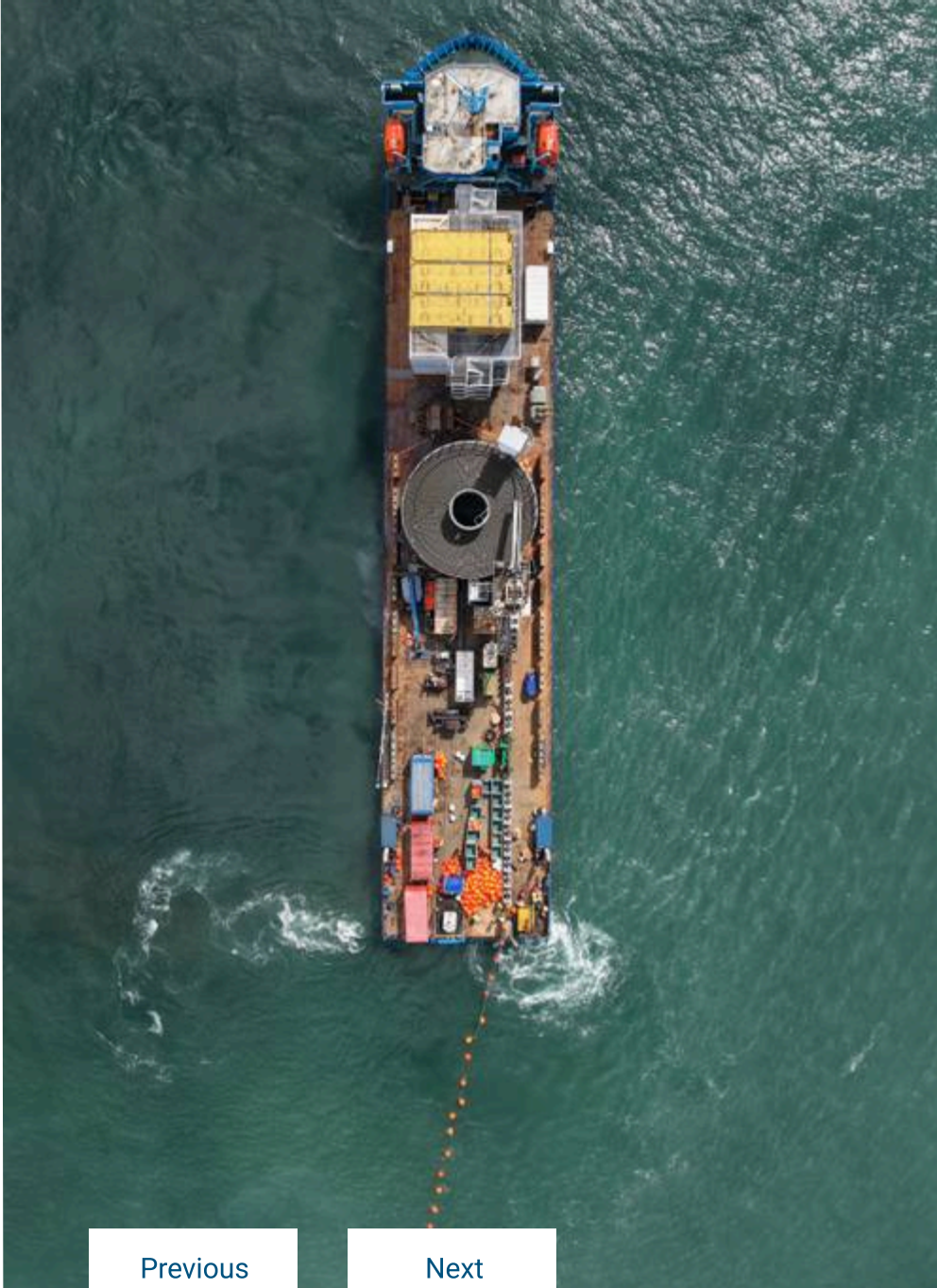


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Published May 13th 2026



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The sustainability report has been compiled by Esko Pettay and Minna Suuronen

From the Managing Director

This year marks 40 years since Meriaura was founded. Responsibility and the continuous development of responsible practices have been the company's guiding star throughout its existence—and rightly so, because sustainability work must be long-term and must be advanced regardless of economic cycles and of the political environment and trends of the moment. However, we cannot rest on historical achievements; we must strive for ever more ambitious goals.

By far the largest share of the carbon dioxide emissions generated by our operations comes from the fuel consumed by our vessels. Therefore, our target of achieving carbon neutrality by the end of the 2030s requires a strong focus on modernising the fleet and on developing alternatives to fossil fuels.

Fleet renewal is already well underway: the biofuel-powered dry cargo vessels we ordered in 2024 will replace older units with clearly higher emissions. The deck cargo vessel ordered at the end of 2025 has also been designed to run on biofuel. In addition, for time-chartered vessels, we are in the process of replacing older units with newbuilds. As a result of these changes, the average age of the fleet will decrease significantly, while the number of vessels suitable for biofuel will double.

As in previous years, 2025 was characterised by political uncertainty and slow economic development. Due to the unpredictability of international trade policy and ongoing military conflicts, the long-anticipated upswing has been postponed yet again. Despite the challenging conditions, we succeeded in keeping both turnover and revenue at the level of the previous year. A healthy business is a fundamental prerequisite for responsible operations in both the short and the long term. Business activity always involves both financial and operational risks. One of management's key responsibilities is to identify, prepare for, and manage these risks, and to maintain the organisation's resilience and adaptability.

We also recognise our importance for Finland's security of supply, and we are proud to maintain and develop domestic shipping operations. Our skilled and motivated personnel—both at sea and ashore—play a central role, as do our customers, with whom we develop smarter operations together and work to support the achievement of their goals. Our numerous partners and stakeholders also play an important role in ensuring smooth supply chains.

Beppe Rosin
CEO, Meriaura Ltd.

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Meriaura in numbers

Turnover 2025

65 M€

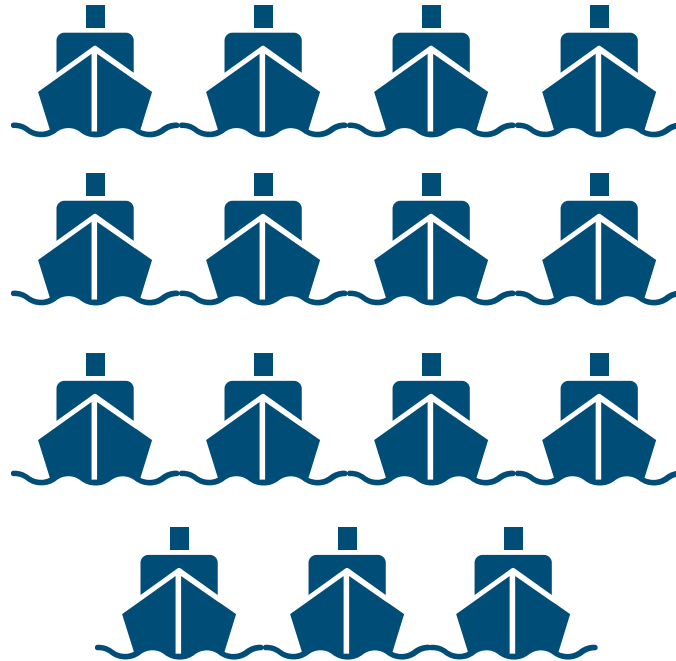
Cargo volume 2025

**2,3 M
tons**



CO₂ 16,4 g

CO₂ emission per tonne /km




17 vessels,
operating mainly in the
Baltic and North sea
areas

4 vessels owned by
Meriaura



12 time-chartered vessels and 1
external vessel under Meriaura
management

735 
voyages in 2025

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Family-owned company once again

During the 2025 reporting year, until June, Meriaura was still part of listed company Meriaura Group and its maritime logistics business area. Meriaura Group Oyj ("Meriaura Group") merged through a share exchange agreement on 9 June 2025 with Summa Defence Oy, a company bringing together businesses in the defence and security sector. The new listed company was named Summa Defence Oyj. In connection with the arrangement, the maritime logistics business (Meriaura Oy and its wholly owned subsidiary VG-EcoFuel Oy) was sold to Meriaura Invest Oy, and Meriaura Oy continued its operations as an independent family-owned company.

Meriaura Oy is a significant carrier of dry bulk cargo and demanding project deliveries in Northern Europe, especially in the Baltic Sea and North Sea regions. The company provides its customers with competitive, low-emission sea transport services based on long-term chartering agreements, a modern fleet, and active development of operational sustainability. In addition, Meriaura has a strong market position as a provider of sea transport services for renewable energy construction projects. Meriaura's subsidiary VG-EcoFuel Oy manufactures biofuels from bio- and recycled oils generated as industrial by-products.

Companies operating close to Meriaura

For years, the Meriaura group of companies consisted of two legal groups, as the groups' business operations were different in nature. The group's bio and circular economy companies were owned by the investment company Aura Mare Oy. This changed at the end of 2025, when Aura Mare Oy was merged into Meriaura Oy's parent company, Meriaura Invest Oy, on 31 December 2025.

The merger reflects a strategic decision to focus on the core business, i.e., maritime logistics, and closely related operations such as biofuel production and port activities. As a result of the merger, the ownership structure of the group has also been significantly simplified. Following the change, Biolinja Oy's biogas plant in Uusikaupunki, VG-Port Oy which provides port services and circular economy collection services in Naantali, and the real estate development company Skogby Strand Oy are sister companies of Meriaura Oy.

The Board of Directors of Meriaura

Jussi Mälkiä, Chairman
Antti Vehviläinen
Ville Jussila
Patrik Rautaheimo

Management team

Beppe Rosin, CEO
Mathias Landor, COO
Miia Peltonen, CFO
Jessica Troberg, CHRO, Crewing
Jyrki Hentula, CTO

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Our Values



Innovativeness

We are not afraid to question established practices and find new ways to build cleaner and more efficient shipping.



Cooperation

We nurture the power of collaboration to maximize expertise and success between both co-workers and customers.



Honesty

We handle things sincerely, ethically and fairly, respecting each other and our stakeholders.



Hard work

We persistently and resolutely strive to complete things while renewing old established practices and finding more effective ways of working.



Responsibility

We take proactive responsibility for the impact of our operations on the environment and society. We do not compromise on safety.



Our Mission

is to transport cargo in the Baltic and North Seas sustainably, professionally, to the benefit our customers.



Our Vision

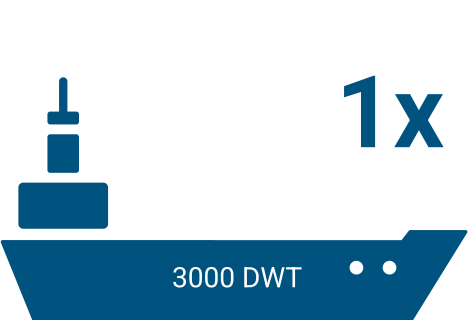
is to be the leading forerunner in environmentally friendly, innovative and solution-oriented maritime transport services.

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Our fleet- Owned and Time-Chartered

In 2025 our fleet consisted of 14 dry cargo vessels, with a capacity of 3000-4850 cargo tons, and two deck cargo vessels designed for special and heavy transports.


*Meriaura's main owner and parent company Meriaura Invest Ltd. is a co-owner in Helmer Lundström Ab Oy and Rederi Ab Nathalie (RABN), and Marship Minibulker Flotte GmbH.



1x
3000 DWT
Baltic Sailor

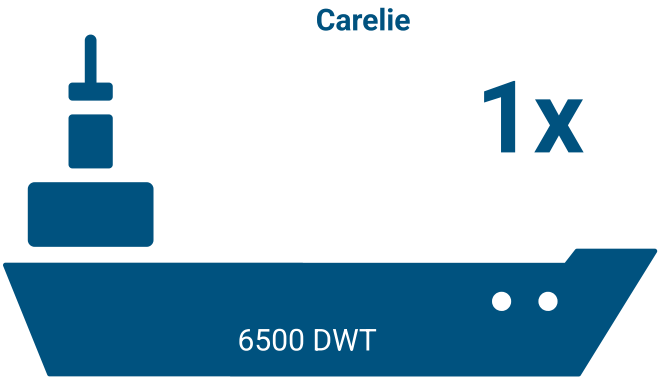


8x
4000 DWT
Aava VG, Travetal*, Emilie*, Lottaland, Aurelie*, Loraland, Karion, Dreamland



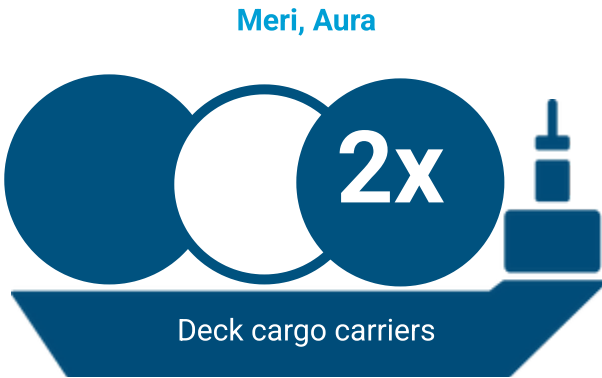
4x
4500-5000 DWT
Eeva VG, Mirva VG*, Nathalie*, Friendland

Carelie



1x
6500 DWT

Meri, Aura



2x
Deck cargo carriers

Research vessel Aranda



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Ships under managment

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Meriaura's fleet renewal is advancing rapidly



NB832 was named Sofia VG and was launched in November 2025. The vessel was completed and entered service in spring 2026. The sister ship NB833 is scheduled for completion in early 2027.

Our fleet renewal program will reduce the average age of our vessels from 22 to 14 years between 2025 and 2027. Thanks to the new energy-efficient vessels, partly fueled by bio-oil, the carbon footprint of our maritime transport will be further reduced..

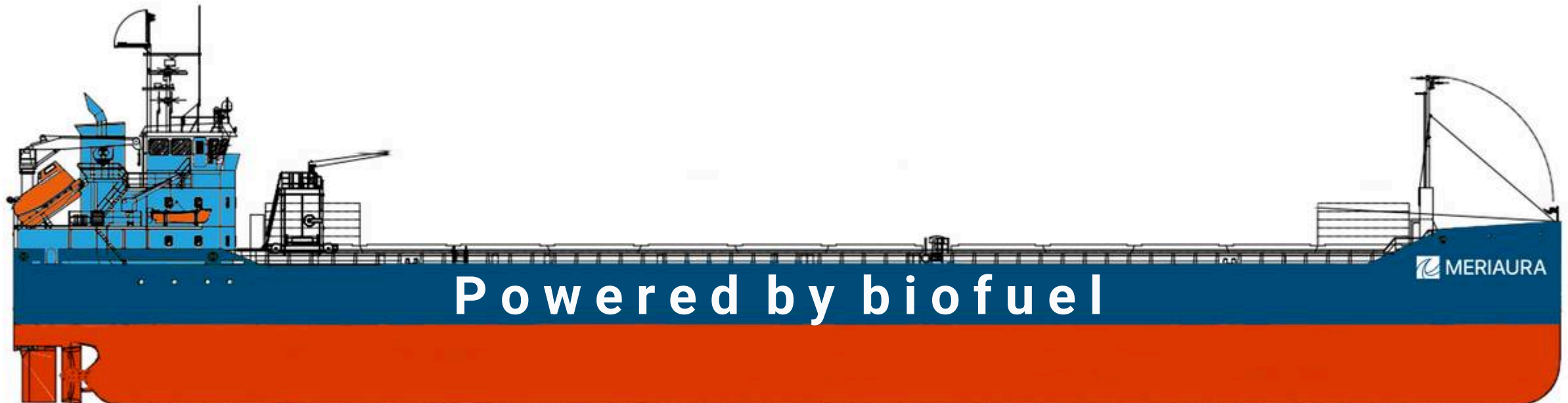
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EcoTrader bulk carriers

Technical information

Lenght overall	104.93 m	Hold capacity	310,000 cbft (8778m ³)
Length between perpendiculars	102.98 m	Tank top area	933 m ²
Breadth moulded	15.00 m	Gross tonnage	4.144 GT
Depth	9.50 m	Speed	11.8 kt
Draught	6.60 m	Air draft	~ 21.0 m
Dead weight	6.735 t	Main engine	Wärtsilä 9L20 (1800 kW)

The EcoTrader vessels are approximately 30 percent larger than the EcoCoaster vessels. This meets market and customer needs, and the larger vessel size also improves economic efficiency and reduces the environmental burden of transportation. The vessels are designed to run on biofuel. The EcoTrader vessels have two holds, both with bulkheads.



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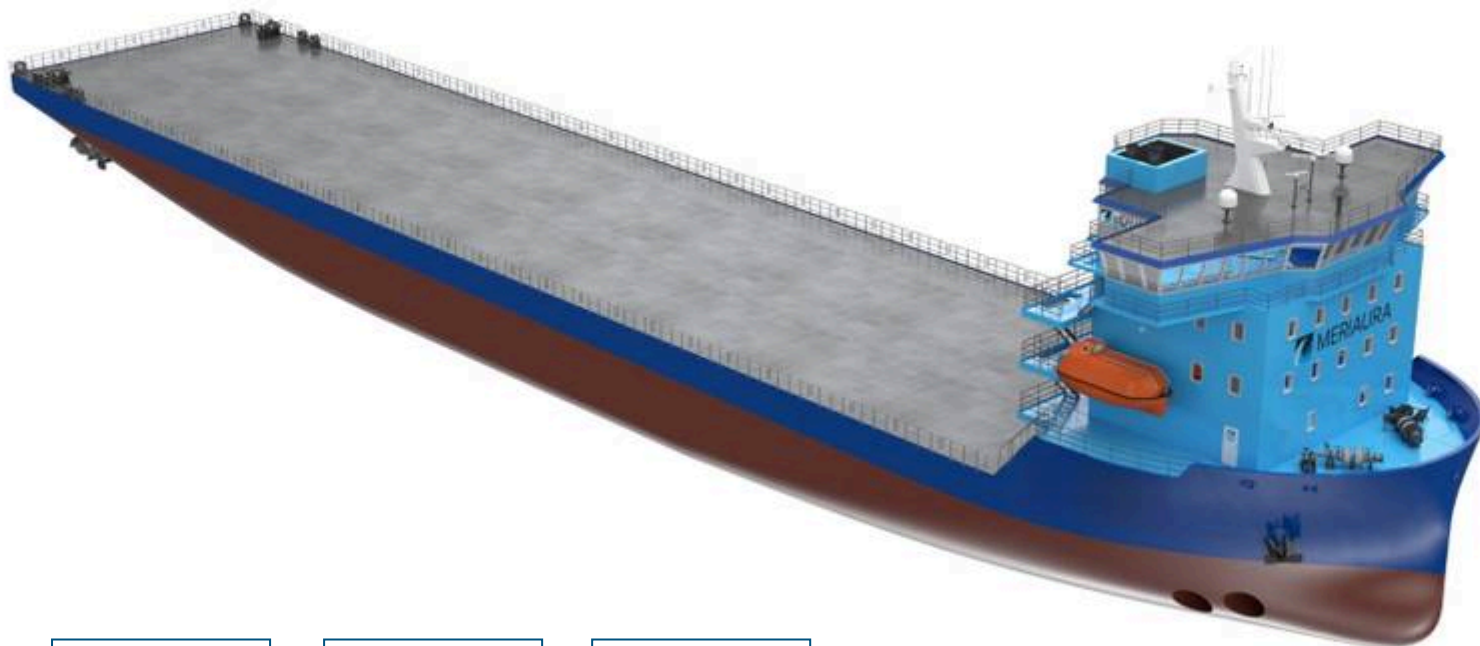
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Next-generation open deck carrier

Technical information

Lenght overall	120 m	Deck area	2100 m ²
Length between perpendiculars	115,20 m	Cruising speed	11,0 kt
Breadth moulded	21,60 m	Main engines	Wärtsilä 2x25, 1x20
Depth	7,5 m	Propulsion	2 x 2000kW
Draught	n. 5,3 m	Ice class	1A
Dead weight	n. 6800 t	Dynamic positioning	DP2



The open deck cargo vessel is optimized for heavy project transport and special cargo, and is particularly well suited for demanding RO-RO operations. The vessel features, among other things, a dynamic positioning system, a large deck area and excellent technical and operational performance, which makes it suitable for the special transport needs of demanding projects all year round. The vessel enables access to challenging locations with shallow draft, inadequate infrastructure or limited space.

The advanced multi-fuel engines selected for the vessel support the green transition. Meriaura's own biofuel will be part of the future fuel mix, and its use enables immediate fuel-related emission reductions. In addition, the vessel is battery-ready via a plug-and-play solution. The optimized hull design and efficient engine technology significantly improve fuel efficiency.

According to the agreement, the vessel, ordered in January 2026, will be delivered by early 2028.

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Cargo Flows

The most visited ports by Meriaura fleet in 2025



**Commodities
carried in 2025**

	Discharging port	No. of port calls
1	Naantali	65
2	Uusikaupunki	33
3	Lubeck	32
4	Muuga	31
5	Rotterdam	31

	Loading port	No. of port calls
1	Uusikaupunki	53
2	Naantali	42
3	Kokkola	38
4	Pori	36
5	Gdansk	35

Grain and feedstuff

**Raw materials and
minerals**

Recycled materials

Peat

Fertilizers

**Energy wood,
chips, pellets**

Project cargo

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Economic responsibility: Investments in a sustainable future

Geopolitical turbulence and economic uncertainty continued in 2025 and weakened demand for spot shipments throughout the year. Nevertheless, supported by a strong contract base, Meriaura’s transport volumes remained at a satisfactory level. Demand for heavy project cargo remained stable in most segments despite the economic cycle. Major investments in the energy sector indicate that the market will continue to be strong, and other significant segments such as infrastructure construction, port equipment and shipbuilding also show steady demand. The company is renewing its fleet and investing heavily in the future.

Meriaura Oy’s revenue for 1 January–31 December 2025 was EUR 64.7 million, decreasing slightly compared to the previous year. Business profitability remained at the same level as in the prior financial year, and overall Meriaura’s financial performance remained good considering the circumstances. The company’s financial position is stable and its debt servicing capacity is good.

During the financial year, the company’s fleet comprised 17 vessels, of which 14 were part of the fleet throughout the entire financial year. The fleet consisted of both owned bulk and project cargo vessels as well as vessels chartered from external partners.

The company registered its owned vessel Aava VG in Finland in mid-January and sold its smallest owned vessel, Helena VG, in May. As a result, all vessels currently owned by the company now sail under the Finnish flag.

The renewal of the company’s fleet progressed rapidly: in addition to selling Helena VG, the company chartered the larger m/v Carelien (6,000 dwt) into its fleet at the beginning of January, increasing cargo capacity. In addition, the company signed an agreement in September to charter two new dry cargo vessels. The capacity of the new vessels is approximately 30% higher than that of the oldest ships in the company’s fleet, which they will replace. The first new time-chartered vessel joined the fleet in the spring of 2026 and the next will follow during the second quarter of the year.

Construction of the two Eco Trader cargo vessels ordered by the company in 2024 progressed as planned at a shipyard in the Netherlands. The starting point for the vessels’ design has been to achieve the lowest possible emission levels. Steelwork on the first vessel began in February 2025, and the vessel was launched in November.

Meriaura Oy	2025	2024	2023	2022
Turnover (MEUR)	65	65	63	69
Profit (MEUR)	3	3	5	10
Investments (MEUR)	8	6	1	5
Transported tons (millions of tons)	2,3	2,19	2,14	2,38
Purchases in Finland (MEUR)	30	32	30	31
% of all purchases	51%	52%	56%	56%

Governance Principles

Governance principles

During 2025 the governance principles of Meriaura Oy were determined by the parent company Meriaura Group Oyj until the beginning of June. Meriaura Group Oyj was a publicly listed company in Finland, whose governance is based on the Finnish Companies Act and the company's Articles of Association. Additionally, the company adheres to Finnish legislation and guidelines from the Financial Supervisory Authority and the stock exchange.

Meriaura Oy's governance principles changed due to the corporate restructuring June 9th 2025, so the requirements of a public limited company no longer apply to Meriaura Oy.

The highest decision-making body of Meriaura Oy is the Board of Directors appointed by the General Meeting, responsible for the company's strategy and management together with the CEO selected by the Board. The CEO is assisted by the management team, which includes the heads of Meriaura's departments.

According to Meriaura Oy's Articles of Association, the Board of Directors consists of at least one (1) and at most five (5) regular members. The term of office for Board members ends at the conclusion of the first Annual General Meeting following their election.

Responsibilities of the Board

The tasks and responsibilities of Meriaura Oy's Board of Directors are defined by the Finnish Companies Act and other applicable legislation. According to the Companies Act and Meriaura Oy's Articles of Association, the Board is responsible for managing the company and organizing its operations appropriately and represents the company. The Board approves the company's strategy and monitors its implementation. The Board approves the company's financial statements and interim reports and oversees the proper conduct of accounting and financial matters. The Board decides on significant loans, acquisitions, and investments and approves business plans and budgets as well as risk management principles.

The Board also decides on the principles within which the management can make decisions on investments, company acquisitions and sales, contract agreements, and the provision of guarantees. The Board selects the CEO and decides on the terms of their service, as well as approves any potential remuneration programs. Additionally, the Board's task is to promote the success of the company and all its shareholders by planning the company's operations in a way that delivers the best possible return on the capital invested in the company over the long term.

Responsibilities of the Management Team

The management team assists the CEO in supervising the company's performance relative to set objectives. This includes setting long-term goals and defining the measures needed to achieve them. The management team monitors the strategy approved by the Board and ensures the adequacy of the company's assets and financing. The management team is also responsible for matters and policies related to statutory governance, compliance with requirements, and stock-exchange-related obligations. The management team oversees the company's financial situation, budgeting, and ensures that financial targets are met.

The management team ensures that the right people are in the right positions and that personnel are continuously developed. This also includes maintaining and developing the company culture and addressing initiatives from the staff. The management team meets regularly on a monthly basis, and as needed. Matters handled at the management meetings that are suitable for internal distribution are communicated to the office staff in the internal monthly newsletter.

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Collaboration with stakeholders

Qualified and motivated personnel and customers are our most important stakeholders. By acting responsibly, we build a reputation as a good employer and attract employees who share our values. For our customers, openness, transparency and responsible operations are significant sources of added value. We carefully select our partners and suppliers to ensure reliability and quality. In addition, our partners include agents, stevedores, ports, spare parts and fuel suppliers, shipyards and classification societies, as well as partner shipping companies from which we have chartered vessels. We also work closely with authorities, the Finnish Shipowners' Association and environmental organizations focusing on marine nature. Open and direct communication with stakeholders forms the basis for cooperation and helps us adapt to societal changes.

Approximately one third of the vessels chartered by Meriaura are owned by the company itself and the rest are chartered, i.e. time-chartered vessels. In recent years, we have deepened and expanded our previous chartering cooperation with two Finnish partner shipping companies.

Meriaura's parent company Meriaura Invest has been a co-owner of Helmer Lundström Ab Oy and Rederi Ab Nathalie (RABN) since 2022. With these strategic partnerships, we ensure the availability of suitable Finnish tonnage for our use in the long term. The partnership also promotes the sustainable development and strengthening of the Finnish shipping industry and supports the regional maritime industry sector.

In cooperation, we develop innovative solutions and practices that promote more environmentally friendly shipping and better meet current and future sustainable development challenges.

In 2025, we joined the CargoRes project led by Laurea University of Applied Sciences, which aims to develop the recovery and treatment of cargo hold wash water.

For our time charter vessels other than those we co-own, cooperation is mainly based on long-term contracts, and we know the ship owners well. Most time charter vessels have a master employed by Meriaura, who has pilot exemption on Finnish waters. This way, we ensure good and smooth communication between the shipping company, the ship and Meriaura's land organization. Cooperation between Meriaura and the owner shipping company aims for the most efficient and economical operation.

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Sustainability Management

Meriaura's Code of Conduct

Meriaura's goal is to create a balance between a thriving work community, environmentally friendly operations, and economic success. This requires leadership where the company's values and responsibility goals guide decision-making at all levels.

We are committed to ethical guidelines in all our activities, which guide the actions and behaviour of our management and employees. Meriaura's principles of good business conduct bring together the rules that ensure responsible and ethical conduct on land, sea, and in ports.

We are committed to maintaining and developing sustainable shipping and environmentally friendly thinking in our daily operations. To achieve this, we adhere to all applicable laws and ethical guidelines in the industry, exceeding minimum standards. The business principles describe both our company's values – innovativeness, cooperation, honesty, hard work, and responsibility – and the requirements we set for all employees and partners in our group.

At the core of the business principles are compliance with national and international laws, regulations, and standards relevant to our industry and operations, respect for human rights and workers' rights, and especially ensuring the safety and health of maritime personnel. It is of great importance to us to develop environmentally friendly shipping and sustainable solutions in all our activities. Transparency, incorruptibility, and cooperation with authorities are the cornerstones of our operations.

Environmental Policy

Meriaura's environmental policy focuses on practical measures. We have analyzed the main environmental impacts of our activities using a double materiality analysis and designed concrete actions to reduce them.

Meriaura aims to be the leading pioneer of environmentally friendly, innovative, and solution-oriented maritime transport services. We are committed to promoting environmental values in our daily work and constantly seeking cost-effective solutions to environmental challenges.

Our vessels operate in sensitive marine areas, so understanding and managing risks is important. The most significant environmental impacts of maritime transport arise from air emissions from fossil fuel use and wastewater. In the event of an accident, a potential oil spill can cause significant damage to nature.


We respond to the challenges of our industry and operating environment by developing biofuel from recycled raw materials, properly treating wastewater, and employing skilled personnel. We continuously invest in the recycling and further processing of waste onboard. We train and encourage our employees to consider environmental responsibility in their daily activities.

We continuously monitor and strive to reduce the environmental impacts of our operations. Our future transport concept aims at completely carbon-neutral transportation. Considering the environment is an integral part of our work, regardless of external conditions.

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The UN Sustainable Development Goals

The **UN Agenda 2030** for Sustainable Development aims at global poverty eradication and sustainable development, where the economy, environment and welfare of the people are considered equally. Our key areas of influence around these goals are included in the following five key areas.




5 GENDER EQUALITY

Meriaura provides equal opportunities for everyone to participate fully in the operations and management, regardless of gender. We offer flexibility regarding work tasks, according to one's life situation.




7 AFFORDABLE AND CLEAN ENERGY

We increase the use of renewable energy in both office and marine operations. Our EcoCoaster vessels are ESI-certified (Environmental Ship Index) to ensure energy-efficient operation.




9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

We actively monitor the development of technology and promote the introduction of more sustainable shipping technology. We invest in new and more environmentally friendly cargo ships and test new methods and technologies.



13 CLIMATE ACTION

We use renewable and carbon neutral electricity. We produce biofuel from waste-based material. Waste-based bio-oil is ethically sustainable and its lifecycle CO2 emissions are up to 98% lower compared to the traditional fossil fuel option.



14 LIFE BELOW WATER

We reduce the nutrient load to the sea by delivering the wastewater from our vessels ashore for proper treatment. Our ships are equipped with ballast water management systems.

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Audited Environmental and Quality Systems

Meriaura's ISO 14001 environmental management system is limited to the company's chartering and operating activities and the office as a working environment, as well as the EcoVoy transport concept. In addition, the environmental program applies to certain parts of the company's own ships.

The limitation is based on the fact that we can influence the environmental impacts of these operations ourselves, and the ships are already under the ISM code, which includes environmental protection. The selected limitation may be expanded in the future. The environmental protection measures are based on the requirements of ISO 14001:2015, and they are integrated into Meriaura's safety and quality system.

The environmental program has defined measurable indicators for concrete goals so that we can follow the principle of continuous improvement and systematically develop our operations in the right direction. During 2025, the use of biofuel and the EcoVoy concept have been further developed.

In accordance with our environmental system, employees are offered the opportunity to receive an employee travel ticket or an employee bicycle.

Meriaura's ISO 9001 quality system supports customer-oriented and consistent operations by ensuring process management, risk and deviation handling, and consistent service quality. The system guides continuous improvement and quality development in cooperation with customers and stakeholders.

Meriaura's ISO 14001 environmental program consists of:

Reduction and sorting of waste

- Sorting station at the office
- Waste management plan

Commuting

- Possibility to distance work
- Purchase of an electric company car

Communication

- Sustainability report on a yearly basis
- Staff training

Biodiversity

- Follow-up of the sewage streams

Influencing

- Continuing cooperation with marine nature foundations
- Active participation in working groups of our interest groups

Material efficiency

- Use of waste-based biofuel on vessels
- Follow-up of emissions

Chemicals

- Chemical lists on board, updated yearly

CERTIFIED
ISO 9001
ISO 14001



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Regulation and Reporting



Meriaura is subject to voluntary reporting

In 2024, we began preparing for CSRD sustainability reporting. For this purpose, a dual materiality analysis was prepared, which comprehensively examined the materiality of the sustainability impacts of our operations.

However, in early 2025, the EU Parliament decided to extend the work and change the size limits for companies subject to regulation. Due to the change in the size limit, Meriaura is not obliged to prepare a CSRD-compliant sustainability report. However, the work we have done will not be wasted, as we will be able to utilize the information obtained through the dual materiality analysis in our sustainability reports.

Instead of CSRD, we will report at least in accordance with the voluntary VSME. This is an appropriate level for sustainability reporting and still covers all the most material areas.

Regardless of regulation, we will develop the coverage of our reporting year by year. We believe that open reporting promotes the development of sustainability. By comprehensively monitoring and assessing the impacts of our operations, we will find areas for improvement. By reporting on our impacts, we can monitor how successful we have been in our sustainability work.

Many of our partners also need information about the impacts of our operations. Many of our customers ask us for calculations of carbon dioxide emissions from transportation, and financiers, for example, are interested in a variety of sustainability information. In addition, large companies subject to CSRD obligations send extensive sustainability-related surveys.

Our material impacts

The updated dual materiality analysis confirmed that CO2 emissions constitute the most significant impact of our operations. This will continue to be the most important sustainability information we report. In addition, reducing CO2 emissions is our most important environmental goal.

The materiality analysis also revealed that, globally, shipping is subject to corruption and deficiencies in working conditions. Therefore, especially in international operations, it is necessary to report that we comply with good Finnish collective agreements and that no corruption or violations related to working conditions have been observed. Our ethical principles unequivocally prohibit all corruption and Meriaura is committed to maintaining and developing sustainable shipping and environmental thinking in its daily operations. We comply with all legal and ethical standards applicable to our industry. Every Meriaura employee is expected to act responsibly and honestly, and everyone has an obligation to comply with this Code of Conduct and the principles and instructions underlying it.

With regard to data protection and information security, we monitor and comply with applicable legislation, and we provide regular training for all our employees. Our systems maintain a high level of security.

Our approach to sustainability also includes assessing the impact of a changing world on our operations. Environmental and sustainability regulations affect our operations in many ways. Unfortunately, it will still be a long time before regulations begin to significantly reduce shipping emissions, and for example, emissions trading or FuelEU Maritime do not yet apply to ships under 5,000 GT, which is what Meriaura's fleet consists of. The impact of climate change on our operations has also been assessed.

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Emissions Measurement and Reduction Goals

The double materiality analysis required by the CSRD confirmed that the main source of emissions for Meriaura is the fuel of the ships. Meriaura closely monitors the emissions from the ships, and how they relate to the performance (transport work done). In 2021, the company co-developed software for measuring CO₂ emissions and introduced a monitoring system for the whole fleet. The chosen monitoring unit was emissions per tonne of cargo transported per nautical mile. The monitoring was improved in 2023 with more systematic methods, the data from different years was harmonised, the data input for the calculation was standardised, and the used unit was changed to “tonne-kilometre”, which is also used by Traficom (the Finnish Transport and Communications Agency) to facilitate the comparison of the data with other modes of transport. Four full years of data have now been gathered for all the ships.

Sea freight carbon footprint

Sea voyages have four stages: ballast voyage; loading; cargo voyage; and discharging of cargo. On a ballast voyage, the ship carries no cargo as it travels to the loading port. All stages of the freight journey produce carbon dioxide emissions. Time spent in port and anchorages causes lower emissions than when the ship is sailing. Our cargo ships spend about half of their time sailing and half in ports.

The Carbon Footprint indicator that we use is closely related to the share of ballast miles in the total journey, which reflects the situation of the freight market and the success and efficiency of chartering.

In our calculation of the carbon footprint for Meriaura, we consider the CO₂ emissions from every stage of each cargo voyage. Emissions from docking and repairs of time-chartered ships are not part of the reported figures. The carbon footprint of sea freight depends on the amount and type of fuel used. We convert fuel use data into carbon dioxide emissions using coefficients. For light low-sulphur fuel oil (MGO), we use the number 3.206 (tonnes of carbon dioxide/tonne of fuel), and for bio-oil (LBO) made by VG-Ecofuel, 0.0, as coefficients.

The calculated CO₂ amount is divided by the transport work, which is obtained by multiplying the number of freight kilometres by the amount of freight sailed. The DWT equivalent number is used as the amount of cargo. The equivalent refers to the fact that instead of the weight of the cargo, for light products, the amount of cargo is limited by the cargo hold’s volume. In practice, a DWCC number is defined for each ship, which indicates the maximum weight of the cargo. The ship’s utilisation rate is therefore evaluated in addition to the weight from the perspective of the use of the volume of the cargo spaces. The trip-specific DWT number is obtained by multiplying the ship’s utilisation rate by the DWCC number.

Data reliability

The information affecting the calculation is obtained from the ships’ voyage reports. For example, the voyage report states the amount of cargo, the degree of filling of the ship, fuel consumption, the arrival and departure times in ports, and the lengths of ballast and cargo journeys. Among these data that affect the carbon footprint of the journey are the fuel consumption of the entire journey, fuel type, the length of the cargo journey and the ship’s degree of occupancy (utilisation).

The ship’s filling rate is stated as a percentage of the maximum amount of the cargo in question the ship could load. Fuel consumption during the trip is based on measurements taken at the beginning and end of the trip. The accuracy of individual measurements may suffer in challenging conditions, but the data on total consumption will level off over time. In addition, the consumption data is compared with the bunker delivery data. The length of the freight voyage is obtained with the aid of GPS tracking and can be considered reliable. Data is manually entered into the voyage report and from the voyage reports into the operational system. Typing errors are possible in both phases, but gross errors are noticed in the monitoring of the reporting.

Carbon Footprint calculation formula

Carbon Footprint (g/tkm) = CO₂-emission (grams)/Transport work (tn, km)
 CO₂-emission (grams) = 1000000 x (MGO tons x 3,206 + LBO tons x 0,0)
 Transportwork (tn, km) = (utilisation rate x ship DWCC x cargo kilometres)/100
 ((utilisation rate/100) x ship DWCC) = DWT_eq
 (cargo kilometres = 1,852 x nautical miles loaded)

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Our Emissions in 2025

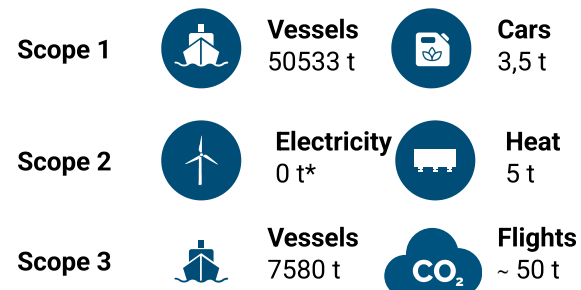
Meriaura's long-term goal is to be a carbon-neutral shipping company by the end of the 2030s. Our short-term goal has been to improve our carbon intensity, i.e. to reduce emissions in relation to transport performance by 4% annually or 15% in four years starting in 2021. In 2025, our total shipping emissions were approximately 50,533 t CO₂. The carbon intensity decreased again slightly to 16.4g CO₂/tkm (18.0g CO₂/tkm in 2021, 16.5g CO₂/tkm in 2022, 16.8g CO₂/tkm in 2023, 16.6g CO₂/tkm in 2024). Success in reducing emissions consists of many small things together, the most important of which are minimizing ballast voyages, maximizing the ship's load factor and optimizing port times. We have therefore managed to improve our carbon intensity by 8.9% compared to 2021. Progress has been made, but the set 15% target was not reached. Over the next five years, we aim for an annual improvement of 5%. This should be possible thanks to the rapid renewal of the fleet, as new energy-efficient ships replace older ships.

Customers are key, as they decide where the ships are taken. Customers' batch sizes must also match the ships' cargo capacity as closely as possible. The digital application NauticAI Fleetrage plays an important role in planning and optimizing ship programs and has also developed as a tool for monitoring environmental data. Competent ship management ensures economical driving. Efficient port operations reduce the time ships spend in port and enable economical driving during sea voyages, which saves fuel and reduces emissions.

We also estimated the emissions from the production phase of our largest emission source, the fossil fuel used by ships. Oil drilling, refining and transportation cause large emissions. The biofuel we use is also significantly lower in terms of emissions from these production phases than fossil fuel.

We also calculated the emissions from our personnel's air travel again. The majority of flights are caused by crew changes. Our office's energy efficiency is very high and the electricity we use is carbon dioxide-free. Turku's district heating emissions are also very low.

CO₂ emissions 2025



*100% carbon dioxide-free electricity contract

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Sewage recovery

One of our most significant environmental goals for several years has been the discharge of ships' sewage into port reception facilities. Sewage that is legally allowed to be discharged into the sea in most sea areas, contains nutrients, bacteria, fats and chemicals. Treatment facilities reduce, but do not eliminate, these harmful effects. For this reason, we strive to leave sewage in ports, from where it is transported for proper treatment. In this case, the sewage causes almost no load on the water bodies.

Reducing sewage discharges is particularly important in sensitive areas, such as the shallow and eutrophicated Baltic Sea.

Proper treatment of sewage is constantly improved due to fleet renewal, as the need for sewage storage tanks has been better taken into account in new ships. For example, in 2025, the newest ships in our fleet, Mirva VG and Eeva VG, did not discharge any sewage into the Baltic Sea at all.

For our own and partly owned ships, clearly less than 20% of the wastewater had to be discharged into the Baltic Sea.

By maintaining a strict policy, we have persuaded several ports to change their practices to promote wastewater recovery, thus encouraging other shipping companies to pump wastewater ashore.

The ban on the discharge of wastewater in Finnish territorial waters entered into force on 1 July 2025. The change has not affected our operations, largely because our practices already met the new requirements with a focus on the front.

Our goal for 2026 is to further reduce the amount of wastewater ending up in the Baltic Sea, and to develop monitoring and reporting. The renewal of the fleet provides good conditions for cleaner operations, also from a water protection perspective.

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We are interested in all of our environmental impacts

In 2025, information was collected on solid waste left by ships in ports. The data did not reveal any surprising facts. The crews of the ships are small (7 - 9 people), so the amount of waste is also small and resembles household waste.

At the end of 2025, we joined the CargoRes project led by Laurea University of Applied Sciences, which aims to develop methods and practices to reduce cargo residues ending up in the sea during loading, unloading and hold washing using a wide cooperation network.

We have also tested new loading methods, including those that reduce dust, together with cargo providers.

Our long-standing monitoring and reporting of carbon dioxide emissions is of interest to more and more of our partners every year. For years, we have been providing some of our customers with emission calculations for maritime transport.

It was great to see that recently, more and more of our partners have started to collect this information. Funders are also interested in the emissions from our operations. We are constantly considering which new environmental challenges we should respond to. For example, we have discussed with researchers the erosion of beaches caused by shipping, noise and biodiversity impacts.

[Edellinen](#)[Sisällys](#)[Seuraava](#)

Low-emission biofuel

Meriaura has been using biofuels in its fleet for over a decade. The system in which our group of companies and affiliated companies both collect the raw material, produce bio-oil, and even the energy used in the manufacturing process is clean (biogas), and consume the fuel in our own fleet, is completely unique.

Biofuels, especially on a large scale, come with numerous sustainability issues, but if the fuel is produced from raw materials that have no better use, the situation changes. Raw materials produced as by-products and waste do not compete with food production or degrade biodiversity.

Waste-based biofuels can also be considered almost carbon-neutral, as the carbon they contain comes from the atmosphere and would be released back there anyway. It makes sense to utilize bio-oil produced from such raw materials for energy, for example as fuel for ships. The Tank-to-Wake emissions of sustainable biofuels are currently calculated as zero, but in the case of recycled biofuels, the Well-to-Wake emissions are also significantly low.

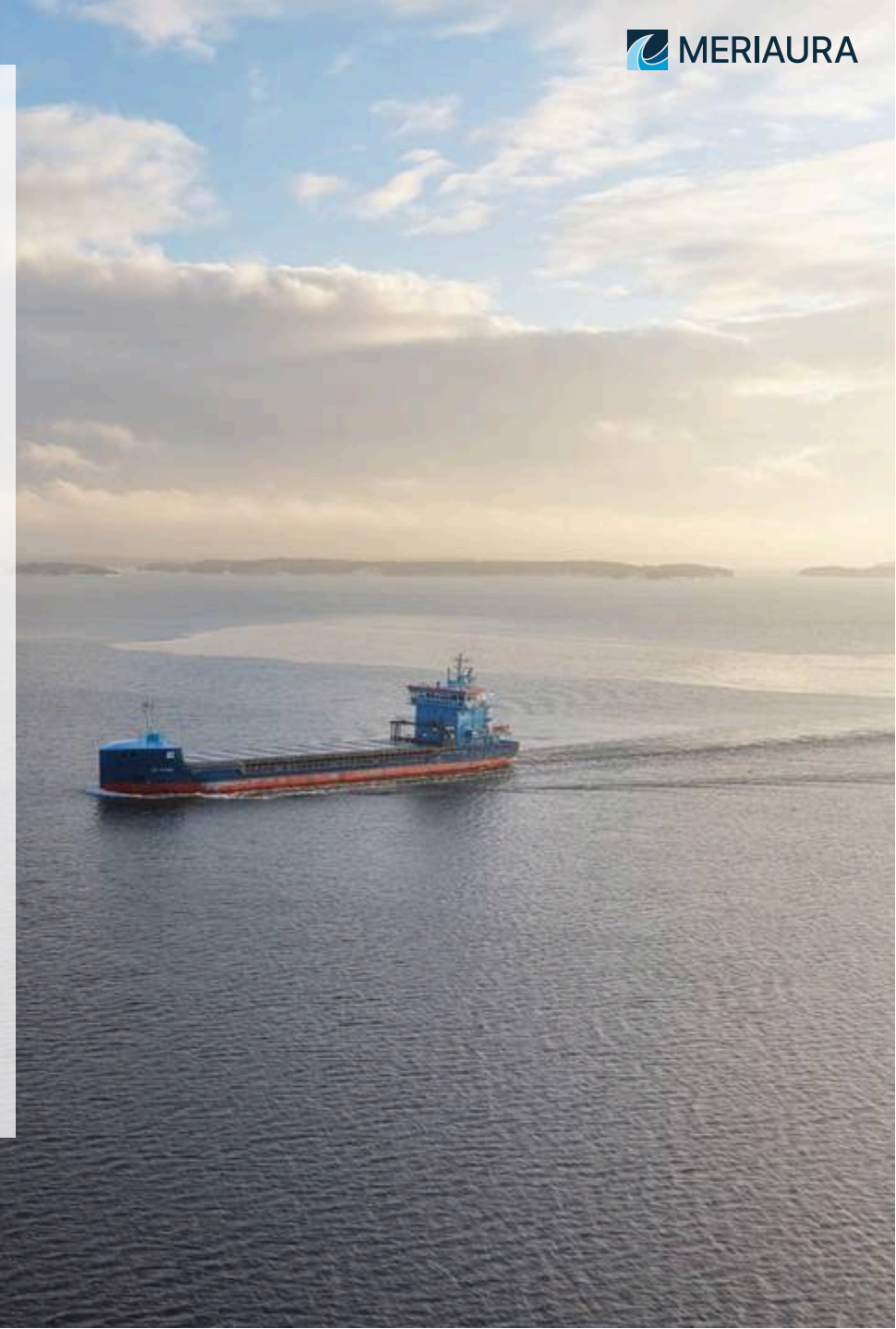
Using bio-oil does not require major technological changes. Distribution can be done with similar equipment as traditional oil, and ship engines can use such fuel with small modifications.

The ships built today will be in traffic for decades, so it is important to consider the emissions over the entire lifespan of the ship and enable the necessary emission reductions now – bio-oil makes this possible. Fortunately, the need to reduce emissions is finally reflected in maritime regulations. For instance, the IMO has stated that shipping must be carbon-neutral by 2050.

The biggest weakness of waste-based biofuel is that the amount of suitable raw material is limited, and it only has potential to replace part of the fossil fuels. However, for some companies in the shipping industry, it is a significant alternative to fossil fuels.

Fossil fuels will be replaced by many different technologies. We are monitoring the development and will also adopt other carbon-neutral solutions, but at the moment, the production and use of bio-oil are at the center of our development work.

Three new cargo ships designed to run on biofuel, to be completed between 2026 and 2028, will significantly increase the share of biofuel in our fuel mix. This, combined with the renewal of our TC fleet and general improvements in energy efficiency, will enable us to further reduce emissions from our transport operations.



External projects we are currently involved in

Project	Lead	Financier	Timeline	Goals	Meriaura's role
Bio4All	VTT (Technical Research Centre of Finland)	Business Finland	3/2024 - 8/2026	Bio4all project aims at developing a value chain from challenging forest and agricultural biomass residues through liquification technologies to aviation and marine fuels as well as selected chemical products.	Steering Group member
Data Analytics for Zero Emission Marine (DAZE)	Åbo Akademi	Business Finland	9/2023 - 8/2026	The DAZE research project aims at significant improvements in energy efficiency and marine system performance by using a data-driven process.	Steering Group member
The Flexible Green Propulsion Technologies	University of Vaasa	Business Finland	5/2024 - 4/2027	The project's goal is to establish an economically stable, zero-emission future for the Finnish powertrain industry, departing boldly from locally-driven, single-fuel agendas	Steering Group member
FOR-Blend	University of Vaasa	EU Interreg, Vaasan yliopisto, Åbo Akademi, RISE	10/2024 - 12/2027	The project aims to develop a feasible process for managing forest-based residues locally, and produce a sustainable fuel blending component.	Steering Group and Advisory Board member
RoboSea	Turku University of Applied Sciences	EAKR	1/2024 - 12/2026	The RoboSea project develops an automated water traffic test platform in collaboration with regional companies. The test platform consists of a test boat and a remote control center.	Steering Group member
REFOLUTION	SINTEF (Norway)	Horizon Europe Innovation Action	1/2023 - 12/2027	The EU project REFOLUTION aims to reduce greenhouse gas emissions from aircrafts and ships by developing advanced and cost-effective biofuels.	Advisory Board member
CargoRes	Laurea University of Applied Sciences	Interreg	2025 - 2028	The CargoRes project develops effective and sustainable methods for improving cargo handling practices in ports and on ships.	Supporting Partner

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Provisions for working onboard

Meriaura employed 95 seafarers on the company's own and crewed vessels at the end of 2025. In addition to its own cargo ships Meriaura provides the crew for the research vessel Aranda and the cargo vessel Mirva VG. Most of Meriaura's time-chartered vessels also have a pilot-exempt captain hired by Meriaura. Our vessels generally operate on a five-week work period. Working at sea requires adaptation to special conditions, such as heave of the sea, and for some of the staff, shift work. The professional qualifications and health requirements for maritime personnel are precisely defined by international agreements and national legislation.

Meriaura's Food & Nutrition Policy

We launched a new Food and Nutrition Policy for our vessels in 2025. Demand for healthier food and vegetarian options has been brought up in our sea personnel surveys. Additionally, the National Nutrition Council of the Finnish Institution for Health and Welfare published new national nutrition recommendations in 2024. The primary goal of the national nutrition recommendations is to improve the health of the population. Meriaura's policy's goal is to improve the job satisfaction of our seafarers and support our sustainability goals.

To put our new policy in action we hired nutritionist Hanna Partanen, who first did some research about the eating habits and cooking conditions on board by interviewing crew members. Based on those interviews she prepared lessons about healthier eating, which we filmed to produce short videos to be distributed to staff to get tips and recipes for following a healthier and more varied diet. The goal is to promote healthier and more versatile meals and unify the food culture on our ships.

With the release of the food policy, we also formalized the long-standing practice regarding catering for events, staff meetings and refreshments at the office: whenever possible, we choose a vegetarian and/or fish option.

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Occupational Safety at Sea

Occupational safety at Meriaura is developed in a planned and long-term manner. Continuous attention is paid to the systematic development of occupational safety so that practices are as clear and effective as possible and work is as safe as possible.

At the beginning of 2025, Meriaura introduced quarterly occupational safety cooperation meetings to strengthen and improve communication between vessel personnel and the shore organization. The masters of all vessels crewed by Meriaura are invited to the meeting. Through the safety committees, the meeting creates a direct link between vessel crews, the DPA and top management, so that safety observations and development ideas can be reported directly to top management.

Mutual and open communication is essential for maintaining and developing a strong safety culture. This approach also enables the sharing of near-miss incidents and good practices across the entire fleet. The aim is to address potential issues in time and prevent accidents from occurring.



Accidents at Meriaura	2025		2024		2023		2022	
	Incidents	Frequency	Incidents	Frequency	Incidents	Frequency	Incidents	Frequency
Working hours total	221 187		200 005		192 299		259 491	
Total recordable case frequency	4	18,8	0	0	1	5,20	9	34,68
Lost time injury frequency	2	9,04	0	0	1	5,20	7	26,98
Medical treatment / case frequency	2	9,04	0	0	0	0	2	7,71
Fatal accident frequency	0	0	0	0	0	0	0	0

When calculating the accident frequency, the number of employees, the average number of hours worked and the number of accidents that occur are taken into account. Accident frequency = 1,000,000 * (Number of accidents at work / Hours worked)

Our Personnel at Sea and on Land



At the end of the year, we introduced the internal communications application Beekeeper, which enables us to share news and information with all sea and shore personnel and makes it easy for individuals and teams to stay in touch.

In the spring, we organized a wellbeing day for shore and sea personnel, to which all employees were invited. Two staff days were arranged so that as many as possible had the opportunity to participate given shift schedules.

We make flexible use of our shore and sea personnel's broad expertise through job rotation. Working in both shore and sea roles increases understanding of the importance, challenges and solutions of tasks carried out in different environments, improving the smoothness of cooperation across the entire organization.

We offer sports and culture benefits as well as a meal benefit. The occupational safety committee and the wellbeing at work group meet regularly to address matters related to office working conditions.

The annual job satisfaction survey for shore and sea personnel is an important tool for monitoring and continuously improving working conditions. Each year, the survey assesses, among other things, the working atmosphere, wellbeing at work, leadership, communications, living and leisure conditions on board, as well as the smoothness of cooperation between the vessel and the office's operational functions.

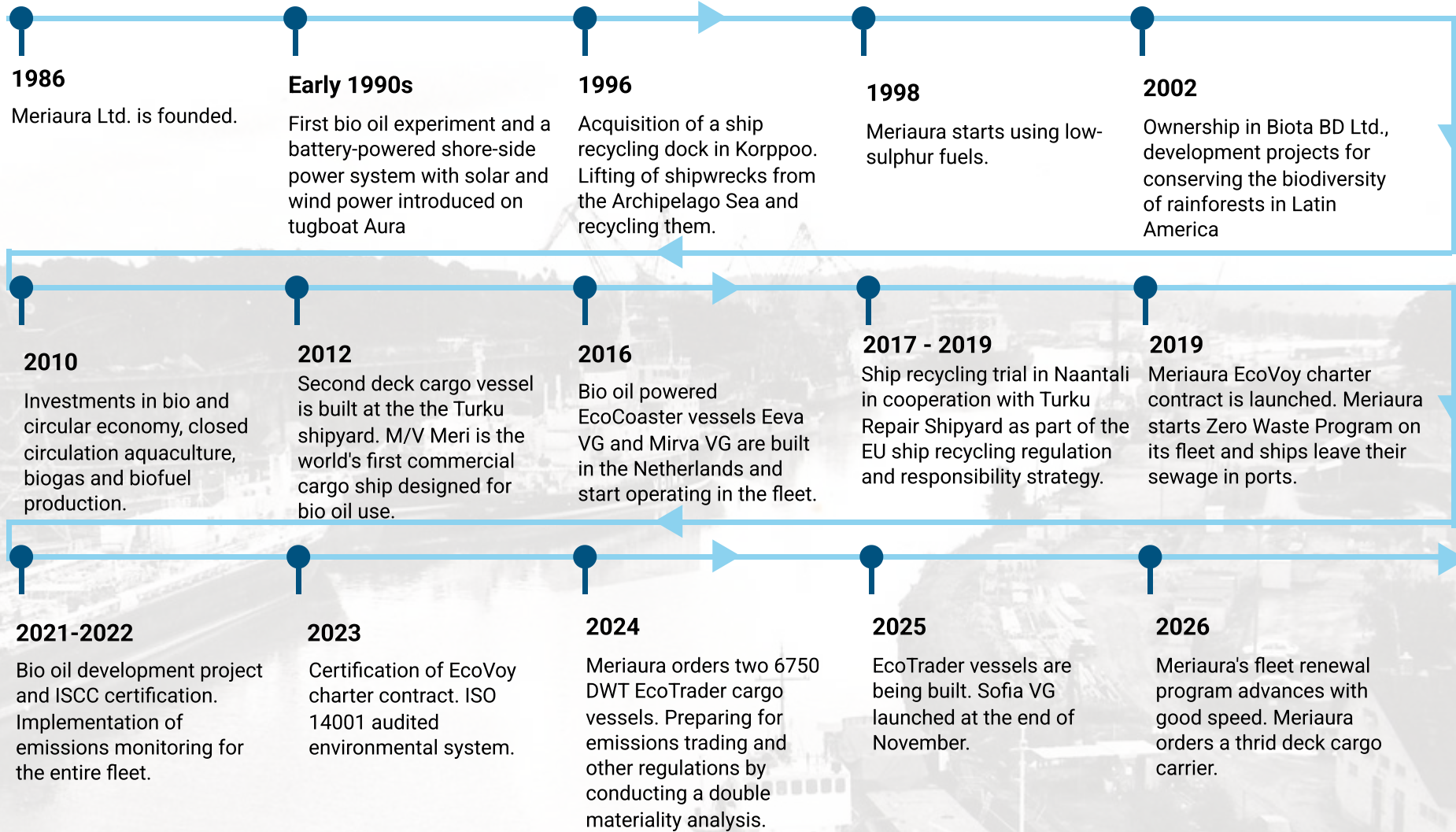
Meriaura	2025	2024	2023	2022
Staff ashore	35	38	36	36
Staff at sea	95	85	78	101
Staff altogether	130	123	114	137
Women	25	22	24	24
Men	105	101	102	113
Average age of staff ashore	44,5	44	42	41
Average age of staff at sea	40	39	41	41

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1986-2025: Environmental Milestones



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