Q2 2025

PUBLISHED SINCE 1997

WORLD BUNKERING

THE OFFICIAL MAGAZINE OF IBIA

SAVING THE PLANET **IS IMO ON COURSE FOR NET ZERO?**



INSIDE THIS ISSUE: INTERVIEW: EUGENIA BENAVIDES BUITRAGO FUEL MANAGEMENT EASTERN MEDITERRANEAN



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Yet again there is plenty to report in this issue. So much so that it is almost hard to know where to start amid unremitting geopolitical turbulence. Just as these words were being committed to paper the news broke that Yemen's Houthi rebels have agreed to some sort of ceasefire, India and Pakistan have, it is to be sincerely hoped, narrowly avoided allout war and a US – China trade deal has been announced.

For the shipping industry being able to resume unhindered passage through the Red Sea would be huge. By the next issue of *World Bunkering*, we should have a better idea of how that works out.

However, by far the biggest story for the shipping and bunkering industries has to be that IMO has moved significantly towards implementing an effective decarbonisation strategy. As Dr Edmund Hughes, IBIA's representative at IMO explains in his report it is not yet a done deal.

Nevertheless, MEPC83 took the decision to approve draft amendments to MARPOL Annex VI to make regulations to enact the IMO Net-Zero Framework despite some of the most difficult headwinds for multilateralism with both actual and trade wars prevailing leading to global governance processes being put under tremendous strain.

The definitive vote at IMO will be in October. Edmund detects that there is the political will to move this "game changer" forward.

He also notes IBIA has played a significant role in the discussions that led to the draft being approved. As usual, however busy you are, his IMO report is the absolute 'must read' in this issue. If you want to know the potential implications of this major regulatory development for the marine fuel industry, here is where you'll find them.

But please do read the rest of this information-packed issue. For an insider's personal view of our industry, in our Interview slot long-serving IBIA stalwart Eugenia Benavides Buitrago says that once you go into bunkering "there's no going back".

One of our special features this issue is on Fuel Management, covering a wide range of topics within this overall area. One of them is the increasing use of biofuels and their possible challenges to the smooth running of machinery. Biofuels offer a way of meeting current and pending requirements to cut carbon emissions, but their use is controversial, as we report in our Alternative Fuels & Technology section.

Our other special feature is on the use of scrubbers, possibly an even more controversial area with some administrations banning the use of openloop systems within their jurisdictions. Sweden is going further and also targeting closed loop systems from 2029. We look at two scientific studies that draw very different conclusions.

The feature also highlights that scrubber technology is now being developed to incorporate carbon capture systems. That will please those who would welcome a viable way of continuing to use fossil fuels. Others, to put it mildly, will be less happy.

Talking of systems to eliminate sulphur oxides from emissions, the whole of the Mediterranean became an IMO Emission Control Area on 1 May. In our report on the Eastern Mediterranean, John Rickards describes how bunker companies are responding by securing supplies of 0.01% sulphur fuel.

It will be interesting to see, when scientific studies start to report in a few years' time, if reducing particulate matter emitted into the atmosphere has had any effect on temperatures in the region.

So, there is plenty of food for thought in this issue. I hope you enjoy reading it.

Best wishes

David Hughes Editor





TANK YOU.

For relying on our **40 years** of experience in marine bunkering in the Mediterranean and for realizing that this headline truly means what it says.

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7 Chair's Letter

9 Executive Director's Report

11 IBIA Events IBIA's global events calendar sets tone for 2025

23 IBIA Africa A strong start for IBIA Africa in 2025

26 IBIA Training Powering Progress: IBIA Training Fuels Industry Knowledge

31 IBIA Asia IBIA Asia in action

36 New IBIA Members

38 IMO / Regulatory Matters Regulatory round-up

40 The BIMCO & IBIA Shipmaster's Bunkering Manual 2022

42 INTERVIEW No going back -Eugenia Benavides Buitrago

45 Eastern Mediterranean Supply and Demand

48 Africa Friends in need **52 Fuel Management Insight** FOBAS fuel quality insight

54 Fuel Management MFM - The key issues

55 Scrubbers Claims, counter-claims and science

59 Green Finance EU cash for fuel from waste

60 Training Training crews for new fuels

61 Legal US doubles down on Yemen sanctions

62 Environmental News

64 Industry News

67 Alternative Fuels and Technologies – Carbon Capture LNG plus carbon capture

68 Alternative Fuels and Technologies – Wind Power Testing wind power

69 Alternative Fuels and Technologies – Ammonia Getting ready 70 Alternative Fuels and Technologies – Nuclear Al goes nuke

71 Alternative Fuels and Technologies – Hydrogen Hydrogen plus diesel

72 Alternative Fuels and Technologies – LNG Critical role for LNG

74 Alternative Fuels and Technologies – Methanol Green methanol pitch

75 Alternative Fuels and Technologies – Biofuels Bio boost

76 Alternative Fuels and Technologies – Synthetic Fuels Hurry up and wait?

78 Equipment & Services Cutting methane emissions

79 Innovation EU-funded research

80 Company News

91 Events & Training Diary 2025

93 Next issue

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Dear friends and fellow IBIA members,

The first quarter of 2025 passed exceedingly quickly, yet it was full of news, far-reaching developments - still unfolding, and IBIA's continued development.

Our Annual Dinner in London was a resounding success, and this is not an exaggeration. With an attendance of approximately 1,200 guests, with ceaseless networking, great gusto for discussions and fun, I was truly impressed, as I said, and showed, when I welcomed you all there. This is what I always had in mind as Chair, what I strive for, what all of us at the Global Board focus on: expansion, diversification, impact, relevance. And this is how the newly formed Global Board of Directors as of 1st of April will surely continue.

You will have heard of, and likely attended, our other successful events, such as our Asia Dinner and our American Reception. The same success is expected for our forthcoming Middle East Gala Dinner. And we are also already working on the preparation of yet another dynamic and impactful Annual Convention, this year in Hong Kong, in November.

Apart from the aforementioned events, what we have squarely focused on is the rapid and monumental developments in the IMO, pursuant to the recent MEPC 83. We welcome the measures for a Global GHG Fuel Intensity Standard including a pricing mechanism. As significant work lies ahead and remains outstanding, we look forward to the further discussions and all pragmatic attempts to reach the widest possible consensus. To this end, we in IBIA will be present, vocal, and united.

Referring to the above, and as always, we were among the very first associations to organise a membership-wide open and in-depth discussion on the IMO developments, through a dedicated Members' Meeting, and we are arranging more pertinent ones, always in conjunction with maritime developments. To only name a few, as MED ECA is approaching, we will host a dedicated Members' Meeting for this measure, as we will a separate one further on for biofuels' uptake developments. In the meantime, our Future Fuels Working Group, which I also chair, is now completing the updated and comprehensive FAQs for all major new fuels, which, bearing in mind the urgent need for strategic preparation and compliance once IMO measures are, one way or another, ratified, will become a major issue for all shipping stakeholders. The remaining FAQs will be published in the next few weeks.

In all of this, independently of my professional duties in StarBulk, I dedicate myself to IBIA's goals and priorities, and I am vocal about our aims and aspirations, but also - and mainly - about our great achievements in representing the marine energy industry. Hence, I was honoured to be invited and speak at FUJCON 2025 in Fujairah, at the "Leader's Panel: Navigating the Current and Future Bunker Fuel Market" session, and to also have had the honour of being invited to meet His Highness the Ruler of Fujairah. I also had the pleasure of representing IBIA at the Navigator Assembly 2025 in Athens and participating in relevant discussions on the decarbonisation session. Importantly, I also look forward to my keynote speech as a guest of honour at the 9th Istanbul Bunker Conference towards the end of May.

It may seem trite to repeat that we are living in exciting times. I firmly believe that these are more than that; they are extraordinary. Fundamentals are starting to play second fiddle to all other elements at play, and geopolitical tectonic plates are moving, not imperceptibly, but sometimes violently and surely in an unpredicted manner. Marine energy is right in the middle of this complicated jigsaw, and IBIA is right there, always present to practically assist in putting things in place.

Best regards,

Constantinos Capetanakis IBIA Chair



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BUNKERING AT THE CENTRE OF A RAPIDLY CHANGING MARITIME LANDSCAPE

Unity and progress

he first quarter of 2025 began with a strong and symbolic statement of unity and progress. The IBIA Annual Dinner in London - our flagship networking event - once again proved to be a monumental success. Held before the start of International Energy Week, it welcomed close to 1,200 IBIA members and guests for a memorable evening that set the tone for the year ahead. It was more than just a social gathering; it was a testament to IBIA's growing influence and our role as a platform that brings together stakeholders across the global bunker / marine energy and shipping industry

This powerful start of the year was followed by rapid developments across the maritime sector, driven by ongoing geopolitical tensions, the far-reaching implications of decarbonisation goals, and the increasingly complex regulatory framework facing shipowners and operators. From tariff debates in the US to the evolving regional emissions schemes and a particularly contentious MEPC meeting, it is clear that the shipping industry is being redefined in real-time. What has also become evident, perhaps more than ever before, is the central role that bunkers, and the marine energy industry play in shaping this new reality.

Over the course of just three weeks, I had the opportunity to engage with stakeholders across three continents— Asia, the Americas, and the Middle East—representing IBIA at a series of key industry events. At each stop, one message echoed clearly: the bunker / marine energy industry is not merely adjacent to shipping's challenges—it is at the heart of the conversation.

Singapore was the first stop, to attend Singapore Maritime Week (SMW) and SeaAsia. These events brought together global thought leaders navigating the challenges of regulatory alignment, fuels of the future, and regional coordination. IBIA's strong presence in the region was underlined by the success of the IBIA Gala Dinner in Singapore, which brought together more than 350 members and guests. Our collaboration with the Maritime and Port Authority of Singapore (MPA) continues to grow stronger, particularly following the successful completion of the refreshed SS648 training course and ongoing discussions about IBIA's support for Singapore's leadership role in global bunkering.

From Asia, I travelled to New York for the CMA Shipping Conference. I had the honour of participating in CMA's opening panel on geopolitical disruption and was proud to moderate IBIA's dedicated panel on alternative fuels-an area where the bunker industry is directly shaping the energy transition. The IBIA Americas Networking Reception, attended by over 150 professionals, reaffirmed the appetite for dialogue and engagement across the value chain. Amid discussions on potential tariff changes, fuel strategies, and shifting US policy under the current second Trump administration, the need for industry coordination has never been greater.

Finally, I attended FUJCON in the UAE, where IBIA was again prominently represented with several Board members speaking. I participated in a high-level panel on the evolving demands of global trade and decarbonisation—discussions which emphasized both the urgency and complexity of achieving compliance while maintaining competitiveness. The extensive IBIA participation across the conference was a strong indicator of our credibility and visibility in the Middle East. Across all three regions, one reality stands out: the industry's transformation—driven by decarbonisation, digitalisation, Al integration, and geopolitical shifts—is both a challenge and an opportunity. And at every junction, the relevance of bunkering to shipping's strategic decisions continues to grow.

We are proud that IBIA is not just part of the conversation - we are helping shape it. Looking ahead, the IBIA Annual Convention will be a landmark moment for our association. Taking place during Hong Kong Maritime Week on 19–20 November, we are preparing for what is anticipated to be another sold-out event, rich in substance, engagement, and cross-sector networking.

Mark your calendars and make your travel plans - this is one you will not want to miss!

Sincerely

Alexander Prokopakis IBIA Executive Director alexander.prokopakis@ibia.net





SAVE THE DATE MONDAY 9 FEBRUARY 2026

Grosvenor House Hotel London, United Kingdom

For further details please visit www.ibia.net | email ibia@ibia.net

IBIA'S GLOBAL EVENTS CALENDAR SETS TONE FOR 2025

From London to Singapore, Stamford to Dubai - IBIA events are creating waves and forging stronger industry connections across the globe

t's safe to say that 2025 is off to a flying start. In just a few short months, IBIA has already delivered an impressive calendar of events—hosting, attending, and supporting key gatherings that span the globe. From our own flagship events to strategic participation in leading industry forums, the IBIA Secretariat and Board have been hard at work, helping shape the global conversation around marine fuels, compliance, innovation, and the future of bunkering.

Let's begin by thanking everyone who joined us in London in February for the IBIA Annual Dinner—our signature networking event that continues to be a highlight of the year. Your presence made the evening a memorable one, filled with meaningful connections and warm camaraderie. A special thank you to our sponsors for their generous support: The Hawks, Arte Bunkering, Bunker Partner, PEMA, Sohar Port & Freezone, Cockett Marine, ExxonMobil, Gulf Petroleum Supplies, MME, Uni-Fuels, Arkas Bunkering, Asmira, BunkerNext, Drumo Coin, Maritec Naisa, and UnercoNext year's dinner will take place on Monday, 9 February 2026—earlier than usual—so be sure to mark it in your calendar.

In Singapore, the IBIA Asia Gala Dinner 2025 was another sold-out success during Singapore Maritime Week, bringing together over 360 industry professionals for an evening of dialogue and networking. Meanwhile in the United States, our IBIA Americas Networking Drinks during CMA Shipping in Stamford, Connecticut proved to be another valuable opportunity to engage with members and partners. Huge thanks to our event supporters Lindsay Blee, Sunoco, Seahawk Services, GTBunkers, Eric Evans LLC, and Monjasa for their contributions in bringing this gathering to life.

March saw IBIA's presence at the International Women's Day 2025 celebrations at the IMO. Tara Morjaria, IBIA's *Operations & Membership Manager* attended alongside llenia Arand as the industry reflected on the importance of gender equality, recruitment, retention and career growth for women in maritime. With the launch of the IMO-WISTA Women in Maritime Survey 2024 and the Gender Equality Award, the event spotlighted the strides we've made—and the work still to do. At IBIA, we remain committed to fostering an inclusive industry, one where diverse perspectives drive innovation and resilience.

As I write, we are looking ahead to the inaugural IBIA Middle East Gala Dinner in Dubai on 5 May 2025. Held at the Sheraton Grand Hotel and kicking off UAE Maritime Week, this promises to be a stand out evening of insight and industry celebration.

We are grateful to our sponsors: IME – International Marine & Energy DMCC (Gold), Flex Commodities DMCC, Oil Marketing & Trading International L.L.C., and TFG Marine Pte Ltd (Silver), and Axiom Global Oil & Gas Trading DMCC (Bronze). Their support underscores the strength of our growing network in the region.

Our Members' Meetings also continue to offer vital forums for shared learning and engagement. We recently welcomed Dr Edmund Hughes and Maria Skipper Schwenn (IBIA Board Member) for a debrief on MEPC 83—a session packed with valuable insights. Coming up in the second week of June, we invite members across the Mediterranean to join us for a discussion on the region's designation as a Sulphur Emission Control Area, coming into effect on 1 May 2025.

This will be a chance to share operational perspectives and prepare collaboratively for compliance.

And of course, our flagship event, the IBIA Annual Convention 2025, is on the horizon. Taking place during Hong Kong Maritime Week, this year's edition includes a full day of training on 18 November, followed by two days of conference sessions. It's the perfect opportunity to network, learn, and collaborate—so keep an eye out for registration and sponsorship announcements in May.

As for supported events, IBIA's global footprint continues to grow. From the Navigator Assembly in Athens and Maritime Week Africa in Mauritius, to panels at CMA Shipping and FUJCON, our board and Secretariat have been active participants in key industry conversations. Whether it's exploring future fuel pathways, compliance trends, or geopolitical impacts on global trade, we are helping shape the future of bunkering with every engagement.

We were also proud to be represented by our Asia Regional Manager, Siti Noraini Zaini, at the Green Fuels Forum in Dalian, China—an important platform to discuss emissions, life cycle certification, and the shifting focus of fuel procurement post-MEPC 83. Similarly, IBIA is proud to be a strategic partner at the upcoming Istanbul Bunker Conference in May, and we continue to support leading platforms such as Sea Asia and the International Bunker Conference.

IBIA events are more than dates on a calendar—they are touch points that connect our members, foster collaboration, and amplify our collective voice. As 2025 continues to unfold, we look forward to more of these opportunities to engage with you, our valued members. Thank you for being a part of our journey.

Tahra Sergeant Regional Manager (Africa) & Global Head, Events tahra.sergeant@ibia.net

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IBIA & INDUSTRY 2025 CALENDAR

MAY			
26 - 27	9th Istanbul Bunker Conference	Istanbul, Turkey	
27 - 28	2 Days Basic Bunkering course (SS600:2022 & SS648:2024)	Singapore, Asia	
28	IBIA Training Course - Alternative Fuels Training Course	Istanbul, Turkey	
JUNE			
18 - 19	2 Days Advanced Bunkering course (SS600:2022 & SS648:2024)	Singapore, Asia	
19	East Med Maritime Conference 2025	Athens, Greece	
SEPTEMBER			
15	The Bunker Party	London, UK	
15 - 19	London International Shipping Week	London, UK	
25	The Maritime Standard Transportation & Climate Change Conference	Abu Dhabi, UAE	
OCTOBER			
29	The Maritime Standard Awards	Dubai, UAE	
30	The Maritime Standard Tanker Conference	Dubai, UAE	
NOVEMBER			
11	24th NAVIGATOR – THE SHIPPING DECISION MAKERS FORUM 2025	Athens, Greece	
16 - 22	Hong Kong Maritime Week (HKMW) 2025	Hong Kong	
18 - 20	IBIA Annual Convention 2025	Hong Kong	
FEBRUARY 2026			
9	IBIA Annual Dinner 2026	London, United Kingdom	

IBIA ONLINE TRAINING COURSES

ONLINE BUNKER TRAINING COURSE			
MODULE 1 TO PURCHASE	Bunker Market Regulations and Enforcement	Online at www.ibia.net	
MODULE 2 TO PURCHASE	Understanding ISO 8217 and ISO 4259	Online at www.ibia.net	
MODULE 3 TO PURCHASE	Best practice for suppliers with VLSFO	Online at www.ibia.net	
MODULE 4 TO PURCHASE	Best practices for users with VLSFO	Online at www.ibia.net	
MODULE 5 TO PURCHASE	Adapting to a changing market	Online at www.ibia.net	
MODULE 6 TO PURCHASE	Compatibility and stability – Issues with VLSFO fuels and the measurement of Stability	Online at www.ibia.net	
MODULE 7 TO PURCHASE	Sales terms and conditions – The purpose, structure and application of Sales terms	Online at www.ibia.net	
MODULE 8 TO PURCHASE	Quantity measurement – The principles of quantity measurement including Mass Flow Metering	Online at www.ibia.net	
MODULE 9 TO PURCHASE	Sampling – The basics of sampling, sampling methods and sample handling	Online at www.ibia.net	
MODULE 10 TO PURCHASE	Fuel quality – Impact on storage, treatment and use in the engine	Online at www.ibia.net	
MODULE 11 TO PURCHASE	Alternative Fuels	Online at www.ibia.net	
MODULE 12 TO PURCHASE	Bio Fuels	Online at www.ibia.net	
MODULE 13 TO PURCHASE	Exhaust Emissions	Online at www.ibia.net	
MODULE 14 TO PURCHASE	Introduction to LNG Bunkers	Online at www.ibia.net	
COURSE TO PURCHASE	The IBIA Basic Bunkering Course	Online at www.ibia.net	



*All dates were correct at time of going to print but may be subject to change, please refer to IBIA's website (https://ibia.net/events/) for any updates

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A STRONG START For IBIA Africa in 2025

The first quarter of the year has set a positive pace for IBIA Africa, with dynamic engagement across the region and exciting developments for our members

he first quarter of 2025 has been a particularly busy and energising period for IBIA Africa, marked by strong regional engagement, key industry discussions and important leadership transitions.

IBIA was proud to support Maritime Week Africa, hosted by ship.energy, in Mauritius earlier this year. It was a pleasure for me, as IBIA's Regional Manager and Global Head: Events, to moderate a lively and insightful panel discussion, bringing together leading voices from the South African bunkering sector. The panel featured IBIA members Graham Dreyden (AMSOL - African Marine Solutions Group), Siyamthanda Maya (South African Marine Fuels Pty Ltd), Durand Naidoo F.I.C.S (Linsen Nambi), and Wilhelm Wasserman (FFS Refiners).

The discussion explored a wide range of topics crucial to the region, including licensing processes, operational challenges, supply chain dynamics, environmental regulations, and the exciting future opportunities in the South African bunkering market. It was an energising conversation, reflecting the sector's ambition and its commitment to sustainable and resilient growth.

IBIA was honoured to contribute to this important event and thanks go to ship. energy for hosting a highly successful Maritime Week Africa. It is clear that Africa's role in the global bunkering sector is expanding, and IBIA remains committed to supporting our members and partners across the continent in navigating the opportunities and challenges ahead. In further exciting news for the region, IBIA is pleased to announce the appointment of Jon Hughes, Managing Director of Dan-Bunkering Africa, as the new Chair of the IBIA Africa Regional Board. Jon brings more than two decades of marine fuel industry experience, with deep expertise in bunker trading, supply chain management, and regional business development. His leadership at Dan-Bunkering Africa has been instrumental in the company's growth and operational excellence across the African continent.

As Jon steps into this important leadership role, we would also like to extend our sincere gratitude to Paul Maclons, who has served as Chair of the IBIA Africa Regional Board since 2021. Paul's leadership has been characterised by professionalism, dedication, and a strong commitment to building IBIA Africa's profile both regionally and globally. His contributions have left an enduring impact, and the entire IBIA Board and Secretariat thank him warmly for his service.

Commenting on his appointment, Jon Hughes said:

"I am honoured to take on the role of IBIA Africa Chair and build on the solid foundations laid by Paul Maclons and previous Chairs. I look forward to working with colleagues across the region to further strengthen collaboration, promote sustainable practices, and support the continued growth of Africa's bunkering sector."

We are confident that Jon's expertise and leadership will steer IBIA Africa towards new heights, enhancing opportunities for our members and supporting the industry's continued development.

We are also delighted to welcome Joshua Kwabena Duodu, Head of Technical & Special Products Department at GOIL, to the IBIA Africa Regional Board. Joshua's expertise and passion for the industry will be a great addition as we continue to expand the Board's regional representation. As we look ahead, IBIA Africa is focused on strengthening member engagement and industry dialogue. We are excited to announce that we will be hosting a South Africa Maritime Gathering in June details will be shared shortly. We will also be launching an online Townhall Talk for our Africa members and the wider industry, providing a forum to hear directly from the market and better understand the needs, challenges, and aspirations of the African bunkering community.

The momentum is building, and IBIA Africa is proud to be at the forefront of the region's growth story. We look forward to an active and impactful year ahead, working together with our members and stakeholders to advance the future of bunkering across Africa.

Tahra Sergeant Regional Manager (Africa) & Global Head, Events tahra.sergeant@ibia.net





















POWERING PROGRESS: IBIA TRAINING FUELS INDUSTRY KNOWLEDGE

From methanol to mass flow meters, IBIA's global training initiatives are equipping the bunker industry with the tools to thrive in a changing fuel landscape

BIA's training initiatives continue to go from strength to strength, offering accessible and expertly led programmes that support the industry's evolving needs. We recently wrapped up a fantastic Methanol Bunkering Masterclass with GREEN MARINE, held at Vopak's Rotterdam Terminal. Led by Capt. Ariel Gaban and supported by specialists from Chevron Marine, Dräger, and GREEN MARINE, the course focused on safe handling, fire protection, dual-fuel systems and the new ISO 6583:2024 standards.

A big thank you to Vopak for hosting us so brilliantly and to all the participants who are helping to move sustainable fuel practices forward.

We held the Mastering MFM Bunkering course in Antwerp on 14 May 2025. This one-day session was designed for surveyors and industry professionals to navigate MFM-equipped operations with confidence, covering compliance, accurate fuel measurement, and best practices for quantity and quality assurance. Meanwhile, as part of UAE Maritime Week, we hosted our IBIA Alternative Fuels Training in Dubai on 5 May 2025.

Nigel Draffin, IBIA Board Member and industry consultant, will be joined by Gary Hubbard FCILT for an in-depth dive into biofuels and LNG, including their regulatory frameworks and future relevance, with a focus on EU legislation and regional developments.

In addition to these global sessions, we continue to deliver our MPA-approved inperson training in Singapore and offer our global members flexible online options to ensure learning remains accessible to our members worldwide. Whether you're new to the sector or looking to deepen your expertise, IBIA's training platform is here to support your professional journey.

For more information and to register, visit our website:

www.ibia.net/training

Or contact IBIA Secretariat Tel: +44(0)203 951 9615 Email: ibia@ibia.net











The IBIA Basic Bunkering Course



IBIA ONLINE EDUCATION

Module 1 Introduction

Module 2 Basic commercial

Module 3 Basic Technical

Module 4 Basic Operations

<mark>Module 5</mark> Real life



The IBIA Basic Bunkering Course is a programme of training modules designed to introduce new entrants or staff with limited knowledge of the bunker industry to the most important aspects of the bunker industry.

It consists of 5 modules each lasting just over 1 hour presented by IBIA Board member, Nigel Draffin, the renowned bunker industry expert, Author of 12 books on Bunkering.

The course materials have been peer reviewed by members of the relevant IBIA Working Groups.

The **Online training** course is recorded video content, it is not live. The duration of each module is up to 60 minutes.. The modules can be attended as stand-alone modules, however students will gain the best value by taking all five modules in the order suggested. On completion of the course, students will receive the **'IBIA Certificate of Attendance'**.

Nigel Draffin



Consultant and IBIA Board Member

ONLINE BUNKER TRAINING COURSE



Module 1: **Bunker Market Regulations and Enforcement** Module 2: Understanding ISO 8217 and ISO 4259 Module 3: Best practice for suppliers with VLSFO Module 4: Best practices for users with VLSFO Module 5: Adapting to a changing market Module 6: Compatibility and stability Module 7: Sales terms and conditions Module 8: Quantity Measurement Module 9: Sampling Module 10: Fuel quality Module 11: Alternative Fuels Module 12: Biofuels Module 13: Exhaust Emissions Module 14: Introduction to LNG Bunkers



IBIA runs a series of online training courses to inform the members of our industry and help them to understand international regulations, guidance on how best practice and application of International standards can improve their ability to source, supply and use the fuels required now and in the medium term.

The training modules are aimed at all bunker industry stakeholders who are keen on gaining solid general knowledge of marine fuel. It will be of value to sellers, bunker deliverers, surveyors and ship operators. The course is delivered in clear, understandable language. Delegates will be able to ask questions and seek clarification on any topics covered.

The renowned bunker industry expert Nigel Draffin, Author of 12 books on Bunkering and IBIA's Treasurer, will run the online Bunker Training courses.

On completion of a module, students will receive the 'IBIA Certificate of Attendance'.

Nigel Draffin



Consultant and IBIA Board Member



Annual Convention IS COMING TO Hong Kong

PART OF HONG KONG MARITIME WEEK 18-20 November 2025

JOIN US, DURING HONG KONG MARITIME WEEK, AS WE BRING THE GLOBAL BUNKER & SHIPPING COMMUNITY TO ONE OF THE WORLD'S MOST DYNAMIC MARITIME HUBS



IBIA ASIA IN ACTION

Strengthening Industry Ties and Member Connections

As we close out the first quarter of 2025, I am pleased to share some of the key highlights from IBIA's activities across the Asia region.

Strengthening Industry Connections: IBIA Asia Annual Dinner 2025

In April, we welcomed close to 360 guests to the IBIA Asia Annual Dinner 2025, held at the PARKROYAL COLLECTION Marina Bay in Singapore. The event brought together our valued members, partners, and stakeholders for an evening of meaningful connections and celebration.

It was especially heartening to see new faces alongside familiar ones, reinforcing the strong sense of community that defines IBIA.

We are grateful to our sponsors, Pertamina International Marketing & Distribution Pte Ltd and Bunker Partner, for their support in making the evening a success.

Expanding Our Engagement in China

In April, I had the opportunity to travel to China for a series of meetings aimed at deepening IBIA's collaboration with key stakeholders. Supported by IBIA member, Teamhead Marine Services Pte Ltd, we engaged with industry associations, companies, and port authorities to explore avenues for greater cooperation. These discussions were vital in ensuring IBIA's voice is part of the evolving conversations around bunkering, alternative fuels, and maritime decarbonisation in China.

The work trip also allowed us to build closer relationships with our members on the ground, understand local developments, and chart the way forward for IBIA's presence in the region.

I had also the privilege of representing IBIA at the Green Fuels Forum held in Dalian, China, organised by Xinde Marine. Speaking alongside industry peers, I shared IBIA's perspectives on the evolving bunkering landscape, regulatory developments, and the critical role of collaboration in navigating the transition to a more sustainable future.

Events like these are important platforms for IBIA to advocate for the industry's interests and to reinforce our commitment to supporting members through the ongoing energy transition.

Looking Ahead

As we move into the second half of the year, we look forward to continuing to strengthen our partnerships across Asia. We are also continuing our efforts to expand IBIA-led training initiatives to equip the industry for the future. On behalf of the IBIA Asia team, thank you for your continued support. Together, we will continue building a vibrant, forwardlooking bunkering community.

Siti Noraini Zaini Regional Manager, IBIA Asia Siti@ibia.net www.ibia.net

































IBIA Code of Conduct

Abiding by this Code of Conduct shows that members support our common goal: to promote the widespread adoption of a common set of ethical values within our industry. We believe that when the entire industry acts with the highest ethical standards that this will be to the benefit of us all.

Fair Business

- We conduct our business in a fair and transparent manner
- We will always act in the best interest of each business partner and are honest with the stakeholders involved in our business
- We only engage in business using compliant products, and deliver the quality and quantity agreed with our business partners
- We always act in good faith

Best Practice

- We always act in accordance with applicable legislation, including sanctions
- We always meet contractual obligations in a timely manner
- We always do our best to avoid disputes and seek resolution promptly if disputes occur
- We comply with all applicable competition and anti-corruption laws
- We respect confidential information and do not unlawfully use any intellectual property

Social responsibility

- We seek to minimise our environmental impact and the risk of environmental damage
- We will always ensure employees' health, safety and security
- We offer equal opportunities, prohibit unlawful discrimination and respect human rights
- We offer the same opportunities for professional development to all our employees

Transparency

- Our accounts and records are kept accurately and reflect the true state of the company and its operations
- During audits or investigations, we fully cooperate with the authorities
- We will not receive or give any gift or entertainment of disproportionate value
- We are fully committed to preventing both money laundering and terrorist financing

This Code of Conduct is endorsed by the International Bunker Industry Association (IBIA). IBIA encourages members to abide by this Code of Conduct and to endorse it.

NEW IBIA MEMBERS

CORPORATE A

Other Air Products Shantel Williams Americas

Bunker Supplier **Asmira Petrol Ve Kimya Urun. Nak. San** Mustafa Aslan Europe

Bunker Trader, Trader

Aura Energies Dmcc Ivan Gromykin Middle East

Agent, Supplier **Curoil N.V** Johana Restrepo

Americas

Legal, Other (Ferderation) eNG Coalition

Rafik Ammar Europe

Ship Manager **Kassian Maritime Ltd.** Antonis Papadakis Europe

Ship Manager, Ship Owner Neptune Lines Shipping and Managing Enterprises S.A. Nikos Paterakis Africa Trader Ocean Energy Ltd Chrystelle Tosello Europe

Port Authority **Port Of Rotterdam Authority** Kesih van den Berg - Dominicus Europe

Other **Shipergy Ltd** Daniel Rose Europe Bunker Supplier Shipoil Ltd Alberto Tsoris Europe Agent, Trader Wells Bunkering Ltd Ilias Argyris Europe Bunker Trader, Broker Worldwide Bunkering DMCC Aleksandrs Rapohins Middle East

CORPORATE B

Bunker Broker Lindsay Blee Americas LLC Tammi Ingannamorte Americas Trader

Ocean Energy Hellas Stamatis Kontouzoglou Europe

CORPORATE C

Bunker Supplier **Vivo Energy Maroc** Hicham Monsif Alaoui Africa

INDIVIDUAL

Bunker Trader, Ship Manager, Trader, Supplier Maryam Alfalasi International Marine & Energy DMCC Middle East Bunker Trader, Ship Manager Osman Bayhan York Bunker B.V

Europe Bunker Trader, Broker **Pietro Girone** Girone Trading Oil Srl Unipersonale Europe Barge Operators, Bunker Fuel Supplier (Physical), Bunker Supplier, Bunker Tanker Owners, Bunker Trader

Bhupendra Jadeja Bapu's Shipping Jamnagar Private Limited Asia

Other (R&D Institute), Port Authority

Dongho Jung Korea Research Institute of Ship and Ocean Engineering Asia

Supplier (Physical), Port, Bunker Broker, Bunker Trader

Yousuf Muhammad Ocean Straight Run Fuel Supply Services LLC Middle East

Bunker Trader, Broker, Trader

Abdelrahman Naga Sing Fuels Pte Ltd Middle East

Service, Other (Risk Appraisal)

Dynamar Europe

Bunker Supplier, Charterer, Trader, Supplier

Daniel Oyegun Bunker Seaworld Limited Africa

Bunker Trader, Supplier

Iratxe Pagazaurtundua Marinoil Service, S.A.

Europe Legal, Other (Consultancy) **Burcak Sercan Sarikaya** Sarikaya+Sahin Law Firm

Sarikaya+Sahin Law Firm Europe
Join IBIA today

to play an integral part in the sustainable future of the bunker industry

By joining IBIA you will become part of a global network of bunker industry experts who collectively form one of the world's leading authority on bunkers. Not only will you have access to a wealth of information and insight (we publish newsletters and industry updates on current issues) which offer pragmatic advice for managing the industry's challenges; members also have the potential to shape and influence both international and local legislation. This happens through IBIA's Working Groups which are responsible for developing industry guidance, participation in IMO correspondence groups, solving long-term industry issues, and addressing both commercial and technical aspects.

INDIVIDITAT	IBIA Board Member eligibility
INDIVIDOAL	The right to 1 vote for Board Member Elections
£350	IBIA Working Group eligibility
	Access to all IBIA Members Meetings
	Discounted IBIA training courses/ conferences/seminars events/conventions
	Individual discounts on other industry events
	Subscription to World Bunkering magazine
	Representation at IMO (International Maritime Organisation)
	Access to IBIA's member networking platform
	• Eligible to book up to 4 tickets at the prestigious IBIA Annual Dinner
	IBIA mediation and dispute resolution
	IBIA membership certificate
CODDODATE	ALL THE BENEFITS OF INDIVIDUAL+
CORPORATE	Register up to two offices anywhere in the world
£1750	The right to 2 votes for Board Member Elections
	• 5 user registrations on the IBIA portal per registered office
	• 2 subscriptions per office to World Bunkering magazine, sent to all registered offices
	• Eligible to book up to 4 tables at the prestigious IBIA Annual Dinner
	• Eligible to add further offices for a reduced fee of £600 per office
	Use of the IBIA Members' logo on your website and stationery
	CORPORATE ADDITIONAL MEMBERS GET ALL THE BENEFITS OF THE CORPORATE MEMBERSHIP WITH THE EXCEPTION OF THE RIGHT TO VOTE FOR BOARD MEMBER ELECTIONS.
	You can add as many additional offices as you pay for. Affiliation with the primary
	Corporate member must be authorised. Special cases can be negotiated individually with
	the IBIA membership management team.



USEFUL INFORMATION

- 15% discount for 3 years membership, (Paid in one instalment) –
- Guarantee no membership price increases for the next 3 years.
- Unregistered offices will not get IBIA benefits



REGULATORY ROUND-UP

A game changing moment for shipping and the bunkering sector

he outcome of the 83rd session of IMO's Marine Environment Protection Committee (MEPC 83) was expected to be a momentous conclusion to nearly two years of negotiation and certainly it proved to be so. The decision to approve draft amendments to MARPOL Annex VI to make regulations to enact the "IMO Net-Zero Framework" came at what are possibly some of the most difficult headwinds for multilateralism with both actual and trade wars prevailing leading to global governance processes being put under tremendous strain.

IMO's net-zero framework, were it to be adopted in October, provides a signal that global action to address anthropogenic climate change continues to move forward, albeit not at a pace to keep the Earth's average surface temperature increase to the 1.50C limit. Nevertheless, it will be a game changer in that it will trigger the start of the energy transition of international shipping. In this regard, the significant implications for stakeholders across the marine fuel value chain cannot be understated. I shall explore some of those in this edition.

I have used this column before to highlight all the significant policy issues, many of them highly political, that needed to be reconciled in order for an agreement to be achieved. Whilst a consensus could not be gained, as those many policy issues proved too difficult to find a compromise satisfactory to all, sufficient IMO Member States were satisfied to support the decision to "approve" the draft amendments to MARPOL Annex VI. Indeed roll-call voting is a rare occurrence in IMO whereby Member States that are registered as "present" in the meeting are called one at time in alphabetical order to express "Yes", "No", or "Abstain". Those Member States not present are not counted. Indeed, the last time your correspondent recalls a roll-call vote happening was in 2011 when the amendments to MARPOL Annex VI on energy efficiency regulations (EEDI/SEEMP) were "adopted".

With 63 Member States voting 'yes' and 16 'no' the requirement of just a simple majority for a decision of the Committee was easily obtained. However, when it comes to the "adoption" of the draft amendments in October the equation changes. This is because adoption is a matter for the 108 Contracting Parties to MARPOL Annex VI only. Also, the treaty requirement is for the decision to be supported by a two-thirds majority of those "present and voting". In other words, a working majority would be 72 Parties. It is unlikely that all Parties would be present. Also, not all of those who voted this time are Parties and eligible to vote in October. In the end I do expect the amendments to be adopted as there

is apparently clear political will for the measures to be taken forward.

What does this mean for marine fuel? To some degree an insight into the implications has already been gained from the implementation of FuelEU Maritime. Whilst many businesses engaged as suppliers or buyers have developed their strategies to achieve compliance and gained valuable operational experience of implementation, several questions remain not least about the availability of fuels to comply with this regional rule let alone the future international rules that require global availability. In the short term, at least, the new IMO rule will add to the uncertainty on which fuels will be the winners, and which will struggle to gain traction. The result will be for many to stick to tried and tested solutions for compliance and to hedge on the basis of the current known risks, both financial and operational.

This uncertainty prevails as key parts of the IMO rule remain to be defined or have been agreed only for a relatively limited period with the aim to review before the end of the decade. A clear example of the former is that the all-important quanta remain to be agreed for the "rewards" for those using "zero or near-zero" (ZNZs) fuels, technologies and energy sources. It is already apparent that those rewards



will need to be substantial to support the business case for shipowners to consider the procurement of those ZNZs in the next decade especially whilst availability, especially of fuels, remains uncertain. Put simply until the quanta are agreed those making the business decisions cannot make those decisions on the basis of the risks being priced. A decision on the rewards may not be forthcoming until Spring 2026 giving, in theory, under a year before entry into force with the GHG intensity requirement beginning 1 January 2028.

The uncertainty is compounded, and an example of where agreement has been made for a limited period only, as the cost of "remedial units" that ships will need to purchase to come into compliance where they do not meet the "Direct Compliance Target" for annual GHG intensity of the energy used by the ship has been set for the first two reporting periods only. A decision on the cost of remedial units for the reporting periods starting 2031 and onwards is expected by 1 January 2028.

The development of future strategies for anyone producing, supplying, selling and buying marine fuels will in many respects be determined by when these uncertainties are addressed.

A major decision was the confirmation that the governance of marine fuel will move onto a "Well-to-Wake" basis. Physical suppliers will be at the fulcrum of this new governance regime and may become solely responsible for providing the required information to enable the ship to calculate the GHG intensity of energy used on board the ship - the basis for calculating compliance! IBIA engaged in the detailed negotiations of the new "Sustainable fuels certification schemes" framework and ensured that the required information to be documented in a "Fuel Lifecycle Label" would not need to be provided at the time fuel is supplied to the ship but rather "may accompany the bunker delivery note". This outcome was the result of comments forwarded to IMO Member States by IBIA that emphasised the importance for the new governance regime of implementation, those comments being based on feedback received from IBIA members during an

online meeting held to discuss proposed amendments to the BDN in March. I would like to thank all those who provided their views and the IBIA Board for their support to ensure this important matter was appropriately reflected in the final draft of the regulations.

The previous example clearly demonstrates the value of consultative status at IMO for IBIA's members. As a global association we have less of an opportunity to provide input to specific jurisdictions such as the European Union, but the recently established European Regional Board provides scope for IBIA to engage in the debate in the EU. Part of that debate will be the alignment (or not) of the EU rules with the IMO rules. EU instruments provide for a review once the global requirements are confirmed. In a statement released welcoming the outcome of MEPC 83 the European Commission reflected this review as follows: "The Commission will also assess the new global measure to see how it interacts with current EU maritime related regulations, maintaining environmental integrity while avoiding significant double burden." Note the statement does not read 'while avoiding any double burden'?! It is expected that there will be pressure on the EC to confirm their position on alignment before the IMO rule is adopted. This is because non-EU

IMO Member States, both supportive of and against the IMO rule, will wish to understand the implications for their ships before they cast their vote in October.

Consideration of carriage of greater than B25 biofuels by bunker vessels

Finally, I am pleased to report that IBIA's efforts to highlight the incongruity on the issue of the carriage of greater than B25 biofuels by MARPOL Annex I certified bunker vessels led to a successful outcome. Following consideration and recommendation by PPR 12 in January, MEPC 83 approved MEPC circular Interim guidance on the carriage of blends of biofuels and MARPOL Annex I cargoes by conventional bunker ships (MEPC.1/Circ.917) that permits the transport of blends of not more than 30% by volume of biofuel, providing all residues or tank washings are discharged ashore unless the oil discharge monitoring equipment (ODME) is approved/certified for the biofuel blend(s) being shipped. The interim guidelines confirm that an IOPP certificate showing "oil tanker" issued to a conventional bunker ship carrying blends between 25% and 30% biofuel or synthetic fuel does not need to be modified

Wishing you all a fair wind and safe seas.

Edmund Hughes









2022 SHIPMBUNKERING MANUAL

THE BIMCO & IBIA SHIPMASTER'S BUNKERING MANUAL 2022

The Shipmaster's Bunkering Manual 2022 is the first practical industry guide for both owners and suppliers, seeking to create a common understanding of best practices when bunkering to facilitate a smoother process and safe bunkering globally

The manual is a unique result of cooperation between IBIA and BIMCO to create insight and practical understanding of bunkering across the shipping sectors.

Bunkering operations are routine, critical and high-risk operations which require accurate planning from both the owner and supplier to ensure a safe and successful operation. The publication consists of background information as well as checklists and key notes for the entire process for shipowners, masters and crew on how to prepare, execute and follow up on bunkering, including what to do when it goes wrong.

Totalling 4 chapters and phases of the bunkering process, the manual covers the following topics:



Chapter 1: Background insight on fuel types and key regulation

Everything you need know from fuel oil types, safety, and environmental regulations to ISO standards and contractual issues related to bunkering.



Chapter 3: Bunkering procedures

Bunker sampling is one of the most important aspects of bunkering. This chapter covers preparations, practical issues and what to do if something goes wrong. Details of the role each stakeholder ashore and on board undertakes during the process including actions required before, during and after the bunkering.

The book is available to buy from Witherbys on this link: https://shop.witherbys.com/shipmaster-s-bunkering-manual-2022/ IBIA members receive a 20% discount on all publications. Please enter "IBIA" in the "Coupon/Gift Certificate" box to receive your 20% IBIA member discount.



Chapter 2: Origin and supply chain of marinebunkers

An overview of bunker blends before the ship arrives for bunkering followed by a detailed description of the ship's preparation and planning prior to bunkering. Advice is also given on how to handle a situation if compliant fuel is unavailable in a specific port. Paperwork including the bunker delivery note and certificates of quality are described and recommendations are given that aim to help to use them correctly.



Chapter 4: Calculation of bunker quantity and after completion procedures

Details on how to create a solid background for calculating the bunker quantity and determine if the ordered bunker stem has been delivered. For ships carrying equipment to undertake onboard testing of marine fuels, testing procedures are referred to and detailed description of how to interpret test results provided. Keeping an accurate and up to date oil record book is, together with the bunker delivery note, important as records for internal and external use for example during port state control.



NO GOING BACK

Long-serving IBIA stalwart Eugenia Benavides Buitrago tells World Bunkering's Editor David Hughes that once you go into bunkering "there's no going back"

DH: Can you sketch out how you came into the petroleum and then bunkering industries. I know your post-graduate degrees included one in Maritime Transportation and Port Legislation. Was that your first interest in shipping or had you been attracted to the sea before that?

EB: I was born and raised in the city of Barranquilla. I always wanted to study international business, but when I graduated from high school there was no such degree in Barranquilla, so I began studying Business Administration in the United States and returned to finish my career in Colombia.

I started my semester of industry internship in a new company that was just starting called Terpel del Norte S.A. I worked and studied from that moment on many areas of oil and gas, managing service stations, aviation, lubricants and industrial fuels in the operations, marketing and sales fields.

In 2004, after the merger of the company's multiple corporate names and some reorganisations by business units, I dedicated myself exclusively to selling marine fuels to the maritime sector as I was living in the northern coast of Colombia, an area where the maritime operations were. It was the only region that was selling marine products.

More than twenty have passed, and I have had the opportunity to attend local, regional and international events, where I have been able to strengthen ties with the sector and serve port concessions, tugboats, dredgers and offshore companies, as well as traders and international shipowners.

As I was working in that field, I studied maritime transportation and port logistics. As I also belong to Wista Colombia I had the opportunity to study after the pandemic online to get a Diploma in Maritime Affairs organised by the CEPAL Chile (Economic Commission for Latin America,) in partnership with Wista and the MAMLA Network.

DH: You have had a long career with Terpel .What would you say have been the highlights? And what are the main things that you have learn from working in Colombia's major oil company?

EB: Well, 40 years and 5 months I worked in Terpel.

I can tell you that when I started at Terpel del Norte S.A., doing my internship for my business administration degree, there were four of us, and I learned how to do everything. The earthworks for the Baranoa supply plant had barely begun.

So, I learned everything about finance, but I leaned toward the marketing and sales side. I was a sales assistant travelling the entire coast by car to open markets service stations, then Marketing and Sales Director, Commercial Assistant Manager, Commercial and Operations Assistant Manager, selling aviation fuels, lubricants, industrial and marine fuels.

I got to know the whole country well through working with Terpel, developing markets, opening service stations and selling fuels for over 20 years.

While at Terpel del Norte S.A., I was one of the few women working in the sector. I also had the privilege of attending the first IBIA event in Orlando, Florida, in May 1992, where I began to learn about the fascinating bunker industry. Once you go into bunkers you don't go back.

I had the opportunity to run for board of directors of IBIA International Bunker industry association with the support of the company, where I was elected since year 2011 and I will be stepping down at the end of this month as my period expires as I ended my second period of my second 6 years term.

I work with passion and discipline. Every day at work was different. It's a very dynamic market so I learn every day working with transparency, discipline and values that are not negotiable.

DH: Did moving into the bunkering side of Terpel just happen or was it a deliberate choice on your part?

EB: As I was working in the only Terpel company selling marine fuels after 2004

when the seven Terpel companies all over Colombia merged into one becoming, as it is known today, ORGANIZACION TERPEL, I was put in charge of the marine business.

And I loved dedicating myself only to that. I don't regret it in the slightest. Working in marine fuels has given me the opportunity to travel the world, mature, experience different cultures and learn from them. This has enriched me not only professionally but also as a person. I also believe that many people have become friends, meaning we've developed a relationship that goes beyond just a work relationship.

DH: You have been active in IBIA for a long time, with two periods on the Board. Why do you think IBIA matters?

EB: As I was solely dedicated to the marine business, in 2010 I applied as a candidate for the IBIA board. At that time, there was an initial filter from the BDC, and they didn't select me. So, the following year I applied again, and that's how I was on the board from 2011 to 2016, but since I was treasurer, I continued into 2017. Then I had to step down for a year, as the byelaws required, and reapplied in 2019. My second term expired on March 31st.

I have had the opportunity to represent Latin America in the IBIA board and I was the only female for many years. Being there has given me the opportunity to travel around the world, give talks, training sessions, be a panellist in forums, get to know different cultures, put a face to a person with whom we have been in virtual contact and gain a lot of friends.

Years ago, there was no WhatsApp or Skype or Face Time. Our daily tool was the yahoo messenger that today does not exist. I think IBIA with their annual convention and the IBIA dinner during IP week (now IE week) gave us the opportunity to share with current and potential clients, meet other companies, learn about the business, and find out what's happening at the IMO, where we have a representative who actively participates in decisions regarding marine fuels.

The monthly IBIA membership meetings are a must. The newsletters updated us on what is going on. And the *World Bunkering* magazine is great and very informative.

DH: During the time you have been involved with IBIA it has expanded significantly and is now a larger organisation. What do you see as being its main achievements? What challenges does it face now?

EB: Yes, IBIA has grown significantly. I believe any company involved in the marine fuel supply chain should be a member of IBIA. One of the main achievements I think is having our active participation on IMO and the establishment of the regional boards. These give us the opportunity to focus on the regions.

The creation of working groups allows many members to participate in the growth of IBIA.

Also, the development of a series of online courses is ideal for all those who are currently participating in this business as are all of the live courses we have been doing with Nigel Draffin. We can also offer physical courses on demand globally.

I think we should have more shipowners within our association.

About the challenges, I think our director can answer you that.

DH: In what ways has the bunkering industry changed since you first started working in the sector? To what extent has the IMO sulphur cap affected the bunker market and the way Terpel operates.

EB: Well, in Colombia, until 2002, IFO was delivered by pipeline to the supply plants located in Mamonal, Cartagena. After that, and as today the product is manufactured by the players by mixing crude oil that come directly from wells in the interior of the country and a diluent. The state oil refinery is not providing the finished product.

Working for IMO 2020 was a challenge, but our marine diesel meets the requirements of IMO 2020.

I also think that IBIA has grown a lot and today it sets the standard in many things.

DH: Today the big challenge facing the industry is seen as achieving Net Zero. Do you see that happening?

EB: Transforming the way, we produce and use energy as quickly as possible is a huge challenge, but one we can meet decisively. The most significant challenges include technological limitations, the high costs of green technologies, a lack of infrastructure, and the need for comprehensive global cooperation and policy harmonisation. We must work for that.

DH: If IMO adopts a more effective decarbonisation strategy, where does that leave countries like Colombia that have significant oil and gas industries?

EB: IMO's GHG Strategy 2023 envisages a reduction in the carbon intensity of international shipping (to reduce CO₂ emissions from transport work), averaged across all international shipping, by at least 40% by 2030. The new ambition level refers to the adoption of zero or near-zero GHG emission energy sources, fuels and/ or technologies representing at least 5%, with the aim of reaching 10% of the energy used by international shipping by 2030.

Colombia must work towards a decarbonisation strategy.

DH: What do you think the bunker sector will look like in 10 years' time.

EB: I think there will be different fuels such as LNG, ammonia, hydrogen, biofuels and other alternative fuels.

I also think we will have many things digitally and communications will be even better.

DH: You have recently retired from Terpel. Do you plan to stay involved in the bunker industry?

EB: In Colombia, women retire at 57. I'm turning 62 this year, so I was late. I retired on 31 December and today I'm working as a consultant for several companies. I'm clear that I need to be busy and have my mind working. I don't have grandchildren to take care of yet so I will continue working because I can't be without doing something.

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SUPPLY AND DEMAND

The Mediterranean ECA may have arrived on top of the ongoing geopolitical disruption and its effects on established trading patterns, but the Eastern Med has grounds for some optimism, John Rickards writes

By the time World Bunkering has gone to print, the Med ECA will have come into effect, and we'll know just how well prepared the region's ports and bunkerers were for the changeover. As ever, for vessels not equipped with scrubbers, or those already running on alternative fuels, availability and cost are going to be the choke points, if there are any.

Availability confirmation certainly came down to the wire in some areas. Three weeks before the ECA entered into force, Energy Petrol announced it had become the first Turkish bunker supplier to offer compliant ULSFO in Istanbul and Izmit Bay.

It was followed a few days later by rivals Petrol Ofisi. Aydin Yildiz, senior maritime manager at Petrol Ofisi Group, said: "Our leadership in the maritime fuel sector is defined not only by our market share [the company supplies around 1 million tonnes of bunker fuel per year] but also by the innovative steps we take to shape the industry. Successfully completing the supply of marine fuel with 0.10% sulphur content in alignment with the MED ECA transition in Türkiye is a concrete reflection of this."

"We previously led the way with the country's first VLSFO bunkering operation, setting a precedent in our sector. With our

ULSFO bunkering, we have once again demonstrated that we are setting the standard in Türkiye's marine fuel landscape. The designation of the Mediterranean as an Emission Control Area is not only a regional development but a historic turning point for global maritime operations. We are proud to not only be part of this transformation but to be among those leading it. We will continue to shape the future of the maritime sector by delivering environmentally friendly and fully regulation-compliant services."

In fairness to Petrol Ofisi, the company also commissioned what it describes as the country's first "self-sustaining domestic barge" in March. The project, in collaboration with Hon Denizcilik and ALLPRO Enerji, has seen the bunker barge fitted with a battery system to store the excess energy obtained from the generator while underway. When the ship is in waiting position, the stored energy can be used for at least 5 hours without the need for a generator. The company says this allows the barge to optimise energy consumption, shorten the operating time of the generators, and improve energy efficiency.

Aydin Yildiz said: "We are thrilled to realise this exemplary project. Our goal here is to provide tangible benefits for sustainable development by improving energy efficiency and promoting responsible fuel consumption in the maritime industry. We are excited to collaborate with our stakeholders in carrying out holistic and innovative processes with a focus on energy transformation, while undertaking growth-oriented projects."

Those two bunkerers were followed another week later by Oilmar, which announced its first completed ULSFO delivery ten days before the ECA came into force and said that it was now offering the fuel at Istanbul, the Marmara Sea, the Gulf of Derince, Bozcaada Anchorage and southern Turkish ports.

Arkas Bunker, meanwhile, has been pushing its wider green credentials by promoting the use of biofuels since supplying its own national first in that regard last October to one of the Arkas group's own container vessels.

Speaking at this year's Green Shipping Summit, Arkas Bunker's general manager Seckin Gul said: "We are now accelerating our steps. We have observed that the use of biofuel, Bio24F, not only reduces the carbon tax obligations of shipowners under the EU Emissions Trading System (EU ETS) but also significantly reduces CO₂ emissions. We want to collaborate with

shipowners not only in Türkiye but all over the world. We are here to support all our shipowners with customised solutions to create cleaner seas."

Bio24F is Türkiye's first biofuel, a blend of recycled waste cooking oil and low-sulphur fuel (though not ULSFO), with around 20% CO₂ emissions reduction. The company says it is currently aiming to scale up production.

At the time of its introduction, Gul said: "As Arkas Bunker, we have been working for many years on solutions that comply with international regulations and reduce greenhouse gas emissions from vessels. Since the main source of these emissions is the fuel they use, we have focused on sustainable marine fuels. About three years ago, we started research and development on bio-components by taking a closer look at marine biofuels. In February, we achieved our goal for 2024 by obtaining the ISCC certification, becoming Türkiye's first ISCC-certified bunker supplier. Now, we are marking another first in Türkiye's maritime industry. Our ISCC-certified product, 'Bio24F', will significantly reduce greenhouse gas emissions from vessels, making it much easier for shipowners to achieve their sustainability goals. As Arkas, we continue to develop new products with our expert technical team, using our experience as the owner and operator of Türkiye's largest container vessel fleet."

Yang Ming became the company's first external client in November last year, and has since opted for the fuel again, which can only be a good thing in terms of transition fuel adoption.

Looking to the longer term, US-based bioenergy firm WasteFuel announced in March it had signed a partnership deal with Turkish waste management company ITC to carry out initial engineering design work for a green methanol biorefinery to be located in Ankara. The company said this would be the first green methanol facility in Anatolia and one of the largest of its kind in the world.

The biorefinery, which would adjoin ITC's existing 1.8 million tonnes per year integrated waste management facility, would utilise biogas derived from anaerobic digestion and landfill gas collection. Once operational, its green methanol will be intended for use as bunker fuel.

"Since our founding, ITC has been passionate about identifying innovative applications for municipal waste treatment that have a positive impact on the communities we serve," said Yavuz Kantur, general manager of ITC. "This project is a demonstration of this mindset. We are proud to join the Ankara municipality and WasteFuel in celebrating this milestone."



"WasteFuel is proud to partner with ITC in Ankara, strengthening our global portfolio of green fuel projects," Wastefuel CEO David Trench said. "Green methanol will be crucial for near-term decarbonisation of the shipping industry, and this project will help meet this growing global demand."

A final investment decision is expected in early 2026. If approved, the company said the project would position Türkiye's as a hub for sustainable marine fuel supply in the Eastern Med.

Greek bunkering has also seen its first tentative step into biofuels. In April this year, Motor Oil Group subsidiary Coral Marine delivered, reportedly, the country's first biofuel bunker blend to the cruise ship *Celestyal Discovery* at the port of Lavrio. The fuel was another with 20% derived from waste cooking oil and mixed with fuel oil.

Captain George Koumpenas, Celestyal COO, said: "This initiative marks a meaningful shift toward sustainable cruising. We are proud that the *Celestyal Discovery* is taking the lead in the efforts to reduce the environmental footprint of the cruise sector in our country."

With the ongoing effects of Houthi attacks in the Red Sea and Israel's attacks on Gaza – Piraeus fell to fifth on the list of Europe's busiest box ports last year, traffic dropping 6% to 4.8m TEU, in part because of the shift in traffic – and no sign of imminent peace across the Black Sea, cruise traffic and the tourist trade are a key part of the Greek maritime sector and the bunker industry supplying it.

It's no surprise, then, that the government announced in April a €139m investment programme to overhaul passenger infrastructure at the country's ports. A report last year from the Panhellenic Union of Merchant Marine Captains described many of the country's ports as antiquated and said that some of them were dangerous as a result of a lack of dredging, congested approaches and a lack of shoreside passenger facilities.

Simultaneously, the government is aiming to expand its tourist season beyond the usual spring-autumn months. It's certainly good news, then, that MSC Cruises has made a point of expanding its offerings this spring, with six of its ships due to be operating out of Piraeus across the summer season, with the MSC Sinfonia continuing to offer cruises through the winter months as well, following a successful trial winter season last year. Piraeus saw a record of over 1.7m cruise passengers in 2024 from 810 vessel calls, of which 1m were homeport passengers from 600 vessel calls.

"Greece is extremely important to MSC Cruises. We are proud to further strengthen our presence in the region, with a yearround presence," said the line's CEO Norbert Stiekema. "With six of our ships calling at and based in Greek ports this summer, and with our brand Explora Journeys offering luxurious itineraries in the Eastern Mediterranean, we are giving our guests more opportunities than ever to explore the beauty, culture, and heritage of this unique country."

As with other parts of the region, there are also projects in Greece taking a longer view towards decarbonisation. This year, the Port of Thessaloniki (ThPA) embarked on a one-year pilot under Greek maritime environmental body HELMEPA and the METAVASEA project, a 70-body-strong collaboration backed by the Lloyd's Register Foundation. The five-year project aims to map the existing infrastructure for maritime decarbonisation in Greece, Cyprus and the Eastern Mediterranean, as well as to empower seafarers, port workers, and maritime executives through the development of flexible training tools for retraining.

One of its keystones is to assesses preparedness for new fuels (Greece, as it currently stands, lagging behind some of the other Mediterranean coastal states in this regard) and identify key challenges in improving operational efficiency in ports and shipping. ThPA is piloting the use of RightShip's Maritime Emissions Portal to track and reduce emissions from vessel calls and activity in the port as part of the project's aim to employ data-driven action.

"At ThPA, sustainability is at the core of our strategy," said Athanasios Liagkos, executive chairman of ThPA's board. "Piloting the MEP reinforces our role in setting new standards in the port industry. By tracking and measuring value chain emissions from incoming vessels, we gain vital insights into the environmental impact of this activity, enabling targeted actions that support 'greener' practices in the maritime industry."

Malta is also looking towards upgrading infrastructure and preparing the island's shipping sector for alternative fuels. At the start of the year, the government put forward its National Energy and Climate Plan to the European Commission, with a raft of measures applying to both Maltese shipping in general and bunkering specifically. The plan would see alternative fuels promoted, port infrastructure upgraded to support this transition and greener operations in general, and further emissions reductions measures in general.

The plan acknowledges that Malta's maritime sector is going to be competing for use of new fuels with other industries, and that supply of fuels like LNG and green hydrogen will therefore have to be sufficient to cover all demand, and that affordability barriers need addressing.

Maltese vessel traffic has steadily increased over the past decade as the island positioned itself as a key transshipment hub. The comparatively small size of the island means putting a lot of those port operations, particularly at Valetta, in close proximity to population centres and has made air emissions an ongoing area of concern.

March saw Carnival UK and P&O sign a first deal with Transport Malta to purchase power from the island's national grid while its vessels are docked in Valetta's Grand Harbour. The use of shoreside power should "significantly" cut air pollution. One of MSC's cruise ships became the first vessel to use the shore hookup since the facility became operational in July, last year. Given the appeal, both from the operators' side in terms of efficiency and image, and the port side in terms of air quality, this seems set to become standard.





FRIENDS IN NEED

Bunker suppliers all along the route around the Cape of Good Hope have benefited from ships avoiding the Red Sea, with clear fuel hubs developing – though not at the Cape itself, John Rickards reports

he comparative boom times enjoyed by African bunker suppliers in the wake of ongoing Red Sea attacks has lasted well into 2025, and it's no surprise that a regional market dominated by a couple of international major suppliers and an array of national bunkering firms trading off the back of their respective countries' oil stocks or locations close to East-West shipping routes has seen significant expansion from newcomers and growth in local outfits.

South Africa should have been perfectly placed to take advantage of the slew of vessels steering clear of the Red Sea. However, longstanding issues with local supply coupled with bunkering being stopped in Algoa Bay for well over a year – it eventually restarted in February – has meant that bunker sales have continued to slide across 2024. Total fuel sales last year amounted to under 900,000 tonnes, a sharp decline from the country's heyday.

Various government measures down the years both for and against the fuel sector have meant a mix of regulations, port congestion, high costs and all backed by only limited shoreside infrastructure. On top of which, Astron Energy remains the only local refiner producing marine fuels, leaving the market heavily reliant on more expensive imported fuels. While South African bunkerers continue to press for change in the hopes of reinvigorating the country's fuel market, it's been up to other potential hubs to take advantage of traffic shifts and stake a claim to be regional bunkering powerhouses. West African bunker demand rose 18% last year, and Global Fuel Supply became the latest to take the plunge into the region's waters by launching its own physical supply operation out of Luanda, Angola, at the end of February. Bunkering is provided by the newly chartered 5,498 dwt tanker *RLO Explorer*.

"We see tremendous opportunity for growth and expansion in the West African market," said Bijan Shahbaz, managing partner and COO of GFS. "With some of the most dedicated professionals in the industry, we are fully prepared to add even more value for our customers by delivering a smooth, seamless service that sets new standards in this region."

The company was at pains to point out the tanker's relatively short length as an advantage in terms of going alongside oil platforms and floating storage, while also keen to highlight that it is fitted with flow meters and is capable of handling e-BDNs.

In the case of the latter, GFS said it had become the first physical supplier in West Africa to offer fully digitalised bunker operations in April by joining Ofiniti's FuelBoss platform.

"We are excited to bring digital innovation to our West Africa operations with Ofiniti," said Lamin Bara, GFS' chief commercial office. "This marks a key milestone in our commitment to delivering smarter, faster, and more transparent services to our customers." "Global Fuel Supply joining Ofiniti is a great testament to how technology can play a part in enabling expansion into new markets," Ofiniti's Oliver Brix Sparsø added. "At Ofiniti, we are confident that the FuelBoss platform can offer increased value for suppliers anywhere in the world."

Further north, Osprey Energy Marine launched a new physical supply operation at Abidjan towards the turn of the year, offering in-port bunkering.

Monjasa, the longest-standing international supplier and one of the dominant players in the market, added two further tankers (one to replace an existing one repositioned to Panama) to its West African fleet last year. One was a length-restricted vessel to service the offshore sector. The 7,858 dwt *Monjasa Hunter* "brings new and specialised capabilities to the Monjasa fleet," the company said.

Group shipping director Torben Maigaard Nielsen added: "Unlike our other tankers in West Africa, which are too big in size for this purpose, *Monjasa Hunter* offers a distinct advantage for offshore operators in the region. Thanks to her overall length of 101m and her relatively large carrying capacity compared to her size, *Monjasa Hunter* can support niche length-restricted fuel operations, including FPSOS."

The company rolls its African sales volumes in with the Middle East in its financial reports, so it's hard to say for sure



how much it's benefited directly from the Red Sea shift, but Monjasa's Middle East and Africa combined sales volumes rose over 20% in 2024 – broadly in line with the WAF region's uptick as a whole.

To the east, Mauritius has been one of the big winners in the move away from Suez – and the halt to bunkering at Algoa Bay. The country's bunker sales nearly doubled last year to just under 1m tonnes after a lull in growth post-pandemic. Of note, the share of total sales accounted for by HSFO doubled to 22.83% as large scrubber-equipped vessels stopped for fuel. Mauritius is currently planning to more than double its onshore bunker fuel storage in the near future to just over 175,000 tonnes. The country's government remains keen on turning it into a key Indian Ocean hub, and to be prepared for future fuel developments, with LNG bunkering already one possibility in the coming years.

Mozambique is a smaller bunker destination but has seen steady increases in its offerings in recent years and a growing volume of bunker-only calls at anchorage. Late last year, Maputo Port Development Company signed an extension to its bunkering operating agreement with CPG Bunkering which has seen the company deploy a second tanker to Maputo, expanding services on offer. The exclusive agreement covers all grades of marine fuels, lubricants and ship-to-ship transfer services. On top of that, during the extension period, CPG Bunkering has agreed to evaluate the possible supply of alternative bunker fuels such as biofuels, LNG, methanol and ammonia at Maputo.

This year's Maritime Week Africa saw various discussions of interest to the bunkering world, with South Africa's Linsen Nambi and its CEO Durand Naidoo in particular raising interesting points on aspects of the future of the industry and the considerations that have to be kept in mind when applying them to the African market.

In the closing leadership panel, which included Naidoo, the subject of mass flow meters and whether or not they should be compulsory was raised. Afterwards, the company put out a statement on the topic:

"From an African perspective, this question cuts deep," Linsen Nambi said. "We have invested in mass flow meters across our fleet to attract blue chip customers but for many independent barge owners, especially in developing markets, the cost of installing mass flow meters is not just financial – it's operational. Taking a barge out of service to install the equipment means lost revenue in already tight operating environments. The capital expenditure, combined with downtime, could significantly raise the barrier to entry and disadvantage smaller or emerging players, many of whom are African-owned."

"If mass flow meters become a baseline order qualifier instead of a competitive order winner, we risk creating a market where only the most well-capitalised players can compete—further marginalising local businesses. As leaders in this space, we must ask: How do we drive progress without leaving our own behind?"

All salient points. The company was similarly forthright on the subject of decarbonisation, raised during the opening day's sessions.

"The global energy transition, while necessary, comes at a cost – and in Africa, that cost could be disproportionately high," Linsen Nambi said.

"As the world pushes towards decarbonisation, we must also acknowledge that this shift can increase inflation, especially in regions where energy alternatives are still unaffordable or unavailable. Over 600 million Africans still live without access to electricity. The rise in energy costs will squeeze households further, decreasing disposable income across many developing nations and slowing economic progress."

"If the transition isn't inclusive and realistic, we risk leaving entire populations behind. Africa must be at the table – not just to comply, but to co-create solutions that are sustainable and socially just."

Equally salient. Particularly given the current geopolitical climate, African coastal states could have a key role in energy shifts, so long as they're fully involved.





TANGER MED: MOROCCO'S RISING POWERHOUSE IN THE GIBRALTAR STRAIT BUNKERING MARKET

Strategic investment, cutting-edge infrastructure, and sustainable innovation propel Tanger Med to the forefront of global marine fuels supply

ommanding the gateway between the Atlantic Ocean and the Mediterranean Sea, Tanger Med Port is rapidly emerging as one of the most dynamic players in global trade, logistics, and maritime services. With an expanding focus on bunkering, Morocco's flagship port is now challenging established regional leaders in the competitive Strait of Gibraltar fuel market.

Strategically located just 14 kilometers from the European Union and flanked by the high-traffic corridors of Algeciras and Gibraltar, Tanger Med has combined world-class infrastructure with consistent growth to reinforce its position as a critical maritime hub. In 2024, the port set new benchmarks by handling an unprecedented 10.24 million TEUs an 18.8% year-on-year surge that underpins its rising profile among the world's top container ports and signals growing bunkering potential alongside increased vessel traffic.

Record-Breaking Growth and Global Connectivity

Since surpassing 5.77 million TEUs in 2020, Tanger Med has charted an extraordinary growth trajectory. In 2024, the port shattered its own benchmarks, handling 10.24 million TEUs-an 18.8% year-on-year surge. This stellar performance reflects deep collaboration among terminal operators and global shipping alliances, paired with optimized port call management that minimizes vessel turnaround times. As Tanger Med accelerates toward joining the ranks of the world's top 20 container ports, its expanding throughput is also fueling demand for auxiliary services such as bunkering.

Diversification has been central to Tanger Med's resilience. In 2024, the port handled a record 142 million tonnes of goods, a 16.2% increase from the previous year. Ro-Ro traffic climbed to 516,842 trucks (+8.1%), underpinned by strong industrial exports (+6.8%) and a flourishing agribusiness sector (+7.2%). Vehicle exports rose to 600,872 units (+4%), driven by output from Renault and Stellantis. Meanwhile, passenger traffic staged a robust recovery, reaching 3,047,387 travelers, a 13% uplift buoyed by a successful Marhaba operation.

Overall ship calls rose 3.4% to 17,479, with mega-ship visits (over 290 meters) advancing 13.7% to 1,217 calls. These numbers reflect not only Tanger Med's growing operational capacity but also a rising appetite for high-quality bunkering solutions.

A Smart Port Underpinned by Innovation

At the heart of Tanger Med's ascent is a forward-thinking digitalization strategy. Its Port Community System integrates e-payments, just-in-time (JIT) logistics, artificial intelligence, and machine learning, all designed to accelerate cargo flows and optimize service delivery. A strategic alliance with Wärtsilä further enhances its Smart Port capabilities, deploying advanced data analytics to fine-tune operations and support predictive logistics.

Such innovation ensures Tanger Med delivers the operational precision modern shipping lines demand, an advantage that seamlessly translates into the efficiency of its bunkering activities.

Rising Force in the Bunkering Arena

Tanger Med, long established as Morocco's leading export hub handling over 50% of the country's trade, is now positioning itself as a premier marine fuel supply center in the Strait of Gibraltar. With a strategic focus on bunkering, the port competes head-tohead with established giants like Algeciras and Gibraltar, offering shipowners a highly competitive, congestion-free alternative supported by state-of-the-art infrastructure and comprehensive services.

Key assets in its bunkering portfolio include three dedicated oil berths, seven operational bunker barges, and two offshore anchorage zones free from congestion, with an annual bunkering capacity of 6 million tonnes and total oil handling capacity reaching 15 million tonnes per year.

Central to this offering is Horizon

Tangiers Terminals, with over 530,000 m³ of storage capacity. In partnership with Minerva Bunkering, one of the world's leading marine fuel providers, the terminal guarantees flexible 24/7 fuel delivery, both at berth and at anchorage, complemented by integrated services such as fuel sampling, laboratory analysis, and rapid turnaround.

With the introduction of ECAMED Horizon, Tangiers Terminals and Minerva have collaborated closely to ensure a seamless transition, effectively supporting their partners in complying with the new regulations.

Tanger Med's increasing vessel calls, and rising tonnage point to a sharp uptick in bunkering activity, further fueled by shifting regional dynamics. Tanger Med has capitalized on its modern facilities and minimal congestion to steadily capture a larger share of the regional marine fuel market.

Strategic Location Meets Operational Advantage

Tanger Med's competitive edge lies not only in its infrastructure but in its enviable geostrategic location. Situated directly on major East-West trade routes, it offers fast access to offshore anchorage points, minimal waiting times, and seamless connectivity to North African and European markets.

Its consistently low congestion levels provide shipowners with operational predictability an increasingly valuable proposition in an era of tight sailing schedules and mounting decarbonization pressures. For bunker suppliers and traders, Tanger Med offers a gateway to expanding West African, Mediterranean, and transatlantic markets.

Pioneering Sustainability in Marine Services

Beyond operational capability, Tanger Med is advancing ambitious environmental initiatives aligned with the evolving priorities of the global bunkering sector.

Tanger Med is fully committed to the energy transition and aims to achieve carbon neutrality across all its activities by 2030. In this context, an ambitious decarbonization roadmap was launched in 2022, supported by a \$200 million investment program, with the main objective of meeting electricity needs through renewable energy sources.

The port has deployed Onshore Power Supply (OPS), enabling vessels at berth to plug into the electrical grid, significantly reducing greenhouse gas emissions and cutting pollutants associated with auxiliary engines.

Outlook:

A Future-Ready Bunkering Hub

Looking ahead, Tanger Med's trajectory remains exceptionally strong. With sustained investment in infrastructure, advanced digitalization, and a bold sustainability agenda, the port is primed to deepen its footprint as a world-class logistics and bunkering hub. Its unique blend of technical sophistication, strategic location, and operational agility continues to attract leading shipping lines, fuel suppliers, and global traders.

In short, Tanger Med today stands not just as Morocco's trade linchpin, but as a dynamic, future-ready maritime gateway delivering competitive, efficient, and sustainable bunkering services. As global shipping evolves and environmental mandates intensify, Tanger Med's integrated strategy positions it firmly at the vanguard of international bunkering for years to come.





FOBAS FUEL QUALITY INSIGHT

The latest report in the FOBAS Fuel Insight series on fuel quality trends highlights regional issues and increased use of biofuels

he most recent FOBAS Fuel Insight from Lloyd's Register's Fuel Oil Bunker Analysis and Advisory Service (FOBAS) teams found regional-specific issues, particularly with residual fuels, where off-spec sulphur results and high total sediment levels were common problems.

The majority of residual fuels bunkered in 2024 were on-spec particularly when allowing for the 95% confidence range of the specific limit. One of the biggest issues remains off-spec sulphur results. Close to 2.5% of Residual-based VLSFO fuels, based on the recipient's sample, had a tested sulphur of between 0.50%m/m and 0.53%m/m (figure 2); these fuels can be considered still usable and, in compliance with Marpol Annex VI and the 0.50% limit, any onboard samples taken during an inspection have this same tolerance range up to 0.53%m/m applied.

However, FOBAS cautions, results in this range still cause some confusion and concern with ship operators, and suppliers should therefore still be aiming to meet the 0.50% limit exactly with the margin of error on the lower side of the limit (i.e. 0.47%m/m or below). These numbers continued to improve in 2024 after reducing already in 2023 (figure 3) but are still an issue. But FOBAS notes that "with close to 0.80 % of VLSFO fuels having sulphur tested to be higher than 0.53%m/m, this becomes a bigger problem for the vessel. These are potentially non-compliant fuels and, unless the vessel carries an Exhaust Gas Cleaning System (EGCS), there are not many other options except for de-bunkering. Exceptions for the use of non-compliant fuel may only be granted for safety or environmental reasons by the relevant authorities such as the vessel's flag administration.

FOBAS also identified a significant increase in the use of alternative fuels such as biofuels, especially in VLSFO and Fatty Acid Methyl Ester (FAME) blends.

The report notes: "We have seen a continued increase in the use of biofuels and in particular VLSFO/FAME blends falling under the new 8217:2024 RF grades (although still more often referred to as B30 or similar). This range of VLSFO to FAME seems to be common for a number of reasons. Firstly, it leaves the product still with properties generally in line with a standard VLSFO. The % of FAME is also limited in some ports by regulations relating to what the supply barges can and cannot carry depending on their class i.e. whether an IBC Annex 1 tanker, which bunker barges are very often, or an IBC Annex II rated chemical product tanker. From our experience, B30 FAME-based fuels have been used now by a number of vessels without any reported problems. It is important to realise that with 70% VLSFO the majority of issues reported relate to this part of the blend rather than the 30% FAME, whether relating to high Sulphur, cat-fines, Sediments etc., all of which are not an issue with FAME. Where there may be problems is when the FAME itself does not meet the required guality standard, such as EN14214. So far this does not seem to have been a big issue, but looking ahead as the supply of FAME may struggle to match increased demand, there may be a risk of lowering of quality, which will need to be monitored."

"Rigorous monitoring of biofuels needed"

As shipping increases its use of biofuels to meet stricter emissions regulations, CM Technologies (CMT) is urging shipowners to adopt rigorous monitoring practices to mitigate the risks posed by biodiesel blends.

It cautions: "While these fuels are seen as a key pathway to decarbonisation,



their chemical make-up presents new operational challenges."

"The push for biofuels is transforming marine fuel strategies," said David Fuhlbrügge, CMT's Co-Managing Director. "But with that shift comes the need for greater diligence. Operators must actively monitor fuel quality to prevent issues that could compromise engine efficiency, reliability, and compliance."

CMT notes that IMO's emissions targets and the latest ISO 8217:2024 fuel standards have cleared the way for higher biofuel content in marine fuels, with blends ranging from 10% biodiesel to 100% pure FAME. "However," the company warns, "without proper oversight, biofuels can lead to fuel instability, corrosion, and mechanical wear, driving up maintenance costs and increasing operational risks."

CMT notes that DNV research has found the solvent-like nature of biofuels can dislodge tank residues, clogging filters and separators. The higher acidity in biofuels also risks increased corrosion, making lubrication adjustments essential. Higher BN (Base Number) lubricants will be required to neutralise acids and protect components from excessive wear. Biofuels also absorb more water, which fosters microbial growth and fuel degradation.

The latest advice from global non-profit association promoting the development of ship propulsion, train drive and power generation, CIMAC also highlights concern over high FAME content, particularly with regards to fuel stability and long-term storage.

"Research has reinforced the need for biofuel users to regularly monitor fuel and engine performance," said Fuhlbrügge. "Biofuels do offer sustainability benefits, but without the right monitoring and management, they can result in long-term engine damage, significant downtime and costs. Marine engines designed for conventional fuels will require operational adjustments to handle high biofuel concentrations, while fuel heating and purification systems should also be optimised for biofuel properties." CMT says it has seen a surge of interest for its test kits from the cruise industry, indicating the sector's preference for the fuel as a way of meeting sustainability goals.

"When different fuels are blended onboard, the risk of fuel instability and compatibility issues increases, so it is important ship managers and crews continue to test and monitor this fuel regularly," Fuhlbrügge says. He adds: "The low energy density of some biofuels could also mean more fuel is required to maintain voyage range. This will certainly impact bunkering strategies and procurement planning, making compatibility testing essential when mixing biofuels with conventional fuels. Otherwise fuel and lube oil inconsistencies could be missed leading to unexpected cruise itinerary cancellations."

With feedstock variability and different blending methods, CMT advises shipowners to implement strict testing protocols for viscosity, stability, and water content analysis. These checks help validate biofuel batches before use, preventing unexpected performance issues.

"With tightening fuel standards and alternative fuels becoming mainstream, shipowners must adopt systematic fuel monitoring to safeguard engine reliability and regulatory compliance," says Fuhlbrügge.





MFM - THE KEY ISSUES

Piero Padroni, General Manager of mass flow meter manufacturer Krohne's Global Marine Division, gives his views on the introduction of mass flow meters

have been participating in IMO discussions since 2007, being part and cooperating with several NGOs and Flag Administrations. And I recall when — promoted by several governments, shipowners' associations, and NGOs the IMO developed the Bunker Licensing Scheme regulatory framework, aimed at ensuring the consistent and transparent supply of compliant marine fuels in terms of both quality and quantity.

The IMO called on Member States to adopt the scheme and act against fuel oil suppliers found to be delivering fuel that does not comply with the specifications stated on the Bunker Delivery Note (BDN), in order to enhance the safety of ships and their crews.

In parallel, the Bunker Licensing Scheme may help reduce the number of claims and disputes, along with the associated costs in terms of time wasted by operators, the visibility and reputation of Port Authorities, and financial losses for all stakeholders involved.

Singapore was a pioneer in mandating the use of Mass Flow Metering (MFM) bunker systems, which have proven to work effectively. Following this example, several Port Authorities are now working to incorporate MFM systems within their Bunker Licensing Schemes.

Today, some of the most important Port Authorities in the EU — such as those in the ARA region (Amsterdam-Rotterdam-Antwerp) — are also taking the lead by requiring MFM bunker systems as part of their licensing frameworks, adopting both EU Directives and international standards. As of today, fuel costs account for approximately 50–60% of a ship's total operating expenses.

The new alternative and green fuels entering the market are even more expensive than traditional heavy fuel oil (HFO), partly because they are not yet available on the large scale required by the shipping industry.

With such significant economic value at stake, it is reasonable to expect that more governments and port authorities will adopt the use of Mass Flow Metering (MFM) bunker systems within their licensing frameworks.

What we must keep in mind is the importance of maintaining a practical perspective, and there are two important aspects to be taken into consideration with the mandatory application of MFM bunker systems.

Firstly, there is the regulatory point of view. If I were a bunker tanker operator, I would need to move my vessels according to market demand. Given that the maritime industry is highly global, I would want the flexibility to operate my tanker vessels in major ports such as Rotterdam, Singapore, South Africa, the Middle East, Korea, and beyond, without facing complications due to differing local regulations regarding MFM bunker systems.

In other words, applicable regulations should be harmonised to allow the best shipowners and tanker operators to operate seamlessly across the globe. Secondly, there is the question of how to finance the use of MFM bunker systems.

Coriolis MFM bunker systems provide highly accurate measurements but being advanced technology, they are not inexpensive.

Additionally, many MFM systems on the market have a larger omega-shaped design, requiring significant modifications to the pipeline and occupying considerable space within the infrastructure.

As such, also the installation process may incur substantial costs. Bunker tankers owners and operators deciding to install MFM bunker systems are forerunners and should be recognised and supported in their bold investments.

So, port authorities and local networks should provide appropriate financing to assist the use of MFM bunker systems in their ports. There could be several ways.

By doing so, they will not only contribute to the overall improvement of the marine bunker process, but will also benefit from increased bunker operations, reduced disputes, and enhanced global visibility.



Piero Padroni, General Manager , Krohne



CLAIMS, COUNTER-CLAIMS AND SCIENCE

The use of scrubbers to meet IMO sulphur emission limits is growing but is also increasingly controversial, with scientific research results being used both for and against this technology

he use of scrubbers has got to be one of the most contentious environmental issues for the shipping industry apart from the ongoing decarbonisation debate. At IMO opinions among member states are sharply divided with some opponents calling for not only open-loop systems to be banned but also closed-loop ones as well.

Those wanting to see scrubber use phased out have been buoyed up recently by Sweden's decision to ban the use open-loop scrubbers as of 1 July this year and even of closed-loop systems as of 1 January 2029.

Meanwhile the uptake of scrubbers continues as considerable effort is put into developing scrubber technology to remove CO_2 from emissions (See our Carbon Capture report on page 67). It has not escaped the notice of both sides in this argument that killing off scrubbers now would also stop progress towards carbon emission free technologies that could continue to use fossil fuels. That is anathema to some and seen as common sense by others.

Anders Skibdal, CEO of scrubber manufacturer PureteQ Group, tells *World Bunkering:* "Notably, 25% of newbuild vessels opt for scrubbers, while the majority of dual-fuel ships also integrate scrubber systems, indicating a pragmatic approach considering the limited availability and cost of new fuels in the foreseeable future."

Skibdal says his company's main business is servicing all brands of scrubbers globally. He says: "Currently, we cater to over 25% of scrubber-fitted vessels worldwide. Scrubbers are ageing so we provide comprehensive pre-inspections for impending 5-year drydockings. Our drydocking services encompass overhauling crucial components like pumps, fans, internal structures, and compliance equipment that necessitate attention when scrubbers are operational."

Asked how the scrubber market is developing, he says: "In response to the evolving SECA status of the Mediterranean Sea, many vessel owners are upgrading their water treatment systems for longer voyages. These include PureteQ's Purepass standalone filtration unit." "Even in Europe," he adds, "we witness a trend of smaller vessels adopting scrubber retrofits, despite the cost

disparity between HFO and low sulphur

fuels."

Is Skibdal worried attempts by some green campaigners to have scrubbers banned completely. He responds: "Scrubbers play a crucial role in enabling the installation of solvent-based Onboard Carbon Capture Systems (OCCS) on ships. With the increasing presence of EGS and ICER systems (which also incorporate scrubbers), along with the necessity of scrubbers for new fuels to address unwanted emissions, concerns are mitigated. Scrubbers serve as highly efficient technology that captures airborne emissions, converting them into a manageable form without causing pollution; the real concern lies with fuel emissions. A scientific perspective suggests that environmental advocates focus on influencing policymakers to reinforce emission regulations rather than targeting scrubbers. Shipowners may need to transition from open-loop scrubbers to hybrid or closed-loop systems.

The emphasis should be on setting clear requirements, ensuring legislation, and effective monitoring to drive technology advancements in compliance with evolving limits."

On the other hand the rhetoric against scrubbers is ramping up. Reporting Sweden's scrubber bans the journal *Offshore Energy* recently wrote: "Our planet's oceans are set to get a little bit cleaner thanks to a new ban tidying up the shipping industry in Sweden."

It reported Romina Pourmokhtari, Sweden's Minister for Climate and Environment, as saying: "Emissions from ship scrubbers are — even in very low concentrations — harmful to our marine environment."

As *Offshore Energy* noted approvingly: "The ban in Sweden is part of a larger global effort to ban emissions from scrubbers and protect open seas worldwide. Finland's government has already decided to prohibit scrubber water from being discharged in the ocean, and Denmark is working toward banning the practice soon as well. Yet, since oceans have no borders, pollution from scrubbers in one region has the potential to spread all over. Ultimately, a global scrubber discharge ban is needed to address the broader issue and replace heavy fuel oil with more sustainable alternatives."

Sweden's position on scrubbers has been heavily influenced by research carried out by the country's Chalmers University of Technology. It reported in 2022 that a study showed that the discharge water from ships' exhaust gas treatment systems was responsible for up to 9% of certain emissions of carcinogenic and environmentally harmful substances in the Baltic Sea, which was "considerably more than was previously known".

However, the results of a newly published major study challenge the basis of much of the opposition to scrubbers.

A peer-reviewed study conducted by the Massachusetts Institute of Technology and the Georgia Institute of Technology in cooperation with Oldendorff Carriers finds that for large, ocean-going bulk carriers operating in open seas, heavy fuel oil (HFO) used with a scrubber can, in various instances, outperform lowsulphur fuels when assessed from a life cycle perspective.

The study was commissioned by Oldendorff in 2021 to generate independent data on scrubber performance under real operating conditions. Testing was carried out during a voyage of the 209,131 dwt *Hedwig Oldendorff* from Taicang to Hong Kong.

The study also provides scientific evidence that open-loop scrubber washwater discharges are well within IMO environmental thresholds, while being significantly lower than stringent US and EU limits for municipal and industrial effluents. Even under a conservative 1,000-fold dilution assumption, the expected final concentrations in receiving water bodies remain significantly below EU environmental quality standards and US EPA water quality criteria for marine ecosystems.

"Studies like this are urgently needed to resolve complex environmental questions, uncover unknowns, and support science-based policy and decision-making in the shipping sector and beyond. While many reports have been released on this topic, peerreviewed studies are limited. The peerreviewed studies are limited. The peerreview process is essential to ensure scientific rigour and build trust in the results." Patricia Statehouse, Assistant Professor in the School of Chemical and Biomolecular Engineering at Georgia Tech and Lead Author of the study, states.

According to Oldendorff, most earlier studies evaluating scrubber impact lacked a complete well-to-wake life cycle assessment, and many were based on outdated data from first-generation systems. These limitations "contributed to continued regulatory uncertainty". The company says that the new study, published in the American Chemical Society journal, *Environmental Science and Technology*, addresses those shortcomings, using up-to-date data on air and washwater emissions from a modern scrubber system operating at sea.

"This study demonstrates the scientific complexity of the waste stream of scrubbers. Having finally conducted a multi-year, comprehensive and peerreviewed study, commonly held fears and assumptions are now put to rest.

For far too long, regulators and the shipping industry have relied on outdated or incomplete scientific analysis when developing regulations with profound financial impact on shipping," Scott Bergeron, Managing Director Fleet at Oldendorff Carriers, concludes.

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EU CASH FOR FUEL FROM WASTE

€7.7m investment from European Innovation Council for XFuel

Fuel a producer of "high-grade sustainable drop-in fuels and carbon removal for the transport sector", says it has secured €7.7 million in blended finance from the European Innovation Council (EIC), helping it bring its fuel-from-waste technology to transport markets.

EIC Accelerator is a funding programme under Horizon Europe, the EU's framework for research and innovation. It offers support to start-ups and SMEs that have an innovative, game changing product, service or business model that could create new markets or disrupt existing ones in Europe and even worldwide. The accelerator offers grants of up to ≤ 2.5 million combined with equity investments through the EIC Fund ranging from ≤ 0.5 to ≤ 15 million (up to ≤ 10 million as of 2025). In 2025, the EIC is expected to allocate more than $\leq 1.4b$ of funds

Mallorca, Spain-based company XFuel says it has developed proprietary conversion and refining technologies that can produce cost-competitive low-carbon drop-in fuels for the transport sector. These are produced from a variety of scalable waste materials, with a focus on industrial hydrocarbons and biomass residues. It adds that the drop-in nature of its fuels mean that it meets fossil fuel specifications and performance, "making them fully compatible with existing combustion engines and fossil fuel infrastructure and allowing for direct replacement today". XFuel says its products require no capital expenditure and significantly reduce operational costs by owners when compared to other decarbonisation options in the industry.

XFuel says it has developed two novel technologies that produce high-grade transport fuel; chemical liquid refining (CLR), which can refine and crack hydrocarbon liquids and residues into ultra-clean drop-in transport fuels for marine, road and aviation sectors, and mechanical carbon conversion (MECC), which co-processes lignocellulosic waste biomass and waste oils to produce low carbon transport fuels and biochar.

The EIC funding enables XFuel to progress its CLR technology to market, an innovation designed to convert hydrocarbon waste into ultra-clean, low-carbon fuel. The immediate focus is on delivering sludge-derived marine gas oil (MGO) grade fuel, with anticipated GHG emissions savings of up to 85% under the EU RED II framework for recycled carbon fuels.

Nicholas Ball, CEO and founder of XFuel, commented on the funding: "XFuel has developed unique and innovative technology to deliver our long-term vision to provide sustainable fuels for heavy transport sectors. We see many organisations seeking good value and the sustainable disposal of their waste, while transport fuel off-takers are urgently seeking affordable, low-carbon fuel, not least as regulations tighten and the cost of carbon starts to bite. With the EIC award, we can now strive to bridge this gap and unlock a viable solution to decarbonise these hard-to-abate sectors starting today. This is a major milestone in our mission to scale our low-carbon fuel solutions across Europe and beyond."

XFuel says it is the first company to produce low-carbon drop-in transport fuel at a comparable price point to fossil fuels and that it has signed MoUs and Lols with "high-profile off-takers in the maritime sector, including world-leading container lines and towage solutions providers".



TRAINING CREWS FOR NEW FUELS

As the decarbonisation process accelerates the global shipping industry, and its regulators are moving to prepare the workforce for this fundamental change

n February IMO took a significant step forward in setting out a framework ensuring crews are properly trained for operating vessels with novel fuels and systems. Its Sub-Committee on Human Element, Training and Watchkeeping (HTW) has agreed on draft interim generic guidelines for training seafarers working on ships powered by alternative fuels and new technologies. These draft guidelines will be submitted to the Maritime Safety Committee for approval in June 2025.

The Sub-Committee agreed that such guidance should be provided through both generic interim guidelines applicable across the whole industry and relevant to all alternative fuels and new technologies and also through individual sets of fuel/ technology-specific interim guidelines, closely aligned with safety provisions developed by other IMO bodies. With the draft interim generic guidelines finalised, the Sub-Committee has now begun developing specific training guidelines for seafarers working on methyl/ethyl alcoholfuelled ships.

This work will continue between meetings under the Correspondence Group on the Development of Training Provisions for Seafarers on Ships using Alternative Fuels and New Technologies.

The Correspondence Group has been tasked with developing interim guidelines for training seafarers, including individual sets of guidelines for: the use of methyl/ ethyl alcohol as fuel; the use of ammonia as fuel; hydrogen fuel cell powered ships; the use of LPG as fuel; the use of hydrogen as fuel; and battery powered ships. These will consider existing interim safety guidelines for ships using methyl/ethyl alcohol, ammonia and LPG as fuel, as well as hydrogen fuel cell powered ships.

Meanwhile Singapore is also preparing for challenges of decarbonisation for ship's staff. The Maritime and Port Authority of Singapore (MPA) has set up the Maritime Energy Training Facility (METF) Digital Platform, an initiative to help the global maritime workforce access training in the safe handling of alternative marine fuels and new technologies. The prototype platform was showcased in March at the Accelerating Digitalisation and Decarbonisation Conference at Singapore Maritime Week (SMW) and, MPA says, "will be ready by the second half of 2025".

The METF was first announced at SMW 2024. Since then, MPA has engaged training providers, shipping companies, and maritime associations to align training standards with industry needs. These efforts have led to the development of the METF Digital Platform, a training management system that simplifies access to training, streamlines certification issuance, and ensures alignment with evolving international standards.

The METF Digital Platform offers maritime companies, seafarers and maritime

professionals a systematic and easy way to find relevant courses, register and pay for them. Training progress and certifications received can also be tracked through the platform, helping both companies and individuals monitor compliance with the relevant industry and regulatory standards. By streamlining administrative processes such as training grant eligibility and certification management, the platform reduces the administrative burden on maritime companies and makes training easily accessible for seafarers and maritime professionals. The platform is currently offered to Singapore-based maritime companies and/or Singapore-registered ships. This would be extended to more companies and stakeholders, including those based overseas, in the next phase.

In April it was announced that technology company Wärtsilä will introduce the Methanol Power and Control (PAC) simulation model in partnership with the METF and Singapore's Wavelink Maritime Institute. This model will help maritime professionals acquire the knowledge and competencies needed to operate methanol-powered vessels safely and efficiently. Wavelink Maritime Institute will be the first MPA-accredited training partner to use this innovative simulation model launched at SMW 2025. Wärtsilä will also introduce the Ammonia PAC simulation model in early 2026 to further enhance the industry's capabilities to handle and operate ammonia-powered vessels.

US DOUBLES DOWN ON YEMEN SANCTIONS

P&I Clubs circulate new guidance on sanctions against Houthi rebels

he major P&I clubs have issued similar circulars to their members that provide information in conjunction with a recent press statement on the United States' State Department's position regarding support to terrorist organisations, such as the Houthis.

Steamship Mutual notes that on 9 April US spokesperson Tammy Bruce stressed: "The United States will not tolerate any country or commercial entity providing support to foreign terrorist organisations, such as the Houthis, including offloading ships and provisioning oil at Houthi-controlled ports".

In early March 2025, the clubs note, the US Office of Foreign Assets (OFAC) designated Ansarallah (as the US government terms the Houthis) as a Foreign Terrorist Organization (FTO) pursuant to Executive Order 13224, by updating the existing Ansarallah entry on the Specially Designated Nationals and Blocked Persons List (SDN List). Ansarallah was already listed on the SDN List as a result of the State Department's February 16, 2024, designation of the group as a Specially Designated Global Terrorist (SDGT) organisation. Pursuant to the Executive Order 13224, U.S.- and non-US persons using US dollars are prohibited from engaging in virtually any transaction with Ansarallah or any entity owned 50 percent or more by Ansarallah. Furthermore, non-US persons risk secondary sanctions exposure under Section 1(d)(1) of Executive Order 13224, if the US determines that a non-US person has provided material

support or assistance to a person designated pursuant to that same order.

Simultaneous with the E.O.'s designation of Ansarallah as a FTO, OFAC issued General License 25A which permitted the delivery and offloading of refined petroleum products for personal, commercial, or humanitarian use in Yemen until 4 April 2025, provided such products were loaded on a vessel prior to 5 March 25?. This General License expired on 4 April 2025 and has not been renewed.

Although pursuant to OFAC GL 26A transactions "necessary to port and airport operations involving Ansarallah" are generally authorised, GL 26A expressly excludes "transactions involving imports or exports of refined petroleum product".

The clubs emphasise that GL 26A also does not authorise any payments to Ansarallah or an entity controlled by it unless "for the purpose of effecting the payment of taxes, fees, or import duties, or the purchase or receipt of permits, licenses, or public utility services." Based on these developments, if the cargo, including refined petroleum products, is going to be delivered to an Ansarallah controlled entity (or there is another Ansarallah involvement which is not required for the ordinary use of the port) then that transaction is prohibited, unless there is an exemption granted, for example under another GL, such as GL 22A here (for agricultural commodities, medicines or medical devices).

As a result, vessels discharging cargoes in Yemen may be subject to designation by the US if it involves discharge at an Ansarallah-controlled port or delivery to Ansarallah or any entity owned 50 percent or more by Ansarallah. Moreover, Members and their affiliates may also be subject to designation for their involvement in any actions involving importing or exporting of refined petroleum products to Yemen.

Steamship Mutual members considering the delivery of cargoes, including refined petroleum products to Yemen, are "strongly urged to undertake stringent due diligence as to the ownership of the intended port of discharge and the identity of the cargo receiver".

The liability insurer cautions: "In general, we recommend that Members planning port calls to Yemen exercise caution, particularly Ansarallah-controlled ports (currently understood to include at least Hudaydah and Ras Isa) as it carries a high level of risk regardless of the cargo carried - in the light of the volatile situation. Members are reminded that cover is not available for any trade that breaches applicable sanctions. Members are advised that they should conduct thorough due diligence throughout the trade on the parties, cargoes, vessels, and other service providers that are or may be involved before they engage in any trade with a high sanctions risk. Finally, Members are reminded to keep records of their due diligence investigations and findings."



OUR REGULAR ROUND-UP OF ENVIRONMENTAL NEWS

Mediterranean SECA now in force

he Mediterranean Sea became an IMO Emission Control Area for Sulphur Oxides and Particulate Matter (Med SOx ECA) under MARPOL Annex VI on 1 May 2025. The sulphur content in fuel oil for ships operating in the area is now limited to 0.1%, significantly reducing air pollution and delivering major benefits to both human health and the marine environment.

Ships operating in Emission Control Areas for Sulphur Oxides and Particulate Matter, such as the Mediterranean Sea, are subject to strict mandatory measures to prevent, reduce and control air pollution. This new ECA must comply with stricter sulphur content limits than those set by the global standard (0.10% mass by mass (m/m), compared with 0.50% m/m allowed outside SOx ECAs).

The Mediterranean Sea is home to some of the busiest maritime routes in the world, supporting 20% of seaborne trade. It is estimated that more than 17% of worldwide cruises and 24% of the world fleet navigate the Mediterranean Sea.

The Med SOx ECA is the fifth designated Emission Control Area under MARPOL Annex VI, alongside the Baltic Sea area; the North Sea area; the North American area (covering designated coastal areas off the United States and Canada); and the United States Caribbean Sea ECA (around Puerto Rico and the United States Virgin Islands). In 2024, IMO designated two further ECAs: the Canadian Arctic and the Norwegian Sea. In April 2025, MEPC 83 approved a proposal to designate the North-East Atlantic as an Emission Control Area.

Cautious welcome from shipowners for IMO's proposed global agreement on GHG reduction

"After many years of negotiations", the International Chamber of Shipping (ICS) welcomed the agreement in April at IMO, to a critically important package of new greenhouse gas (GHG) emissions reduction regulations – the "IMO netzero framework" – to help ensure that international shipping will transition to net zero by or close to 2050.

Speaking at the conclusion of the high-stakes IMO meeting (MEPC 83), Guy Platten, Secretary General of the International Chamber of Shipping said: "Today will hopefully be remembered as a historic moment for our industry. If formally adopted, shipping will be the first sector to have a globally agreed carbon price, something which ICS has been advocating for since COP 26 in 2021, when the industry agreed a net zero 2050 target. Shipping is now at the forefront of efforts to decarbonise rapidly to address the climate crisis. The world's governments have now come forward with a comprehensive agreement which, although not perfect in every respect, we very much hope will be formally adopted later this year."

He continued: "Shipowners and energy producers need a workable, transparent, and simple-to-administer regulatory framework that will create the necessary incentives to accelerate the energy transition at the pace required. We are pleased that governments have understood the need to catalyse and support investment in zero emission fuels, and it will be fundamental to the ultimate success of this IMO agreement that it will quickly deliver at the scale required. Shipping is already investing billions in new ships and green technologies to be ready for the new fuels when they arrive. We hope that this agreement will now provide the certainty which energy producers urgently need to de-risk their huge investment decisions.



"We recognise that this may not be the agreement which all sections of the industry would have preferred, and we are concerned that this may not yet go far enough in providing the necessary certainty. But it is a framework which we can build upon. We will be studying the technical detail over the coming weeks and will continue to support the IMO process so that we have a system that also works in company board rooms as well as the governments' negotiating rooms."

"Box ship efficiency not improved" claims report

Europe's container ships pollute as much per container as they did six years ago, according to environmental lobby group Transport & Environment (T&E) calls for stricter efficiency measures to ensure shipping companies sail at slower speeds and invest in energy saving technologies like wind assistance.

T&E notes that, according to the EU's latest shipping data, emissions fell slightly in 2023 compared to the year before. But T&E claims that "contrary to industry claims that ships are operating more efficiently, decreases in emissions like we saw in 2023, are likely down to a fall in trade". Recent improvements in ship technology have led to more technical efficiency in new ships, however T&E says its analysis shows that under real life conditions Europe's container ships pollute just as much on average as they did back in 2018.

A new study commissioned by T&E also found that there is likely no link between fuel prices and ship speeds, which is the biggest contributor to operational efficiency. While the study found that shipping companies tend to order more efficiently designed ships six years after higher global oil prices, no link was found between fuel prices and sailing speeds. This, T&E says, is backed up by the EU's official MRV data for 2018 to 2023.

Jacob Armstrong, shipping manager at T&E, says: "There just aren't enough incentives for ships to sail more efficiently. Shipping companies are reacting to higher fuel prices by buying slightly more efficient vessels. But the data shows that on the whole, transporting containers around isn't getting more efficient. The biggest improvements in efficiency come from sailing slower (sic). If governments put in place measures that promote real improvements in efficiency, they can slash emissions overnight."

Standardised emissions data

In April IMO confirmed the expansion of the data reference model within the IMO Compendium on Facilitation and Electronic Business (IMO Compendium) following the conclusion of the 49th meeting of its Facilitation Committee (FAL 49), adding a range of standardised emissions reporting data fields for the first time.

The new Fuel oil consumption and Cll reporting dataset within the IMO Compendium includes more than 140 data fields for environmental reporting requirements, the majority of which have been newly added by IMO's Expert Group on Data Harmonisation (EGDH) as part of the FAL 49 update. These new data fields aim to streamline emissions reporting and assist vessel operators in managing alignment with regulatory frameworks.

The move is the result of a twelve-month collaborative project involving the classification society members of the Smart Maritime Council – namely ABS, Bureau Veritas, ClassNK, DNV and Lloyd's Register – working with BIMCO, the International Association of Classification Societies (IACS) and Energy LEAP to introduce new standards for emissions data reporting.

"The introduction of these emissions data standards by IMO creates huge opportunity for the industry to streamline the collection and exchange of vessel operational data required for mandatory reporting, and to significantly improve the quality of the information collected," said Rob O'Dwyer, Chairman of the Smart Maritime Council.

Baltic Exchange's Fuel Equivalence Converter

The Baltic Exchange has launched what it describes as "the maritime industry's first-ever free Fuel Equivalence Converter, a reliable, easy-to-use digital calculator that helps owners, traders, brokers and charterers to navigate the complexity of the physical properties of the wide variety of marine fuels that are currently available on the market".

The Fuel Equivalence Converter is the latest resource provided by Baltic Exchange to help shipping players understand the cost and commercial implications of greener fuel options following the launch of its FuelEU Maritime Calculator in December 2024, which was then expanded to include biofuels in March 2025.

The converter enables users to compare the mass, volume and energy content of various traditional bunker and green fuel options in order to better understand how their bunker supplies would be impacted to achieve an equivalent energy level. This type of data is critical for owners and operators looking to reduce their compliance costs or run their vessels on cleaner alternatives.

"With a number of standard and alternative fuels available on the market, finding the conversion rates and energy ratios of all of the options in one place is incredibly difficult. As the range of potential fuel alternatives increase, this converter enables owners, charterers, traders and more to understand the physical properties and energy content by volume of each fuel type," said Martin Crawford-Brunt, Emissions Lead at Baltic Exchange.

At present, the converter includes VLSFO, HFO, LFSO Crude, LFSO Blend, ULFSO, MDO & MGO, LNG, Ammonia and Methanol. It also includes various unit types, including metric tonnes, cubic metres and million British thermal units, enabling shipping players to understand how different fuel options will impact their vessel's bunker fuel storage and management systems.

For example, the fuel consumption for a 300,000 dwt Very Large Crude Carrier (VLCC) at an eco-speed of 11 knots and in laden condition is 39.8 tonnes of VLSFO. Baltic Exchange's Fuel Equivalence Converter shows that this vessel would require 38.4 tonnes of MGO or 33.4 tonnes of LNG in order to achieve the same energy levels. Similarly, the converter shows that the same vessel would require 82.4 tonnes of methanol or 88.2 tonnes of ammonia to achieve the same level of output.



INDUSTRY NEWS

A round-up of global bunkering news

Monjasa reports "third-best financial year"

Global bunker company Monjasa reports supplying a "record volume" of 6.8 million tonnes in 2024, a 4% increase year-on-year and providing it with its "third strongest financial year with a net profit of US\$65 million". Monjasa says that although down sharply on 2023's figure of US\$109 million, its net result was "within expectations and led to an improved consolidated equity of US\$444 million, compared to US\$411 million on 2023. Monjasa says: "The financial year was positively affected by a strong demand in both trading activities and across Monjasa's own maritime logistics and supply chains. In particular, Monjasa continued to see a steady increase in demand from global customers, which includes the world's largest ship owning companies benefiting from collaboration across Monjasa's 16 international offices."

It adds: "Another important contributor to the 2024 financial performance was the continued investments in Monjasa's global tanker fleet and fully integrating these into the marine fuels' activities. With the purchase of an additional three tankers, Monjasa Hunter, Monjasa Rover and Monjasa Master, the Monjasa fleet concluded the year with a total of 33 owned and chartered vessels deployed worldwide."

Monjasa Group CEO, Anders Østergaard says: "At a time where global trade confrontations and uncertainties are building up, we also take comfort in our stable customer base and diversified business and geographic presence across trading, shipowning activities, technical ship management and offshore logistics.





This allows us to keep evolving Monjasa, but we need to keep our eyes wide open and focus on our adaptability and where Monjasa can make a real difference to the maritime industry."

World Kinect's lower Q1

US-based global bunker company World Kinect, formerly World Fuel Services, has reported a Q1 gross profit of \$36 million, a decrease of 26%. The company says the decreased profit was "principally due to lower bunker fuel prices and further reduced volatility that had benefited prior year results, as well as reduced demand and lower margins in our resale and physical businesses as a result of increasing market uncertainty".

eBDNs at Sohar

TFG Marine says that, following a successful trial, it is imminent rolling out of ZeroNorth's electronic bunker delivery note (eBDN) solution at Sohar, Oman.

TFG says that this is a "first for the Middle East region following the successful deployment of the same technology earlier this year by TFG Marine at the Port of Singapore". The eBDN trial in Oman was completed in collaboration with ZeroNorth and SGTraDex, using the Singapore standards as a benchmark

The fully digital solution will enable the inclusion of additional data, such as mass flow meter readings during fuel deliveries.

"K" Line's latest LNG-fuelled car carrier

Japanese shipping group "K" has taken delivery of the LNG-powered 7,000-vehicle-capacity *Triton Highway* from Japan's Imabari Shipbuilding Co.

The shipping company says the new ship is "a next-generation environmentfriendly vessel that is expected to cut emissions of nitrogen oxides (NOx) by 80% to 90% by using exhaust gas recirculation in addition to LNG fuel".

It is equipped with a MAN Energy Solutions dual-fuel electronic control engine.

MOL bunkers bio-LNG

In March, Titan's LNG bunkering vessel Alice Cosulich delivered 500 tonnes of bioLNG and 400 tonnes of conventional LNG to the MOL vehicle carrier Celeste Ace. The simultaneous operation bunkering took place in the Port of Zeebrugge's International Car Operators (ICO) terminal.

Yoshikazu Urushitani, Marine Fuel GX Division General Manager at MOL said: "We are exploring the use of ammonia and hydrogen fuels as part of our strategy to adopt clean alternative fuels, while moving to expand the use of LNG-fuelled vessels and more quickly achieve a low-carbon society. We will also be early adopters of bio-LNG and synthetic LNG. Partnering with Titan, we will start using bio-LNG to lead the shipping industry in the transition to clean alternative fuels. We remain committed to adopting clean fuels to reach net zero GHG emissions by 2050."

Axpo delivers LNG at Algeciras

Swiss energy group Axpo has completed its first LNG ship-to-ship delivery in the Port of Algeciras, marking the expansion of its LNG bunkering operations to a second Spanish port. In April Axpo's 7,500-cubic-metre small-scale LNG vessel Avenir Aspiration supplied MSC's Mariacristina in Algeciras. This followed the ship-to-ship bunkering in March of around 5,800 cubic metres of LNG to an MSC vessel in the port of Málaga.



Dan-Bunkering supplies biofuel for Union Bulk

Danish-based global bunker supplier Dan-Bunkering says it has undertaken Danish dry cargo owner and operator Union Bulk's first bunkering of biofuel, for the *Blue Union Alpha* in March.

Dan-Bunkering says that it was "on short notice able to assist with the necessary expertise and biofuel sourcing capabilities, ensuring an on-time delivery at the Port of Singapore ahead of Blue Union Alpha's EU-bound voyage".

When selecting the most suitable biofuel option, price was just one of many factors considered according to Dan-Bunkering which added that it "provided expert guidance on choosing the most appropriate grade of biofuel thereby also offering solutions to mitigate the risk of losing insurance by ensuring compliance with specific OEM requirements". Loading the 300 tonnes of B24 VLSFO allowed the *Blue Union Alpha* to complete its voyage to Europe "while complying with the EU's regulatory frameworks of ETS and FuelEU Maritime".

FincoEnergies buys part of Oliehandel Klaas de Boer

Rotterdam-based independent supplier of biofuels and decarbonisation services for the transport sector, FincoEnergies has acquired complete lubricants business and part of the bunker fleet of Netherlandsbased bunker supplier, Oliehandel Klaas de Boer. FincoEnergies says: "With this acquisition, FincoEnergies increases its storage capacity and product portfolio, highlighting its role as an independent and leading supplier of biofuels and lubricants within the maritime sector."

Dennis van Loon, Head of Operations at FincoEnergies, says: "Expanding our fleet is an important step towards even greater customer security of supply. Especially in a market that operates 24/7, the availability of (bio)fuel at the right time and place is crucial. This expansion allows us to respond faster, store larger volumes, and further enhance our logistical capabilities. It strengthens our position as a reliable partner in maritime fuel supply."

US Gulf Coast supply operation

US-based bunker supplier Hartree Marine has launched a new physical supply operation in the US Gulf coast. The company now delivers VLSFO and MGO via barge at all major Gulf ports and berths including Port Authur, Houston, Sabine Pass, Beaumont, Lake Charles, Freeport, Galveston, Bayport, Babours Cut, Texas City and Bolivar Roads.

New fuel pipeline at Blyth

UK-based bunker supplier Geos Group says a second bunker point has been opened at the Port of Blyth, following the extension of a pipeline that runs from the firm's fuel storage terminal. The additional bunker point at Wimbourne Quay is part of the redevelopment of the Bates Clean Energy Terminal.





LNG PLUS CARBON CAPTURE

Research project could see innovative CC technology on Havila Voyages' cruise ships

A Norwegian consortium has teamed up to develop a new solution for decarbonising maritime transport by capturing and storing CO₂ from LNG-fuelled Solid Oxide Fuel Cell (SOFC) powertrains.

The project is called LNGameChanger and is led by maritime technology supplier HAV Group, plus coastal cruise operator Havila Voyages, natural gas company Molgas Norway (formerly Gasnor), and research institution SINTEF.

The potentially game-changing research project was unveiled at a press conference in Ålesund, Norway, held on board Havila Voyages' coastal cruise ship Havila Capella in March.

"The LNGameChanger project aims to create the basis of a new product in the form of a low-or zero-emission solution for the maritime industry, strongly positioned for a growing LNG market and infrastructure with superior efficiency to alternative solutions. If this objective is achieved, LNG can become not only a transitional fuel, but a permanently viable option in low-emission maritime transport, alongside, for example, hydrogen," says Gunnar Larsen, CEO of HAV Group.

Given a successful outcome of LNGameChanger, project owner HAV Group has a clear ambition to further mature the solution towards commercialisation and include it in the company's growing portfolio of low-and zero-emission solutions to the maritime sector. The project's primary objective is to design an innovative, decarbonised maritime LNG-fuelled powertrain combining solid oxide fuel cells (SOFC) and high-efficiency onboard CO₂ liquefaction and storage, resulting in a CO₂-equivalent intensity between the 2045 and 2050 emission limits.

Secondary objectives are to confirm energy efficiency and emission targets for the SOFC powertrain with CO₂ capture in stand-alone mode. The project also aims to establish a user case with a vessel design and relevant operational profile to extract load profile characteristics and perform voyage simulations for the vessel in study. The user case may be Havila Voyages' four coastal cruise ships. The performance of the solid oxide fuel cell (SOFC) powertrain integrated with the onboard CO₂ capture and storage (OCCS) will be determined. It will also evaluate overall space and weight requirements and adaptability for marine applications.

Boosting SOFCs

Meanwhile HD Korea Shipbuilding and Offshore Engineering (HD KSOE), HD Hydrogen, and DNV recently signed a Joint Industry Project (JIP) agreement to develop and validate Pressure Swing Adsorption (PSA) technology for carbon capture in Solid Oxide Fuel Cells (SOFC).

SOFCs are high-efficiency fuel cells that generate electricity using natural gas, ammonia, or hydrogen as fuel. As part of this agreement, HD KSOE and its subsidiary HD Hydrogen will explore the integration of PSA-based carbon capture technology into SOFCs for shipboard power generation. The ultimate goal is to replace conventional ship propulsion and power generation engines with SOFC systems, significantly reducing maritime carbon emissions.

PSA technology selectively captures and releases CO_2 by cyclically altering pressure within a capture chamber. This approach is expected to be at least 40% more energy-efficient than conventional CO_2 absorption technologies used in marine applications.

Seunghwan Oh, Vice President of Business Development and Strategy at HD Hydrogen, said: "PSA technology is a key enabler in the era of Carbon Capture, Utilization, and Storage (CCUS). Integrating this technology with SOFCs, one of the most efficient power generation systems available, can substantially contribute to maritime decarbonisation."

Vidar Dolonen, Regional Manager for DNV Korea & Japan, emphasised the importance of prioritising technological solutions for emissions reductions: "The decarbonisation of shipping is a complex challenge, requiring a mix of solutions to bridge the transition to carbon-neutral fuels. Energy efficiency measures and onboard carbon capture technologies can play a crucial role in reducing emissions while the industry works towards securing reliable supplies of alternative fuels. This collaboration represents an important step in exploring practical and scalable carbon reduction strategies for the maritime sector."



TESTING WIND POWER

As more wind power systems are installed on ships, DNV issues guidelines on testing their performance

Norwegian classification society DNV has released a new Recommended Practice (RP) to assess the performance of Wind-Assisted Propulsion Systems (WAPS).

DNV notes that, with some 50 systems now in operation, WAPS have emerged as a promising solution for the maritime industry to realise fuel savings and emissions reductions. It says that as shipping's transition to more sustainable but higher cost fuels accelerates, these efficiency gains can translate into significant cost savings.

"At DNV we have been working on WAPS installations for several years and were the first classification society to publish rules and standards to enable their deployment," says Johanna Tranell, WAPS Performance Assessment Lead, at DNV Maritime. "But for energy efficiency technologies like WAPS to break through to wider deployment, we need the industry to be confident in their effectiveness. The new RP establishes a practical, reliable standard that helps us generate transparent, verifiable data, building trust in the potential of these systems."

DNV's Recommended Practice proposes an on/off methodology - engaging and disengaging the WAPS system under similar operational and environmental conditions - to measure performance. The classification society asserts: "This provides a robust framework that, combined with independent third-party verification, delivers actionable insights for shipowners and operators looking to install WAPS on their vessels." "Industry collaboration and consensus are vital as we work towards a greener future for shipping," says Hans Anton Tvete, Business Development Manager at DNV Maritime. "And to build consensus we need a shared understanding – backed by standardised, verifiable data. By working together to shape this new RP, the maritime community can ensure that these solutions are truly making an effective contribution to our decarbonisation."

Meanwhile WAPS manufacturer bound4blue has completed of the installation of the "world's largest suction sails", with four 26-metre high eSAILs fitted to the *Atlantic Orchard*. Chartered by Louis Dreyfus Company (LDC) and owned by Wisby Tankers AB, Sweden (Wisby Tankers), the specialised juice carrier had the sails fitted in a single stop already planned for the vessel's 10-year survey at Astander Shipyard, Santander, Spain, ensuring optimal efficiency.

The four eSAILs were installed in under a day per unit, as planned. According to bound4blue, when sailing, the 2014-built vessel, which was originally a dry bulk vessel before undergoing a conversion in 2020, will now benefit from simplified FueIEU Maritime compliance, taking advantage of the Wind Reward Factor, with further CII, EU ETS, and additional regulatory benefits. It adds that, depending on trading routes, fuel consumption and emission savings are projected to reach around 10%

José Miguel Bermúdez, CEO and Cofounder, bound4blue says that "the project showcases the simplicity and versatility of adopting advanced Wind Propulsion Systems (WPS) for an industry in transition".

Bound4blue says its eSAILs have a typical payback period of less than five years and are suitable for either newbuilds or retrofitting "across a diverse array of vessel segments". Recent orders have been received from shipping companies including Maersk Tankers, Marflet Marine, Eastern Pacific Shipping and Klaveness Combination Carriers, amongst others.

In another development Japanese classification society ClassNK has issued an approval in principle (AiP) for a Rigid Windsail Type WAPS developed by OceanWings. The certification confirms its feasibility from regulatory and safety perspectives.

ClassNK notes: "The implementation of WAPS is advancing as a solution for responding to environmental regulations and reducing fuel expenses. When such systems are installed on ships, they are expected to be effective in reducing CO₂ emissions through the use of wind power. However, depending on the scale and specifications, risks can arise for the ship's structure, onboard crew, and the surrounding environment."

The design concept of the system was reviewed based on ClassNK's '*Guidelines for Wind-Assisted Propulsion Systems for Ships* (*Edition 2.1*)' and the system's conformity to prescribed requirements for structural design, driving and control systems.



GETTING **READY**

The first ships capable of using ammonia as a bunker fuel are likely to be in service in 2026 or 2027

n April, Trammo, OCI and James Fisher Fendercare conducted an ammonia bunkering pilot between two vessels at a terminal in Rotterdam. Port of Rotterdam Authority said: "This marks an important step in preparing the port for vessels bunkering clean ammonia.

The pilot involved transferring 800 cubic metres of liquid, cold ammonia at -33 degrees Celsius between two ships. The actual transfer took about 2.5 hours and was conducted alongside a new quay at the Maasvlakte 2 APM terminal. The demonstration validated the Port of Rotterdam safety framework for ammonia bunkering, establishing that it is possible to do this safely and without ammonia release in the port.

Various parties collaborated on the pilot, facilitated by the Port of Rotterdam Authority. OCI, owner and operator of the port's ammonia terminal, partnered with Trammo, which supplied the two tankers carrying OCI's ammonia. James Fisher Fendercare provided equipment and expertise to ensure the safe execution of the ship-to-ship transfer at the berth location provided by APM Terminal. Bunker barge operator Victrol shared its bunkering expertise during the preparation of the pilot. The DCMR Environmental Protection Agency, Rijnmond Safety Region (VRR), and the Joint Fire Service (GB) were involved to ensure the pilot was conducted safely and smoothly. The pilot used grey ammonia, which shares the same chemical properties as clean ammonia.

The Port of Rotterdam uses the international Port Readiness Level assessment tool to prepare for all new marine fuels. To properly prepare the port to receive and bunker ships using new fuels, various steps will be taken to ensure that all regulatory, safety, infrastructural and supply factors are in order. The port has already fully implemented this method for LNG and, to a large degree, for methanol. For ammonia, the pilot concludes level 6 and raises the port's readiness to level 7, with all safety procedures ready to allow bunkering on a project basis.

Bunkering vessel design approval

Meanwhile, in another move aimed at preparing for the supply of ammonia to vessels, ClassNK has issue Approval in Principle for ammonia-fuelled ammonia bunkering vessel developed by NYK Line and Seatrium subsidiary LMG Marin. This vessel is mainly designed by LMG Marin and features ammonia fuel dualfuel engines from IHI Power Systems and a bunkering boom from TB Global Technology, allowing for safe and reliable ammonia bunkering operations. Additionally, a safety verification was conducted through HAZID involving relevant stakeholders.

ClassNK carried out a review of the conceptual design of the ship based on its 'Part N; Ships carrying liquefied gases in bulk' of the Class Rules and 'Part C-2; Guidelines for the Safety of Liquefied Gas Carriers Using Ammonia as Fuel (Edition 3.0.2) which is part of 'Guidelines for Ship Using Alternative Fuels (Edition 3.0) and examined the result of required assessment. Upon confirming they comply with the prescribed requirements, ClassNK issued the AiP which refers to IMO's Interim Guidelines For The Safety Of Ships Using Ammonia As Fuel, approved at Maritime Safety Committee (MSC) 109 last December.



(L-R) Mark Ho, PhD Chief Nuclear Officer, Deployable Energy; Dr Stuart Ballantyne, Chairman, Seatransport Corporation; Claudene Sharp Patel, Global Technical Director, LR; and Remko Hottentot, Commercial Manager, LR - Australasia

AI GOES NUKE

Lloyd's Register to use generative AI to advance the application of nuclear technology at sea in collaboration with Microsoft

K-based classification society and professional advisory service Lloyd's Register (LR) says it will become one of the first maritime organisations to use generative AI for permitting capabilities built upon Microsoft Azure OpenAI Service, to bridge the gap between terrestrial and maritime applications.

The capabilities are designed to enhance the regulatory process for nuclear technology and will be used by LR to advance the deployment of nuclear in maritime applications.

Azure's generative AI capabilities work by analysing historic nuclear licensing data and allows licensing engineers to draft new permitting documents more quickly, ready for review and refinement. It can also quickly search for regulations, precedents, and other valuable information buried in large regulatory datasets.

LR says the technology enables a faster and more cost-effective pathway through regulation, which is essential for making nuclear a viable clean energy solution.

Mark Tipping, LR's Global Offshore Power To X Director, who leads on nuclear technology, said: "We have a large data source from decades of regulatory applications which these AI capabilities can interrogate swiftly to identify good practice and lessons learned.

"Together, we're tackling one of the biggest challenges in deploying nuclear technology, which is navigating complex, slow, and costly licensing processes."

LR believes AI has the power to break through barriers and unlock the potential of nuclear across floating nuclear power, offshore, and ship power.

Tipping added: "Collaborating with Microsoft provides us with an excellent opportunity to combine two very different areas of expertise, their Al capabilities and our vast history and knowledge of maritime and nuclear safety."

This collaboration has been driven by LR's CTIO team. Deputy Chief Technology and Innovation Officer Jeff Scott, who played a key role in engaging with Microsoft to explore AI's potential in maritime nuclear regulation, said: "Regulations shouldn't be a roadblock to innovation—they should be a launchpad. By teaming up with Microsoft, we're using AI to cut through the red tape and fast-track the future of nuclear in maritime. It's an exciting step toward making clean energy a reality on the water."

Darryl Willis, Microsoft CVP, Energy & Resources Industry, said: "This

collaboration underscores our commitment to harnessing the power of AI to drive innovation and advance sustainability across sectors.

"By combining our AI expertise with Lloyd's Register's expertise in maritime and nuclear safety, we are paving the way to ease regulatory barriers and make sustainability more attainable for all industries."

Meanwhile Queensland's ship design group Seatransport and Houston-based Deployable Energy are collaborating with LR to develop nuclear power generation for different applications, including strategic response vessels in remote areas.

Using micro modular reactor (MMR) technology, two to five MMRs of 1MWe capacity each could power a 73-metre amphibious vessel, designed for emergency response and disaster relief duties in remote areas. This would enable the vessel to operate for 8-10 years without refuelling, and it could feed power into the shore grid of affected areas and whenever docked at port.

The concept was presented at LR's recent Australia Advisory Committee Meeting with Remko Hottentot, LR Commercial Manager – Australasia, signing the agreement with the Australian parties.



HYDROGEN PLUS DIESEL

Collaboration project to pioneer hybrid hydrogen-diesel retrofits

he innovation arm of shipowning group Lomar Shipping, lomarlabs, has announced a strategic collaboration with Newlight, a technology company specialising in hybrid hydrogen-diesel engine retrofits, to accelerate the adoption of cost-effective, lower-emission solutions for the shipping industry.

This collaboration will focus on retrofitting conventional diesel engines to operate on a hydrogen-diesel mix and, according to the companies, reducing fuel consumption on average by 20% and "significantly lowering greenhouse gas emissions". Savings of up to 30% have been reported from workshop trials and this new collaboration will seek to replicate this onboard vessels.

As the maritime sector works toward meeting IMO decarbonisation targets, shipowners are searching for solutions to extend the service lives of their existing vessels and future proof new vessels they build. Newlight's dual-fuel retrofit technology is described as a "low CapEx solution that enables existing vessels to integrate hydrogen as a cleaner fuel source, improving energy efficiency while maintaining operational flexibility". Stylianos Papageorgiou, managing director of lomarlabs: "We believe in accelerating progress through energy efficiency improvements, emissions treatment and leveraging clean energy sources, always with a focus on maintaining costs at sensible levels. Newlight's solution fits right into this approach. Decarbonisation isn't about waiting for the perfect fuel; it's about acting now with every viable tool at our disposal. Newlight's dual-fuel retrofit technology promises an immediate, scalable and cost-effective way to reduce fuel consumption and emissions. This is exactly the kind of practical innovation that will bridge the gap between today's operational realities and the long-term vision of a net-zero maritime industry."

Through this collaboration, lomarlabs and Newlight will conduct a pilot installation scheduled for summer 2025 on board a Lomar vessel to collect data and carry out harbour and sea trials.

"Hydrogen has enormous potential as a maritime fuel, but transitioning entire fleets to pure hydrogen is a long-term challenge. We believe the industry cannot afford to wait. By taking immediate steps with the current fleet, we can decarbonise ship by ship—delivering real impact today. " said Haran Cohen Hillel, CEO of Newlight. "By retrofitting existing diesel engines to operate on a hydrogen blend, we provide an immediate, scalable solution that cuts emissions without requiring a complete overhaul of the propulsion systems."

Lomar CEO Nicholas Georgiou said: "As the global shipping industry adopts initiatives to move towards net-zero emissions, this lomarlabs-Newlight collaboration represents an important step in deploying practical, short-term solutions that make vessels cleaner, more efficient and more cost-effective to operate."

The ship owning and management group operates a diverse fleet of around 25 bulk carriers and chemical tankers. It is the maritime subsidiary of Libra Group. In 2022 Lomar acquired Bremen-based Carl Büttner Holding which owned and managed oil product and chemical tankers. This fleet has since been integrated into the Lomar group and operates as CB Tankers.



"CRITICAL ROLE FOR LNG"

New report from Lloyd's Register Report highlights LNG's growing adoption, its cost-effectiveness under tightening emissions regulations, and the urgent need to address methane slip

Loyd's Register's (LR) latest *Fuel for Thought* report reveals that liquefied natural gas (LNG) remains the dominant alternative marine fuel readily available to the shipping industry.

Fuel for Thought: LNG reveals a significant resurgence in orders for LNG-capable vessels, with an expanding global fleet and rapidly growing bunkering infrastructure. LR's latest analysis notes LNG's strong market position, with 1,381 dual-fuel vessels in service as of December 2024 and a further 849 on order – representing a 61% fleet expansion. Currently, 14% of all vessels on order will have LNG dual-fuel engines installed.

The data confirms LNG's continued appeal, particularly in segments such as container shipping and car carriers, where its adoption is expanding rapidly: Clarkson Research predicts that the LNG-fuelled fleet (excluding gas carriers) will grow to represent around 24% of the merchant fleet by 2050

Economic analysis within the report indicates that with IMO mid-term measures within the projected boundaries, LNG remains the most cost-effective fuel choice for foreseeable transition pathways up to 2049. LR's modelling suggests that LNG-fuelled vessels could generate substantial compliance savings compared to ships running on very low sulphur fuel oil (VLSFO), with additional benefits from regulatory mechanisms such as pooling.

However, the report cautions that LNG's long-term sustainability depends on tackling methane slip – unburned methane emissions that reduce its overall GHG advantage.

While LNG can provide immediate emissions reductions, its ability to meet stricter targets in the 2040s will depend on advances in cleaner LNG production, particularly through biomethane and synthetic e-LNG, as well as the development of onboard carbon capture technologies.

Panos Mitrou, LR's Global Gas Segment Director, said: "As regulations emerge that place a real financial impact on greenhouse gas emissions, ship operators are realising that LNG is one of few low carbon fuels to be available immediately, widely, with established safety protocols and at relatively predictable cost. "There are several opportunities to improve the long-term sustainability of LNG. These are already being addressed and the measures that are being worked on – from cleaner production and supply processes to bio-LNG and OCCS, through the uptake of onboard methane abatement technologies, as well as regulatory acceptance of these improvements – are likely to increase uptake of LNG even further."

Peter Keller, Chairman of lobby group SEA-LNG, who provided the foreword for the report, says: "SEA-LNG is proud to support this comprehensive report, Fuel for Thought: LNG, which delves into the multifaceted benefits and challenges of LNG as a marine fuel. This report provides valuable insights into the technological advancements, regulatory frameworks, and market trends that shape the future of LNG in the shipping industry."

The report also highlights specific examples of innovation, such as the use of high-manganese steel for LNG tanks, which has significantly reduced costs while maintaining cryogenic handling properties. This technology has been successfully implemented in vessels like the Advantage


Tankers LLC's VLCCs, demonstrating the increasing uptake of LNG across diverse vessel segments.

Mehmet Cebeci, Fleet Manager, Advantage Tankers LLC, said: "The analysis produced by Lloyd's Register serves as a crucial resource for industry professionals navigating the evolving landscape of marine fuels. We believe LNG is the most viable source to comply with both current and upcoming long-term emission regulations, offering a cleaner, more sustainable alternative to traditional marine fuels."

AET has LNG-powered vessels classed by LR. Nick Potter, President & CEO of AET, said: "LNG is a key component of AET's Decarbonisation Strategy, providing immediate emissions reductions while we also invest in net-zero carbon solutions. Through our tiered decarbonisation strategy, we are integrating energy efficiency technologies, innovative propulsion systems, and future fuel capabilities, including ammonia, to help meet our 2030 GHG emissions intensity target.

"While LNG is a viable option today, its long-term role will depend on developments in bio-LNG, synthetic LNG, and the commercial and regulatory landscape for fuels such as methanol, ammonia, and hydrogen. We see LNG as part of a multi-fuel future, complementing alternative energy sources as we move towards our 2050 net-zero goal as part of the MISC Group."

Meanwhile SEA-LNG says IMO's proposed decarbonisation agreement means the UN Agency "has held firm to its principles of goal-based, technology neutral regulation". In a statement it adds: "While many details need to be decided this provides a clear decarbonisation framework for the global shipping industry and will enable all fuel pathways, be they methane (LNG), methanol or ammonia, to compete on a level playing field."

According to SEA-LNG, the framework, assuming it is adopted in October, means that ship owners can confidently continue to invest in LNG-dual fuel engine technologies, secure in the knowledge that the LNG, or more accurately, methane pathway to decarbonisation is recognised by the IMO. A pathway that is practical, realistic, scalable and low cost compared with those offered by other alternative marine fuels. Critically, on the supply side, the proposed regulations will further incentivise the growth we are seeing in liquefied biomethane bunkering and catalyse additional investments in e-methane.

Cutting methane slip

Japanese companies Hitachi Zosen, Mitsui O.S.K. Lines and Yanmar Power Technology report achieving a 93.8% reduction rate, at an engine load rate of 100%, while developing technology to reduce the methane slip from LNG-fuelled vessels through use of a catalyst and engine improvements. This project was adopted by the country's New Energy and Industrial Technology Development Organization (NEDO), and the reduction rate was confirmed by ClassNK.

The project aims to achieve a 70% or more reduction in methane slip by combining methane oxidation catalyst and engine improvements during the six-year period from fiscal 2021 to fiscal 2026.

In 2022, Hitachi Zosen and the Yanmar developed the Methane Oxidation Catalyst System which reduces methane slip by oxidising methane emitted from marine engines fuelled by LNG and received NK's Approval in Principle. In December 2023, a land-based test achieved a reduction rate of 93.8%, exceeding the target, by combining engine improvements with exhaust gas recirculation and a methane oxidation catalyst system, and the vehicle was the first in the world to receive the SOF from NK. A demonstration test started last autumn of 2024 on the large coal carrier REIMEI operated by MOL.

Strong interest in LNG supply in Singapore

The Maritime and Port Authority of Singapore (MPA) has received 14 proposals under its Expression of Interest (EOI) to scale up the supply of LNG as marine fuel. The MPA says that 18 companies took part in the EOI, including energy companies, fuel suppliers, traders, bunker operators, and storage providers. Eight of the submissions included bio-methane and e-methane solutions. It asserts: "The range of submissions reflect the industry's readiness to support sea-based LNG reloading to complement existing onshore infrastructure and supply more options."

MPA says it will work with shortlisted companies to carry out sea-based LNG reloading trials by the second half of 2025. It will also develop plans to promote the use bio- and e-methane as marine fuels in Singapore. The trials will assess scalability, technical feasibility, safety, operational readiness, and digital connectivity, as well as measures to address methane slip.

Insights from the proposals and trials will inform MPA's review of the LNG bunkering licensing framework, "including enhancements to existing supply arrangements to better meet the needs of international shipping".



GREEN METHANOL PITCH

Greenpeace sponsored research backs synthetic methanol but highlights supply issues

limate-neutral industrial alcohol, methanol, made with renewable electricity appears to be the most suitable synthetic fuel to decarbonise international shipping, researchers from the Institute of Maritime Energy Systems at the German Aerospace Centre (DLR) have found.

Switching to green methanol could reduce CO₂ emissions by 96 percent over the entire life cycle of ships, the researchers said in a report commissioned by environmental group, Greenpeace.

"When comparing the options according to specifications and safety, storage and bunkering, emissions, availability of technology and regulations for use on board, methanol currently shows the greatest potential," the report concluded. Unlike hydrogen or ammonia, methanol is easy to handle and technically ready for use in shipping. Moreover, existing ship engines can be easily converted, the authors said. Producing green methanol requires green hydrogen made with renewable electricity, and sustainable CO from renewable biogenic sources or from direct air capture (DAC). Electrification is not a viable option for heavy shipping, because the batteries would be prohibitively large.

However, the report also listed numerous problems afflicting the use of green methanol, for example the necessity to install tanks that are twice as large so that ships can cover the same distance as with fossil fuels. In addition, green methanol has hardly been available on the fuel market to date and remains very expensive. The report said that up to 5.7 million tonnes of green methanol will be needed per year for shipping in Germany alone.

According to the authors, several different fuels will be used in the shipping industry in the long run, not just green methanol. "It is unrealistic to expect that only one alternative solution will prevail in the shipping industry. It is to be expected that various fuel options will be available on the market and that the solutions will differ depending on the type of ship, route and numerous other parameters," the report said.



Greenpeace said the IMO should adopt binding quotas for the use of alternative fuels to ensure that shipping decarbonisation picks up speed now. "And a CO₂ price is needed that reflects the climate benefits of green methanol compared to fossil fuels," the organisation added.

Meanwhile ClassNK has issued an approval in principle (AiP) for design concept of a retrofitted Kamsarmax bulk carrier, converting it from conventional fuel to methanol dual-fuel, jointly developed by Tsuneishi Shipbuilding Co and Fonden Maersk Mc-Kinney Møller Center for Zero Carbon Shipping.

The Japanese classification society says its certification demonstrates the regulatory feasibility of the ship, serving as a meaningful step in advancing the transition of the existing fleet to alternative fuels, as bulk carriers of this size are widely operated today.

ClassNK carried out a design review of the design concept based on 'Part A Guidelines for Ships Using Methyl/Ethyl Alcohol as Fuels (Edition 3.0.0)' of the 'Guidelines for Ships Using Alternative Fuels' and examined the risk assessment through HAZID. ClassNK issued AiP upon confirming the feasibility of key design, including the arrangement of methanol fuel tanks and fuel supply systems, in terms of regulatory compliance.

Methanol Bunkering Licences in Singapore

The Maritime and Port Authority of Singapore (MPA) has opened applications for licences to supply methanol as a marine fuel in Singapore. This follows the finalisation of Singapore's methanol bunkering licensing framework and standards, which incorporated input from over 50 proposals received under MPA's Expression of Interest (EOI) launched in December 2023, as well as methanol bunkering trials and operations conducted in Singapore since 2023. Licensees are required to implement an end-to-end methanol bunkering supply solution as bunker suppliers and bunker craft operators. This includes securing methanol supply to Singapore, implementing quality assurance plans, ensuring proper storage and safe handling of methanol, and establishing emergency response measures. They must also have the necessary manpower and expertise to carry out methanol bunkering operations in Singapore. Additionally, licensees are required to own and operate at least one IMO Type 2 chemical tanker

Licensees must supply methanol as a marine bunker fuel to vessels in Singapore during licensing period from 1 January 2026 to 31 December 2030. MPA says: "To support international shipping's decarbonisation efforts, licensees must supply methanol that meets the specified carbon intensity on a well-to-wake basis, demonstrate a transparent and accurate chain of custody methodology to track emissions from source to delivery, and possess operational experience, readiness, and emergency response preparedness. Licensees will be required to meet the prevailing standards and measures at the national and International Maritime Organization level. Bunker players are also expected to adopt mass flow meters, digital bunkering, and the new standards for methanol bunkering in Singapore ahead of operations. MPA may invite licensees to work with MPA on suitable methanol bunkering pilots and exercises in 2025."



BIO BOOST

FuelEU and probable IMO regulations have led a significant number of shipowners to move to biofuels, but critics point to environmental concerns

he list of shipping companies exploring the use of biofuels to cut carbon emissions and reduce costs imposed by the EU's FuelEU scheme and potentially by the IMO's decarbonisation strategy.

In April Singapore-based shipping company Swire Shipping said that three of its vessels serving the South Pacific have made the switch to B24 and B30 biofuel blends. Swire Shipping's CEO Jeremy Sutton said: "The island nations of the South Pacific are particularly vulnerable to the impacts of climate change, and this move marks an important step in our ongoing efforts to reduce emissions and support a cleaner, greener shipping industry."

Biofuels available now include bio-LNG. Swedish tanker operator Furetank recently completed its first bunkering of 200 tonnes of ISCC certified Bio-LNG, in collaboration with environmental commodity trader STX Group and Molgas. The company acknowledges the economic advantages of bio noting: "As tanker vessel Fure Viken embarks on its next journey powered by a fuel solution rapidly gaining traction, Furetank recognises competitive advantages in heightened EU environmental requirements."

Furetank CEO Björn Stignor notes: "We used biomethane of the highest environmental standard available in the market. This transaction marks a milestone in our transition to clean fuels, while also supporting European agriculture and biogas production. Furetank has worked for several years with fuel suppliers and ports to realize larger-scale liquefied biogas deliveries on several European destinations. This is a very positive development."

That reference to environmental standards is significant. There can be serious environmental issues with bio, and especially bio-based fuel oil.

In the run-up to IMO's Marine Environment Protection Committee's 83rd session (MEPC 83) in April a number of shipping companies including Hapag-Lloyd and environmental organisations called on IMO "to exclude unsustainable biofuels from unsustainable biofuels from its list of green alternatives to traditional fossil fuels.

Once deforestation and land use are taken into account, palm and soy are two to three times worse for the climate than traditional shipping fuels. The use of palm oil biofuels doubled in the EU between 2010 and 2020, following the introduction of a law promoting biofuels in cars. Using crop land for fuel also puts pressure on biodiversity and food supplies, according to lobby group Transport & Environment (T&E). Constance Dijkstra, shipping manager at T&E, said: "As things stand the IMO risks doing more harm than good. Palm and soy biofuels are devastating for the climate, and they take up vast amounts of land. Instead of creating new problems, the global shipping community must focus on green fuels made from hydrogen. Burning crops is never the answer."

T&E acknowledged: "Countries such as France, Norway and the Netherlands have already restricted or stopped using palm and soy biofuels domestically, while the EU itself has excluded the use of food crops from its flagship shipping fuels regulation (FuelEU). But at the global level, no such restrictions are proposed."

IBIA's representative at IMO, Dr Edmund Hughes reported: "There was no real discussion during the recent meetings on biofuels and in particular the sustainability of the feedstocks for those fuels. Work on sustainability themes/aspects is part of the agenda of the scientific group (GESAMP) set up to consider the default emission factors for inclusion in the life cycle assessment (LCA) Guidelines. Further work on the guidelines is expected to continue immediately after the Extraordinary Session of MEPC in October. However, any decisions are unlikely to be made until MEPC 84 in Spring 2026."



HURRY UP AND WAIT?

Synthetic fuels must overcome technical and economic hurdles before they can play a viable role in decarbonisation, writes Konstantinos Voutzoulidis of classification society ABS

he maritime industry is facing several substantive challenges, mostly driven by increasingly strict air emissions and climate legislation.

Among the broad spectrum of technology and fuel solution pathways presently available to ship designers, builders, owners and operators – synthetic fuels or, more specifically, renewable e-fuels – offer medium and long-term alternatives that can enter the market relatively quickly, if the certain challenges analysed below are suitably addressed.

On a Well-to-Tank basis, they also offer the potential to reduce the carbon output of their fleets to zero, or very close to it. Among the synthetic fuels, e-ammonia, e-hydrogen, e-diesel, e-methane and e-methanol are expected to see the largest uptake by the shipping industry.

Research undertaken by ABS and CE Delft for EMSA1 considered each fuel in turn, the latter three, namely e-diesel, e-methane, and e-methanol, are considered in more detail here.

Production and Sustainability

For these three e-fuels, direct air capture (DAC) is required for all the production pathways. Since DAC is an immature technology, none of the e-fuel production pathways is currently technologically advanced enough to enter the market. In addition, some of the production routes for these e-fuels consideration require further technological advancements to enter the market.

The volume of life cycle greenhouse gas (GHG) and air-pollutant emissions generated by using e-fuels for shipping is considered significantly lower than those produced by fossil fuels. However, to produce e-fuels on a significant scale, large amounts of land are needed for wind and solar parks; this is becoming a challenge as it competes with agriculture and biodiversity conservation efforts.

In parallel, the construction and operation of wind farms may adversely affect the habitats of birds and bats. Areas with large amounts of sun, wind and water resources, and large areas with deserts are therefore seen to be suitable locations to establish large production of e-fuels. Lastly, materials for manufacturing wind and solar parks, electrolysers and other systems will also be required to produce e-fuels, potentially also generating negative environmental impacts.

Capacity and Availability

To ensure the large-scale production of e-fuels for the maritime industry, a tremendous expansion in the number of renewable-electricity plants, electrolysers, direct air capture plants and e-fuel synthesis plants will be needed. Whereas the projected global growth in renewableelectricity production could prove large enough to serve the demand for e-fuels of the commercial fleet in 2030, electrolysis capacity, e-fuels synthesis capacity and DAC capacity are not expected to keep pace.

Furthermore, the shipping sector will need to compete with all other sectors for the renewable electricity, green hydrogen and renewable carbon dioxide (CO_2) required for e-fuels production.



The full transition of the global maritime sector to e-fuels will require a significant expansion of industry's capacity to produce renewable electricity, electrolysers, DAC and e-fuels synthesis plants. An analysis of the required and available capacity for the different e-fuel production segments indicates that the largest restraint on expanding e-fuel production capacity is the development of DAC capacity.

Because DAC is the least developed technology it is likely to offer the longest delay before being ready for mass deployment. In addition, the costs of producing CO_2 from DAC are still prohibitively high. In the short to medium term, however, this restraint could be eased by using biogenic CO_2 , another form of renewable CO_2 .

TCO and the Business Case

ABS & CE Delft have calculated the Total Cost of Ownership (TCO) for e-methanol-, e-diesel- and e-methane-powered newly built vessels.

In 2030, a low-cost estimate appears to be approximately 45-85% higher than ships running on conventional fuel oils, with the use of e-diesel representing the upper end and e-methane the lower end of the cost range. In 2050, the TCO of newly built e-fuelpowered ships ultimately could reach a lower cost level than those powered by conventional fuel oil. This is because the cost of e-fuels is expected to decrease significantly, and carbon costs will be applicable.

This means that e-fuels have the potential to play a major role in shipping in the long term, especially since the production varied inputs for e-fuels are not scarce if production techniques are deployed at large-scale.

The results of a retrofitting cost case for a small container ship show that, depending on the fuel prices and the investment time, the shipowner may benefit from retrofitting some existing ships to use (a blend of) e-fuel.

The business case for e-fuel-powered vessels also will be dependent on developments in the global price of fuel oil. If fossil fuel prices continue to rise, the cost gap between the TCOs for using conventional fuels and e-fuels may be closed.

Regulations Are Supportive

Synthetic fuels, including e-fuels, can be considered 'drop-in' fuels, and are expected to replace fossil fuels in the future. The existing standards and regulations, as well as ongoing regulatory developments, industry guidance and best-practice publications are, to some extent, expected to facilitate their adoption as marine fuels. However, for wide adoption of these fuels to be realised, further developments will be needed.

At the same time, the basket of measures introduced by the European Commission under its 'Fit for 55' initiative sets, among others, specific targets for renewable fuels of non-biological origin.

IMO has set new levels of ambition based on Well-to-Wake emissions. Among others, there is an ambition at the IMO to increase the uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources, until they will represent at least 5% (striving for 10%) of the energy used by international shipping in 2030. All these developments are expected to support the uptake of synthetic fuels.

However, without global policy measures to either bridge the price gap or to encourage ships to use green fuels, a transition towards e-fuels with zero-CO₂ impact is unlikely to accelerate at the desired speed and scale in the next decade. Stimulation of market demand for carbon-free maritime transportation could be a complementary or an alternative way to achieve a transition towards green fuels.

WORLD



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CUTTING METHANE EMISSIONS

Wärtsilä engine with new feature cuts methane emissions to 1.1%

echnology group Wartsila is to supply three of its 25DF dual-fuel engines for a new 18,600 cubic metre capacity LNG Bunkering vessel being built for Spanish operator Ibaizabal. The engines will feature its "innovative NextDF technology, which dramatically reduces methane emissions when operating with LNG fuel". The ship is being built at the Hudong-Zhonghua Shipbuilding yard in China, and the order was booked by Wärtsilä in Q4 2024.

The manufacturer explains: "LNG is an important transition fuel as the marine industry strives to reduce its carbon footprint. However, the main component of LNG is methane and when burned as a fuel, a very small amount may not combust properly, leading to methane escaping into the atmosphere."

According to Wartsila the 5DF engine has already set an industry benchmark for low methane emissions, down to as low as 1.4 percent at certain load points. The NextDF feature further reduces methane emissions, achieving as low as 1.1 per cent in a wide load range. What's more, the nitrogen oxide (NOx) emissions are lower than on the standard Wärtsilä 25DF engine which already has low emission levels below IMO Tier III.

"Our company strategy and commitment are for our vessels to be as environmentally friendly and sustainable as possible. In line with current and anticipated regulations - both at an international and regional level - we carefully evaluated the fuel consumption and emission performance together with Wärtsilä, concluding that the Wärtsilä 25DF engine with the NextDF feature would best support us with achieving our sustainability goals," says Jose Maria Torre, Fleet Director of Ibaizabal Group.

The 25DF engine is claimed to be "the most efficient and most environmentally friendly marine engine in its power range". Wartsila asserts: "With its modular, upgradeable, and flexible design, the engine platform helps operators to significantly reduce fuel consumption and emissions, whilst improving the efficiency of vessels. The NextDF feature will enable operators to go even further in reaching their decarbonisation targets. In addition to lower emissions levels, the NextDF feature improves engine efficiency by up to 0.5 percentage points."

Optimising onboard systems

Maritime industry digital solutions provider Oceanly has launched ECOPAC, designed to optimise energy efficiency and sustainability in shipboard electrical systems. This solution is intended to complement Oceanly's existing portfolio by enhancing vessel performance, saving costs and reducing environmental impact.

The company explains that vessels are designed to operate worldwide in diverse

conditions, for instance operating in cooler areas, or at the opposite in areas with high seawater temperatures. In such cases, the vessels' on-board equipment does not normally adapt to the changes, leading to unnecessary energy consumption. ECOPAC targets this inefficiency by optimising electrical systems onboard, ensuring that energy use aligns perfectly with actual operational needs.

ECOPAC is described as integrating cuttingedge technology to monitor, analyse, and optimise electrical consumption onboard vessels, helping shipowners and operators reduce energy waste, lower emissions, and improve overall operational efficiency. By using advanced automation, real-time insights, and predictive analytics, the service is designed to ensure compliance with environmental regulations while also enhancing vessel performance.

ECOPAC requires the installation of VFD Variable Frequency Drives at equipment level, and a cable connecting the VFD to the controlling software. Once this is done, the software controls the speed of the motor in accordance with the load, allowing for measurable cost savings. ECOPAC can typically deliver energy savings of over 60% as well as reducing CO₂ emissions and reducing general wear and tear on equipment. More than 225 vessels worldwide are already saving energy and fuel with ECOPAC.



EU-FUNDED RESEARCH

New projects include developing full DC electrical systems and reducing well-to-wake greenhouse gas emissions

U niversity of Birmingham scientists are joining experts from across Europe in a \in 10.2 million project to create a working prototype ship powered by full DC electrical systems.

The ALL-DC- SHIPS project is aimed at advancing the electrification of maritime transport with a fully DC-based architecture, including the secondary network supplying hotel loads. There will be developments on power converters with wide bandgap components, solidstate protection devices and energy management systems for better overall efficiency.

Twelve partners from eight European countries have come together to drive forward the Horizon Europe-funded project that will demonstrate a full DC grid concept on a real vessel.

Professor Pietro Tricoli, from the University of Birmingham, commented: "Waterborne transport must significantly reduce its use of fossil fuels and resulting greenhouse gas emissions (GHG) to meet climateneutral goals set for 2050. A vital part of this decarbonisation effort is rapid expansion of low-carbon power sources and energy storage solutions.

"To support this transition, shipboard power systems must integrate highpower components and protection devices more efficiently." While some vessels have already incorporated DC primary grids, their secondary grids have largely remained based on traditional AC solutions.

By integrating advanced components with existing power converters and protection devices in primary and secondary grids, the ALL-DC-SHIPS project aims to reduce the risk of blackouts due to faults, improving the overall reliability of the power system.

Meanwhile marine equipment manufacturers and exporters association HEMEXPO has joined another Horizon project, Sustainable Emission Abatement Strategies & Technologies for Advanced Revolution Ships (SEASTARS).

The initiative aims to achieve a minimum 30% reduction in well-to-wake GHG emissions by 2030 (compared to 2008 levels) and a 20% increase in energy efficiency (compared to 2022), creating a global maritime decarbonisation landscape and supporting the European Commission's proposed Fitfor-55 targets.

The project integrates cutting-edge efficiency and emissions-reduction technologies. Hydrodynamic enhancements for consideration will include propeller-hull optimisation and air lubrication systems while machinery innovations are expected to include fuel cells, electric motors, integrated solar panels, wind-assisted propulsion, electrochemical storage. The project will also include research on alternative fuels and energy systems - biofuels, hydrogen, methanol, LNG, ammonia, fuel reforming and carbon capture and storage.

"K" Line funds CO₂ capture research

Japan's Kawasaki Kisen Kaisha ("K" Line) is funding Rikkyo Educational Corporation to carry out carbon capture research project.

The "K" Line Advanced Technology Future Environment Project Laboratory has been set up at Rikkyo University to "capitalise on the industry-academia collaboration". The project involves the development of an onboard CO_2 capturing system that utilises the molecular technology of MOF1, a porous material.

This research project is being conducted in collaboration with a research group led by Professor Mao Minoura at the Department of Chemistry, College of Science, Rikkyo University.



Here, a team from Stena Line, together with people from Castrol and MHService in Måløy, look at the new solution. - It has produced impressive results for our vessels, since it has already averted two major incidents that could have cost us dearly, says Michael Thomson, captain at Stena Line.

PREVENT ENGINE DAMAGE WITH NEW SOLUTION FROM CASTROL AND MHSERVICE

"Castrol SmartMonitor" has been launched in the Norwegian market by MHService in Måløy

t is a system that makes continuous measurements on the quality of the lubricating oil circulating in machines. This means an alternative to sending oil samples for testing, and then waiting for the results.

Stena Line has installed the new, digital system in three of its vessels that ply routes in the Irish Sea. It has already proven to be very cost-saving.

'Now we don't have to rely on the post office - the system always gives us full control. It has produced impressive results for our vessels, as it has already averted two major incidents that could have cost us dearly' says Michael Thomson, Vessel Superintendent at Stena Line.

'Castrol has helped us to put in place a new product for real-time analysis of used lubricating oil. It has produced impressive results for our vessels' continues Stena Line's Vessel Superintendent Michael Thomson.

Measures the lubricating oil all the time

'With this system, the crew gets a much better overview. This means that they can see at an early stage when they should take action to prevent a major damage later' says general manager Gaute Vorren at MHService. 'Many customers see that this system can save them from unwanted events that can cause them large financial losses' he says.

Stena Line is one of the world's largest ferry companies, and offers transport services for passengers, vehicles and goods. With passenger and freight routes between Liverpool and Belfast, Holyhead and Dublin, as well as Fishguard and Rosslare, Stena Line helps connect the Irish Sea to the UK and Ireland.

Previously, the vessels that sailed these routes had to wait up to a week for results from manual tests. Now, instead, we can monitor oil quality in real time, and that helps us take immediate action if we see any negative trends. This saves us both time and money, while also increasing reliability' says Thomson.

Can take quick action

Thomson is impressed by how smoothly the installation process went - both in getting the system in place in the boats and getting the solution up and running.

'Throughout the process, the Castrol team has maintained regular communication, been open to feedback, and adapted the portal to our specific needs. What's more, the Castrol SmartMonitor portal is user-friendly, with clear and easy-to-understand data' he says. He also adds that the installation process was easy, with Castrol supplying all the necessary equipment and cables.

'The system enabled us to detect early on two water incidents on one of our vessels. It has saved the business both time and money, while also preventing something that could potentially have caused far more serious damage. On one occasion, during removal of a cylinder head, water leaked into the cylinder liner. The sensors detected it in a few minutes' says Thomson with satisfaction.

Dredger saved NOK 1.5 million

A UK dredging company has also installed the system from Castrol in one of its dredging boats

On the vessel, the system warned that foreign objects in the lubricating oil were in danger of destroying the machine. The lubricating oil was checked, and the values started to move in a positive direction, but the next day the Castrol SmartMonitor system again reported increased water content in the lubricating oil. Then the chief engineer did a more thorough review and discovered a leak in one of the cylinder heads in the port main engine.



When water enters a main engine unnoticed, it can cause problems with the bearings while the engine is still running.

Because they discovered this in time, the shipping company averted a potentially catastrophic failure of the main engine, which could have cost over £150,000 - i.e. more than NOK 2 million - to repair.

Instead, four people were able to fix the problem in two days for just £30,000 (equivalent to around NOK 400,000), and since the ship already had planned downtime, they avoided additional loss of revenue during the two days the ship was out of service.

'The examples from Stena Line and Dredger only confirm the optimism I have for this new system. I believe that it can revolutionize the shipping industry and contribute to fewer accidents, and in that way contribute to the green shift' says chairman Oddvar Strand of MHService, who's also had a long career as a ship manager in Siem Offshore.

Norwegian customers

Vorren says that they are now working to sell Castrol SmartMonitor on the Norwegian market. The system is initially aimed at larger vessels and was presented to several stakeholders at NorFishing in Trondheim earlier this year.

'The impression is that this is a product many have been waiting for. It solves a significant problem for customers in an efficient and labor-saving way:



An employee of the Stena Line shipping company is introduced to the Castrol system in the engine room. In short, the system makes continuous measurements of the quality of the lubricating oil circulating in the machines. This means reduced time frames when sending oil samples for testing, which can take days or weeks to receive the results.

They don't have to take lubricating oil samples manually and can get the results immediately instead of waiting for the samples to make their way to the laboratory through the postal service' he says.

An important advantage is that this type of real-time monitoring means that the potential for machine cutting is greatly reduced - which provides considerable security for shipowners.

'The dashboard that Castrol offers in connection with this system means that shipowners or the shipping company's office can have access to the same quality measurements on board the ships. It can also act as additional security for those who follow the ships from shore' Vorren asserts.

MHService

The head office of MHService is located in Måløy. The company has one depot in Måløy and one in Ålesund.

In addition to delivery from the quay, by bunker boat or tankers, the company has its own chain of unmanned petrol stations (MH24).

MHService has been a dealer for Castrol since 1994 and is today one of the world's largest marine dealers of the Castrol brand.

The company sells fuel to both marine customers and land and aims to be a complete supplier to the shipping industry.

www.mhservice.no



General manager and chairman of MHService in Måløy, Gaute Vorren and Oddvar Strand say that the new solution from Castrol has been very well received in the market, since customers see that it is cost-saving.



in Måløy and one in Ålesund. Here we see the company's facility in Måløy.



SUPPLY, QUALITY AND SUPPORT

Copec Marine, a leading supplier of marine fuels and lubricants along the Latam West Coast

opec is Chile's leading energy company, with more than 90 years of experience powering people, businesses, and industries across the country. With a presence in mobility, industrial supply, renewable energy, and logistics, Copec plays a fundamental role in Chile's development and energy transformation. Its vast network of over 700 service stations, industrial terminals, and logistics platforms reflects the company's longstanding commitment to operational excellence, customer service, and innovation.

At the heart of Copec's purpose is the ambition to simplify and energize people's lives. This vision is driving significant investment in the future of energy developing electromobility infrastructure, advancing solar energy solutions, and promoting energy efficiency across sectors. As a trusted brand with a strong reputation in Latin America, Copec combines deep local knowledge with forward-looking strategies for a more sustainable future.

Extending this expertise to the maritime sector, **Copec Marine** delivers integrated fuel and lubricant solutions to fleets navigating the **Latam West Coast**, from the country's northern ports to **Puerto Williams**, the southernmost port in the world and gateway to Antarctica. With strategic infrastructure and local coverage throughout Chile, Copec Marine is uniquely positioned to support international and regional shipping operations with efficiency and reliability. Its marine fuels offer includes **Very Low Sulfur Fuel Oil (VLSFO)**, fully compliant with IMO 2020 regulations and backed by consistent availability. Bunkering services are performed through its own vessels— **Doña Ana** and **Don Pancho**—ensuring safe and seamless delivery at key ports.

Copec Marine is also the **authorized distributor of Mobil[™] marine lubricants** in Chile, offering a full range of high-performance products trusted by shipowners worldwide. These lubricants help optimize engine protection, reduce maintenance costs, and improve operational efficiency. By combining Copec's national strength with specialized maritime capabilities, Copec Marine stands as a strategic partner for the shipping industry—providing trusted solutions, deep expertise, and the operational excellence that defines one of Latin America's most respected energy brands.

Contact: bunkers@copec.cl Website: ww2.copec.cl/marine-fuels







KROHNE MARINE

KROHNE Marine provides a diverse range of products, services, and solutions for all types of ships

ROHNE Marine is a global key division of the KROHNE Group which handles sales, engineering, R&D, aftersales support, and spare parts. With over 60 years of maritime expertise, our team of engineers has dedicated itself to providing the global marine industry with certified systems, instruments, and precise measurement solutions.

Cultivated through long-term collaboration with ship owners, managers, and shipyards, our systems and instruments are in vessels ranging from inland to the largest seagoing ships. At KROHNE Marine, we acknowledge the crucial importance of precise and dependable bunkering measurement in the industry. With a commitment to excellence, we provide precise certified systems and utilise premium straight-tube Coriolis mass flowmeters meticulously designed for high-capacity bulk measurement.

Our goal is to establish new benchmarks in bunkering measurement, guaranteeing precision, compliance, and operational efficiency. As part of our continuous dedication to sustainability through digitalisation, we offer comprehensive fluid monitoring solutions to ship operators and yards worldwide, promoting greener shipping operations. #measurethefacts





IS YOUR SHIP COMPLIANT WITH INTERNATIONAL REGULATIONS?

The International Maritime Organization's (IMO) new Net-Zero Framework marks a significant move toward decarbonizing the shipping industry.

hile the outcome of the latest IMO meeting may be difficult to interpret, in the short term, it enables a "pay-tocomply" strategy. A less costly alternative to using low-carbon fuels such as methanol and ammonia is onboard carbon capture. However, a prerequisite for effective carbon capture is the pre-cleaning of exhaust gases using scrubbers.

Other benefits for scrubber-fitted vessels:

- Regulatory Compliance: Scrubbers allow vessels to continue using high-sulfur fuel oil (HFO) while meeting international sulfur emission standards. This flexibility provides a cost-effective compliance path compared to switching to expensive low- or zero-sulfur alternatives.
- Fuel Availability: Low-sulfur fuel may not always be accessible in every region or port. Scrubber systems ensure operational continuity by allowing ships to use readily available HFO without breaching emission limits.

- **Operational Efficiency:** Ships with scrubbers can maintain existing engine setups and avoid the downtime and complexity associated with fuel system conversions. This means less crew retraining and higher fleet uptime.
- Flexibility: The IMO's gradual timeline gives shipowners more time to regain scrubber investments and strategically plan green fuel retrofits. Scrubber-equipped vessels can act as a bridge solution until alternative fuels become viable.





IMO regulations and classification society standards mandate regular drydocking to ensure a ship's safety, structural integrity, and certification. PureteQ supports this process through comprehensive predrydocking inspections that validate key components such as pumps, fans, internal structures, and compliance equipment. The resulting report defines clear work scopes for shipyards, crews, and stakeholders minimizing risks, unexpected issues, and additional costs during drydocking. PureteQ also attends vessels in drydock and maintains an extensive stock of spare parts for most major brands.

Drydocking is also the ideal time to consider retrofitting upgrades that align your ship with future environmental standards.

SCRUBBER RETROFITTING AND THE SHIFT TOWARD ZERO DISCHARGE

While open-loop scrubbers are widely used, they've faced scrutiny due to the discharge of untreated wash water into the sea. A practical upgrade involves converting to a closed-loop or hybrid system, allowing either zero-discharge operation or cleaner effluent release.

The number of closed-loop scrubbers is increasing, but unfortunately, many have remained unused since installation due to the high volume and disposal cost of sludge and residue. To address these challenges, PureteQ offers PurePass, a standalone water filtration system designed to enhance the performance of existing Water Treatment Units (WTUs). PurePass extracts sludge and wastewater directly from the wash-water tank, reducing the dirt load by up to 90% and improving both filtration efficiency and the service intervals of WTUs.

The system features cost-effective, multilayer filters that capture particles of varying sizes. Wash water is pumped through the system using energy-efficient, variablespeed pumps, and the entire process is fully automated. The filter exchange cycle—typically every 24 hours in closedloop mode—can be extended through setting adjustments or by using larger filters.

OPTIMIZING SCRUBBER EFFICIENCY AND CARBON INTENSITY

Scrubber efficiency is tied to how effectively the system removes exhaust pollutants across engine loads. The scrubber tower design and its operational controls are crucial in ensuring optimal performance. If scrubber efficiency drops, energy consumption rises—along with operating costs.

PureteQ's scrubber systems are known for their energy-efficient design and advanced automation, which help lower operational expenses. Moreover, our service engineers can optimize even third-party systems to prevent over-scrubbing and energy waste.

To further improve carbon efficiency, PureteQ offers Pure-SPOT, a web-based Scrubber Performance Optimization Tool. Available through a service agreement, Pure-SPOT reduces energy use across all scrubber types and contributes to better Carbon Intensity Indicator (CII) scores. As the industry shifts toward net-zero, PureteQ supports shipowners with smart scrubber solutions, energyefficient retrofits, and advanced filtration systems. Our expertise ensures regulatory compliance, operational cost savings, and a pathway to sustainable growth—both environmentally and economically.

CONTACT

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CEO: Anders Skibdal anders@pureteq.com



THE SIMPLE SOLUTION TO A GLOBAL CHALLENGE



DELIVERING UNPARALLELED SERVICE

For over two decades, OMTI has stood as a distinguished and privately-owned enterprise, demonstrating unwavering dedication to its customers

perating Uninterrupted for 22 years within the esteemed bunker hub of Fujairah, ranked among the world's top three, OMTI has consistently delivered unparalleled service to discerning clients. The company's commitment to being a dependable and adaptable partner in the Gulf region has solidified its reputation as a premier choice for those seeking superior service. Over 2000 vessels put their trust in OMTI in 2022 for their legacy of reliability and flexibility in an important hub of the global maritime industry.

Boasting a collective experience exceeding 150 years, OMTI's operations team expertly manages a dynamic fleet of SIRE approved and Oil Majors recognized vessels as well as a barge with a mass flow metre capable for quantity determination. Charterers can take pride in selecting OMTI's services, confident in the team's seasoned proficiency. To complement the operations team, strategically positioned offices in Fujairah, Dubai, Singapore, and Greece provide a 360° perspective and seamless contact with the majority of the world's ports and clients. Experience unparalleled connectivity without delays or disruptions, as OMTI brings a global reach to clients' fingertips. Trust OMTI for a comprehensive maritime solution that seamlessly integrates operational excellence and strategic trading acumen.

OMTI ensures each interaction is marked by punctuality, personalization, and seamless execution. The company adopts a ONE-STOP shop approach, providing tailored fuel procurement, risk management, and bunkering solutions that meet the specific needs of each partner, reflecting OMTI's commitment to elevating clients' businesses.

In addition to its supplying operations, OMTI maintains a floating storage of 75,000MTs with a mass flow metre fitted for accuracy in quantity and enabling uninterrupted loading – supplying – loading cycles independent of terminal congestions and shortages. This strategic approach offers flexibility and assurance to both OMTI and its clients, aligning with the practical needs of shipping companies.





The proximity of neighbouring ports, Kalba and Khorfakkan, further expands supply options, accommodating the schedules and routes of OMTI's clientele. The company delivers a comprehensive and adaptable approach to fuelling success in the maritime industry, grounded in operational efficiency and strategic foresight.

OMTI specializes in the supply of all distillate and residual grades of bunkers, deploying experienced barge crews and officers for seamless operations. The company pioneered the provision of highquality Very Low Sulphur Fuel Oil (VLSFO) following the enforcement of the IMO 2020 regulation, maintaining this commitment across all bunker grades.

Integral to OMTI's operational success is a robust supply chain management system that ensures the quality of its products. With meticulous oversight from sourcing to delivery, OMTI adheres to stringent quality standards at every stage. This dedication to a meticulous supply chain empowers the company to consistently deliver bunkering solutions that meet or exceed industry regulations. OMTI stands as a reliable and quality-focused leader in the Fujairah fuel sector.



Since April 2022, OMTI has strategically aligned with Fujairah Engineering Company (FECO), the exclusive fuel supplier in Salalah, Oman. As the operator of the port's bunker terminal and the sole bunker barge in the region, FECO has been providing fuel and Marine Gas Oil (MGO) at the anchorage and berths of the bustling port since April 2022.

Remaining forward-focused, OMTI and FECO are well-prepared to address and fulfill the biofuel requirements of their clients. With established facilities and enduring relationships cultivated over two decades, the forthcoming milestone in bunkering comes with the assurance of OMTI's steadfast commitment and guarantees.

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For more information please visit: **www.galp.com**







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hroughout this period, we have earned the trust of many prominent shipowners and have become the reference supplier in the Mediterranean, relied upon by foreign shipowners when they navigate our waters.

We work with passion, both as a physical supplier and as a trader, aiming to cover all ports where our clients need to refuel.

Our experience as a physical supplier in Italy has taught us that shipowners today place increasing importance on service, precise and timely communication, continuous management along the entire supply chain and expertise in proactively addressing any unexpected issue. In addition we ensure the maximum attention is paid to the quality of the products delivered. Given the high price levels that marine fuels have reached in recent years, financial services enabling tailored and deferred payment conditions for the customer have become a decisive factor, allowing us to differentiate ourselves from competitors and expand our clientele.

In recent years, we have heavily invested in expanding our know-how and expertise in the field of alternative fuels and also managing the energy transition in the marine sector. As a result, we are now able to offer many clients, upon request, our consultancy service on alternative fuels.

In ports where we act as physical suppliers, we work to complement our comprehensive offering of traditional fuels with biofuels capable of immediately reducing greenhouse gas emissions. Furthermore, in various ports where we operate as traders, we are collaborating with different suppliers to ensure that alternative fuels are increasingly integrated into the package of solutions offered to the customer.

We also operate as a physical supplier and as a trader of marine lubricants. In 2018 we launched a constantly stocked lubricants storage service as leading ExxonMobil Distributor for the local market in Italy.

BUNKEROIL CONTACTS: For bunker enquiries please send an e-mail to: bunker@bunkeroil.it

For lubricant enquiries please send an e-mail to: lubricant@bunkeroil.it

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GOIL PLC (GOIL) is a Public Listed Oil Marketing Company. The company is ISO 9001:2015 as well as ISO 14001:2015 Certified. GOIL has as its subsidiaries, GOEnergy Limited, a Bulk Distribution Company, GOIL Upstream Limited to cater for its offshore business and GOBITUMEN Limited, a joint venture bitumen production and distribution company.

GOIL is currently the market leader in additivated premium quality fuel (Super XP RON 95 and Diesel XP) and has the largest and growing retail network in Ghana with over 440 stations. The marketing arm is represented in eight zones country-wide. GOIL also supplies Mining Diesel and lubricants to mining firms and the leading LPG marketer in Ghana.

GOIL supplies Marine Gas Oil, (MGO) at offshore and Anchorage through ship-to-ship (STS) via ex-pipe, and Road Tank Wagon (RTW) from three main ports, Tema and Takoradi as well as the Sekondi Naval Base and markets premium Lubricants some of which are blended locally. GOIL also supplies aviation fuel to major Airlines.

In line with GOIL's commitment to contribute towards building a resilient national economy with free-flow of goods and services, the company has taken steps to diversify its product range by constructing a 35-million-dollar Bitumen plant in Tema. The plant is expected to supply higher- grade Polymer Modified Bitumen (PMB) for the expansion of the nation's road network.

19 - 22 MAY 2025 **MARITIME WEEK AMERICAS** TAMPA, UNITED STATES

Maritime Week Americas (#MWA25) returns to the United States in May 2025, to the fabulous new location of Tampa, on Florida's Gulf Coast. MWA25 will look at shipping and bunker markets throughout North, Central and South America and the Caribbean, examining traditional bunker markets and the 'new' fuels whose take-up is rapidly picking up pace.

For more information: https://www.petrospot.com/events/mwam25-tampa

26 - 27 MAY 2025 9TH ISTANBUL BUNKER CONFERENCE **ISTANBUL, TURKEY**

IBIA is honoured to be the Strategic Partner for the 9th Istanbul Bunker Conference, a premier event in the global bunker industry. Bringing together key stakeholders, this conference serves as a vital platform for insightful discussions on market trends, regulatory developments, and sustainability in the marine fuels sector. As the industry's leading voice, IBIA is committed to supporting initiatives that drive innovation, collaboration, and progress within the global bunkering community.

For more information: https://www.istanbulbunkerconference.com/

377

27 – 28 MAY 2025 **2 DAYS BASIC BUNKERING COURSE** SINGAPORE, ASIA

Approved by Maritime and Port Authority of Singapore Enterprise Singapore and the Maritime and Port Authority of Singapore (MPA) have implemented the Singapore Standard SS600:2022& SS648:2024 to further enhance consistency in practices in the delivery of bunkers for ships calling at Singapore's port. SS600:2022 & SS648:2024 sets out guidelines and procedures to ensure that the correct quality and quantity of bunkers are being delivered safely and efficiently. For more information: ibia@ibia.net

28 MAY 2025 **IBIA ALTERNATIVE FUELS TRAINING ISTANBUL, TURKEY**

18-14

Join us on Wednesday, 28 May 2025, in Istanbul for the IBIA Alternative Fuels Training, following the 9th Istanbul Bunker Conference. Led by Nigel Draffin, IBIA Board Member, this session will explore Biofuels and LNG, including key regulatory updates and regional developments. Venue: Turkish Chamber of Shipping. For more information: https://www.eventora.com/en/Events/alternative-

fuels-training-course-Istanbul

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18 JUNE 2025 2 DAYS ADVANCED BUNKERING COURSE SINGAPORE, ASIA APPROVED BY MARITIME AND PORT AUTHORITY **OF SINGAPORE**

Enterprise Singapore and the Maritime and Port Authority of Singapore (MPA) have implemented the Singapore Standard SS600:2022& SS648:2024 to further enhance consistency in practices in the delivery of bunkers for ships calling at Singapore's port. SS600:2022 & SS648:2024 sets out guidelines and procedures to ensure that the correct guality and guantity of bunkers are being delivered safely and efficiently. For more information: ibia@ibia.net

19 JUNE 2025 EAST MED MARITIME CONFERENCE 2025 ATHENS, GREECE

The East Med Maritime Conference 2019 has managed to secure its position on the maritime calendar as one of the significant maritime events in the region and the world, attracting pioneers, leaders and experts, regional and international shipping companies, port operators and managers, shipbuilding and repair yards. Once again, in 2025, those experts will meet together in Athens to discuss current challenges and suggest recommendations, to develop a road map for a bright, safe and secure future. For more information: https://www.emmc.me/

15 - 19 SEPTEMBER 2025 LONDON INTERNATIONAL SHIPPING WEEK LONDON, UNITED KINGDOM

CONC. DALED

International Shipping Week will celebrate its 12th anniversary in September 2025, playing host to thousands of international industry decision-makers who will attend the hundreds of official events during the week.

For more information: https://lisw.com/

25 SEPTEMBER 2025

THE MARITIME STANDARD TRANSPORTATION & CLIMATE **CHANGE CONFERENCE**

ABU DHABI, UAE

The Maritime Standard Transportation and Climate Change Conference (TMS TACCC) is — a premier platform driving action at the intersection of transportation and climate change. This global event brings together industry leaders, policymakers, and innovators to exchange insights, foster collaboration, and accelerate practical solutions for a sustainable transportation future. For more information: https://tmstaccc.com/

18 – 20 NOVEMBER **IBIA ANNUAL CONVENTION 2025** HONG KONG

Save the date for the IBIA Annual Convention 2025, taking place during Hong Kong Maritime Week. The event will feature a full day of training on 18 November, followed by a two-day conference in Hong Kong. As IBIA's flagship event, it offers a key opportunity for industry professionals to connect, gain insights, and engage in critical discussions. Ticket and sponsorship sales will open in May 2025. For further information, please contact ibia@ibia.net

9 FEBRUARY 2026 IBIA ANNUAL DINNER 2026 LONDON, UNITED KINGDOM

With IE Week confirming its official dates — 10 to 12 February 2026 we're pleased to announce that the IBIA Annual Dinner 2026 will take place on Monday, 9 February. As with the past three years, the event has consistently sold out by year-end, so we encourage you to diarise the date. Ticket sales and sponsorship opportunities will be launched in June. Should you wish to notify us of your interest, please email ibia@ibia.net

All dates were correct at time of going to print but may be subject to change, please review the related websites





RLD (2025 BUNKERING



BUNKERING... AROUND THE WORLD

World Bunkering is the official magazine of the International Bunker Industry Association (IBIA) and provides in-depth analysis of issues that affect the suppliers and users of marine fuel. With four guarterly editions and an online news service World Bunkering is your guide to a rapidly changing industry.

CIRCULATION: Worldwide on a name and title basis.

World Bunkering is sent to IBIA members and trusted non-members covering the whole industry of fuel supply from the producers to the end users including servicing companies.

TARGET AUDIENCE: bunker suppliers, bunker brokers, bunker traders, barging companies, storage companies, surveyors, ship owners and operators, charterers, port authorities, lawyers, maritime consultants, industry manufacturers, non-profit organizations IMO, BIMCO, INTERTANKO, Society of GAS Tanker and Terminal Operators, local shipping and bunkering associations etc.

EVENTS: These include all major international and regional shipping and bunkering events throughout the year. (Nor- Shipping, Posidonia, CMA, SMM Hamburg, Sibcon, IBIA Convention, IBIA Dinner and IP Week etc.).

In addition a wide range of regular items, including a news round-up and a review of recent environmental regulatory developments, each issue has several special features. These home in on particular topics of interest to the industry.

Over the course of a year World Bunkering carries special features on: Traders, Fuel Quantity, I.T., Oil Majors, Fuel Management, Scrubbers, Independents, Fuel Quality, Blending, Fuel Additives and Barge Design. Other topics are added as they emerge as important concerns to the industry.

Each issue also covers several geographical regions, highlighting the particular characteristics and challenges of the various markets. Over a year we cover the entire global industry, talking to the major players and looking at commercial and regulatory environments in which they work.

Also covered in every issue are Testing, Risk Management, Innovation, Legal, Lubricants and Equipment & Services. In addition our comprehensive Diary page keeps readers up to date with the busy conference and events scene.

WORLD BUNKERING Q3 2025... NOW OPEN FOR BOOKINGS

Q3 2025

SPECIAL FEATURES:

Fuel Quality

A look at the increased challenges facing ship staff in managing fuel as alternative fuels come into use. In particular, what guidance is being given on the handling of alternative fuels?

Industry Views

We ask key players in the bunkering sector for their views on the state of the industry and how the industry needs to change

GEOGRAPHICAL FOCUS:

Indian Ocean and Subcontinent

Our overview of the bunkering sector in the region's four supply countries. We look at how fuel requirements are changing and how suppliers are adapting. Meanwhile a number of port infrastructure projects hold the promise of a boost to the marine fuel sector.

Far East

In the run-up to this year's IBIA Convention, to be held in Hong Kong in November, we take a look at this key area against a backdrop of political and economic uncertainty. With two key bunkering hubs within the region, and many other major bunkering ports, *World Bunkering* asks how marine fuel suppliers are coping with current challenges while at the same time needing to prepare for the changes required by decarbonisation.

Regular Features

IBIA News, IBIA Africa Report, IBIA Asia Report, Events Reports, Views & Analysis. Plus: Interview – Industry News – Environment – Testing – LNG – Lubricants – Innovation – Legal – Scrubbers – Carbon Capture – Electric Propulsion Methanol – Biofuels – Hydrogen – Ammonia – Alternate Fuels – Diary – Legal Equipment and Services – Diary – Event Previews & Reviews

Join IBIA today

to play an integral part in the sustainable future of the bunker industry

By joining IBIA you will become part of a global network of bunker industry experts who collectively form one of the world's leading authority on bunkers. Not only will you have access to a wealth of information and insight (we publish newsletters and industry updates on current issues) which offer pragmatic advice for managing the industry's challenges; members also have the potential to shape and influence both international and local legislation. This happens through IBIA's Working Groups which are responsible for developing industry guidance, participation in IMO correspondence groups, solving long-term industry issues, and addressing both commercial and technical aspects.

INDIVIDUAL	IBIA Board Member eligibility
	• The right to 1 vote for Board Member Elections
£350	IBIA Working Group eligibility
	Access to all IBIA Members Meetings
	Discounted IBIA training courses/ conferences/seminars events/conventions
	Individual discounts on other industry events
	Subscription to World Bunkering magazine
	Representation at IMO (International Maritime Organisation)
	Access to IBIA's member networking platform
	Eligible to book up to 4 tickets at the prestigious IBIA Annual Dinner
	IBIA mediation and dispute resolution
	IBIA membership certificate
	ALL THE BENEFITS OF INDIVIDUAL+
CORPORATE	Register up to two offices anywhere in the world
£1750	The right to 2 votes for Board Member Elections
	• 5 user registrations on the IBIA portal per registered office
	 2 subscriptions per office to World Bunkering magazine, sent to all registered offices
	 Eligible to book up to 4 tables at the prestigious IBIA Appual Dipper
	Eligible to add further offices for a reduced fee of £600 per office
	 Use of the IBIA Members' logo on your website and stationery
	CORPORATE ADDITIONAL MEMBERS GET ALL THE BENEFITS OF THE CORPORATE MEMBERSHIP WITH THE EXCEPTION OF THE RIGHT TO VOTE FOR BOARD MEMBER ELECTIONS.
	You can add as many additional offices as you pay for. Affiliation with the primary
	Corporate member must be authorised. Special cases can be negotiated individually with
	the IBIA membership management team.
	USEFUL INFORMATION
	• 15% discount for 3 years membership, (Paid in one instalment) –
	Guarantee no membership price increases for the next 3 years

Unregistered offices will not get IBIA benefits

INTERNATIONAL PLINKER INDUSTRY ASSOCIATION

GOIL PLC OCEAN BUNKERING



GOIL BUNKERING

GOIL PLC has attained the enviable Integrated Management System (Quality, Health, Safety and Environment) and has successfully been certified ISO 9001:2015, ISO 14001:2015. This endorsement attainment makes GOIL PLC stand out among the majority of the Oil Marketing Companies (OMCs), with such international excellence in providing bunkering services in Ghana and towards West Africa Coast.

Our Marine Gas Oil (MGO) meets the requirements of our esteemed clients in accordance with the ISO 8217-2017 fuel standard. GOIL is IMO 2020 - Low Sulphur Fuel (VLSFO 0.5%) compliant. We have built an ultra-modern state of the art bunkering facilities at the Sekondi and Takoradi Ports in Ghana to serve our numerous customers and also deliver by barges through ship-to-ship (STS).

Our barges serve as mobile fuel or filling stations, where our bunkering team supplies MGO and Marine Lubricants offshore across the coast of Ghana to a diversified portfolio of customers.

We leverage on GOIL's brands and sales strategies ensuring a seamless service from product sourcing to delivery by focusing on quality and reliability, thereby guaranteeing product quality, quantity, and availability.

GOIL Bunkering thrives on our customers trust in our management principles which are focused on EHS, quality products, exact quantity or equitable distribution and reliability as well as timely deliveries.

> GOIL, GOOD ENERGY. GOIL, YOUR RELIABLE AND EFFICIENT PARTNER. GOIL, WE DO IT RIGHT THE FIRST TIME.



KEY ACTIVITIES

Our key activities include, cargo sourcing, marketing, and credit management. We deliver at offshore, anchorage and at ports through Ship-to-Ship (STS) and ports via ex-pipe and Road Tank Wagon (RTW).

KEY RESOURCES

Our key resources include, Cargo Sourcing Network, Sales Network, and Operational knowhow.

SERVICE & PRODUCT

Marine Gas Oil (MGO) and Marine Lubricants.

GOIL OCEAN BUNKERING STRENGTH

MARKETING ABILITY

We provide high quality product and Service. Our product is on-Spec, on-time, accurate quantity ensuring value-for-money and nationwide sales network.

OPERATIONAL EXCELLENCE

We have an excellent team of highly trained professionals equipped with a wealth of knowledge in marine industry practices.

COMPETITIVE EDGE

We operate in a very competitive environment and therefore employ best in class competitive strategies. We have been able to weather the storm with our experience onshore, and expertise in the field of bunkering to maintain the number one spot in the industry.

OPERATIONAL AREA

We cover offshore, anchorage, and ports in Tema and Takoradi.



email: bunkers@goil.com.gh website: www.goil.com.gh



SAILING FAR? WE FUEL WHERE YOU ARE!









