



International
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Shaping the Future of Shipping

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Alzbeta Klein, CEO,
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sign an MoU.



Decision Maker

Feeding a hungry world

Alzbeta Klein, CEO and Director General, International Fertilizer Association, discusses how her industry must balance sometimes competing targets of sustainability and food security

Q What challenges are you helping the industry to overcome since you became CEO of the International Fertilizer Association (IFA) in 2021?

A As CEO I was given a “simple” task by the board: to move the industry forward on sustainability pathways. When you add acute food insecurity to the mix, as we have seen after the invasion of Ukraine, it changes a lot of priorities. People have perhaps been lulled into a false sense of security about global food production. Since the war, numbers of people starving have increased tremendously. It has shown just how essential mineral fertiliser is to the world. While we’ve invited organic and biological providers and other novel fertilising and plant nutrition methods to join our organisation, at the moment there is no replacement for mineral fertilisers at the scale required.

We have had two sets of crises to deal with: how do we get wheat and other grains to countries that are dependent on the Black Sea region as a source, and how do we get fertilisers to the farmers in places

that are in desperate need of them - in regions such as Sub-Saharan Africa. Our industry put our heads together with Rabobank - an agricultural bank - and the Bill and Melinda Gates Foundation to create a programme called Sustain Africa. This allowed IFA members to be able to provide discounted fertiliser to Sub-Saharan African farmers, coupled with concessional finance from Rabobank Foundation and the Bill and Melinda Gates Foundation.

During this time, sustainability never left the table. Managing these issues at the same time has been one of the biggest challenges of the past year.

Q While juggling food security solutions, what progress did you make on the industry’s sustainability goals in the past year - particularly around CO₂?

A We continued sustainability work at full speed in 2022. For us it comes in two parts: what happens in the factory, especially in the production of nitrogen-based fertilisers (Scope 2 emissions) and what happens on the farm (Scope 3 emissions).

For factories there is a lot of work around carbon capture and storage and measures to lower CO₂ footprint – things that we have highlighted in a study with the European Bank for Reconstruction and Development (EBRD) and the International Energy Agency in our [Ammonia Technology Roadmap](#). We are currently doing a detailed study with the EBRD on how to improve sustainability in fertiliser production for major producers like Egypt - and will do the same for Turkey, and other countries.

Last year we did the first Scope 3 emissions study for our industry with Systemiq in London, which was endorsed by the US Special Presidential Envoy for Climate Secretary John Kerry.

The study aims to help guide a long-term strategy on decarbonisation in our industry. We found that emissions of nitrous oxide, a GHG with a warming potential of around 300 times that of CO₂, could be reduced by up to 70% with various solutions including greater nitrogen use efficiency (how much fertiliser a plant can take so that less gets leached into the environment). The

remaining 30% will need to come from sequestering carbon in soils, which can be supported by fertilisation practices to increase biomass production. The industry needs to take the responsibility to educate and do the outreach to farmers to improve those processes.

Q Are new trade routes opening up as a result of the impact of climate change or geopolitical instability? And what will shipping's role be?

A Ours is a very dynamic industry so it's not easy to say exactly where new markets will emerge. For example, these days Russian fertiliser is sometimes being transported all the way to China on rail and then picked up in the Far East for distribution. Even though it's a longer route, this gets the product out to farmers and to the market because of how vital it is for food security. Mineral fertiliser cannot be transported easily: it is massive tonnage to be loaded, offloaded and transferred huge distances. Shipping is and will continue to be essential in this.

While we applaud [shipping's] sustainability efforts, it can sometimes create unintended consequences for other industries, including for global food production

Q What kinds of collaborations with governments or industries are in the pipeline to further support your core goals on sustainability and food security?

A A number of decisions being taken by the International Maritime Organization (IMO) directly or indirectly touch our industry, so we have recently requested a seat at the table. While we applaud the sustainability efforts, it can sometimes create unintended consequences for global food production. We have heard from shipping companies that they will sometimes skip ports that have long wait times to achieve a good CII rating – which is a warning sign for food security. If carbon footprint calculations mean fewer calls at the port of Mombasa or Los Angeles, that's a big issue. Farmers need fertilisers on time or they are useless for crops. We would like to work together to find solutions for such unintended consequences.

Another example is a potential use of ammonia for shipping fuel. While we applaud the initiative, we need to understand long term market implications for farmers.

Q What message would you want shipping leaders to take away regarding sustainability?

A Both of our industries are labelled hard to decarbonise. But as one of our industry leaders says "It's not hard to decarbonise, it's expensive to decarbonise". It is doable and it is critical. We both have a tremendous challenge but also an opportunity. The business models of tomorrow will emerge based on the constraints that we have today.





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Summer of strikes in US and Canadian ports offer lessons for shipping

A series of [strikes in major US and Canadian ports](#) this summer has disrupted supply chains and offers valuable lessons for the shipping industry. These strikes, prompted by high inflation and stagnant wages, began in April after contract negotiations with port workers in Vancouver and at 29 US West Coast ports fell apart. Although resolutions have been reached, the impact on supply chains has been substantial.

Speaking with *ICS Leadership Insights*, Guy Ryder, Under-Secretary General for Policy at the United Nations, cautioned against exaggerating the situation and attributed the strikes in part to inflation. To address these issues, Ryder emphasised the need “to take seriously the way workers and employers collectively interact to make sure working conditions are fair”.

Steve Cotton, General Secretary of the International Transport Workers' Federation, told *ICS Leadership Insights* that



View of Port of Vancouver with port workers striking in Vancouver, British Columbia, Canada – July 8, 2023. Credit: JHVEPhoto/Shutterstock

transport workers are demanding recognition and respect for their vital role in the economy. He said the events highlight the need to work together to make the shipping industry attractive, with a key

element to ensure that seafarers “are paid what they deserve and given appropriate pay increases in recognition for the critical contribution that they make to the global economy”.

Uncertainty for North Sea energy island construction

Denmark's plan to create an [artificial island](#) around 100 km off its coast surrounded by 10 offshore wind farms faces uncertainty as forecast construction costs have significantly exceeded the government's profitability threshold. The government has postponed the public tender for the project and is reevaluating its approach.

The North Sea Energy Island project aims to generate renewable energy, distribute it to Denmark and Europe, and serve as an epicentre to foster green technology development. There are also goals for the island to produce green fuels for the aviation and shipping industries. Despite the delay, the project remains on track, with construction of the island expected by 2028 and the first 3 GW phase of wind farms by 2033.

Friend-shoring boosts ocean shipping

Demand for shipping is [benefiting from a global trend in international relations](#) where nations increase trade with allies, a shift known as friend-shoring.

The United Nations Conference on Trade and Development (UNCTAD) has observed an increase in bilateral trade between countries that share similar political values, countering the overall gloomy outlook in its June Global Trade [update](#). Jan Hoffmann, Chief, Trade Logistics Branch, Division on Technology and Logistics, UNCTAD, told *ICS Leadership Insights* friend-shoring has resulted in longer average shipping distances going up, especially as Europe seeks energy sources beyond Russia.

The conflict in Ukraine and the COVID-19 pandemic are drivers of friend-shoring, shifting volumes through sanctions

UNCTAD has observed an increase in bilateral trade between countries that share similar political values, countering the overall gloomy outlook

compliance and a desire to minimise supply chain disruptions, as seen during the pandemic. Rico Luman, Senior Economist and Research Lead at ING, told *ICS Leadership Insights*, that while tankers have experienced increased tonne-miles due to sanctions on Russia, dry bulk commodities, such as coal, have also been impacted as EU and G7 countries shift away from Russian commodities.



MV Afros, dubbed the “world’s first rotor sail bulk carrier”. Credit: International Windship Association

Potential of wind assisted propulsion hindered by perception and funding challenges

This month, *ICS Leadership Insights* takes a look at the progress and roadblocks being faced by wind-assisted propulsion systems in the maritime sector

As the shipping industry grapples with the imperative to meet decarbonisation targets and adhere to new regulations such as EEXI, OII, and EU ETS, wind-assisted propulsion is gaining increasing attention as a potential solution. However, despite its promise, [wind-assisted propulsion faces challenges](#) stemming from industry perception and a shortage of mainstream funding, hindering its broader adoption.

Numerous wind-assisted propulsion solutions are under development, many incorporating automation and smart route optimisation features that hold the potential to enhance fuel efficiency, leading to reduced fuel consumption and

greenhouse gas emissions. An important advantage of wind-assisted propulsion is its retrofit capability, and ease of operation that requires no additional crew workload or personnel onboard.

DNV’s latest [Maritime Forecast for 2023](#) asserts that wind-assisted propulsion can serve as a valuable tool for the shipping industry to “overcome decarbonisation challenges” and achieve operational energy efficiencies. Notably, DNV said that wind-assisted propulsion systems have already been installed on 28 vessels, resulting in fuel savings ranging from 5-9% to date, and this figure could potentially reach 25% when retrofitted onto existing ships.

Wind-assisted propulsion technology is emerging from both within and outside the maritime industry, with unexpected entrants like tire manufacturing company Michelin introducing its novel inflatable solution [WISAMO](#) in 2021, of which trials have now begun.

Numerous trials of various solutions are underway. Yara Marine Technologies (YMT), for instance, has developed BAR-Tech WindWings, and two of these are slated for installation on the Pyxis Ocean, a vessel chartered by Cargill. Speaking to *ICS Leadership Insights*, Thomas Koniordos, CEO of YMT, said: "With two BARTech WindWings installed onboard, the Pyxis Ocean is likely to experience approximately 3 tonnes of fuel savings per day on average – and consequent reduced emissions."

According to YMT, this is an equivalent reduction of approximately 4.65 tonnes of CO₂ emissions per wing per day for a vessel using HFO. Due to "a stark rise in demand", Koniordos said YMT is currently producing four BARTech WindWings for the 210,000 DWT bulk carrier Berge Olympus and is negotiating additional contracts.

Di Gilpin, CEO of Smart Green Shipping (SGS), identifies key challenges confront-

ing wind-assisted propulsion, including "lack of market confidence in the technology, claims regarding its fuel and GHG saving performance, and concerns about safety and operational impacts on ships." To address these concerns, SGS is rigorously testing its FastRig technology, which will be unveiled at a land-based site in Scotland at Peel Ports' Hunterston Parc in December 2023. Gilpin emphasises SGS' focus on safety and performance efficiency, stressing the importance of real-world testing to validate laboratory performance predictions.

SGS is also collaborating with Nuclear Transport Solutions to assess the feasibility of installing the FastRig technology on the UK-flagged nuclear waste vessel Pacific Grebe. In 2024, it will also be fitted onto a UK-flagged commercial vessel, with full design approval secured beforehand.

Gavin Allwright, Secretary General of the International Windship Association (IWA), identifies the primary challenges facing wind-assisted propulsion as non-technological. He cites the "uneven playing field in the marketplace" and a fuel-centric approach to decarbonisation policy as barriers to progress. Allwright notes that wind propulsion is often perceived as a "fuel-saving device" rather than a "propulsion power delivery

system", and its energy cannot be commoditised or traded, leading to undervaluation in the market.

Standardisation efforts are also underway, including the development of KPIs to measure wind propulsion energy, as well as work to establish uniform rules, regulations, assessment criteria, and sea-trial procedures.

Meanwhile, more demonstrator vessels will be required to measure the technologies emission benefits and allow shipowners to make informed investment decisions. "For primary wind, there is a higher CAPEX upfront in the building of vessels, but the key barrier is the commitment from cargo owners to issue longer term commitments to transport their goods on very low emissions vessels that use wind as their main source of power," Allwright said.

While the industry works to further validate its technology, overcome funding hurdles, perception issues, and create standardisation, demand for wind-assisted propulsion appears to be on the rise. Allwright said members are scaling up production capacity to meet growing demands "and future fleet sized contracts" as opposed to individual contracts they have seen to date.



Credit: International Windship Association

Wind propulsion is often perceived as a "fuel-saving device" rather than a "propulsion power delivery system", and its energy cannot be commoditised or traded, leading to undervaluation in the market

Gavin Allwright, Secretary General, International Windship Association

ICS in Action

A round-up of ICS news and activities over the last month

Shipping industry unveils ambitious plans for COP28

The shipping industry will come together at a [series of events](#) during the UNFCCC Climate Conference COP28 in Dubai.

The annual Shaping the Future of Shipping summit, organised by the ICS with the Emirates Shipping Association and a range of industry bodies, will be hosted under the patronage of His Excellency Suhail Mohamed Al Mazrouei, United Arab Emirates' Minister for Energy and Infrastructure on 10 December.

Governments and leaders in energy, maritime, and all parts of the value chain will discuss practical solutions for infrastructure, fuel availability, and financing, and how to prepare the maritime workforce for handling low and zero carbon emission fuels.

The event will build on the new IMO strategy agreed during MEPC 80 and the discussions at COP28 to set a course for the industry going forward.

The summit will follow a Ministerial Roundtable on 9 December hosted by the UAE's Ministry of Energy and Infrastructure. The series of events will culminate in a gala dinner held in honour of the IMO Secretary General, Kitack Lim, prior to his stepping down from the IMO at the end of the year.

Liquefied Gas Tanker Safety Guide available soon

ICS is launching the 4th edition of its [Tanker Safety Guide \(Liquefied Gas\)](#). A carriage requirement under the national regulations of many flag States, the guide has been updated to align with the latest edition of the *International Safety Guide for Oil Tankers and Terminals (ISGOTT 6)*.

It offers updated guidance on rollover, enclosed spaces and mooring, and reliquification (based on new technologies), new guidance on bunkering and simultaneous operations, and ISGOTT 6 aligned ship/shore safety checklists.

ICS Chairman's headline activities during LISW and the European Shipping Summit

- ICS Chairman Emanuele Grimaldi delivered the keynote address at the [ABS Sustainability Summit 2023](#) on 11 September. Welcoming MEPC's agreement on a revised and more ambitious course to zero emissions by 2050, he stressed the importance of the CEM Hubs initiative. He said: "The energy-maritime value chain must be aligned, with all stakeholders collaborating to unlock the production, transportation and use of low carbon fuels for the world at scale."
- Mr Grimaldi met with Ugo Salerno, Chairman & CEO of RINA during [Capital Link's 15th Annual Shipping &](#)

[Marine Services Forum](#) on 12 September, to discuss 'Shipping – The Path Forward'. The one-to-one discussion focused on where the industry is headed on an international level, current and near future challenges and the road ahead.

- Mr Grimaldi was in Brussels for the European Shipping Summit, to deliver a keynote on the 20 September. He discussed some of the key challenges within the maritime industry, focusing on increasing protectionism, decarbonisation and the importance of delivering a people-centred energy transition.

ICS is the principal international trade association for merchant shipowners and operators, representing all sectors and trades and over 80% of the world merchant fleet.

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