

# Green — from the very beginning

by Riinu Walls, *Director of Business Development, Meriaura*

**The 2020s have finally brought about a situation where the whole shipping industry, under pressure, is considering various means and forces that will be used to reduce maritime emissions in the coming decades. Our shipping company from Finland has been known for its ambitious environmental policy even before sustainability (and corporate responsibility) became trendy. Carbon-neutral goals and a vision for more sustainable shipping have been present throughout the company's 36 years. At the end of last year, the family-owned Meriaura merged with a listed company, opening more possibilities for green transition investments.**

The company's green values go all the way back to founder Jussi Mälkiä's young adulthood. As a young man in his 20s, Mälkiä and his friends bought the tugboat *Aura* in 1986 and established a company with the intention to make shipping more sustainable. Their first bio-oil experiment was carried out on this tugboat as early as 1992. The pilot was partially successful: the main engine worked well, but unfortunately, the generators did not. At that point, it was already clear that some capital was needed before more serious tests could be done.

## No more limits

Many years have passed since then, and Meriaura has grown to become a group of companies. In 2009, Sybimar, a company developing waste-based bio-oil, joined the pack. Bio-oil was made of fish residues in the first experiments. Early on, one of the primary objectives has been to produce second-generation bio-oil: one that doesn't compete with the food industry.

The next step on the path was designing and building the open deck cargo carrier *Meri* in 2010-2012. As far as we know, she was the first commercial ship and freighter designed to use bio-oil, thus an important test platform for using bio-oil in shipping. Facilities for producing bio-oil were improved, and a production plant in Uusikaupunki opened in 2015. A biogas plant was built as part of the ecosystem, feeding energy for bio-oil production, this time made of household food residues.

The biofuel-powered 'EcoCoaster' sister vessels *Eeva VG* and *Mirva VG* were

constructed in 2016. Both were using bio-oil regularly until the winter of 2020 when an investment decision was made to improve the production plant's capacity and the fuel's quality. The development project aims to formulate a biofuel that is more uniform in quality than the previously used ones, which can be standardised for ship use. In addition to developing the production line, Meriaura also invests in the ships by installing equipment that enables the use of blended fuel. The blending machinery can be used to unify the mixing ratio of bio- and fossil fuel, allowing for the continuous use of the bio-component. Neither will the location of the refuelling point for the biofuel (Finland in the case of Meriaura's own biofuel) limit the use anymore. This project is almost completed, and we expect biofuel consumption to grow significantly in 2023.

## Course set: carbon-neutral voyages

Based on the biofuel-powered vessels, Meriaura has launched the close-to-carbon-neutral sea transport concept EcoVoy. By using 100% waste-based biofuel, the lifecycle emissions of individual transportation are 97.7% lower than with conventional fossil fuels. EcoVoy enables cargo owners to decarbonise their value chains from a logistics point of view, creating added value for their business.

Calculations on CO<sub>2</sub> reductions achieved through an EcoVoy contract, in the form of a carbon footprint report, are made using nauticAi's software to report these accurately to the customers. Meriaura

commits to utilising biofuel across its biofuel-compliant fleet until equivalent calculated carbon emissions for the specific EcoVoy contract are achieved.

The biofuel we use, VG Marine EcoFuel (MEF), is an 'in-house product,' produced by Meriaura's daughter company VG-EcoFuel. The commodities of MEF are completely derived from industrial side streams and recycled materials (mostly used cooking oil, UCO) sourced in the Nordics. MEF's well-to-wake process is independently audited and assured by a third party, and it has been granted International Sustainability and Carbon Certification (ISCC). During the above-mentioned development project, a more extensive raw material base was ensured by expanding UCO's collection area from the Turku region to other parts of Finland.

Just a few years ago, valuing low-emission transport was marginal. Lately, clients have been showing an increasing interest in EcoVoy. For the moment, biofuel is the most climate-friendly available already today option for sea transportation. With the biofuel development project mentioned earlier, Meriaura will be able to enter into new EcoVoy charter contracts.

## The more you know, the farther you go (and on less bunker)

Marine fuel is the most significant source of emissions in shipping, thus of our operations too. Therefore, emissions from Meriaura ships are closely monitored and related to transport performance. In 2021, a software and monitoring system



Photo: Luis Suarez



Photo: CRIST

was developed for monitoring the CO<sub>2</sub> emissions of the whole fleet. Emissions per tonne of transported cargo per nautical mile, or 'tonne-mile' in short, was selected as the most sensible monitoring unit. From the data collected, the essential variables for the calculation are the nautical miles travelled, while of these, the share of ballast voyages, cargo capacity utilisation, and the fuel consumed.

The fleet data set covers two years and forms a benchmark for setting future shipping operation emission reduction targets (currently by 4% annually). Along with efficient operations and minimised ballast voyages, increasing the use of bio-oil is the most effective means of achieving the set

decarbonisation goals. To boost the development even further, our company has a new-building program underway, with the idea of supplementing the renewable fuel selection with green ammonia in the next few years, still naturally complemented with biofuels.

### What corporate responsibility is about

At Meriaura, we think that it is crucial for shipping and all commercial vessels

of different sizes to be included in the EU Emission Trading System (EU ETS). Otherwise, there will be loopholes and shortcuts, which is never good for reaching the target. According to Reuters, 45% of ships calling into EU ports are smaller than GT 5,000 – and, still, the block is leaving these outside its ETS. It is also crucial that all greenhouse gases, including methane, are taken into account.

It is not typical for a shipowner to lobby for their services to be included in EU ETS. Still, when your values have been green from the beginning, it is only natural to truly strive for the benefit of the environment and climate. An important factor from the climate's point of view is that the funds collected from EU ETS will be directed to investment and innovation projects yielding real solutions for slowing climate change.

In November 2022, Meriaura and its subsidiary VG-EcoFuel, which collects and produces biofuels in the Group, merged with Savosolar Oyj, a listed company (Nasdaq Nordic) that designs and delivers large-scale solar thermal solutions to district heating producers and industry. With the listing, our resources and opportunities to promote the use of renewable energy and applications of the green transition in maritime transport increase. We want to invest in clean energy both on land and at sea.

Environmental sustainability requires a wide variety of actions, whether big or small. Meriaura's environmental programme is audited and certified, and ISO14001 is underway. The third sustainability report in the company's history will be published later in the spring of this year.

Besides working for the climate, we want to take action for our home sea, the sensitive and polluted Baltic. Meriaura has several years of experience delivering wastewater to reception facilities ashore, and we have highlighted the problem of the legislation allowing ships to discharge sewage into the sea.

Corporate responsibility is about volunteering – and it starts where legislation ends. Support from the clients and other interest groups is vital in working together across the field for a common goal: lowering the emissions caused by shipping. □



Meriaura is a Finnish shipping company that ships with care (some 2.7mt in 2022 aboard its seven owned and eight time-chartered vessels). We transport industrial bulk, recycled and raw materials, and demanding project cargoes across Northern Europe. Our vision is to be the leading forerunner in environmentally friendly, innovative, and solution-oriented maritime transport and ship management services. Head to [meriaura.fi/en](https://meriaura.fi/en) to discover more.