

Briefing Note # 3

Ocean20: Enhancing Global Economic Security and Prosperity by building on the Maritime Transition

Key Recommendations:

1. Improve market efficiency for green shipping and decarbonisation of vessels.
2. Reduce barriers to entry for industries working on green shipping technologies.
3. Strengthen energy resilience through trade in green fuels.

This briefing note was developed under the auspices of Ocean20 South Africa 2025 through a stakeholder consultative process.

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Ocean20: Enhancing Global Economic Security and Prosperity by building on the Maritime Transition

Technological advances and energy transitions provide an opportunity to refine how markets and economic growth are built and balanced. The G20, under South Africa's leadership, is a timely platform for defining policies that support more resilient growth. South Africa is highlighting equity, solidarity and sustainability as key themes. Building on Oceans20 2024 in Brazil¹ the Ocean20 input sessions this year have concluded that outcomes must include local communities, collaboration on data sharing and partnerships for finance. Transparent access to maritime data, including emissions tracking and fuel usage, will be essential for monitoring progress and ensuring accountability.

One key driver of new investments is driven by the new maritime agreement on decarbonizing shipping. Over 80 percent of all goods, and large parts of oil, gas and hydrogen products, are transported by sea. With the implementation of the International Maritime Organisation's (IMO) Greenhouse Gas (GHG) reduction strategy², the global economy has a new tool at hand. This is a lever for building new markets and balancing growth to build more resilient and prosperous economies.

Three key recommendations:

1. Improve market efficiency: Support international collaborations to refresh global shipping infrastructure.
2. Reduce barriers to entry: Promote public private partnerships, streamlining of blended finance mechanisms and funds to de-risk infrastructure investments.
3. Strengthen energy resilience through trade in green fuels: International shipping and energy trade will enable national capacities for renewable energy production.

The shipping industry has already begun its transition to zero GHG emissions. This includes a supply chain of ports, utilities, fuel producers, ship builders and newly trained personnel. Shipping is a nexus for global trade, with over 150 coastal states enabling trade valued at over 20 trillion USD annually. Every port call is part of global economic growth. The new regulations will give ports access to the global market for green energy; both to sell and to buy energy. This global move from extractive and monopolisation of energy resources, towards renewables, will improve individual nation's energy

¹ Available from the "2024 Oceans20 Communiqué - A Call to G20 Leadership." See at (https://www.oceans20brasil.org/_files/ugd/0a78ab_642ed6e162d744d58ef92d5c0eb798ad.pdf)

² Available from the IMO homepage. See at (<https://www.imo.org/en/ourwork/environment/pages/2023-imo-strategy-on-reduction-of-ghg-emissions-from-ships.aspx>)

resilience as well as market access. By actively building on the maritime transition, governments will be able to build more secure, prosperous and resilient economies.

Background

The IMO agreement

The IMO's Marine Environment Protection Committee (MEPC 83), held from 7-11 April, 2025, marked a significant step forward in the decarbonization of international shipping. A key outcome was the approval of new requirements on GHG fuel intensity, combined with a novel pricing and reward mechanism, which are set to take effect from 2028. These measures are encapsulated in a new Chapter 5 of MARPOL Annex VI³, comprising the IMO Net-Zero Framework, and aim to gradually lower the GHG intensity of marine fuels. Specifically, ships will be required to meet progressively stricter annual GHG Fuel Intensity (GFI) targets, calculated on a "Well-to-Wake" (WtW) basis, ensuring a holistic assessment of emissions.

To achieve these ambitious targets, MEPC 83 introduced a two-tiered compliance system for the GFI. Ships that outperform the "Direct Compliance Target" will be eligible to generate "Surplus Units" as a reward for their low-emission operations. Conversely, vessels that fall between the "Base Target" and "Direct Compliance Target" will need to purchase "Remedial Units" at a Tier 1 price, currently set at USD 100 per tonne of CO₂ equivalent (WtW). For ships exceeding the "Base Target," a higher Tier 2 price of USD 380 per tonne of CO₂ equivalent (WtW) will apply. These financial incentives and penalties are designed to accelerate the uptake of zero and near-zero GHG fuels and technologies, thereby driving the maritime industry towards the IMO's overarching goal of achieving net-zero emissions by or around 2050.

Blended finance

Blended finance holds significant relevance for the decarbonisation of ports, shipping, and the development of green shipping fuels. The sheer scale of investment required to transition the maritime sector to net-zero emissions, including infrastructure upgrades at ports for shore power and alternative fuels, the development of new vessel technologies, and the production of green fuels like ammonia and methanol, far exceeds what public funds or traditional private investment can achieve alone. Blended finance, by strategically combining concessional public or philanthropic capital with private sector investment, can de-risk projects, making them more attractive to a broader range of investors and mobilizing the substantial capital needed for these transformative changes. This is particularly crucial for early-stage or less commercially viable green projects that might otherwise struggle to secure traditional financing.

³ Available from IMO webpage. See at ([https://wwwcdn.imo.org/localresources/en/MediaCentre/HotTopics/Documents/Circular%20Letter%20No.5005%20-%20Draft%20Revised%20Marpol%20Annex%20Vi%20\(Secretariat\).pdf](https://wwwcdn.imo.org/localresources/en/MediaCentre/HotTopics/Documents/Circular%20Letter%20No.5005%20-%20Draft%20Revised%20Marpol%20Annex%20Vi%20(Secretariat).pdf))

Specifically for ports, blended finance can accelerate investments in crucial infrastructure such as shore power connectivity, bunkering facilities for new fuels, and renewable energy generation on-site to power port operations. For shipping, it can support the retrofitting of existing vessels for fuel efficiency and the construction of new ships capable of running on zero or near-zero emission fuels. Furthermore, blended finance is vital for stimulating the nascent green shipping fuel industry. By providing catalytic capital, it can help scale up the production of these fuels, address their higher costs compared to conventional fuels, and create the necessary demand certainty for further private investment in their supply chains.

The IMO's new GHG pricing mechanism is expected to further strengthen demand signals for low-carbon fuels, creating a more favorable environment for blended finance solutions to thrive.

Blended financial tools should not only de-risk infrastructure, but also empower local communities and small-scale innovators, particularly in Africa and the Global South. This means ensuring that ports and shipping fuel hubs are developed in a way that will also benefit surrounding coastal communities, through job creation, training, equity participation, and infrastructure co-benefits like renewable energy access. Opportunities must be made accessible, especially through investment in skills development and knowledge transfer, so that the benefits are equitably distributed, not captured solely by large corporations or foreign investors.

Energy markets

The global push for green shipping and the escalating demand for green shipping fuels, such as green ammonia and methanol, present a transformative opportunity for countries with limited domestic energy production. These "e-fuels" are produced using renewable electricity to create green hydrogen, which is then combined with other elements (like nitrogen for ammonia or carbon dioxide for methanol). This process inherently requires vast amounts of clean energy, primarily from solar and wind power. For energy-importing nations, investing in domestic renewable energy projects to produce green shipping fuels will not only cater to international maritime demand but also significantly bolster their national energy security and reduce reliance on volatile fossil fuel markets. This shift can turn a country's abundant renewable resources, like sunshine or consistent winds, into a valuable export commodity in the form of sustainable maritime fuel.

Furthermore, the scale of renewable energy infrastructure required to meet the projected demand for green shipping fuels is immense. It is estimated that shipping's demand for e-fuels alone could necessitate an additional two terawatts (TW) of renewable energy generation capacity by 2050. For countries with limited fossil fuel reserves but high renewable energy potential, this translates into a powerful impetus for large-scale national clean energy build-outs. Such projects would not only serve the green shipping sector but also create new green jobs, stimulate local economies, and contribute to national decarbonization targets across various sectors. This symbiotic relationship positions green shipping as a significant driver for sustainable economic development and energy independence in regions traditionally reliant on imported energy.