



International
Chamber of Shipping
Shaping the Future of Shipping

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Decision Maker

Dr. Ngozi Okonjo-Iweala

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Re-globalisation, not fragmentation

Dr Ngozi Okonjo-Iweala, Director-General of
the World Trade Organization, lays out the steps
needed for a more resilient global supply chain



Rewiring trade:

Re-globalisation, resilience, and shaping the future

Dr. Ngozi Okonjo-Iweala GCON, the Director-General of the World Trade Organization (WTO), talks to *ICS Leadership Insights* about geopolitical impacts on trade, globalisation and building a more resilient supply chain for today's modern world.

Q As global economic fragmentation intensifies, largely driven by escalating geopolitical conflicts, what key trends is the World Trade Organization (WTO) observing in relation to this shift?

A The world is facing strong geopolitics, this, combined with the vulnerability seen in supply chains during the pandemic, has led to this notion of friendshoring, nearshoring, and reshoring.

At the WTO, we see a growing tendency for countries to prioritise trade with like-minded countries, investment flows are following a similar pattern. We've modelled this using UN-voting patterns, and we see this kind of trade growing faster.

Q And what are some of the specific impacts you are seeing with this shift?

A I think we are seeing certain sectors impacted. For example, on the export of certain technologies like semiconductors.

We are trying to avoid this kind of fragmentation because, as an example, if the world were to break into two trading blocs, there would be a 5% loss in real global GDP in the long term. That's like losing the economy of Japan. In addition, there will be double-digit GDP losses for developing countries.

Having a supply chain concentrated in one country or a small set of countries is not the best way to have resilience for the world. If 95% of semiconductors or, say, critical mineral processing is concentrated in one country, that's something to think about.

Q With vulnerabilities in concentrated supply chains, what steps does the WTO recommend to strengthen global supply chain resilience?

A We are suggesting an alternative strategy that we call re-globalisation. We are saying to CEOs and governments that we can build resilience in the world by deconcentrating supply chains. If you concentrate production in one or two areas, you can also be hit by climate change with drought, flood, fires, and this kind of phenomenon we are already seeing now.

Why don't we also use the decentralisation of supply chains as an opportunity to bring in countries that were previously left at the margins of the global trading system. This will build resilience, and you also are inclusive.

We saw the hyper-globalisation of the 1990s-2000s integrated much of the world, China, Eastern Europe, and India, that was not previously integrated. Now the rest of the world, the Global South, needs to too. It will



benefit the entire world to integrate them into the global trading system. So instead of China plus one, which means China plus Vietnam, why not China plus Bangladesh? Or China plus Brazil? Or China plus South Africa?

Q How can decentralising supply chains for resources such as critical minerals help ensure a just transition for developing countries, allowing them to benefit?

There's a natural opportunity now with critical minerals found in the global south and developing countries. And normally the idea would be to build infrastructure, extract these minerals and send them somewhere to be processed.

We are suggesting that part of this reconfiguring of the supply chain should be to build the supply chains and value chains in the countries where the critical minerals are found, particularly since some of these countries have a comparative advantage in green hydrogen and clean energy. This would mean they can actually cleanly process the critical minerals, and then create jobs in these countries that have many young people, and create economic prosperity rather than exporting it out.

It could also mean different kinds of shipping, for example, the creation of more regional supply chains. Transportation is costly; it's cheaper to ship from China to Lagos than from Cape Town to Lagos.

Q What are your thoughts on increasing protectionism impacting global trade flows and how it impacts the robustness of the supply chain?

A We are concerned about creeping protectionism and unilateral measures. Some of that protectionism is being done to encourage the fight against climate change and the move to net zero by

2050, which we are very much in support of at the WTO. Climate change is an existential threat, and trade should be contributing positively.

Some of the measures, however, such as goods requiring local content, are things to be looked at more closely. So too are subsidies. Some subsidies are good and we at the WTO have no ideological view towards subsidies, whether it's in shipping or developing new products or new approaches to climate change. However, we must be careful that we don't enter into a subsidy race to the bottom. Negative externalities can be significant, including the impact on developing countries that do not have the fiscal space within which to subsidise.

Q What is WTO's view on the mechanisms required to create a greener global supply chain?

We recently met with a number of shipping CEOs and there was an excellent conversation about trade and climate, and the fact that decarbonisation of the environment must involve shipping. Shipping will be important as a vital transporter of green fuels but faces challenges of access to these fuels at scale.

A key consideration is today's approach to carbon pricing and taxes, which is very fragmented. There are currently 78 different systems operating globally, according to the World Bank. We understand that a carbon tax on the price of shipping is in the works at the IMO, we at the WTO are advocating a global approach to carbon pricing.

We are coordinating a task force with other multilaterals like the IMF, the World Bank, UNCTAD, UNFCCC, and the OECD to try and develop such a global approach.

A question must be what is done with the monies that are gathered from carbon pricing? Can it be used to cushion developing countries and create a more just transition.

Q What final message would you like to leave shipping leaders with?

Shipping should be looking at the new trends in trade and asking itself how it aligns with them, such as growth in services trade, a large part which is digitally delivered. Of course, as yet these trends, while growing, do not make a major part of overall global trade; goods trade accounts for \$23 trillion out of a total \$30.5 trillion in 2023 (on a balance of payment basis).

But amid changes to global trade, shipping needs to speak up on behalf of the free, fair, predictable, multilateral trading system, much more than I've heard them doing in the past. I told the shipping CEOs this recently, if you love the WTO and what it does, we need to hear you telling leaders to strengthen the system and [make it work for everyone](#).

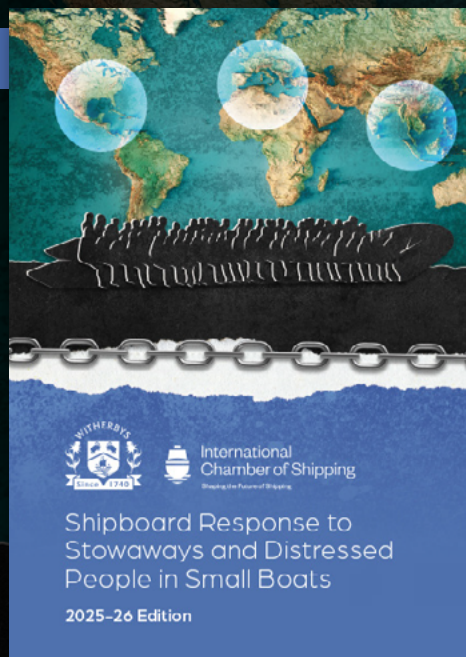
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Current trends and regions of higher risk are identified, with reference to the latest industry guidance and regulatory framework.

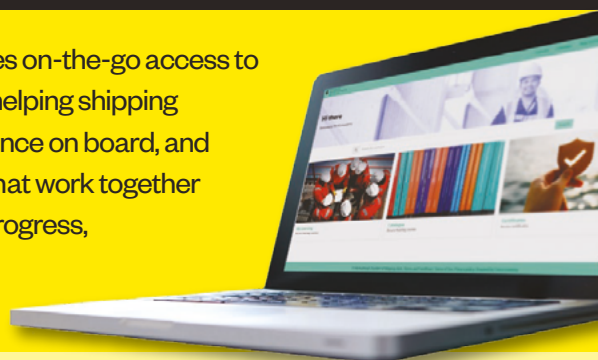


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Based on the best-selling ICS publication *Guide to Helicopter/Ship Operations*, the ICS 'Helicopter Operation Procedures for Ships' course helps ship's crews involved in helicopter/ship operations become familiar with the important technical aspects of these complex operations and understand their roles in the task. The course is designed by e-learning specialists, using a mixture of storytelling, scenarios, videos and other interactive content to engage the learner.



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Industry is waking up to the impact power hungry data centres, increased with growing demand from AI, could have to achieving their own green targets. Credit: Shutterstock

Navigating the energy challenges of AI

Artificial Intelligence has the potential to transform the global supply chain, boosting efficiency and cutting carbon emissions. However, its hefty energy demands could pose a serious threat to sustainability as companies seek deeper levels of integration.

AI's rapid adoption comes with a steep energy cost. Popular large language models like ChatGPT are thought to consume roughly 2.9 watt-hours each use—almost ten times more than a standard Google search. As AI becomes more integral to global strategies, its energy demands will soar. By 2027, its energy consumption could match that of entire countries, challenging industries, including shipping, to think hard about AI's role in sustainability objectives.

AI's double-edged sword

Data centres are the backbone of AI operations, hosting the computational resources to process massive datasets. These centres consume enormous amounts of energy. In 2020, global data centres consumed about 200 tera-

watt-hours (TWh) of electricity, accounting for about 1% of the world's total energy use—a figure expected to rise as AI adoption accelerates.

Professor Thomas Nowotny, Head of the Sussex AI Research Group at the University of Sussex, told *ICS Leadership Insights*: "AI has an energy problem. Training models like ChatGPT have been estimated to consume as much energy as driving a car to the moon and back. The technology behind such models is increasing in size and energy consumption by 750 times every two years. At this rate, we might use all the energy on the planet to build chatbots within a decade."

Nowotny explores alternatives inspired by the human brain, which operates

on about 20 watts of power. He envisions a future where AI systems utilise 'neuromorphic' computing, achieving low-power, sustainable AI. However, he cautions that its current pace of adoption has reached a critical point, and that energy infrastructure cannot keep up with demand. "The free lunch of AI is over", he stressed, adding: "Companies need to avoid getting locked into solutions that may not be optimal in the long run."

For shipowners this could have a significant impact on Scope 3 emissions, those indirect greenhouse gas emissions that are incurred elsewhere in the value chain. When any maritime business uses AI-powered services provided by cloud providers or third-party data centres, the emissions from the energy used to power them become part of their Scope 3, whether they like it or not.

Mitigating AI's energy footprint

The challenge lies in balancing AI's energy demands with the broader sustainability benefits it generates. WiseTech Global creates software solutions that it claims will be able to help optimise complex supply chains.

Richard White, CEO and Founder of WiseTech Global, told *ICS Leadership Insights* that while Generative AI's energy consumption is a concern, its potential for optimisation in operations and compliance justifies the trade-off.

"We started work on GenAI in secret and very early on when it became obvious that it was going to be important," he said. "We have been using and growing Machine Learning, Big Data, Natural Language Processing and a variety of automation tools for more than a decade and increasingly, we are blending GenAI into the functionalities and automations that we create."

WiseTech Global operates three data centres in Sydney, Chicago, and Hamburg and is increasingly turning to sustainable energy for answers.

"Our own data centres are very energy efficient – as are most major cloud providers – that said, GenAI has become a major consumer of power and has the potential to dramatically increase energy consumption as demand grows," he said. "We already have mitigations in place and a significant proportion of energy in our

largest data centre (Chicago) is already from non-GHG (greenhouse gas emissions) sources.

"The carbon emissions saved by our AI-driven optimisations far outweigh the additional energy consumed." White said they are constantly working to encourage customers to use its centralised, more efficient data centres, removing inefficient self-hosted and energy-intensive environments.

**"AI has an energy problem...
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**Professor Thomas Nowotny,
Head of the Sussex AI Research
Group, University of Sussex**

"The carbon (GHG) that can be removed from the burning of fossil fuel by using GenAI and related optimisations is orders of magnitude larger than the rather minor increase in GHG caused by the additional processing power demanded by GenAI to create these optimisations," he added.

While the benefits may indeed outweigh the energy cost, data centres still use a colossal amount of power and water for cooling systems. Shipowners implementing AI into their strategies will need to carefully ensure their partners have a robust strategy and commitment to renewable energy options and are not relying on electricity generated by fossil fuels.

Making sure AI works for you

In order to feel the benefits of a sustainable AI strategy in environmental social governance, companies must be careful when selecting their data centre partners, ensuring they are equally committed. Major tech companies like Amazon Web Services (AWS), Microsoft Azure, and Google Cloud are all investing heavily in renewable energy at their data centres and Google has publicly committed to net-zero carbon emissions across all of its business and value chain by 2030.

Among its many projects, Maersk Innovation Center has developed AI-based solutions such as digital twins and computer vision to enhance visibility and optimise drayage movements. Erez Agmon, Global Head of Innovation for Logistics and Services at Maersk, told *ICS Leadership Insights* that maritime leaders need to start with clear problem definitions when adopting AI and warns against them jumping on the bandwagon without fully understanding the environmental implications.

He said: "You should always start with 'what problem are we trying to solve here?' and whether AI will solve it for you. If what you're looking at is going to solve it great, run a proof of concept test on a small scale and see if you like it, then expand further but don't just be following trends and buzzwords out there."

He added that many of the latest AI developments won't immediately add value, and businesses must work hard to understand how to shape technology to meet specific challenges.

Balancing innovation with sustainability

As AI's popularity grows, maritime businesses must collaborate closely with data centre partners to balance their drive for innovation with sustainability.

Ravindra Rapaka, Director of AI and Product Manager at Aquasight, a US-based technology firm specialising in enhancing water systems, sums it up. He says a truly green AI is not here yet, but companies should enshrine sustainability in any long-term AI strategy. He told *ICS Leadership Insights*: "Although the transition from classic AI to Green AI is a new topic, it's both on time and important, especially for global logistics providers. In the short term, demand for mainstream AI will remain strong because of its entrenched nature, but demand for Green AI will gain because of increasing awareness of the environmental impact and because it'll be the next big thing for organisations keen to address sustainability."

He added: "Achieving a completely Green AI landscape will take time." This was due to more progress needed in energy-efficient hardware and computing technologies and the high initial investment costs of alternative energy. He said that through better regulatory support, international policies and greater incentives to innovate, Green AI would indeed be the next [big thing](#).



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ICS in Action

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

ICS Barometer launched

Data from the [ICS Barometer Report 2023-2024](#) has demonstrated the positive impact that improved clarity from governmental bodies such as the International Maritime Organization (IMO) have had on the sector. The comprehensive survey of over 100 global maritime industry leaders over a three-year period analyses year-on-year shifts in sentiment on pivotal issues influencing operations. It has tracked steadily rising confidence among maritime leaders in their ability to cope with challenging operating conditions.

Areas of concern for respondents include the recent increase in geopolitical instability (which is seen as a risk multiplier as it impacts other factors), malicious physical attacks and cyber-attacks (by state and non-state actors), as well as updates to global and/or regional regulatory environments and availability of fuels and infrastructure driving decarbonisation.

The ICS Barometer 2023-2024 is available [here](#).

ICS Academy, the new on-the-go access to practical e-learning, will be going live in October. Find out more [here](#).

ICS Publications launch new book

[International Chamber of Shipping \(ICS\) Publications](#) is proud to announce the e-book release of the second edition of [Reducing Greenhouse Gas Emissions: A Guide to International Regulatory Compliance](#).

[Reducing Greenhouse Gas Emissions: A Guide to International Regulatory Compliance](#) has been extensively updated to provide shipowners, operators and managers with essential guidance on navigating the increasingly complex regulatory landscape of maritime decarbonisation.

Chris Waddington, Technical Director at ICS and contributor to the guide, stated: "This

updated edition comes at a critical juncture for the shipping industry. The new chapter on EU ETS addresses one of the most pressing and challenging topics in maritime regulation today, providing clarity on its current status and implications for global shipping."

New Lloyd's Open Form Default Clause published

The outcome of over a year's consultation with underwriters, owners, Lloyd's and other interested parties including P&I Clubs, brokers and salvors is a new clause for incorporation in marine hull policies.

The shipping community as a whole has recognised the necessity of maintaining Lloyd's Open Form (LOF) as a contract with pre-agreed terms that can be easily used in the event of an emergency. The LMA has worked with the ICS to produce a clause designed to give clarity around the process for contracting for emergency and non-standard tug services. The clause emerged from the working party set up to consider challenges to LOF and how to encourage its use.

Kiran Khosla, Principal Director, Legal, at ICS, commented: "The LOF is about saving lives, the environment and property. For over a century, the LOF has been pivotal in ensuring maritime safety, enabling swift and effective responses to situations where the ship is in danger. The clause emphasises that in a situation of danger for the ship, the LOF is the right and appropriate contract for the salvage response".

Please click [here](#) to download the LOF Default Clause.

Upcoming events

ICS representatives will be participating at the [IAPH World Ports Conference](#) in Hamburg, Germany, in October, as well as the [Malta Maritime Summit](#), the [WISTA AGM & Conference](#) in Limassol, Cyprus, the [EUROMED XXVI](#), in Athens Greece, and the [Clean Energy Ministerial Meeting](#) in Foz do Iguacu, Brazil.



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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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