

Newsletter: July 2023

Secretary General's Message

The first half of 2023 has seen continued momentum with an additional five installations, the delivery of six wind-ready vessels and a healthy pipeline. We expect a flurry of further announcements in Q3/Q4 so, we are on track for a total of 40+ vessels by the end of this year. IWSA has also been busy with events, including the RINA and IWSA Wind Propulsion Conference held at IMO headquarters in February and the Innov'sail (May) and Wind for Goods (June) events in France.

The proceedings of the Wind Propulsion Conference were submitted to IMO as [MEPC80 INF.33](#). We also have had a survey underway for policy makers and shipping stakeholders on their perceptions of wind propulsion and its place in the decarbonisation framework. [Survey link](#) (closes 14 August)

It was a great pleasure to put together the 'Wind Ship – The Future' youth poster contest for which we received nearly 100 submissions of artwork from 4-15 years olds from more than 10 countries worldwide and their colourful and inspiring vision of wind powered vessels of the future garnered over 2,000 votes. A big thank you to the jury members, voters and in particular the artists, the naval architects, engineers and seafarers of the future! It was my pleasure to showcase the winners and runners up at MEPC80. [Poster Contest Link](#)

That brings us to the area of policy. 2023 will be remembered as the year that the IMO set its level of decarbonisation ambition and made progress on the mid-/long-term measures to deliver on that. IWSA has maintained a clear, consistent message throughout, calling for a level playing field, with an 'energy centric' as opposed to a 'fuel-centric' approach and the delivery at low/no cost of high ambition targets for 2030, 2040 and 2050. This message was backed up by the release of a CE Delft report; [Shipping GHG Emissions 2030](#) in late June, that highlights that emissions could be reduced by between 28-47% by 2030 with a combination of wind, speed reductions and 5-10% new fuels with only a 6-14% increase in costs, well within standard yearly bunker fluctuations.

Progress has certainly been made towards zero-emissions with the revised [IMO GHG strategy](#), and while not-binding, much of the industry understands that the interim 2030 goal of up to 30% reduction in GHG's will be vital if we are to stay in touch with a 1.5C aligned goal for 2050. The proof of the pudding though will be in the eating and it will be the delivery of economic and technical measures that will underscore this heightened ambition, however the timeline for the economic measures is 2027 at the earliest, so much work to be done. The IWSA policy checklist also includes:

- Recognition of wind propulsion as a zero-rated 'fuel' so that comparative LCA can be undertaken.
- Inclusion of wind in any Global Fuel Standard (more appropriately - Global 'Energy' Standard).
- High carbon price, and the majority of proceeds returning to the industry to fund decarbonisation.
- A level playing field requiring a Well-to-Wake approach for LCA of fuels/energy sources.
- The inclusion of 20-year global warming potential (GWP) of all emissions to ensure realistic comparisons (aligns with Ship lifespans [20-30 yrs] & environmental/climate tipping point risks).
- Non-GHG climate forcing emissions should also be taken into account, including black carbon, VOCs, fugitive H2 emissions and underwater noise, among others.
- Enshrine the 'just, fair and equitable' principles to ensure no place or people are left behind.

Therefore, the message that we have delivered to national governments, the EU, the IMO and at the UN headquarters in New York has been that wind delivers on the most ambitious targets, it is the only propulsive energy source that will effectively pay for itself and a firm, robust and predictable framework for decarbonisation is what is needed for the industry to invest, scale quickly and weather the decarbonisation storm.

Gavin Allwright (IWSA Secretary General) secretary@wind-ship.org

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Anemoi Marine Technologies (UK)

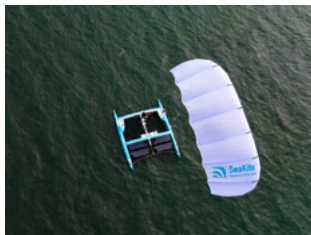
In February, the Liberian Registry awarded Approval in Principle (AiP) to Anemoi's Rotor Sail Systems, validating a 20% reduction on EEDI score for a Newcastlemax vessel with Anemoi Rotor Sails. [Read more...](#)

Anemoi has a total of 16 Rotor Sails currently in production. Tufton Investment's *TR Lady Kamsarmax* is due to set sail with 3 Anemoi Rotor Sails (5x24m) imminently. The Rotor Sails are being installed on a transverse rail deployment system; a movable option offered uniquely by Anemoi.



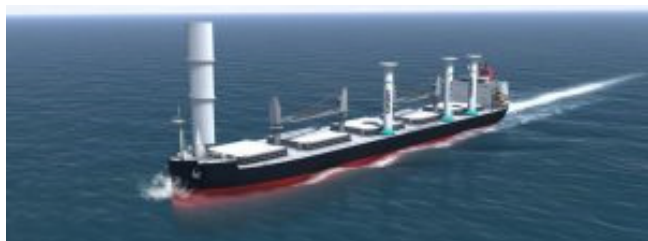
Beyond the Sea (France)

In April, Beyond the Sea christened its catamaran laboratory for kite traction, Le SeaKite in Arcachon. Launched in October 2022, the vessel Le SeaKite has carried out a series of tests of its 25 and 50m² SeaKite wings in the Bay of Arcachon throughout the winter, in static and dynamic flight. Beyond the Sea and its automated kite-powered ship traction system have been selected as one of the 100 innovative solutions of The Arch, a European call for projects aimed at giving visibility to concrete solutions contributing to the ecological shift of the economic fabric. [Read more...](#)



Airseas (France)

In January, it was announced that Kawasaki Kisen Kaisha (K Line) had completed the installation of the first Seawing from Airseas - an automated kite system that harnesses wind power - on a Capesize bulk carrier at the end of 2022. Last year Airseas confirmed that they had received an order of three Seawing kites from K Line for installation on three Post-Panamax bulkers. Which brings the total to five vessels to be outfitted with the automated kite system. [Read more...](#)



Dealfeng New Energy Technology Ltd. (China)

In December 2022, Nippon Kaiji Kyokai (NK) granted Approval in principle (AiP) certification for the Dealfeng Rotor Sail. [Read more...](#)

Dealfeng New Energy's rotor sizes are manufactured in the main sizes of 2m, 3m, 4m, 5m diameter and 18m-35m height rotor sails. At present, a newbuild 5,000 dwt oil tanker fitted with the first 16m x 4m Dealfeng Rotor Sail on the bow is under construction, which is expected to be delivered in Q3 2023.



TOWT (France)

Currently TOWT is making progress with the hull construction for their 80m, 1,100 dwt primary wind general cargo vessel in Vietnam. The hull is almost ready to be moved to France for outfitting.

Delivery is expected at the end of 2023. [Watch Video](#)



Mitsui O.S.K. Lines, Ltd (Japan)

In January, Mitsui O.S.K. Lines, Ltd (MOL) Wind-assist Design received an approval in principle (AiP) from ClassNK – Nippon Kaiji Kyokai. Then in June, they announced the launch of their dedicated Wind Propulsion Department – the department is named the "PBCF & Wind Propulsion Department" with the aim of expanding its area of wind propulsion equipment and devices in addition to continuing existing

operations with energy saving devices such as the Propeller Boss Cap Fin (PBCF) System. [Read more...](#)



Blue Wasp Marine (The Netherlands)

In May, Blue Wasp Marine and Groot Ship Design announced that they had signed a principal collaboration agreement to work on the design of wind-assisted vessels. Both companies will remain independent, bringing their skills together for mutual benefit. The companies say that through the partnership, shipping companies now have access to experienced naval architects and wind-assisted propulsion specialists at a single stroke, making the process both more efficient and more reliable.

[Read more...](#)

Smart Green Shipping (UK)

In February, Smart Green Shipping celebrated a new wave of investment from MOL Drybulk Ltd and Scottish Enterprise [Read more...](#)

In June, Smart Green Shipping announced their collaboration with Nuclear Transport Solutions (NTS) as part of the 'Winds of Change' project to appraise wind-assist sail technology for their ships.

The *Pacific Grebe*, a 103m long 4,900dwt nuclear fuel carrier is being assessed for installation as part of the 2-year project - which will assess the technical, commercial and environmental viability of using 21st century wing sail designs to provide direct thrust to commercial ships. Di Gilpin, SGS CEO says that the project gives SGS an excellent opportunity to demonstrate the feasibility of retrofitting SGS FastRig wingsails onto ships with the highest safety standards [Read more...](#)



BAR Technologies (UK) and Yara Marine (Norway)

The BAR Tech WindWings by Yara Marine Technologies are currently being assembled and prepared for final installation on board the 80,962 dwt *Pyxis Ocean*, a Mitsubishi Corporation owned vessel, chartered by Cargill.

This first set of WindWings is assembled in Shanghai, China, with the installation and delivery to take place later in Q3 2023. WindWings reduce fuel consumption by 1.5 tonnes per WindWing per day on global routes, which equals 4.65 tonnes less CO₂ per WindWing per day, assuming HFO use.

Later this summer, BAR Tech WindWings will be installed on the 2018-built *Berge Olympus*. The 210,000 dwt bulk carrier will be equipped with 4 WindWings.

In June, BAR Technologies and Yara Marine were awarded with full Type Approval Design Certificate (TADC) for the Wind Wings system from DNV. [Read more...](#)

Also in June, Deltamarin and BAR Technologies announced that they are once again partnering to lead the way in wind propulsion innovation with new build design, Aframax/LR2. The new optimised hull design is capable of harnessing wind power for 15% improvement against the current fleet. [Read more...](#)



Norsepower (Finland)

In January, Norsepower, SOCATRA and TotalEnergies signed a contract for the installation of 2 x 35m x 5m rotor sails on a French flagged MR tanker by the end of the year. [Read more...](#)

In February, they installed two tilting 35m x 5m Rotor Sails on the *CLdN MV Delphine*, a Ro-Ro vessel in operation between the UK, Ireland and Europe, which is reportedly the largest short-sea Ro-Ro vessel operating in the world today. [Read more...](#)

In March, Norsepower confirmed that they had successfully secured €28 million in their Series C fundraising round. This includes a Finnish Climate Fund (Ilmastorahasto) capital loan of up to €10m (\$10.85m) for increasing its production capacity. [Read more...](#) They also announced that MOL and VALE will install two 35m Norsepower Rotor Sails™ on an in-service 200,000dwt Capesize bulk carrier in Q2 2024. [Read more...](#)

Norsepower has also signed a contract with Iino Kaiun Kaisha Ltd for the installation of two 20m x 4m rotor sails on a newbuild Very Large Gas Carrier (VLGC). The LPG dual-fuel vessel has been delivered wind-ready today from Daewoo Shipbuilding and Marine Engineering Co, Ltd. in Korea, and the side-by-side rotors will be installed in Q2 2024. [Read more...](#)



GT Green Technologies (UK)

Congratulations to the team at GT Green Technologies on winning the Start-up of the Year award at the Maritime UK Awards in April! They are developing a novel wind propulsion system named AirWing™. [Read more...](#)

Aurelia Design (Netherlands)

In June, Aurelia Design announced a cooperation with Carisbrooke Shipping on route optimisation and GHG reduction for the 11,183 dwt *Vectis Pride*. With options for both sail systems and rotors. [Read more...](#)



Econowind (The Netherlands)

From the end of 2022, Econowind scaled up in orders, capacity, their team and product development and introduced the upgrade of the suction wing technology the VentoFoil.

In March 2023, Marfret extended their trial with two Econowind containerized VentoFoil units, leasing the units that they rented the previous year.

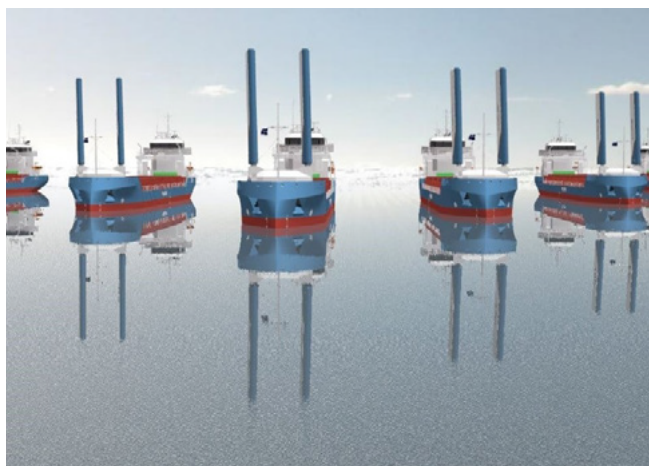
In May 2023, Econowind installed two 16m x 2.8m VentoFoil units on the *MV Sunnanvik* for SMT shipping.

In the summer they will deliver 2 x 2 VentoFoil units of 16 x 2.8m for two Vertom ships (*MV Perfect* and *MV Pride*) and in the autumn they will install four 16m x 2.8m wings onto the chemical tanker *MV Chemical Challenger* of Chemship.

In Q4 23, Econowind will deliver two 16m x 2.8m VentoFoil wings to the *Onego Duesto* (Formerly the *MV Beluga*), which was some years ago equipped with a kite. In April, Singapore-based Ocean Network Express (ONE) announced it will install two 10.5m x 2.8m containerized Ventofoils wind assist units on the Norse-owned, 143m, 1,036 TEU feeder container ship the *MV Kalamazoo* by the end of 2023. As far as we know, this will be the first container ship with some form of wind-assist capability. [Read more...](#)

In cooperation with Bijlsma Shipyard and Conoship International, Econowind has started on the development of a 30m VentoFoil unit, which will be introduced in Q1 2024.

In June, Wilson ASA signed a contract for six 3,800dwt wind-assist bulkers with the option for eight more for delivery in early 2025. [Read more...](#)



Chantiers de l'Atlantique (France)

Congratulations to Chantiers de l'Atlantique for winning the 2023 JEC Group Composites Innovation Awards in the "Maritime Transportation and Shipbuilding" category for their Solid Sail Mast project. Bureau Veritas delivered an AiP for solid sails in 2022 and are conducting the approval process for the design and construction of the mast and systems.

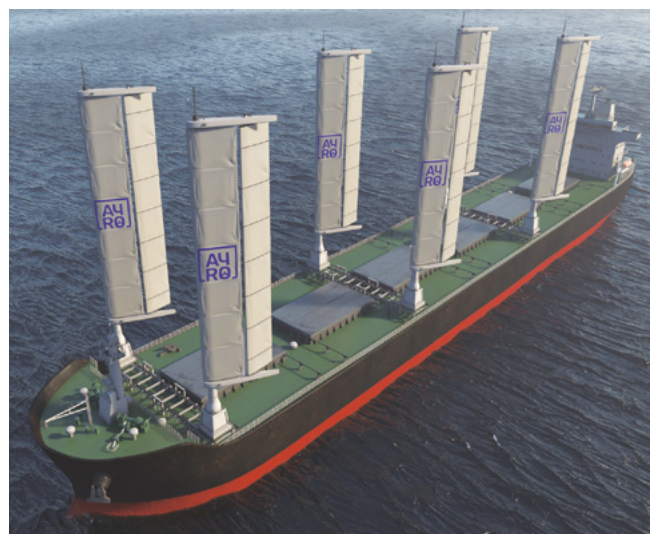
In March, the construction of the first 136m NEOLINE "Neoliner", a primary wind powered RoRo ship for routes in the North Atlantic commenced at the RMK Marine Gemi Yapım Sanayii ve Deniz Taşımacılığı İşletmesi A.Ş. shipyard in Turkey. The vessel will feature 2 x 76m solid sail systems designed by Chantiers de l'Atlantique. The customers for this first vessel include Renault Group, BENETEAU Group, MANITOU Group, Michelin, Hennessy, Groupe Clarins, Longchamp and Rémy Cointreau. Investors include CMA CGM and Corsica Ferries. [Read more...](#)

ARYO (France)

In January, ARYO received EU funding for its participation in the WHISPER energy transition project.

WHISPER, has been granted €9.2 million in funding from Horizon Europe for a 4-year innovation project. WHISPER is comprised of 14 European partners and aims to demonstrate around 30% fuel savings on a retrofit bulk carrier and more than 15% on a retrofit containership. ARYO will design and install a tiltable version of the Oceanwings for the related bulk carrier. [Read more...](#)

ARYO recently announced the supply of two Oceanwings® 32 for the *Ocean Eco 90 H2*, a fuel-free 90 feet electric superyacht designed by ALVA Yachts. It confirms the evolution of the yachting sector towards a more environmental-friendly approach, in which ARYO is completely involved.



bound4blue (Spain)

bound4blue has recently installed two 17m suction sails high on the Amasus owned general cargo vessel *Eems Traveller*. [Read more...](#)

In June, it was announced that Marubeni Corporation and bound4blue have formed a strategic partnership to promote and sell the eSAIL technology in Japan [Read more...](#)

In May, it was announced that bound4blue and Oceanking are teaming up to expand access to the eSAIL technology in Greece and Cyprus. [Read more...](#)

Congratulations to Cristina Aleixendri, co-founder and COO of bound4blue for winning the Nor-Shipping Young Entrepreneur Award 2023 in early June. [Read more...](#) This prestigious award followed her winning the Seatrade Maritime Young Entrepreneur of the Year Award in November 2022. [Read more...](#) Cristina has also been highlighted as one of the ten women to watch in shipping.



Terntank (Sweden)

Finnish North European Oil Trade (NEOT) group has signed a charter agreement with TERNTANK for the shipping company's two newbuild wind/methanol-ready hybrid tankers that will be delivered in 2025. [Read more...](#)



Syroco (France)

Syroco has announced the availability of a new version of EfficientShip, the simulation platform for optimising the energy efficiency of ships. The platform enables wind propulsion technologies benchmarking. It builds a digital twin of the ship and adds to that twin any propulsion device that is being considered. The new version of EfficientShip makes it possible to create and deploy digital twins of ships that are already in operation. [Read more...](#)



SINTEF (Norway)

In June it was announced that Hurtigruten Group will launch its first zero-emission cruise ship in 2030. The Sea Zero project behind the vessel development is made up of twelve members, including IWSA member SINTEF. The 135m vessel will be capable of taking 500 passengers and will be fully electric when not under wind propulsion. It will feature 50m solar sails along with batteries, air lubrication and other innovative systems.

Hurtigruten Group is planning to roll out more of this design in the future. [Read more...](#)

Bluewater Engineering (UK)

Congratulations to the Bluewater Engineering team for being selected to receive a share of the £1.96m funding from the UK Transport Research and Innovation Grant (TRIG) for their Skytug system. Skytug is a wind-propelled ocean tug that can provide the same power as a traditional craft for ship sizes from 35,000 to 200,000 dwt. [Read more...](#)

Thordon Bearings (Canada)

In March, Thordon Bearings announced that they are supplying its grease-free, self-lubricating ThorPlas-Blue bearing material to a novel containerised wind propulsion system designed to reduce fuel consumption and fossil fuel emissions across all commercial ship types. The rigid sail system – developed by entrepreneurs Miles Keeney-Ritchie and Satchel Douglas, co-founders of Boston, Massachusetts, U.S.A.-based start-up Aloft Systems – is a rigid aluminum and composite airfoil housed in a 16m (53ft) shipping container that deploys automatically when the wind is sufficient to propel the vessel along.

Four ThorPlas-Blue bearings were machined and installed on a 1/4 scale prototype to allow the sails to fold, rotate 360 degrees and pivot to optimize wind conditions. Thordon will supply the material to full-scale units once the entrepreneurs have partnered with a shipowner with whom to trial the system. [Read more...](#)

Ecoclipper (Netherlands)

In May, *De Tukker*, the first ship operated by sail cargo company Ecoclipper, has set sail signalling the start of the emission-free short sea Western European liner service. Leaving Amsterdam carrying chocolate and headed for Porto where she arrived mid May and took on a cargo of wine and olive oil. This is the first voyage on a sailing schedule which will see the ship sail on a regular route across North and West Europe. *De Tukker*, which was built in 1912 has over 300 square metres of sail, carrying capacity of about 70 cubic metres (50-70 tons) & accommodation for up to 12 trainees or travellers. [Read more...](#)



MIDES Design (Slovenia)

After attending the Wind Propulsion Conference 2023, MIDES Design took action and presented Aero Sail patent to their potential partners. Instead of a traditional mast, the Aero Sail is built around an A-frame, which is then fitted with a rotating carbon boom mounted on a central pivot point.

They will initially focus on the commercial sector and are currently working with one of the largest telecommunications companies in Slovenia to create a business strategy and explore potential collaboration in the future. MIDES Design have also been given the opportunity to enter the pleasure sector. [Read more...](#)



Team Malizia (Germany)

In May, it was announced that Team Malizia and Windcoop will be teaming up and promoting commercial wind propulsion. [Read more...](#)

After 6 months of intense racing, 7 legs and 9 stopover cities, Team Malizia finished their 37,201,95 nautical mile-long lap around the world while competing in the World Ocean Race at the end of June. Well done Team Malizia!



VPLP Design (France)

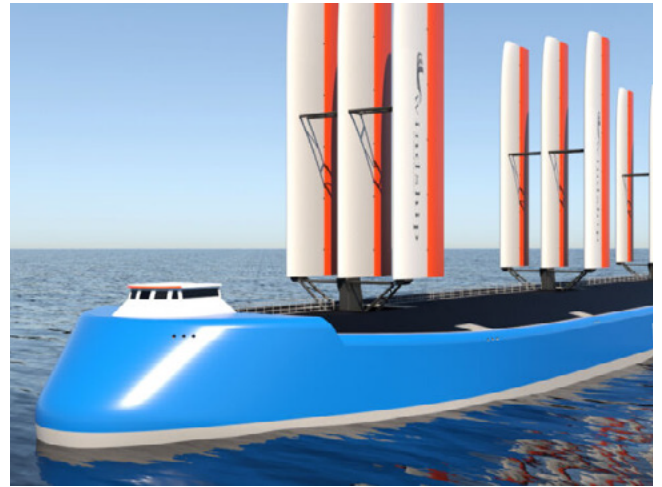
In May, a new vessel design 'VELA' was announced by VPLP, a French start-up that is designing and equipping cargo sailboats. This led to the design of a 65m schooner-rigged trimaran which can carry 350 tonnes between Nouvelle-Aquitaine (France) and New York in under two weeks, including loading and unloading. The first VELA ships will connect France to the United States, transporting approx. 450 US pallets, they are scheduled for launch in 2025. [Read more...](#)



Windship Technology (UK)

WindShip Technology has secured £4million (\$4.5 million) for trialling their wing sails and onboard CCS. [Read more...](#)

The Windship Technology solution is an auxiliary power system. Each rig is a three-wing foil set of 36 to 48 metres in height, depending on the size of the ship.



Oceanbird (Sweden)

In January, it was announced that Oceanbird, Wallenius Wilhelmsen and project partners have secured a Horizon Europe funding totalling €9m to support building a RoRo sailing vessel. Over the next five years, all aspects of planning, building, and operating a wind-powered vessel, the Orcelle Wind, will be done. [Read more...](#)

Also, congratulations to Wallenius Wilhelmsen and Oceanbird for winning the prestigious Heyerdahl Award 2023 for the Orcelle Wind project [Read more...](#)



Policy, Projects & Other News

In July, MEPC80 was held at International Maritime Organization (IMO), the third MEPC gathering that IWSA has attended with full consultative status. Here is a broad outline of the revised strategy and a copy of one of our major interventions that is appended to the MEPC80 strategy report:



1. Level of Ambition - GHG emissions from international shipping to reach net zero - to peak GHG emissions from international shipping as soon as possible and to reach net-zero GHG emissions by or around, i.e. close to 2050, taking into account different national circumstances.
1. Uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources to represent at least 5%, striving for 10%, of the energy used by international shipping by 2030
2. No binding interim targets for 2030/2040 but rather indicative checkpoints:
(2-1) 2030, all greenhouse gas (GHG) emissions should be reduced by 20 percent, striving for 30 percent
(2-2) 2040, all greenhouse gas (GHG) emissions should be reduced by 70 percent, striving for 80 percent.

Mid-term measures – agreed to move forward with a (i) technical element, namely a goal-based marine fuel standard regulating the phased reduction of the marine fuel's GHG intensity [likely a Global Fuel Standard] (ii) economic element, on the basis of a maritime GHG emissions pricing mechanism [a basket of measures is still undecided but will undergo a Comprehensive Impact Assessment (CIA) by UNCTAD to judge their impacts especially on LDCs/SIDs but also other developing countries.]

Draft schedule: The basket of mid-term GHG reduction measures should be finalized and agreed by the Committee by 2025, however no dates set for establishing the delivery mechanisms or for coming into force, the earliest will be 16 months after the adoption.

2024 - MEPC 81 (spring 2024) - Interim CIA report // Finalization of basket of mid-term measures

2024 - MEPC 82 (autumn 2024) - Finalized CIA report

2025 - MEPC 83 (spring 2025) - Approval of mid-term measures

2025 - Extraordinary 1-2 day MEPC (six months after MEPC 83 – autumn 2025) - Adoption of mid-term measures

2027 - 16 months after adoption - Earliest date of entry into force for mid-term measure

Specifically impactful for Wind Propulsion

1. As in item two above, we have “technologies” and “energy source” included in the 5% and striving for 10% target for the uptake of zero or near-zero GHG emission technologies, fuels and/or energy sources.
2. Fuel Lifecycle Assessment – while not fully confirmed, we have argued fairly successfully for wind propulsion to be included in the Fuel LCA (zero-rated) and the provision of wind propulsion is included in the fuel listing as pathway/fuel 126.
3. Well-to-Wake assessment of Fuels – while not confirmed (currently noted that Well-to-Wake should be taken into account), there is strong support for the adoption of Well-to-Wake assessment for all fuels, and IBIA, the bunkering association assured IMO that they can provide standardised certification for fuels within the next 12-18 months. This is a key issue for a level playing field assessment with wind propulsion energy. The report states that the “levels of ambition and indicative checkpoints should take into account the well-to-wake GHG emissions of marine fuels as addressed in the Guidelines on lifecycle GHG intensity of marine fuels (LCA guidelines) developed by the Organization with the overall objective of reducing GHG emissions within the boundaries of the energy system of international shipping and preventing a shift of emissions to other sectors.”
4. Global Fuel Standard - we have support from a number of key delegations to either have wind propulsion included as a fuel in this or for the GFS to be amended to a Global Fuel & Energy Standard. Further work will need to be done on how to assess wind contribution (revised KPI's)

IWSA statement:

We recognise that there have been some very difficult compromises made over the last two weeks, notably the two hottest weeks globally recorded in the past 40 years. While we all know that this agreement isn't 1.5C aligned, it is still a milestone on the way to delivering on a high ambition decarbonisation pathway for the industry, but just as many delegations have stated, it is only the first milestone.

Of course, binding interim targets would add much more certainty for the industry and for investors to move, however the use of indicative checkpoints in their place has been agreed and striving for, or even exceeding, the top end of those will be critical to keeping 1.5C alive.

The next and probably the most important milestone will be an agreement on ambitious and robust technical and economic measures without which we will not be able to deliver. The International Windship Association will be fully engaged with the development of these measures.

Wind propulsion technologies offer proven and substantial decarbonisation benefits, available for immediate deployment and our members are committed to continuing to push forward with the scaling of that deployment and with their expansion of production capacity. This will be their ongoing contribution to delivering a just, fair, equitable and the highest emission reduction transition possible.

IWSA was very pleased that the MEPC80/INF.33 paper submitted by the Royal Institution of Naval Architects (RINA) and International Windship Association (IWSA) was accepted and presented at MEPC80.

MEPC80 paper Executive summary: The maritime wind propulsion industry is evolving rapidly with significant strides made in analysis, testing, verification and demonstrator ship deployment that make use of Wind Propulsion Technologies (WPTs). This document highlights much of that progress and summarizes the key themes and papers delivered during a recent event held at IMO. [Read more...](#)



This gathering of wind propulsion experts and end users on 16-17 February 2023 at IMO Headquarters in London, represented a significant milestone in the journey to develop a wind-powered fleet fit for the 2030's and beyond. The keynote speech by the IMO Secretariat referred to both the scale of the challenge of decarbonization facing the shipping industry but also outlining the positive initiatives underway in IMO. The Secretariat also highlighted how the potential for wind propulsion aligns with these IMO and industry goals and will be an important technology segment available to reach the goals set at MEPC 80.

The paper includes short summaries of each of the conference papers presented through the two days and full copies of these proceedings can be ordered from RINA directly – check for details https://www.rina.org.uk/Wind_Propulsion_2023.html or email request to publications@rina.org.uk

IWSA Secretary General, Gavin Allwright manned a booth at the International Maritime Organization, while attending both the intercessional meetings and MEPC80. It was a great opportunity to meet and talk with many delegations and to show both a loop video of wind propulsion projects and also the inspirational winning entries from our Youth Poster contest.



The WASP project has drawn to a close after 3.5 years, it has concluded with five vessels retrofitted with three different wind propulsion technologies tested, third-party validations conducted to verify actual fuel savings achieved and a raft of other key deliverables concerning performance indicators, standard sea trials, decision making tools, policy interventions and raising

the profile of wind assist solutions etc. [Read more...](#)

The WASP project has also published a 'Best Practice Manual' tracking some of the decision making processes, shipowners & technology providers feedback, project learnings etc. [Download page](#)

The Project website - <https://northsearegion.eu/wasp> - will remain active and project partners will continue to build on the foundations laid by the project. Visitors to the website can access extensive information about the technology installations and even track the ships fitted with wind propulsion technology as part of the project. The output section on the website houses copies of all of the deliverables from the project partners, including scientific reports, policy briefs, academic papers, finance and decision-making tools.

IWSA will continue to integrate the deliverables from the WASP Project into its work and to also maintain the expert database on the IWSA website.

In May, the keel laying ceremony for the Pacific Island Supply Vessel was held at Asia Shipbuilding Co, Ltd close to the city of Geoje on Geoje Island, South Korea.. The ship will provide a trading, research and training platform for the Republic of the Marshall Islands (RMI) when it is delivered in early 2024. [Read more...](#)

The consortium of Asia Shipbuilding Co., Ltd., and the naval design company Kostec Co., Ltd., has signed a contract with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH last year's July to deliver an innovative sailing cargo ship for the needs of the Republic of the Marshall Islands.





The North American Marine Environment Protection Association (NAMEPA) and ESGplus LLC have developed an innovative ESG assessment tool tailored specifically for the maritime industry. Launched in June 2020, the tool enables companies, associations, educators, and individuals in the industry to evaluate their adherence to ESG (Environmental, Social, and Governance) principles. Covering all three elements of sustainability, the program encompasses Six Transparency Pillars: Waste Management, GHG Emissions, Education, Technology, Social, and Governance.

Numerous companies have successfully completed the program, earning their Maritime Sustainability Passport (MSP) and MSP Seal. The MSP Program aims to annually track, measure, verify, and certify participants' ESG performance while facilitating their progress. It provides valuable feedback, guidance, and resources to enhance sustainability practices and attain higher scores.

For additional details about the program and enrolment, please visit [NAMEPA-MSP Program](#)

RISE SSPA will lead a new benchmark project called SWOPP - RISE SSPA Maritime Center Workshop On Performance Prediction for wind-powered ships for all organizations working with performance predictions of wind-powered and wind-assisted ships. Registration: Email your interest to: swopp@sspa.se

How does it work?

The organizers will provide data of two generic ships. All participants predict the performance with their respective tools and submit the results to the organizers. A description of the prediction method may be submitted along with the results, but this is not required. The results from all participants will be compared and presented in an anonymized form. By the end of the project, all participants are invited to a hybrid workshop in Gothenburg/online, where the results will be discussed. Finally, all participants are invited to contribute to a joint publication.

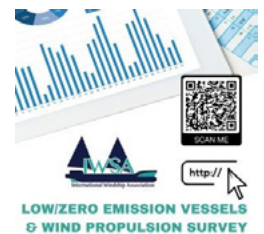
Timeline

30.08.2023 End of Registration standard fee (late registration will be +50%)
02.10.2023 Kick off meeting (online). Input given for Ship 1
31.12.2023 Submit results of Ship 1
31.01.2024 Mid-term online meeting, present results of Ship 1, Start Ship 2
15.05.2024 Submit results of Ship 2
25.06.2024 Final meeting at RISE SSPA Maritime Center, Gothenburg
Presentation of results and discussions on methods.
Plan for joint publication
Facility tour, networking and social activities

Fee: EUR 5000 (EUR 3000 for enterprises with fewer than 10 employees)
Includes final workshop in Gothenburg (not including hotel/travel).
Email your interest to: swopp@sspa.se

IWSA Low/Zero Emission Vessels & Wind Propulsion Survey

This survey was launched in June and we have received c.100 responses to-date from industry stakeholders and policy makers. Under popular request, the survey will remain open until 14 August – it takes 10 minutes to complete and the answers to those questions will give us further insights into the industry and policy makers understanding of and engagement with wind propulsion systems and projects. [Survey: Low/Zero Emission Vessels & Wind Propulsion](#)



Thank you for your support in completing the survey and we really appreciate your help in passing on the survey details to your network!

New CE Delft Report: Shipping GHG emissions 2030 Analysis of the maximum technical abatement potential

The report concludes that it is technically possible to reduce shipping emissions by 28-47% by 2030, relative to a 2008 baseline, amounting to c. 175–350 Mt CO₂e on a Well-to-Wake basis per year. About half of the emission reductions would be delivered from lower speeds and other operational measures, a quarter from wind propulsion primarily along with other technical measures and the rest through zero/near-zero GHG fuels. The report also concludes that these measures would only increase shipping costs by 6-14% on average, relative to a business-as-usual approach.

[Read more...](#)

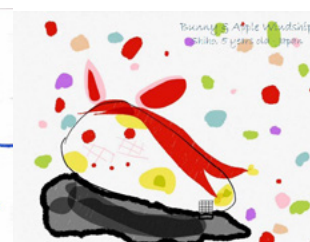
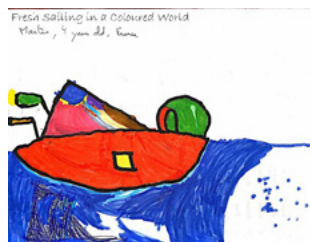
[Download Report](#)

'Wind Ship – The Future' Poster Contest – Winners Announced

Congratulations to all of the young artists that submitted c.100 inspirational entries and the over 2,000 votes received. We would also like to thank the [expert jury](#) that gave so much of their valuable time too. [Read more...](#)

Download – [Wind Ship – The Future – Poster Contest – Winners Album](#)

Visit online gallery: [2-5 Years Old](#) // [6-11 Years Old](#) // [12-17 Years Old](#)



On 25th June it was the International Day of the Seafarer - This year's day of the seafarer came just ahead of several key meetings held at International Maritime Organization, with ISWG 15 taking place the week before MEPC80 the following week. As an industry we will debate the long-term decarbonisation strategy and measures to reach the agreed targets.

However, it is seafarers that will be tasked with implementing the changes, adapting to the new ways of operating and dealing with the new fuels and technologies. They have always been key workers, but their role in coming years will be absolutely critical.

I think we can all agree with this: If we; Respect, Recruit, Re-train, Retain and adequately Remunerate our seafarers, then our industry has a bright future! IMO Secretary General message – [VIDEO](#)



The "WIND" research project has secured funding and will now move forward. Congratulations to SINTEF Ocean and the consortium of securing the funding from Norges forskningsråd for the research proposal "WIND" – Enabling Zero-Emission shipping with wind-assisted propulsion. "WIND" is a collaborative project by SINTEF Ocean, Norwegian University of

Science and Technology (NTNU), and 12 leading maritime companies including: Kongsberg Maritime; Sea-Cargo AS; Seatrans AS; Klavness Ship Management AS; Kristian Gerhard Jebsen Skipsrederi AS; Grieg Star; Solvang ASA; Odfjell SE; LMG Marin AS; Polarkonsult AS; Norsepower; AYRO; AIRSEAS

The "WIND" project will enable the maritime sector to move, with confidence, towards ships with wind assisted propulsion where a large portion of the propulsion comes from the wind, both as retrofit solution and newbuilds. "WIND" will generate market opportunities, new jobs, and increase competitiveness in Norwegian maritime sector. [Read more...](#)



There was a clean (wind) sweep at the Nor-Shipping Awards 2023 this year. Wind propulsion projects won in all three categories:

Nor-Shipping Ocean Solutions Award – Oceanbird for the primary wind car carrier ship design by Alfawall, a joint project between Wallenius Marine AB and Alfa Laval, that will hopefully have it's first vessel in operation with Wallenius Wilhelmsen in 2026

Next Generation Ship Award – TERNTANK and Kongsberg Maritime for their three wind-assist hybrid 15,000 dwt tankers.

Nor-Shipping Young Entrepreneur Award – Cristina Aleixendri Muñoz of bound4blue, increasingly bringing their suction sail systems to market.

Congratulations to all of the winners and to the others on the shortlist, which included projects from NEOLINE, BAR Technologies & Yara Marine Technologies + Mitsubishi Corporation/Cargill as part of the CHEK PJ project and Danielle Southcott from Veer.Voyage. [Read more...](#)





IWSA Secretary General visited the **United Nations headquarters in New York** in early June, from World Environment Day all the way through to World Ocean Day on 8th June. He presented to and participated in the UN working group on Oceans and the Law of the Sea, discussing wind propulsion and its impact and opportunities for sustainable development.



NORSEPOWER

A new paper on **'Voyage Optimization with Wind Propulsion (Sept 2022)'** has been released, authored by Ville Paakkari (Norsepower), H Wang, C Stigler

Abstract: Wind propulsion has been proven to produce significant fuel savings on commercial vessels. The typical savings potential of wind propulsion on conventional cargo ships is 5-25%. On the other hand, voyage optimization and weather routing has been shown to produce similarly large fuel savings in the order of 15%. Wind is an intermittent energy source, and it often occurs together with waves, making ships installed with wind propulsion especially interesting from weather routing point of view. This means that a holistic approach is needed when conducting weather routing for ships with wind propulsion. Using detailed simulations, this paper studies how the fuel savings potential of wind propulsion can be further improved by coupling it with state-of-the-art voyage optimization software. Via case study examples, it is shown that the savings potential of wind propulsion can be more than doubled by using voyage optimization. [Download paper](#)

We are delighted to announce that Gavin Allwright, IWSA Secretary General was awarded with the Personality award in this year's Green4Sea Awards in April. [Read more...](#)



The German Federal Ministry for Economic Affairs and Climate Protection has funded a three year study on rotor sails.

The project "FlettnerFLEET – Development of a comprehensive methodology for the integration of Flettner rotors on different types of ships" is led by MARIKO GmbH. The project will focus on three installations on the E-ship 1 (4 rotors), and the Fehn Pollux and Annika Braren both with single rotors. [Read more...](#)

The FlettnerFLEET project creates the necessary conditions for the further development of the Flettner rotor technology and lays the foundations for the development of ships with this propulsion system. The project consortium, consisting of partners from science and industry, officially started work on the project in January.

The pioneer of the project is the former "MS Fehn Pollux" equipped with a Flettner rotor built in Leer. The project started on 1st January 2023 and has a proposed duration of three years.



New Members

Full Members



MIDES design
(Slovenia)



Knud E. Hansen
(Denmark)



McFarlane Shipdesign
(Monaco)



Rondal
(Netherlands)

Associate Members



ABL Group
(UK/International)



Aurelia Design
(Netherlands)



Cargill
(Switzerland/International)



NAPA Group
(Finland)



Team Malizia
(Germany)



Africa Express Line
(UK)



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(Netherlands)



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(Spain)



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Dr. Vusal Jivishov, Assistant Professor in Mechanical Engineering (Azerbaijan)
Eric Plumlee (USA)
Pablo Albers (Finland)
Deniz Tugay, Ship Science Student, University of Southampton (UK)

Classification Society Guidelines

There are an increasing number of publicly released guidelines and links to specific wind-propulsion classification documents:

Bureau Veritas Guidelines: [Download](#)

ClassNK Guidelines are downloadable from www.classnk.com

DNV Guidelines: [Download](#)

ABS Guidelines: [Download](#)

Lloyds Register Guidelines: [rotors](#)

Russian Maritime Register of Shipping (RS): [Download](#)

China Ship Classification Society: [Download](#)

Media Listings

IWSA Newsletter Back Issues: Download back issues of the IWSA newsletter

[December 2022](#) / [May 2022](#) / [December 2021](#) / [April 2021](#) / [October 2020](#) / [April 2020](#) / [December 2019](#) / [July 2019](#) / [February 2019](#) / [October 2018](#)



Click a link to view our
youtube interviews



14 episodes of the Aronnax Podcast that have featured stories about wind propulsion

9th March 2020 with Gavin Allwright, IWSA and Brian Boserup, Blue Technology [Listen Here](#)

1st April 2020 with eConowind [Listen Here](#)

11th May 2020 with BAR Technologies and AirSeas [Listen Here](#)

1st February 2021 with Roger Strevens re WW plans [Listen Here](#)

1st May 2021 with Orestis Schina HHX and intro to Danielle Doggett, SailCargo Inc. [Listen Here](#)

7th May 2021 with Daniellle Doggett SailCargo Inc. [Listen Here](#)

19th November 2021 with Di Gilpin, Smart Green Shipping [Listen Here](#)

2nd January 2022 with Bound4Blue [Listen Here](#)

1st April 2022 with Orca [Listen Here](#)

24th April 2022 with Syroco [Listen Here](#)

2nd November 2022 with Danielle Doggeet, Veer Voyage [Listen Here](#)

29th January 2023 with Oceanbird [Listen here](#)

26th February 2023 with Di Gilpin, Smart Green Shipping [Listen here](#)

8th May 2023 with Sofia Werner, RISE SSPA [Listen here](#)

Articles & Interviews



Massive Sails Power Ships Like Never Before, WIRED Magazine
[Read more...](#)



THE
NEW YORKER

The Climate Crisis Gives Sailing Ships a Second Wind
[Read more...](#)



MEPC80 Submission – Reduction of GHG Emissions from Ships: Wind propulsion technologies as a key enabler
[Read more...](#)



Wind propulsion returns to commercial vessels
[Read more...](#)

the **guardian**

Cargo ships powered by wind could help tackle climate crisis
[Read more...](#)

BBC

BBC video – A compact BBC show following the Oceanbird project and their vision for the return and scaling of wind propulsion.
[Read more...](#)

Lloyd's List 

Combining wind with advanced tech would swiftly bring savings
[Read more...](#)



Wind propulsion in shipping: Projects that make headlines
[Read more...](#)

CNN travel

Giant kites could pull cargo ships across the ocean – and slash their carbon emissions
[Read more...](#)

THE BUSINESS TIMES

Harnessing wind power for shipping looks promising
[Read more...](#)

The Washington Post

Global shipping industry faces headwinds over going green
[Read more...](#)

The Sydney Morning Herald

Trade winds: Shipping is turning back to sails after a century
[Read more...](#)

WORLD OF
Cruising

Winds of change: how big cruise ships could use futuristic sails to save fuel
[Read more...](#)

Key IWSA Programs 2023+

Program	Date	Description	Opportunity
Accelerator Program	2023+	Large scale incubator – test fleet – installation program giving all tech members access to funding, tech and business support, training & research opportunities + retrofit/newbuild	Multi-stakeholder project currently being scoped. Working on full structure & funding proposals throughout 2022/23
Wind Propulsion Reports	2023	Reports on market developments, technology developments, Barriers/Drivers + updated policy briefing papers – include findings from surveys.	Collaborative project between all stakeholders and being delivered as part of EU ESSF activities as a White Paper.
Member & Industry Surveys	Q2/3 2023	Series of industry/policy maker surveys IWSA, Shipping & Policy (IMO, EU etc.)	Research level questions and academic collaboration.
Expert Database	Ongoing	Database - researchers/engineers, policy specialists & academics	Developed in coop with WASP project
Small Vessel Publication	2023+	50+ pg pdf report on small vessel sector, - tech, economic/business plans, routes, cargos, project profiles + expert input.	Collation of papers.. Sponsorship and project segments available.
Documentary & Short Film	2023/4	Professionally produced 2-3 min short film intro wind propulsion tech & developments.	Designed for general & maritime audience. Sponsorship required
Webinar & Podcast Interviews	Ongoing	Continued 'Listening to the Wind' interviews with IWSA members + selection of webinars this year with leading expert panels	Recordings will be made available for free on Youtube channel - Sponsorship available
Education Program	Ongoing	Univ. & School program – seminars, lectures, works groups & project visits + Produce educ. materials for wider network.	Expansion of ongoing program to maritime colleges, univs, high schools. - Sponsorship - materials production & events available.
Wind Propulsion Conference 2024	Q4 2024	RINA/IWSA associated Two-day conference – hybrid or in-person event	Sponsorship available: Contact Royal Institution of Naval architects directly
Wind Propulsion Multi-Stakeholder Working Group	2023+	Regular working group - 20-30 members from all external stakeholder groups. Covering all aspects of integrating wind in the industry and policy framework.	Funding required for research, work package support + dissemination.
Wind Propulsion Hub Development	2023+	Increased coordination of international hubs, national chapters, stakeholder engagement + funding outreach	Involvement & funding of set-up of additional hubs + increased regional/national impacts.
Project Collaborations & Advisory	2023+	GCMD Collaboration WiSP 2 – JIP headed by ABS & MARIN, World Wind Energy Association, Waterborne EU IRENA: Coalition for Action – UN affiliated IMO & ESSF Status	Engagement in partnership, as representative or as supporting organisation/knowledge partner to further the aim of integrating wind propulsion solutions into the policy framework of commercial shipping and encouraging further pilots and demonstrator vessels.
Match-making Platform	Q3 2023+	Virtual events bringing together projects, OEMs, suppliers, finance and other stakeholders for introductions, discussions and activities around wind propulsion.	Platform will have regular meetings and events which will include a small fee and can also be sponsored.

Upcoming Events

21-23 November – The Motorship Propulsion & Future Fuels Conference - Hamburg – Germany

IWSA is an official supporting organisation.

The Motorship's Propulsion & Future Fuels Conference will cover a range of topics with emphasis on the next steps to 2030 and 2050, and an in-depth analysis of ship operators' future fuel considerations. The 2023 conference will feature high-profile sessions with informative presentations from a selection of fuel and equipment manufacturers, policymakers, safety experts, shipowners, and class societies. 2023 marks the 44th anniversary of Motorship Conferences, making Propulsion & Future Fuels the longest-running technical conference in the maritime sector. The conference provides senior executives with a meeting place to learn, discuss, and share knowledge of the latest developments in efficient propulsion technology and low flashpoint, low carbon fuels. [Read more...](#)



IWSA member discount code:

18-20 October – GreenPort Congress & Cruise – Port of Lisbon, Portugal

IWSA is an official supporting organisation.

The 18th edition of GreenPort Congress & Cruise will provide decision-makers from the port community – port authorities, terminal operators, shipping lines, logistics operators – with a meeting place to both learn about and discuss the latest in sustainable development and environmental practice to enable them to effectively implement the changes needed to reduce their carbon footprint and to be more sensitive to the environmental considerations. [Read more...](#)



IWSA member discount code:

27 September - Wind Propulsion Match Making Event – Virtual 1400-1630 (CET)

This will be the first in a regular series of IWSA virtual match making events. The inaugural matchmaking event will be a forum for shipowners and other industry stakeholders to meet an extended group of wind propulsion technology developers including online booths, a discussion forum and one-to-one private meeting slots. A great opportunity for shipowners and operators to get industry insights and meet. Shipowners join free of charge.

Official announcement and event links to be posted on IWSA website and social media shortly.

30 November - 12 December - 2023 United Nations Climate Change Conference or Conference of the Parties of the UNFCCC (COP28) Dubai

An IWSA delegation will be attending the COP28 meetings and events in Dubai to help showcase wind propulsion developments and their contribution to shipping decarbonisation but also highlighting wind propulsion technology segment as a win-win climate solution. [Read more...](#)

5-8 December –Marintec Exhibition, Shanghai, China

[Read more...](#)

September - Wind Propulsion: Barriers, Drivers and Perceptions Roundtable & Forum @ London International Shipping Week

In association with the Royal Institution of Naval Architects, we will co-host a two-stage event during September to discuss the pathway forward for the sector in light of the new IMO decarbonisation strategy, EU maritime regulations coming into force and other developments.

Expert Roundtable

Thursday, 07 September 1400-1700 CET:

We will hold an expert virtual roundtable where a group of leading experts from across the maritime sector will meet to discuss these issues and access the progress made since the last roundtable held in 2021. (Invitation only)

Wind Propulsion: Barriers, Drivers and Perceptions Forum 14 September - 14.30 – 16.30:

IWSA will hold an in-person forum to be held at the RINA HQ in London to discuss the report from the roundtable and also for the public release of our IWSA Wind Propulsion Survey to be followed by networking and drinks. Limited tickets are available for this forum. [Registration link](#)

Location: RINA HQ, 8-9 Northumberland Street, London, WC2N 5DA

Agenda:

- IWSA 2023 Survey results presentation (20 mins)
- Panel discussion - Barriers & Drivers Roundtable (30 mins)
- Interactive Feedback/Work groups – expanding on results, issues raised etc. (60 mins)
- Close/Summary (10 mins)
- Networking drinks

World-leading Maritime Procurement Events

IMPA Events 2023

12-13 SEPTEMBER 2023
Queen Elizabeth II Centre
London

21-22 NOVEMBER 2023
Suntec Convention Centre
Singapore



Conferences & Events Presented at in 2023:

Conference/Event Name	Location	Month
International Maritime organization (IMO) – Intersessional Working Group 15	London, UK	June 2023
Norshipping	Oslo, Norway	June 2023
United Nations Open-ended Informal Consultative Process on Oceans and the Law of the Sea	New York, USA	June 2023
Seafuture 2023	Genoa, Italy	June 2023
The European Blue Economy Conference 2023	Brussels, Belgium	June 2023
Wind for Goods	St Nazaire, France	June 2023
Innov'Sail 2023	Lorient, France	May 2023
Seatrade Maritime Middle	Dubai, UAE	May 2023
International Maritime organization (IMO) - Expert Workshop on comparative analysis of candidate mid-term GHG reduction measures	London, UK	May 2023
Seminar on the IMO GHG developments ahead of MEPC 80	London, UK	May 2023
WASP Project – Final Webinar – Results and Impacts	Online	April 2023
Five Quarters Webinar - Wind technologies for cleaner - EU Parliament	Online	April 2023
World Maritime University (WMU) – Wind Propulsion Seminar	Malmö, Sweden	April 2023
Natural Propulsion Seminar 2023 (Blueweek)	Mallorca, Spain	April 2023
Green4Sea Athens Forum	Athens, Greece	March 2023
Shipping, Sustainability and Solutions conference	Hamburg, Germany	March 2023
CMA Shipping 2023	Connecticut, USA	March 2023
SNAME Conference – ‘Wind Propulsion, Projects & Progress’	Glasgow UK	February 2023
Wind Propulsion Conference 2023	London, UK	February 2023
Singapore Institute of Technology - Future Ship and System Design (FSSD) R&D programme	Singapore	February 2023
IMO CARES/MTCC Latin America Decarbonisation Seminar	Online	February 2023
RINA & Inmarest NE UK Branch - Re-Wind not Rewind: 21st Century Wind Propulsion Systems & Decarbonisation Pathway for Shipping	Newcastle, UK	February 2023
SNAME - Webinar: Re-Wind not Rewind: 21st Century Wind Propulsion Systems & Decarbonisation Pathway for Shipping	Online	January 2023
International Grain Trade Coalition (IGTC): Seminars on Sustainability in the Grains Value Chain	Geneva, Switzerland	January 2023



World-leading Maritime Procurement Events

IMPA Events 2023

12-13 SEPTEMBER 2023
Queen Elizabeth II Centre
London



21-22 NOVEMBER 2023
Suntec Convention Centre
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IWSA Members get FREE entry for IMPA London and IMPA Singapore

IMPA London registration: <https://impa2023.eventreference.com>

IMPA Singapore: <https://www.impaevents.com/event/singapore>

www.impaevents.com

Membership & Membership Fee Structure

IWSA welcomes all membership enquiries from companies/ individuals that support our objectives. The associate and supporter categories are open to all, while the Full member category is reserved for those heavily involved in the sector. For further details: contact Gavin Allwright secretary@wind-ship.org

Annual Membership Fees (No VAT) – 01 January 2023 – 31 December 2023

Full Member – Large (more than 250 employees) – €5,000

Full Member – SME (more than 10 employees) – €1,000

Full Member – Individual/micro organisation/NGO (up to 10 employees) – €400

Associate Member – Large (more than 250 employees) – €2,500

Associate Member – SME (more than 10 employees) – €500

Associate Member – Individual/micro organisation/NGO (up to 10 employees) – €300

Registered Supporter – Company – €100 (donation) // Individual/micro organisation/NGO – FREE + donation*

*NOTE: Supporter – No Charge – [Voluntary 'membership fee' to cover costs is welcome – €50 or donation]



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WIND PROPULSION: BARRIERS, DRIVERS AND PERCEPTIONS FORUM

14th SEPTEMBER 2023
LONDON, UK

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MARITIME



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SPOT**

