Europe's challenges in transport decarbonisation

by Ewa Kochańska

The XXV EuroMed Convention *From Land to Sea*, organised by the Grimaldi Group at the Hilton Sorrento Palace near Naples, Italy, was a gathering of port and government leaders as well as policy and logistics experts in the European maritime sector. The event took place from 29 September until 2 October 2022 in Sorrento, where the attendees took part in seminars and panel discussions about the energy transition, intermodality, and the sustainable future of the maritime sector. The annual event aims to promote short sea shipping in the European Union to improve the continent's economic, environmental, and social life.

This year, while the Grimaldi Group celebrates 75 years of successful existence, some 800 delegates deliberated on various regulatory facets and transport demands of the transport sector and the motorways of the sea, such as the energy transition, its technological aspects, and intermodal solutions to deal with the constantly growing transport demand.

Regulation chasing innovation

The convention began with greetings from the Greek Minister of Shipping and Island Policy, Ioannis Plakiotakis, and European Coordinator for the Motorways of the Sea, Kurt Bodewig. Next, the Grimaldi Group President, Emanuele Grimaldi, gave his opening remarks, summarising shipping's biggest challenges, especially environmental sustainability. "Particularly now, in the gas crisis due to the Ukrainian war, we have a window of opportunity during 2023 to address the issue of global measures on carbon emissions," he said. Even in this unique geo-political climate, Grimaldi is confident that an agreement on carbon taxation measures worldwide can be achieved.

The first panel, titled *Energy Transition: a technological challenge for Europe's maritime sector*, debated EU policies and regulations, such as Fit for 55, the resulting taxes and their consequences, technological and investment challenges, and the need for, and too often - luck of, international collaboration. "I believe shipping has a very bright future ahead," said the panel moderator, Guy Platten, Secretary General of ICS, starting the discussion. "There are so many opportunities as we embark on our path to net zero emissions, and hopefully, 5% of ships will be burning the new, clean fuels by 2030 alone."

However, according to the panellists, what threatens the maritime sector at the moment is a patchwork of environmental regulations from the EU, the IMO, and individual governments worldwide, creating uncertainty for stakeholders. A regulatory certainty in the sector would encourage sustainable innovation and solid investments with a clear pathway forward. Another concern mentioned was the need for better communication with communities regarding sustainability. ***Annick De Ridder***, the chairperson of the Antwerp Port Authority board, said that at the moment, the general public views businesses, factories, and shipping lines as *the problem* and the reason for the environmental crisis. "They have to make this mental shift because


Ricardo Batista


Mikael Makinen


Dario Bocchetti


Ugo Salerno


Guy Platten


Annick de Ridder



Photos: Grimaldi Group

our companies are part of the solution," she said, adding that there has been a lot of innovation and investments in sustainability and that it should be better communicated to the public.

Energy and operational efficiencies

The speakers also underscored that it would be a mistake to move away from nuclear power in Europe due to false narratives about safety

Emanuele Grimaldi



In welcoming port and industry leaders and experts from across Europe to the 25th EuroMed Convention From Land to Sea, Emanuele Grimaldi, Managing Director of the Grimaldi Group, spoke about the success of the 75-year-old company as well as the challenges facing the maritime sector, particularly concerning sustainability solutions and regulation. While addressing the issue of environmental regulation, Grimaldi underscored that since environmental sustainability is a global problem, it must be handled with global taxation measures instead of regional ones. He pointed out that the EU Emissions Trading Scheme regulation could trigger other regional actions causing a patchwork of legislation. "This would be an administrative nightmare for shipowners and Ministers, bringing the less certain rule of law and a reduced effectiveness of the measures," he said. "A unique legislation, at IMO level, would do it much better." Since most countries agree on finding a global carbon solution, Grimaldi sees a window of opportunity to reach a common ground with a "fair distribution of costs and benefits." Grimaldi offered the company's suggestions on the frame of market based measures in maritime, which include: taxing all ships over 5,000 GT based on their CO_2 emissions during a calendar year – around 250mt of fuel per year; one part of that tax revenue would reimburse majority (quantum of reward based on 80% of the average global price of conventional liquid fuel oil during the five years preceding the implementation of the measure) of the extra fuel cost burn by pioneers consuming green fuels, possibly leading to 5% of zero-emission ships by 2030 worldwide; the other part of the tax revenue would go to developing countries for producing green fuels out of renewable resources such as sun or wind.

On an individual scale, the Grimaldi Group partners with various companies, such as RINA, Wärtsilä, and Corvus, seeking innovation and environmental solutions like autonomous ships, microplastic filters, atomic ships, battery packs, hydrogen-fuelled port equipment, and own patents as well.

This year, the Grimaldi Group is also celebrating 75 years of ongoing success. Grimaldi highlighted that despite various challenges throughout the decades, most recently the COVID-19 pandemic and the war in Ukraine, the Group has never closed a year in a loss. He attributed this achievement to company strategy, including reinvestment policies, fuel consumption reduction, and R&D activities.

In conclusion, Grimaldi thanked his clients, stakeholders, and all employees of the Grimaldi Group but most notably, the seafarers whom he praised for their patience and dedication. "After the COVID crisis, it became evident the necessity to have even more consideration for the seamen's health and welfare," said Grimaldi.

concerns. ***Ugo Salerno***, the managing director at RINA, called nuclear power generators "the safest technology" and "the least [environmentally] impacting power production that humans have discovered." But because of Chornobyl, Europe has very strict regulations when it comes to nuclear generators, even though there have only been three accidents related to nuclear power in human history. Nowadays, nuclear power technology is much safer than in the last incident in Fukushima. "This is a safe technology and a friend of the environment," said Salerno. This view was also supported by De Ridder, who stated that the wisest plan for sustainable energy in Europe includes a mixture of green fuels and nuclear. "I think it's a huge mistake to step out of nuclear power as Europe," she said.

But it is not only fuels that play a role in making shipping operations environmentally sustainable. Ship efficiency related to "silicone paint, the Air Librication System (air bubbles covering the vessel's hull bottom), special propellers, and so on, can reduce 20% or so of the energy consumed," said ***Mikael Mäkinen***, Corvus Energy chairman of the board. This is in addition to ports and ships, which are also inefficient at present. For example, ports have bottlenecks of vessels queueing at the entrance waiting to be processed, all the while ships, around 40% of which are not fully loaded, speed to the port, wasting additional fuel. "So, if you had fully loaded ships running at the right speed, having the right efficiency, with modern technology, you could save a lot of energy," Mäkinen pointed out.

To deal with some of these challenges, the EU should aid companies, ports, shipowners and other stakeholders in the energy transition rather than overtaxing and overregulating, according to some of the debaters. "Shipping and motorways of the sea should be seen as a partner for decarbonisation in Europe and not only as somebody to tax," said ***Dario Bocchetti***, Head of Energy Saving, R&D and Ship Design at Grimaldi Group. Bocchetti suggested that if taxation is too high and regulation too restricting, it will force more tracks back on the roads. Moreover, there need to be more investments directed towards sustainable technologies in Europe, and relevant regulation must be consistent with innovation; regulations cannot stifle progress in sustainability. As an example, Mäkinen mentioned battery production, which is dominated by Tesla and non-existent in Europe due to the lack of lithium. "There is [a lithium mine] starting up in Finland, which could be a 10% addition to the world lithium," said Mäkinen. "And now, it is fighting with the environmentalists that we should not dig for lithium in Finland to make clean cars or clean batteries. So, I think that we are in a stupid situation here."









Navigating uncertainty

Ricardo Batista, Policy Officer at the European Commission DG-Move, acknowledged the above issues pointing out that "the regulator cannot be a monk, isolated in a church, drafting the regulations and then spelling them out." However, he also highlighted challenges with varying technological and economic developmental levels among countries as well as difficulty in bringing everyone on board, for example, China or India, who still have not agreed to the 2050 carbon neutrality target. Nevertheless, Batista reiterated that a patchwork development of regulations is not acceptable in the sector. "Maritime transport is an important pillar of the economy, and regulations cannot destroy this pillar or make this pillar more fragile," said Batista. "Quite the opposite, the regulatory development has a responsibility of reinforcing this pillar and making this pillar of our economy ready for the future."

The regulators also pointed out that the European Union policy is already in place to assist companies and ports in the transition. On the energy efficiency side, the Emissions Trading Scheme (ETS) at the EU level will "allow having a return on investment on energy efficiency technologies." The way that Fit for 55 is designed is to ensure that there is regulatory certainty and investment in infrastructure development. Strictly on the fuel side, FuelEU is "a regulation to promote the uptake of [green] fuels." There already are many collaborative developments regarding fuels and fuel certification framework, advanced biofuels and synthetic fuels. "I think the value of the industry alliances is key," said Batista. "The regulation in itself is an empty statement. It needs commitment from the operators, it needs facilitation and support of the industry." Addressing the issue of battery production, the European legislators seem to be looking past lithium mining. "At the European level, we have the European Battery Alliance (…), which is looking beyond lithium," said Batista. "There is an important work of technology cooperation that looks beyond lithium, and I believe that looking beyond lithium is part of the future sustainability of patent systems."

Multimodality for sustainable transport

The second panel of the day, *Intermodal transport in the Mediterranean area: which toolbox for a sound growth?*, focused on ambitious intermodal investments and developments in rail, road, and maritime in Southern Europe. Capitalising on intermodality expansion, the region is creating ports that are not only able to resolve bottlenecks outside their entryways but can expand their capabilities; for example, the Port of Gioia Tauro, thanks to its new railway gateway "set the international competitiveness standard for rail cargo." The panellists mentioned that in the switch to an intermodal system of transport in the south of Europe, cooperation has been crucial. In ports, shipowners and terminal operators have to work together to develop solutions that make the whole operation more efficient. Additionally, initially wary of the modal switch away from roads, trucking companies are now satisfied to create a win-win relationship in the new environment; they have been able to keep their drivers working in a reduced area, where they are more efficient. And unlike the previous panel about energy transition, here the speakers called for more concrete regulation efforts from the government to simplify the processes necessary for intermodality in order to refine operations and procedures and create a "slim, lean" easy-to-navigate system.

Further, the convention included a press conference followed by the Grimaldi Excellence Awards Ceremony and a formal Gala dinner. ■