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Op-Ed: We Need New Cross-Industry Collaboration to Reach Net Zero

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Coming from Switzerland, the International Year of Glacier Preservation and World Water Day's glacier theme strike a chord with me. I have witnessed the alarming retreat of Swiss glaciers firsthand—a 65% ice loss since 1850, with 10% gone in just 2022-2023.

Maritime has a front-row seat to glacial and polar melting, with rising sea levels, surging storms, and threats to coastal infrastructure. If the climate crisis escalates, supply chains and industries worldwide will face disruption.

The point is, this is a climate red flag. And it's a call to unite like never before. Maritime's strength has always been partnership, and in the past five years, together we have deployed efficiency technologies, dual fuel engines, and digitalization to curb emissions.

Yet, even with these efforts, progress is too slow, and two more red flags appeared last year. Global emissions should have peaked before 2025; instead, they hit an all-time high in 2024. It was also the first full year of 1.5°C warming.

One year of 1.5° is not a point of no return, but it raises the stakes ahead of 2030 emissions targets. Missing those could make future goals unattainable. On the other hand, meeting shipping's 20-30% reduction target would prove that we can pull our weight.

A 2023 IMO study confirms we can, if we accelerate two key developments.

First, we have to go viral with fuel efficiency

The technology for maximum efficiency already exists—from speed optimization to hull cleaning, digital tools, and wind propulsion. Just derating engines with optimized turbochargers can save a conservative 3% in fuel and emissions. We have a customer that combined that with a propeller upgrade to save 25%. But in a global fleet averaging 13.1 years (weighted), only 37% of ships have energy saving technology (EST) retrofits.

We need to finish the efficiency job, and it only makes sense. Investing now will future-proof ships, cut fuel costs, and ensure compliance with new carbon regulations, avoiding wasted money on penalties.

Second, and not as easy, we need to solve the carbon-neutral fuel challenge

To meet the 2030 target, the IMO estimates 5-10% of the global fleet must also switch to carbon-neutral fuels. Consensus is growing around green methanol and ammonia, with new ships already designed for them. Theoretically, we could just scale up infrastructure for green hydrogen production and non-fossil carbon capture as feedstock, boosting green methanol and ammonia production and driving deep decarbonization toward net zero. Unfortunately, theory and reality are far apart, and the way forward is blocked by infrastructure and investment challenges.

Green shipping corridors help, by concentrating carbon-neutral fuel availability, and in 2024, they grew 40% to 62 initiatives worldwide. Still, the actual fuel is in short supply.

As a result, LNG dual fuel technology now leads in new ship orders, Of course, we have to manage methane slips, but mitigation technologies exist. With no perfect path, a 25% emissions drop from conventional fuel is still progress, and onboard carbon capture (OCC) is gradually emerging which could further reduce CO2 emissions from LNG.

But it will not get us to net zero.

Navigating the fuel challenge requires a cross-industry compass

We are not alone in our infrastructure needs. Shipping accounts for 3% of global emissions, but combined with other hard-to-abate sectors—aviation, steel, cement, and chemicals—the total jumps to 25%. Adding power generation (34% of global emissions) and agriculture (12%) brings the total to over 70%, all reliant on green hydrogen and carbon capture. Some sectors, especially shipping, also depend on increased production of green methanol and ammonia.

Right now, infrastructure is critically lagging, and continuing with a fragmented, sector-specific approach will see green hydrogen demand outstrip supply by at least 900% in 2030, with carbon capture facing a similar gap. As major energy players are now scaling back renewable investments, that gap could well grow.

We must join forces to build critical mass

Why not unite to shift the balance in our favor? A cross-industry initiative could consolidate demand and provide market certainty, unlocking the requisite investment: $9 trillion for green hydrogen, $3.5 trillion for carbon capture, five times current methanol production, and a tripling of ammonia production by 2050.

Of course, demand alone will not suffice. With prohibitive costs and long payback periods, making green hydrogen and carbon capture cost-competitive also requires bold national leadership and large-scale incentives—like the ones that drove solar growth in Germany, and made it viable against fossil fuels.

Shipping, a natural starting point for a united fuel front

As stewards of 80-90% of global trade, shipping has a responsibility—and a unique position—to unite sectors, aggregate demand, and amplify our collective voice with policymakers. When it comes to the climate challenge, we are all in the same ship, sailing the same ocean. Acting together now can turn the carbon-neutral fuel challenge into our greatest opportunity for net zero.

Daniel Bischofberger is CEO of Accelleron. With a 100-year heritage of innovation, Accelleron helps the world move further, more efficiently and sustainably through its turbocharging, fuel injection, and digital solutions for heavy-duty applications. The company serves marine and energy customers in more than 100 locations across 50 countries, continuously innovating to drive the energy transition forward and accelerate the decarbonization journey.