

GREEN HYDROGEN ORGANISATION (GH₂)

IMO Net-Zero Framework: What it means for Africa Green Hydrogen Alliance countries

24 September 2026

Key takeaways

- 1 GH2 estimates that **50%** of all green hydrogen projects in member countries of the Africa Green Hydrogen Alliance (AGHA) **explicitly or likely intend to supply green fuels to the maritime sector**. The decarbonisation of the shipping industry is therefore critical to enable green hydrogen production.
- 2 Despite their strong potential for local value creation, **most green hydrogen projects in AGHA countries are stalling** before final investment decision (FID) due to the lack of demand certainty, which remains the main barrier preventing their progress.
- 3 The International Maritime Organization's Net Zero Framework (IMO NZF), by providing a **clear and credible signal** to the shipping industry, can stimulate demand for green hydrogen-based electro fuels and give projects in AGHA countries the **certainty they need to secure offtake and advance towards FID**.
- 4 **The NZF as approved in 2025 is the most balanced way forward:** it is a hard-fought compromise that retains an economic element, which is critical to support AGHA countries' participation in emerging green shipping value chains.
- 5 AGHA countries are uniquely positioned to benefit from green fuel bunkering and production given their strong renewable energy potential. **Supporting the IMO NZF "as is" would help AGHA countries reap the benefits of shipping decarbonisation** by providing the support and certainty needed for green hydrogen projects to go ahead.

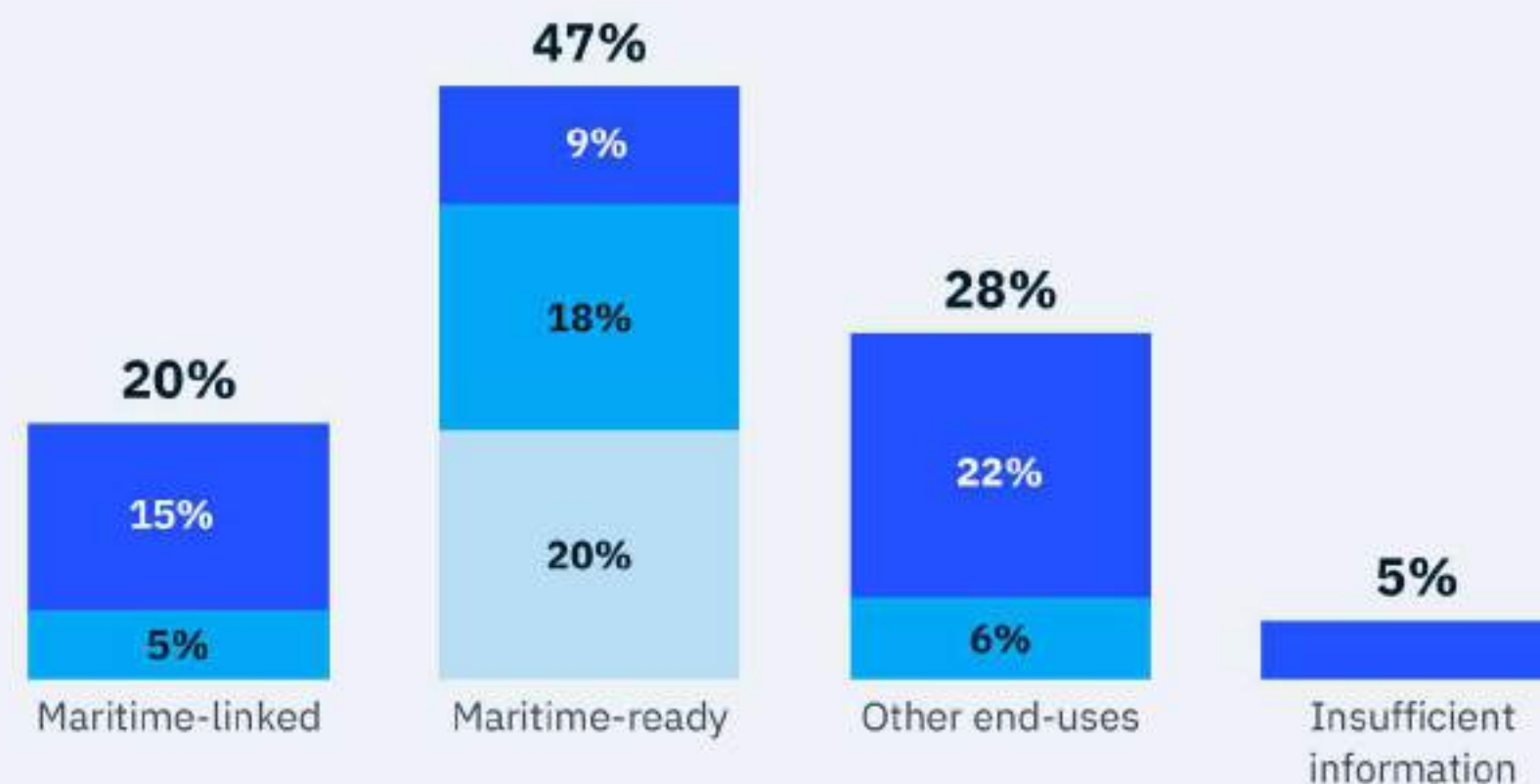
Maritime decarbonisation is a key enabler of green hydrogen production in AGHA countries

- Using the International Energy Agency (IEA) [database](#) of hydrogen projects and other publicly available information, and excluding cancelled and decommissioned projects, GH2 identified 104 electrolytic hydrogen, ammonia or methanol projects located in Algeria, Angola, Djibouti, Egypt, Ethiopia, Kenya, Mauritania, Morocco, Namibia, Nigeria, Tunisia, and South Africa. These countries are all members of the Africa Green Hydrogen Alliance (AGHA)*.
- GH2 found that 20% of these projects are “**maritime-linked**”: they explicitly intend to supply green shipping fuels to the maritime sector.
- Additionally, GH2 estimated that another 30% projects are “**maritime-ready**” with a medium to high likelihood: although they do not make an explicit mention of the maritime sector as a target sector, they are well-positioned to supply green shipping fuels in the future. A more complete description of the methodology used is available in the appendix.
- The maritime sector is therefore a key enabler of green hydrogen and derivatives production in AGHA countries: **50% of projects in AGHA are related to maritime decarbonisation**, and a clear signal encouraging demand for green shipping fuels could catalyse green hydrogen projects.

*with Tunisia considering membership of AGHA

Share of a total 104 projects by maritime relevance and likelihood rating, %

Maritime relevance likelihood ■ High ■ Medium ■ Low



Maritime relevance of green hydrogen and derivatives projects in selected African countries, as a % of total projects (GH2, 2026)

Source: GH2 analysis of IEA hydrogen projects database (updated June 2026)

GH2 projects go hand in hand with local value creation in AGHA countries

87%

of the investment required is land-based; only 13% is vessel-related ([GMF, 2020](#))

GBP 3.2tn

of infrastructure investment could be required for shipping decarbonisation ([GMF, 2024](#))

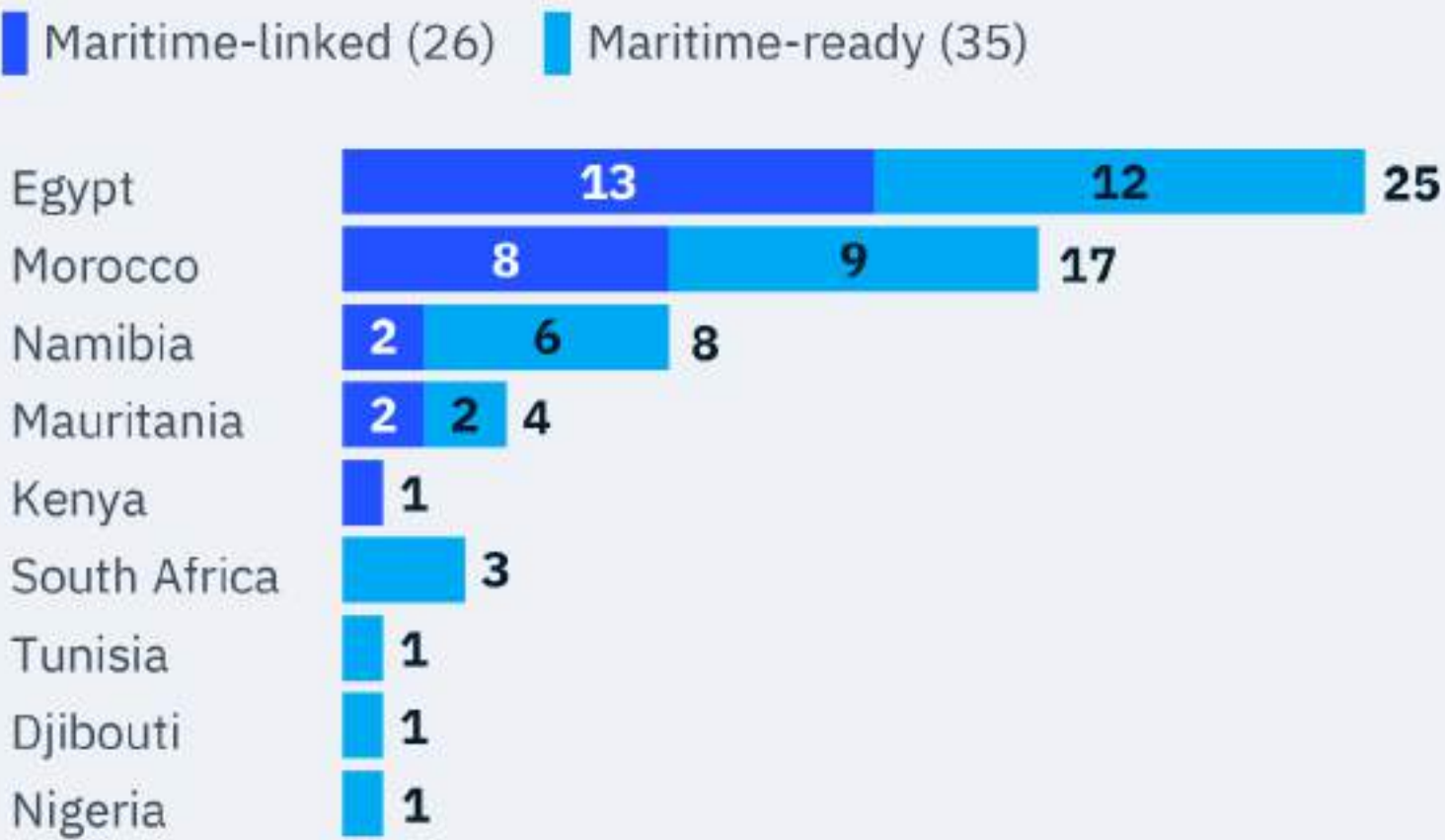
Up to 4m

new jobs could be created in the Global South by 2050 with the transition to green shipping fuels ([GMF, 2024](#))

- **Green ammonia production for shipping fuels can support energy and food security:** In addition to supplying the market for green shipping fuels, green hydrogen and ammonia produced domestically can also reduce reliance on imported fossil fuels for fertiliser production and help limit AGHA countries' exposure to global price shocks. Recent disruption to shipping through the Strait of Hormuz and continued insecurity in the Red Sea showed how quickly geopolitical tensions can affect energy and trade flows and threaten AGHA countries' food security.
- **Maritime demand can catalyse green hydrogen project development and support wider economic growth:** In Mauritania, CWP Global and the Ministry of Energy and Petroleum signed the Global Convention for the AMAN project last week, setting out the framework for the development of CWP's green ammonia plant ([Gov of Mauritania, 2026](#)). The plant intends to supply green shipping fuels, as well as support green iron production. Demand for green hydrogen and derivatives anchored by the maritime sector can therefore stimulate the development of domestic green industrial value chains for wider green hydrogen-based products, fostering local value creation.
- **Demand for green fuels can promote domestic employment opportunities and capacity-building:** In Kenya, a EUR 6 million GIZ programme is already working with vocational and higher-education institutions to develop hydrogen-related training ([GIZ, 2025](#)). In South Africa, the Coega project is expected to create more than 20,000 jobs across the Eastern, Western and Northern Cape during construction and operations, with additional support for upskilling through its community development programme ([Climate Fund Managers, 2025](#)).
- Green hydrogen and derivatives production anchored by the demand for green shipping fuels could therefore foster **local value creation**, advance **green industrialisation**, help AGHA countries secure **long-term economic gains** and stimulate **job creation**.

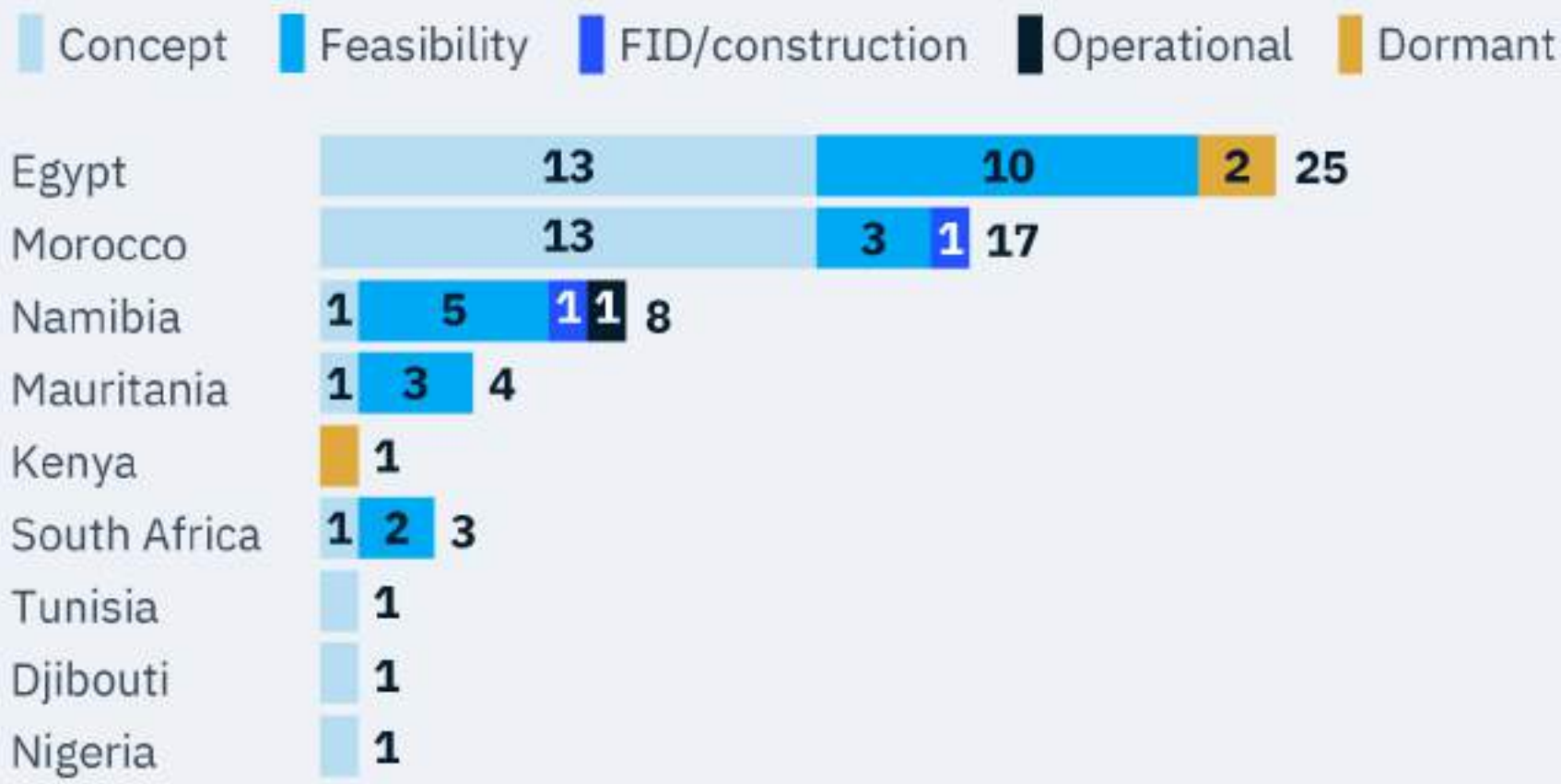
Green hydrogen and derivatives projects are stalling in AGHA countries

Projects by country and maritime relevance, number



Green hydrogen and derivatives projects in AGHA countries relevant to maritime decarbonisation with a high and medium likelihood (GH2, 2026)

Projects by country and project status, number



Status of green hydrogen and derivatives projects in AGHA countries relevant to maritime decarbonisation with a high and medium likelihood (GH2, 2026)

Only 3 of 61 maritime-relevant projects have reached FID, construction or operations, and these are small-scale projects with a combined production capacity of around 2 kt/y. The main barrier faced by projects remain the lack of offtake and uncertain demand for electrofuels.

The IMO Net Zero Framework is essential for projects to move forward

1 · FRAMEWORK

IMO Net-Zero Framework

The IMO Net Zero Framework (NZF) is a legally binding framework that aims to achieve net-zero by or around 2050 and includes regulations for a new fuel standard for ships and a global pricing mechanism for emissions.

2 · SIGNAL

Clear signal to shipping

If adopted, it would create a strong and credible demand signal for shipowners, fuel producers and investors globally, which would in turn catalyse the use and production of green shipping fuels. The NZF's potential reward mechanism for early movers could also support AGHA countries' production of e-fuels.

3 · PROJECTS

GH2 projects go ahead

The IMO NZF would provide the certainty needed for green hydrogen and derivatives projects to secure offtake and move forward, which would then allow AGHA countries to reap the benefits of such projects and stimulate employment, economic development, and green industrialisation.

4 · BENEFITS

AGHA countries reap the benefits

AGHA countries can capture value from green shipping fuels projects and benefit from the redesign of global shipping routes caused by the transition to green fuel bunkering stations: 10% of all announced green shipping corridors already plan to pass through the Suez Canal (Egypt) or the Gibraltar Strait (Morocco).

Maritime decarbonisation is already underway and without support, AGHA countries risk being left behind

REGIONAL INITIATIVES ALREADY IN FORCE

Europe & UK

In the EU, the EU ETS and the FuelEU Maritime regulations are putting a price on GHG emissions from the maritime sector and setting a minimum target for green fuels uptake in shipping. The UK has included domestic shipping emissions into its ETS scope in 2026 and developing a domestic fuel standard on maritime fuels.

Asia

Japan, China and South Korea are leading in designing and building ammonia-ready vessels, as well as on bunkering protocols and infrastructure. China's leading ports are positioning themselves to become major bunkering hubs in green fuels, and South Korea's 2026 Green Shipping Corridor Support Act enables the expansion of green vessel operations and port transitions.

Green shipping corridors

The emergence of green corridors around the world shows that shipping decarbonisation is underway. 25 new green corridor initiatives were launched in 2025 in China, India, Brazil, Chile, Ghana and Kenya, reflecting the economic opportunities that come with the development of green fuels and bunkering infrastructures.

POTENTIAL EFFECTS ON AGHA COUNTRIES

- **Higher trade costs for AGHA countries:** The EU ETS applies to 50% of emissions on voyages between EU and non-EU ports, which generates additional compliance costs for ships travelling between AGHA countries and the EU. FuelEU Maritime applies to all ships calling at EU ports, regardless of their flag, which creates an incentive for all ships going to/coming from the EU to use greener fuels to avoid paying a penalty. These higher costs risk having a disproportionate impact on emerging economies, which are less resilient to economic shocks.
- **Seizing the green shipping opportunity requires investment:** AGHA countries could capture value from green hydrogen production and the transition to greener shipping fuels, but this requires significant investment in infrastructure, renewable energy, skills and regulatory capacity.
- **The IMO NZF “as is” as an essential catalyst:** Shipping decarbonisation is already underway, and the IMO “as is” could bring critical support to AGHA countries looking to take part in emerging green shipping value chains.

The IMO NZF “as is” is the most balanced way forward for AGHA

Ahead of MEPC 85 (30 November-3 December), several proposals have been put forward to revisit elements of the IMO Net-Zero Framework agreed in April 2025. While most retain a global fuel standard, they differ on the **economic element**, which relates to emissions pricing, the role of a central IMO Net Zero Fund, and support for zero- and near-zero fuels and a just and equitable transition.

	NZF “as levy” (Tuvalu)	NZF “as is” (UK, Australia, South Africa)	“Softer start, harder finish” (Brazil)	“Direct contributions redesign” (Japan)	“Market-based redesign” (Liberia)	“Technical-only redesign” (UAE)
Puts a price on emissions?	Yes, on all emissions (a universal levy)	Yes, on part of emissions	Yes, same pricing and two-tier structure as “as is”	No real price ; “direct contributions” instead	No, credit trading only (SU market)	No, no GHG pricing or other market-based measure
Raises money for the Fund?	Yes, highest revenue, but an earlier rise in transport costs	Yes, around USD 11bn a year from 2029	Yes, but less in years 1-2 (RU1 revenue removed initially), similar after to “as is”	Similar amount (USD 10bn/yr); but paid straight to private projects, not the Fund	No	No
Rewards early switching to zero and near zero fuels?	Yes; the strongest incentive of the five	Yes, funds prioritised to reward first, then JET	Yes, but weaker - softer GFI initially delays reward spending	No	No	No
Route to JET support for AGHA countries?	Yes, the largest of the five	Yes	Yes, but less effective initially than “as is”	None	None	None; only vessel-level compliance exemptions

Based on UCL Shipping and Ocean Group readout from ISWG-GHG 22 (4 September, 2026)

For AGHA countries, the key question is whether shipping decarbonisation can become a driver of green industrialisation. Removing the economic element, including the reward mechanism and Net-Zero Fund, would leave countries facing new compliance costs with fewer tools to unlock investment, jobs and domestic growth. **The NZF “as is”, which is a hard-fought compromise, could therefore bring critical support to AGHA countries by helping de-risk projects, developing green fuel value chains and strengthening the region’s long-term industrial competitiveness.**

Key recommendations

- 1 Consider shipping decarbonisation as a strategic priority for AGHA countries:** AGHA countries are uniquely positioned to benefit from green fuel bunkering and production given their strong renewable energy potential. Some AGHA countries like Egypt and Morocco are also strategically located on international trade routes. Supporting green hydrogen and derivatives production would strengthen AGHA's energy and food security.
 - 2 Supporting the IMO NZF “as is” would help AGHA countries reap the benefits of shipping decarbonisation:** If adopted, the NZF will send a strong demand signal and enable countries to maximise the co-benefits of the shipping transition, including increased investment, industrial development and job creation. Adoption would also unlock the net-zero fund and provide the regulatory certainty needed for green hydrogen and derivatives projects to scale in AGHA countries.
 - 3 A united African voice during IMO negotiations and alignment with other progressive positions would be beneficial:** African countries can push for their common position on maritime decarbonisation by mobilising and engaging with other country delegates. They could also join forces with other progressive countries to advance their strategic priorities and agenda.
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Appendix: Methodology and classification of projects

- GH2 used the [IEA hydrogen production projects](#) database updated in June 2026. It **excluded cancelled and decommissioned projects** from its analysis, to the exception of the Aman project in Mauritania, which was labelled as “cancelled” in the IEA database, but progressed to feasibility studies on 16 September 2026. As such, the Aman project was included back in GH2's analysis. Additionally, GH2 added to its analysis the [Ming Yang green ammonia project](#) in Ethiopia, which did not figure among the projects identified by the IEA.
- GH2 looked at electrolytic hydrogen projects in Algeria, Angola, Djibouti, Egypt, Ethiopia, Kenya, Mauritania, Morocco, Namibia, Nigeria, Tunisia, and South Africa, which are all members of the Africa Green Hydrogen Alliance (with Tunisia considering membership of AGHA).
- Using publicly available information, GH2 labelled each project as “maritime-linked”, “maritime-ready”, “other end-uses” or “insufficient information”:
 - **“Maritime-linked”** projects are projects that explicitly mention the maritime sector as a target sector for at least part of their green hydrogen and derivatives production, or projects that explicitly intend to produce some amount of green shipping fuels.
 - **“Maritime-ready”** projects are projects that do not explicitly state their intention to supply the maritime sector, but that are well-positioned to do so in the future. Different elements were taken into consideration to assess projects’ potential to supply green shipping fuels in the future, including projects’ location at ports, intended end-products compatibility with green shipping fuels production (ex: green ammonia, e-methanol,...), intended export market (ex: the Port of Rotterdam), and whether any other end-uses were targeted by project developers.
 - **“Other end-uses”** projects are projects that explicitly mention a different end-use than green shipping fuels, or projects for which there are not enough elements to consider that they are “maritime-ready”.
 - **“Insufficient information”** are projects for which the publicly available information does not allow GH2 to assess whether they might be related to the maritime sector or not.
- Additionally, GH2 associated a **“maritime-relevance likelihood”** level to each of the analysed projects. This metric indicates GH2's level of confidence in its own assessment of whether projects are maritime-linked, maritime-ready, or have other end-uses. GH2 acknowledges the difficulty of identifying with a high degree of certainty the end-use of each project. Therefore, **projects that are considered to relate to the maritime sector in this analysis are projects for which GH2's level of confidence in its own assessment is “high” or “medium”**. GH2 did not consider projects labelled as “maritime-linked” or “maritime-ready” with a “low” level of confidence to be related to the maritime sector, and therefore excluded them from the graphs on slide 5. *It is important to note that this confidence level does not indicate whether projects are likely to go ahead or not.*

Appendix: Background on the IMO Net-Zero Framework

- **What is it?**

The International Maritime Organization’s Net-Zero Framework is a legally binding framework that aims to achieve net-zero emissions from international shipping by or around 2050. It includes a new global fuel standard for ships and a global emissions pricing mechanism. Ships that miss their emissions-intensity targets must pay compliance fees through Remedial Units (RUs), while ships that outperform the targets earn tradable Surplus Units (SUs). Ships meeting the strictest targets can also receive financial rewards from the IMO Net-Zero Fund, which is intended to support the uptake of green fuels and a just transition in lower-income countries.

The 2023 IMO GHG Strategy sets targets for the uptake of zero or near-zero GHG emission fuels, energy sources or technologies, which are to represent at least 5% of the energy used by international shipping by 2030.

- **Status and timeline**



Source: IMO

About the Green Hydrogen Organisation (GH2)

The Green Hydrogen Organisation (GH2) is a Swiss non-profit foundation working to take renewables to industries that cannot be fully electrified, using green hydrogen. These sectors include fertiliser production, steelmaking, shipping and aviation.

Founded in 2021, GH2 has established a presence in Geneva, London, Cairo, Jakarta, Nairobi, and Oslo. It serves as the secretariat for the Africa Green Hydrogen Alliance (AGHA), a government-led platform uniting eleven African countries to drive regional cooperation on green hydrogen.

GH2 is a founding member of the Global Renewables Alliance (GRA).

Since March, GH2 has been coordinating the industry [Call to Action urging Member States to adopt the Net Zero Framework in 2026](#). The statement is now backed by over 90 companies across the shipping value chain including shipowners, ports, fuel producers and technology providers.

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