

Sustainability Report

2022



VIKING LINE

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VIKING LINE

This is Viking Line

Core values

During 2022, Viking Line conducted services using the vessels Amorella, Gabriella, Rosella, Viking Cinderella, Viking Glory, Viking Grace and Viking XPRS.

In March 2022, Viking Glory started operating on the Turku-Åland-Stockholm route. Our vessels depart from Åland, Stockholm, Turku, Tallinn and Helsinki. Shares of the parent company, Viking Line Abp, are traded on NASDAQ Helsinki. The company is domiciled in Mariehamn. The wholly-owned subsidiaries Viking Line Skandina-

vien AB, Viking Rederi AB, OÜ Viking Line Eesti, Viking Line Finnlandverkehr GmbH and Viking Line Buss Ab belong to the Viking Line Group.

Mission

We link together the countries around the northern Baltic Sea by providing sustainable and regular ferry service for everyone. Our three basic services are cruises, and passenger and cargo transport. Our unique expertise in combining these services generates customer and business benefits.

Vision

We are the leading brand in our service area and the preferred choice of all those seeking transport services and experiences. We shall preserve and enhance our position as a profitable company.

Service area

Viking Line provides services on the northern Baltic Sea, with Finland, Sweden and the Baltic countries as its main markets. We have sales offices in Finland, Sweden, Estonia and Germany. In addition, the subsidiary Viking Line Buss Ab provides bus transport based in the Åland Islands.

Finland's largest maritime employer

Viking Line is Finland's largest maritime employer. More than 45 different occupational categories are employed on a vessel, including areas such as operation, maintenance, shops, kitchens, hotels, entertainment, conference facilities, security and healthcare.

Viking Line is for everyone. Our customers are our top priority, and we aim to exceed their expectations, especially when it comes to good service.

- We respect our co-workers and value initiative, innovation, teamwork, openness, honesty, loyalty and acceptance of responsibility.
- We stand for humility and cost-consciousness.
- We take advantage of all good business opportunities.
- Our vessels are safe and well-maintained.
- We conduct our operations in compliance with applicable environmental standards and legislation.
- We strive to continuously improve our environmental and sustainability work.



Our vessels

M/S Gabriella

Helsinki-Mariehamn-Stockholm



Built in 1992
35,492 gross
weight tonnes
Length 171.2 m

2,400 passengers
400 cars
900 lane metres
2,382 berths

M/S Viking Cinderella

Stockholm-Mariehamn



Delivered in 1989
46,398 gross
weight tonnes
Length 191.0 m

2,560 passengers
306 cars
760 lane metres
2,500 berths

M/S Viking Glory

Turku-Åland-Stockholm



Delivered in 2021
63,000 gross
weight tonnes
Length 222.5 m

2,800 passengers
584 cars
1,500 lane metres
3,105 berths

M/S Viking Grace

Turku-Åland-Stockholm



Delivered in 2013
57,565 gross
weight tonnes
Length 218.0 m

2,800 passengers
556 cars
1,275 lane metres
2,950 berths

M/S Viking XPRS

Helsinki-Tallinn



Delivered in 2008
35,918 gross
weight tonnes
Length 185.0 m

2,500 passengers
220 cars
995 lane metres
736 berths

M/S Amorella, sold in October 2022

Turku-Åland-Stockholm*



Delivered in 1988
34,384 gross
weight tonnes
Length 169.4 m

2,480 passengers
450 cars
900 lane metres
1,946 berths

* Helsinki-Mariehamn-Stockholm from April 2022

M/S Rosella

Mariehamn-Kapellskär



Delivered in 1980
16,879 gross
weight tonnes
Length 136.1 m

1,530 passengers
340 cars
720 lane metres
422 berths



Shipping is on the threshold of major changes

With approximately 90% of the world's trade transported by sea, it can be justified to say that shipping has a decisive role in enabling efficient and competitive global logistics.

No other transport sector can ensure international flows of goods at such volumes and with such reliability as shipping makes possible. In other words, shipping is the most resource-efficient mode of transport, and for this reason, maritime transport has been integrated into the value chains of almost all industrial sectors. The Paris Agreement and aligned political decisions on climate cooperation presuppose, among other things, that market players with ambitious climate agendas begin to report on and work to reduce emissions in their logistics chains. Thus, a successful transition to a fossil-free reality can be counted as a victory, not only for shipping, but for everyone from producer to consumer.

Many unanswered questions

The shipping industry is collectively facing an enormous climate transition. Currently, almost all of the shipping vessels in the world are dependent on fossil fuels for their propulsion. Each year, shipping produces approximately 13% of the EU's greenhouse gas emissions and approximately 3% of the total global greenhouse gas emissions. Furthermore, the share emissions produced from shipping is predicted to grow over the next few years, as trade volumes are expected to increase and the challenges to reduce greenhouse gas emissions are greater for us than for many other industries. When it comes to ships in motion, issues such as energy density, weight and volume, not to mention safety aspects, should be considered when choosing fuel and technology. In addition, questions arise regarding production, availability and price, as the entire business world is changing to achieve an emission-free future.

Continued on the next page ►



Regulations push us forward

For those of us who are active in European waters, the European Green Deal and the International Maritime Organization's strategy for reducing greenhouse gas emissions have a major impact. The bottom line is that vessels must rapidly become more energy efficient and produce fewer emissions. Shipping is also included in the EU Emissions Trading System, which puts a price on greenhouse gas emissions. The development of regulations and the increasing awareness of consumers about climate issues are causing disruptive changes in the

market. If we continue to conduct business in old ways, this will become increasingly costly. There is often talk of "greenflation", i.e. price increases caused by the transition to low-emission or zero-emission operations.

It is likely that a greenflation will also affect shipping at the beginning of the sector's transition to a new reality. At the same time, this means that forerunners have a better chance of succeeding in their transition than many others—those who are already on the right track have fewer obstacles in front of them.

Our commitment

At Viking Line, sustainability is part of the company culture, and we have long worked to minimize environmental impact and maximize resource efficiency. Since 2008, we have reduced our fleet's energy consumption per nautical mile by over 30% and we have tried several different cleantech solutions on our vessels. In recent years, the work has intensified and become more purposeful. The sale of three old ships and the introduction of a climate-smart newbuild in the last two years are part of our process to modernize the fleet and

adapt our operations to new environmental standards. We are thus well positioned to meet future demands. We have expanded our collaboration with external stakeholders to better assess the maturity of emerging technologies and to find new ways forward. We are also keen to preserve and strengthen our position as a forerunner in sustainable shipping and see that successful sustainability work is not only profitable but also our *raison d'être*.

Dani Lindberg

Sustainability Manager & DPO

The volumetric density of alternative fuels varies greatly.
The image shows the volume of different types of fuel when they contain the same amount of energy as diesel. A lack of space is one of the challenges that needs to be circumvented when old ships are rebuilt.





We are finishing an exceptional year with faith in the future

The year 2022, like the previous year, was exceptional for the entire world, and for Viking Line as well.

Due to the pandemic, the operating environment during the beginning of the year was very unfavourable with related financial consequences. From the end of February, Russia's war of aggression in Ukraine caused a sharp increase in energy prices and uncertainty in our markets. At the same time, the demand for travel rose—especially to nearby destinations. The summer months were characterized by high travel volumes, and demand in the passenger market was strong, even in the autumn. During the high season, there was a large shortage of personnel on board the vessels, but we were nevertheless able to maintain service at a satisfactory level. Here, the staff's perseverance and commitment have been of decisive importance.

Welcome and farewell

We will remember 2022 as the year we welcomed a new ship into the fleet, while saying goodbye to two faithful servants. In March, the new climate-smart ship Viking Glory began its service on the Turku-Åland-Stockholm route. The ship, which has been very popular, had 945,000 passengers in

its first ten months in service. She has set a new standard in passenger traffic, both internationally and within our own service area on the Baltic Sea.

In October, Amorella was sold to Corsica Ferries, and in December, we entered into an agreement to sell Rosella to Aegean Sea Lines Maritime Company in Greece.

These vessels are two of our company's loyal servants. Rosella has operated for Viking Line since 1980, Amorella since 1988. It always feels sad to say goodbye to ships that have been in the business for a long time, but it is inevitable in our industry.

During the autumn, a decision was made that Viking XPRS would operate under the Finnish flag.

In November, Viking Line acquired 17.1% of the shares in Rederiaktiebolaget Eckerö. To ensure that the share ownership stays in Åland, we chose to acquire the shares.

Five million passengers

During 2022, our business has developed favourably. Demand in the passenger market has been strong, and passenger volumes exceeded our expectations. The number of passengers who travelled with the shipping company in 2022 was 4,945,564, which corresponds to an in-

crease of 114% compared to the previous year. We have almost completely succeeded in compensating the profit effect of the high bunker costs that are a consequence of the war in Ukraine. Our result for 2022 must be described as good.

Fit for 55

The EU-initiated Fit for 55 action programme will pose challenges for shipping. With the new Viking Glory and proactive work, we are better equipped for future demands. Both Viking Glory and Viking Grace can, without major investment, switch to renewable or synthetic liquefied gas, as soon as this is available at economically justifiable price levels.

The new business year 2023 will be both demanding and engaging. We are closely following economic developments and adapting operations to meet the challenges we face, particularly concerning the new environmental norms. Meanwhile, we are optimistic about the future.


Jan Hanses,
President and CEO
Viking Line

Welcome and Farewell



For Viking Line, 2022 was a year that especially we employees will remember. It was the year we welcomed a new ship into the fleet, while saying goodbye to two faithful servants.

1 March, the new climate-smart ship Viking Glory began its service on the Turku–Åland–Stockholm route. The new ship has been well received by both passengers and staff. During its first year in service, the crew has formed a strong and nice community.

Dear faithful servants

The year 2022 also meant saying farewell. In October, Amorella was sold to Corsica Ferries, and in December, we entered into an agreement to sell Rosella to Aegean Sea Lines Maritime Company in Greece.

Those of us who work in the company have mixed feelings about selling ships. It always feels sad to say goodbye to ships that have been in the business for a longer period of time, but changes are inevitable in our industry.

Amorella, who has operated with us since

1988, has been one of the fleet's faithful servants. She has been a mainstay that has maintained regular service on the company's core route between Turku, Åland and Stockholm. The staff's efforts and commitment over the years have been crucial to the ship's traffic, and many of the employees were with us from beginning to end during her time with us.

The other faithful servant, Rosella, will operate in Greek waters starting from the

summer of 2023. Rosella has been part of Viking Line's fleet even longer than Amorella—ever since 1980. Thanks to the competence and commitment of the staff, the ship has been well maintained and the community on board has been special and strong. As one employee said: "here, we all help each other and work across borders".

Both ships have had many loyal supporters who have sailed with their favourites year in and year out.





Close-knit and unique community on board



Unique community

A ship is not just pieces of steel that run from point A to B. A ship conveys so much more. A crew working together forms a close-knit and unique community. This is also visible externally. It is about the atmosphere on board, the products and services offered to the passengers and how the passengers are greeted by the employees. People often talk about “the soul of a ship”. Life on board is its own little world with familiar elements that many appreciate. To achieve a high NPS, it is not enough to just have attractive hardware; the human relationships, the services provided by the staff, the little extras the travellers get to experience, all these matter just as much.

The Viking Spirit is important!

More than 45 different occupational categories

A satisfied crew contributes to passengers being comfortable on board. A happy crew enjoys each other’s company. In addition to a satisfactory working environment, the ships offer the onboard employees a living environment and a good leisure environment. Working on a ship is not just a job. We often say it’s a way of life. It is a floating community with, hotel operations, restaurants, kitchens, the engine room, the command bridge, and more. In total there are more than 45 different occupational categories on board Viking Line’s ships. Many different skills and professional roles are combined. Because the staff

works in shifts with one week on, one week off, small communities of their own arise, and they get used to working, living and having leisure time in the same place. When a community is divided, it can feel tough and scary. Therefore, leaving ships feels extra difficult for many who work in a shipping company—not only for the onboard employees, but also for the office staff. At the same time, a new ship provides the opportunity to form new relationships and new communities.

The Viking Spirit

Within Viking Line we have something we call the “Viking Spirit”. In 2009, when we were named the winner of the Suomen Laaturaportti (Finland’s quality award competition), the jury stated in its evalu-

ation that the unique “Viking Spirit” was an important resource for the company and something that Viking Line was recommended to protect in the future as well. This community and feeling still unite employees and create new communities, experiences and memories in new places and on new ships.



Johanna Boijer-Svahnström
Senior Vice President Corporate
Communications,
Sustainability, HR (Land)

The year in brief



The year 2022, like the previous year, was exceptional for the whole world, also for Viking Line. We will remember the year when we welcomed the climate-smart Viking Glory into the fleet, and at the same time, we said farewell to the faithful servant Amorella and entered into an agreement for the sale of Rosella.

Viking Glory, which began its service in March 2022 on the Turku-Åland-Stockholm route, has set a new standard in passenger traffic, both internationally and within our own service area. During 2022, our business has developed favourably. Demand in the passenger market has been good, and passenger volumes exceeded our expectations.

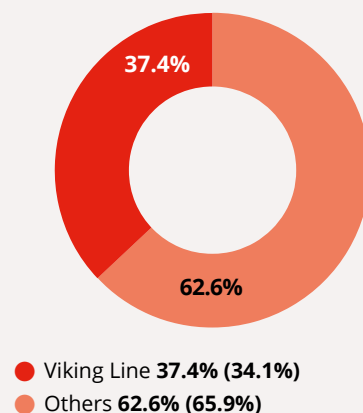
The number of passengers who travelled with the shipping company in 2022 was close to 5 million, which corresponds to an increase of 114% compared to the previous year. The biggest increase was on the Turku-Åland-Stockholm route. Through increased sales, we have almost completely succeeded in compensating the profit effect of the high bunker costs that are a consequence of the war in Ukraine. Our result for 2022 must be described as good. We are closely following the development of the economy and will adapt to meet the challenges that we face, especially regarding new environmental standards.

Sales:	EUR 495 M	Passengers:	4,945,565
Income before taxes:	EUR 28.3 M	Freight units:	117,777
Investments:	EUR 25 M	Passenger cars:	630,651
Equity/assets ratio:	47%	Buses:	9,249

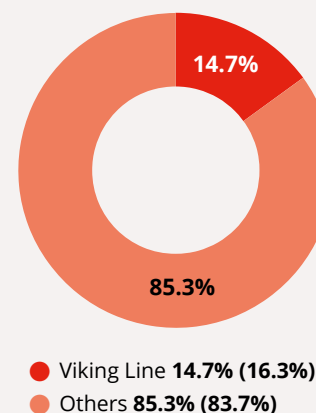
NUMBER OF PASSENGERS PER LINE

Turku-Åland-Stockholm	1,955,988
Stockholm-Mariehamn	517,354
Helsinki-Mariehamn-Stockholm	515,445
Finland/Sweden-Baltic States	1,403,048
Mariehamn-Kapellskär	464,375
Special cruises	89,354
Total	4,945,564

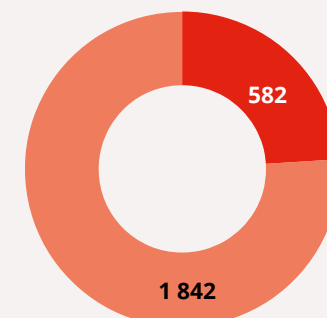
MARKET SHARE, PASSENGERS



MARKET SHARE, CARGO



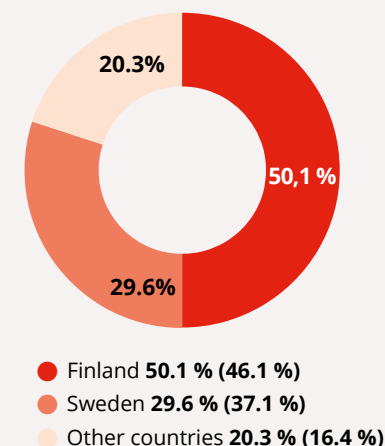
AVERAGE NUMBER OF EMPLOYEES



- Land-based personnel 582 (371)
- Seagoing personnel 1 842 (1 165)

In addition to the Group's own staff, Viking XPRS was staffed by an average of 152 people employed by a temporary employment agency.

PASSENGERS 2022



Our commitment to the UN's Sustainable Development Goals



Our ambition is for sustainability to one day be integrated throughout our value chain and for it to always be a basis for decisions with economic or ecological consequences. We want to treat our customers and employees with respect and protect their health, safety and well-being. We have chosen to prioritize four areas where we believe we can make a difference:



Sustainable energy for everyone

We continue to be a pioneer in applying new climate-smart technology. We test new as well as alternative technological solutions to achieve lower emissions. We continue to support and collaborate with innovative companies and researchers in energy technology.



The sea and marine resources

Our vessels do not discharge any waste-water into the sea. Nor do we use environmentally hazardous paint on the bottoms of our vessels. We vow to continue to find ways to reduce the use of water and chemicals in our operations.



Health and well-being

Well-being at work and a healthy life-style are the basis of success on the job. Through good leadership, an open, stimulating, secure and pleasant atmosphere is created in which employees' efforts are appreciated and recognized and where everyone is treated equally. We promote good health, wellness activities and employee well-being by encouraging and promoting meaningful leisure activities.



Responsible consumption and production

We vow to sort by-products generated from our operations. We want to maximize recycling and, where possible, reuse materials. We strive to reduce waste quantities and create increasingly circular material flows.

Our employees

During 2022, the number of employees in the Viking Line Group as of 31 December 2021 was 2,428 (2,333).

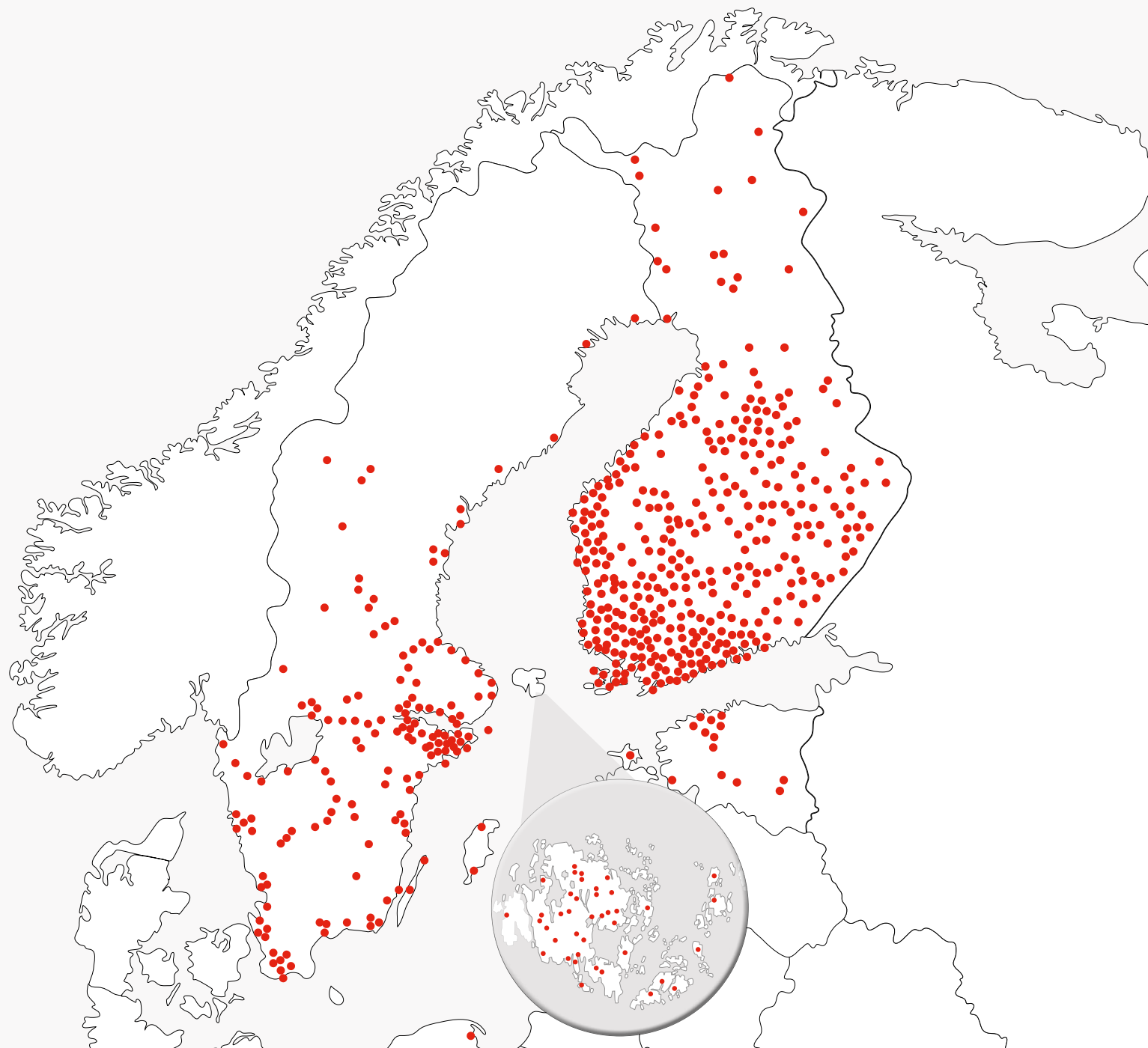
The number of seagoing employees was 1,846 (1,804) and the number of land-based employees was 582 (529). The subsidiary, Viking Line Buss, employed 41 (44) people. In addition to the Group's own staff, Viking XPRS was staffed with an average of 185 (168) people by a temporary employment agency.

The number of employees who were residents of Finland was 1,927 (1,869) and the number of employees who were residents of Sweden was 424 (391). A total of 70 (67) people were residents of Estonia. The number of employees residing in other countries was 7 (6).

The proportion of men was 56.4% (58.7%) and the proportion of women was 43.6% (41.3%). The percentage of women in management positions was 23.1% (27.8%). The average age of the staff was 45.7 years (46.1).

Furloughs for both seagoing employees and land-based employees decreased from the same period last year, and completely ceased in May 2022.

VIKING LINE



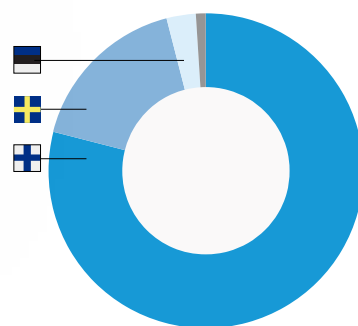
The Group

	Women	Men	Total
Board of Directors	1	6	7
Management team	1	6	7
Supervisors	85	284	369
Finnish flag	560	914	1,474
Swedish flag	130	242	372
Seagoing personnel	728	1,118	1,846
Land-based personnel	330	252	582
Group total	1,058	1,370	2,428

In 2022, the number of employees in the Group increased by 95 people, of which 46 were seagoing employees and 53 land-based employees.

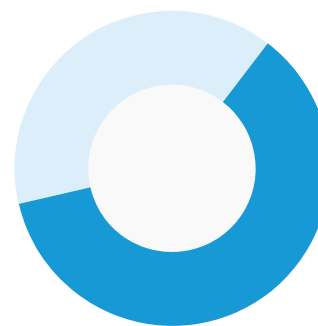
VIKING LINE

EMPLOYEES' PLACE OF RESIDENCE

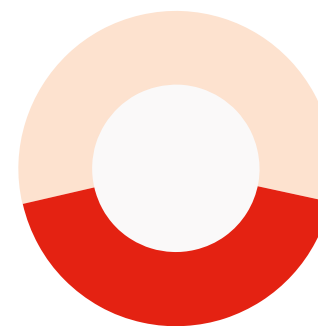


- Finland **80 %**
- Sweden **17 %**
- Estonia **3 %**
- Other countries **< 1 %**

GENDER BREAKDOWN



- SHIPBOARD**
- Women **39 %**
 - Men **61 %**

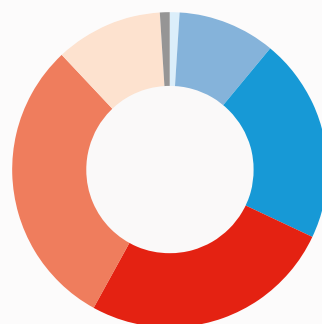


- LAND-BASED**
- Women **57 %**
 - Men **43 %**



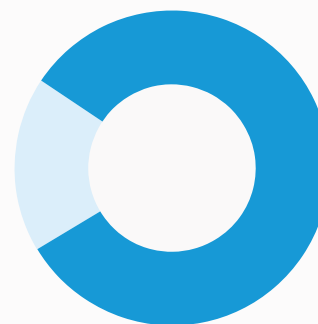
- TOTAL**
- Women **44 %**
 - Men **56 %**

AGE DISTRIBUTION



- < 20 years **< 1 %**
- 20-29 years **10 %**
- 30-39 years **21 %**
- 40-49 years **26 %**
- 50-59 years **30 %**
- 60-69 years **11 %**
- > 70 years **< 1 %**

GENDER BREAKDOWN IN MANAGEMENT POSITIONS



- SHIPBOARD**
- Women **18 %**
 - Men **82 %**



- LAND-BASED**
- Women **44 %**
 - Men **56 %**



- TOTAL**
- Women **23 %**
 - Men **77 %**

Economic value

Sales EUR 495 M

Suppliers
EUR 348 M

Employees
EUR 100 M

Shareholders*
EUR 7 M

Financiers
EUR 5 M

Public sector
EUR 34 M

The board's proposal
to the Annual General Meeting for 2022.

Viking Line's operations generate economic value for the Group's stakeholders in the countries and market areas in which we operate. The most important cash-flows consist of revenue from our customers, purchases from suppliers of goods and services, salaries to employees, payments to and from the public sector, dividends to shareholders, and funding costs to financiers.



In 2022, the Group's consolidated sales and other revenue amounted to 511.2 million euros. The Group's purchases from suppliers totalled 322.4 million euros, and investments totalled 25.5 million euros; 14.0 million euros of this mainly refers to investments in vessels and 10.6 million euros to investments in financial assets. Viking Line employed an average of 2,203 people. Net salaries and pension expenses totalling 100.4 million euros were paid to employees. Viking Line paid a total of 71.2 million euros in the form of port expenses and

vessel charges, taxes on salaries, social security contributions and income taxes. The Group received national restitution and state aid for maintaining freight transport and security of supply during the pandemic, a total of 30.8 million euros. The Board of Director's proposal for the 2023 Annual General Meeting refers to a distribution of a total of 6.9 million euros in dividends. The Group's income statement, balance sheet and cashflow statement are presented in their entirety in Viking Line's financial statements.

Economic value

Generation of economic value, MEUR	2022	2021
Customers		
Sales and other revenue	511	289
Suppliers		
Procurement and investments	-348	-336
Economic value generated by Viking Line	163	-47
Distribution of economic value		
Employees	-100	-67
Shareholders*	7	0
Financiers	-5	-3
Public sector	-34	-10
Economic value distributed	-139	-80
Left for development of the business	25	-127

* The Board of Directors' proposal to the Annual General Meeting for 2022



Finland's largest maritime employer



As Finland's largest maritime employer, with five of the company's seven vessels operating under the Finnish flag in 2022, we have the highest amount of taxes and fees borne by the maritime population.

For Viking Line, this restitution applies to some 1,500 Finnish seafarers. All shipping companies receive this restitution, and the size is determined by the number of seafarers employed by the company. The restitution really benefits seafarers, who get a tax exemption, but since Finland has chosen to follow the model of exception in the guidelines, the taxes are borne by the seafarers and refunded to the shipping company. In Sweden and Denmark, this restitution is not recognized as aid to enterprises, which is why it is debated to a lesser extent than it is in Finland. For Viking Line, this restitution also applies to some 370 Swedish seafarers. The Finnish National Emergency Supply Agency is of the opinion that Finland should have a merchant fleet flying under its own flag, to secure the country's emergency supplies. The seafaring profession also

provides many jobs in sparsely populated areas, particularly in archipelagos, where people can work one week on/one week off.

Restitution to sustain domestic competitiveness

Restitution is an essential condition for enabling ferry service to be carried out under a Finnish flag and with a Finnish crew. To sustain the competitiveness of European sea transport, a restitution system was implemented in a number of EU countries, including Finland, Sweden and Denmark. In accordance with EU State Aid Guidelines, shipping companies may be reimbursed for taxes and social security contributions paid to maintain service under their countries' own flags. This restitution system, which is often called maritime financial aid, is mainly financial aid for seafarers—not shipping companies. Most European countries therefore have a similar system.

The travel industry supports shipping

The tourism industry in Finland (MaRa ry, SMAL ry, Finnish Lapland Tourist Board ry,

Shipping is a global industry

Visit Finland, Finnair Oyj, Eckerö Line Oy, Viking Line Abp and TallinkSilja Oyj) have jointly presented their views on upcoming government programmes. The following is said regarding shipping: Shipping is a global industry and the competition is worldwide. The Finnish and European shipping companies compete in a global environment with large players from the so-called low-cost countries, where less importance is placed on sustainability. It is important that Finland is on an equal footing with the other 15 European shipping states and that we ensure the competitiveness of Finnish shipping in accordance with EU guidelines.

Shipping boosts prosperity in smaller communities

Naturally, the majority of our land-based employees reside close to our market units and terminals. However, the geographic spread among seagoing personnel is much wider. We have employees who live in Lapland, in the archipelago communities of the Åland Islands and Southwest Finland, in eastern Finland close to the Russian border, in the Estonian countryside, and in Sweden near the Norwegian border. The personnel on our vessels work in shifts, with one week on/one week off or ten days on/ten days off. These extended periods of time off enable them to live away from densely populated areas. With such labour arrangements, shipping companies help to preserve the population structure in smaller communities and ensure that tax revenue goes to areas other than metropolitan regions. The hiring by shipping companies of some of these residents may be crucial to archipelago communities and other sparsely populated municipalities.

Maritime transport that enables trade



Regular, reliable sea transport is a vital link in the large flows of goods between Finland, Sweden and Estonia.

Finland, Sweden and Estonia are all included in the EU's so-called transport corridors, which are considered essential to the trans-European transport network. Shipping is crucial in linking together the transport infrastructure of the Nordic countries, the Baltic countries and Central Europe. Bearing in mind the importance of securing emergency supplies, it is important that Finland has its own fleet. Our traffic enables the reliable, regular transport of large volumes of trade goods between the Nordic and Baltic countries. Our cargo customers come primarily from Finland, Sweden and

***A total of 1,548,699
tonnes of cargo was
loaded on board our
ships in 2022.***

Estonia but also from the other Baltic countries as well as Poland, Denmark, Norway and Russia.

Demand for transport and travel for pleasure varies significantly during the year. Summer is our peak season, which is when the need for car deck capacity is also greatest. Our challenge is to utilize the capacity on our vessels in the best possible way for every single departure, every single day. The greater our capacity utilization is, the more we contribute to the sustainability of marine transport as a transport mode.

Dialogue with cargo customers

Cargo transport constitutes an important part of our transport volume and is a cornerstone in our work to utilize our capacity to the fullest. While summer tourism peaks in mid-July, trade goods must still be transported year-round.

Seasonal variations in supply and demand for different goods create various transport needs. We maintain a continuous dialogue with our cargo customers in order to plan for their needs with as much foresight as possible.

Collaboration with stakeholders

Collaborating with stakeholders is an important part of our sustainability work in cargo and logistics. Our aim is to take part in discussions about national and international flows of goods. In this context, port authorities are some of our most prominent stakeholders. We maintain an ongoing collaboration with our destination ports in order to improve logistics to and from our vessels. Through activities such as measuring and weighing units in ports, we further improve our capacity utilization and provide the ports with important information.



Safety on board

The safety and security of passengers and personnel is our top priority. The staff's knowledge and efforts are crucial to safety and security work, and our procedures are all developed on a continuous basis through our safety and security management system.

Safety and security efforts are based on operating vessels in compliance with the prevailing national and international regulations and standards, such as SOLAS, STCW, ISMC, MARPOL and ISPS, as well as careful internal monitoring and regulatory oversight. Continuous training in and monitoring of safety and security of the vessel crews are carried out in order to maintain and improve their skills in safety and security. Through its cooperation with various authorities, the company carries out systematic work to identify potential risk situations.

Exercises in safety and security

Each year, thousands of exercises in safety and security are carried out on board.

Every week, fire safety, evacuation, rescue and security exercises are conducted on board all the vessels. In addition, special exercises are carried out with varying frequency, as are large-scale exercises on each vessel four times a year. The entire crew takes part in these exercises. A growing emphasis has been placed on acquiring equipment, developing instructions and carrying out exercises for managing difficult situations involving violence. We maintain continuous cooperation with maritime rescue organizations, fire brigades, police, customs, border control authorities and national emergency response forces, in order to quickly and efficiently obtain adequate information during any emergency situation. Other activities, including training with the border control authorities' maritime vessel and helicopter units, are carried out in conjunction with the exercises.

The safety organization on board

The master of the vessel has the main responsibility for safety on board, and all crew members have been well trained in

their safety organization duties. The crew is divided into groups with different areas of responsibility, such as evacuation, first aid, fire-fighting and information. All employees are required to take part in safety drills. On board, there are trained nurses and spaces outfitted with special equipment to provide care in a medical emergency. The land-based organization is also prepared for emergency situations and can assist the vessels in taking care of passengers and crew members. This organization holds annual exercises to improve its ability to handle different emergencies that can arise in operations.

Safety checks

On-board safety equipment is checked daily. Before every departure, the ship's officers go through a checklist to verify that the vessel is seaworthy. Hatches, doors and ramps as well as all navigation instruments are inspected. During the voyage, the car deck, areas that are critical to operations and public areas are monitored by the camera surveillance system, while guards make

regular rounds. Maritime authorities have delegated oversight of vessels to classification societies, which inspect the vessels at least once a year.

Preventive work

Preventive safety work on board the vessels is fine-tuned and strengthened on a continuous basis by further developing procedures and processes and providing training in risk factors on car decks, such as electric cars.

Collaboration on maritime safety

In our maritime safety work, we collaborate with community groups, classification societies, authorities and other shipping companies to ensure broad agreement on maritime safety issues. One such effort is NORDKOMPASS, a Nordic forum for passenger ship owners. The forum's objective is to collaborate on various maritime safety issues in Nordic passenger ship operations. In cases of emergency, we also work in collaboration with the Red Cross in Finland and Sweden.

ISMC
International Safety Management Code

ISPS
International Ship and Port Facility
Security Code

MARPOL
International Convention
for the Prevention of Pollution
from Ships

SOLAS
Safety of Life at Sea

STCW
Standards of Training,
Certification and Watchkeeping
for Seafarers

A highlight of the year: Viking Glory arrived in Turku

Viking Glory was met with festivities in the Port of Turku on Sunday, 6 February. The ship was highly anticipated, and thousands of people lined the shores to see her arrive.

The new ship received a lot of publicity in the Nordics as well as internationally, and her arrival was a big event, especially in Turku.

“Turku is Finland’s oldest port city, and it has always had a close connection to the west via the sea. It is very significant that Viking Line has decided to situate its most advanced and interesting vessel here. Viking Glory is the newest jewel in the crown of the fleet of vessels that cross the Baltic Sea, and I wish the ship a warm welcome to our city,” said the mayor of Turku, Minna Arve.

Climate-smart Viking Glory is also a flagship for sustainability

With the launch of the climate-smart Viking Glory, the environmental impact of Viking Line’s vessels on the Turku–Mariehamn–Stockholm route is being reduced. For example, Viking Glory has 66 per cent more cargo capacity than Amorella but its carbon dioxide emissions are more than 25 per cent less. Efficiency, environmental standards and the future were all taken into consideration in an entirely new way when Viking Glory was planned. The ship has

been built as a tribute to our roots, that is, the Baltic Sea and the nature in its beautiful archipelagos. Most of our sustainability work involves different solutions that passengers don’t notice, like the vessel’s technical solutions, which have seen rapid advances. Ten years ago, Grace was the world’s most environmentally-friendly passenger ship, and now Glory, which is bigger, will use about ten per cent less fuel.

A major innovation in itself: Viking Glory was created by top names in shipbuilding

The planning and technology behind Viking Glory is nearly one hundred per cent the result of Finnish work. The work was carried out by the company’s own experts together with trusted partners. Great focus has been placed on efficiency, a minimal environmental impact and a life cycle perspective. The ship in itself is a major innovation with many new cleantech solutions.

Viking Glory is one of the world’s first ships to have Wärtsilä 31DF dual fuel engines and is powered by liquefied natural gas (LNG). They enable optimization of fuel use but produce no sulphur emissions at all. Furthermore, they produce fewer carbon dioxide emissions than do diesel engines. Like Grace, Glory will also run on biogas or synthetic fuels produced using renewable energy when these are available in the future.





With ABB's Azipod rotor propeller system, it is easier to turn in port, and manoeuvring the vessel takes less time and fuel. Every minute saved in port means fewer emissions during the sea journey. By using the Azipod system, it was possible to plan Viking Glory so that resistance when the vessel is operating is less than for a vessel with a traditional propeller. The hull design reduces the formation of waves as well as fuel consumption.

Sustainability project on board

The new vessel is also a forerunner when it comes to taking advantage of waste cold from LNG. Waste cold is used in cooling

***For Viking Line,
the new ship is a
major investment
in reducing
environmental impact***

systems and cold rooms. The vessel has a dynamic control system for air conditioning and lighting. On Viking Glory, lights are turned off automatically in empty rooms, while air conditioning and heat are turned down automatically. The dynamic control system is directly connected to the booking system.

On board Glory, biowaste is also collected and used in biogas production. Reducing food waste on the vessels is something employees work with every day on board. For example, the buffet restaurants offer portioned-size servings, while sandwiches in the cafés are prepared to order based on actual demand. Menus are adjusted

depending on access to ingredients, and locally produced and sustainable alternatives are always on offer when possible.

For Viking Line, the new ship is a major investment in reducing environmental impact in the long term and safeguarding future business conditions. The EU's emission criteria will be tightened considerably, and climate-smart ships will then become central factors in the shipping company's competitiveness. Viking Line was named both Sustainable Business of the Year and Transport Company of the Year at the Finnish Travel Gala, and Viking Glory played a large role in this double victory.

Viking Line assesses green corridor between Finland and Sweden

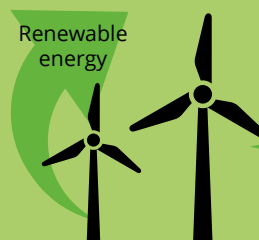
Kempower
Solutions for charging electric
vehicles on board vessels

Rauma Marine Constructions
Energy-efficient solutions for sustainable shipping, ship
batteries and charging of electric vehicles on board

Viking Line
Carbon-neutral transport of passengers and cargo,
and charging of electric vehicles on board

Passengers
Sustainable travel

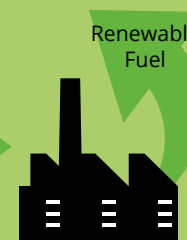
**Cargo owners and
logistics companies**
Reduced emissions in the transport chain



Renewable
energy



Hydrogen
from renewable
energy



Renewable
Fuel

The state
Regulation for the decarbonization
of shipping and trade

Advisory stakeholder

Consortium partner

Åbo Akademi University
Analysis of systemic benefit and regulatory lock-in

Viking Line is participating in a Finnish consortium that assesses opportunities to form a green transport corridor between Turku and Stockholm, one of the EU's TEN-T transport corridors.

The current project goes by the name DECATRIP (Decarbonizing Transport Corridors), and the consortium has been granted funding from Business Finland and the Government of Åland to the amount of 1,596,000 euros. Other partners in the project Rauma Marine Constructions, Åbo Akademi University and Kempower. The project is coordinated by PBI-Research Institute.

Green corridor between Turku, Åland and Stockholm

A preliminary study shows various possibilities for decarbonization, or the phasing out

of fossil fuels, on the maritime transport route between Turku and Stockholm. The goal is to find investment opportunities for reduced emissions in the transport chain, which create benefits for as many stakeholders as possible. The aim in this work is to create a model that can be applied to similar corridors, especially in Europe, such as in the English Channel or in the traffic between Sweden and Germany. "The work is perceived as important because all EU countries, including Finland, have committed to reducing their carbon dioxide emissions and promoting the development of green transport corridors," says **Johanna Boijer-Svahnström**.

Combined expertise from different industries

The consortium connects knowledge and experience from various actors with the

opportunity to promote the development of a green transport corridor. Viking Line contributes knowledge about the shipping industry, which flows into the Rauma shipyard's know-how about shipbuilding and technology. Kempower gathers knowledge about infrastructure and software for charging electric vehicles, which make up a rapidly growing share of the Nordic car stock. Åbo Akademi University's role includes assessing the benefit to society and producing information for decision-makers. The project has also included discussions with energy companies and fuel producers.

Focus on emission reductions

In a global context, the shipping of goods represents a significant source of greenhouse gas emissions both on land and at sea. A reduction of these emissions can be

achieved even without solving a lot of technical challenges. Both Viking Glory and Viking Grace are built to be operated with biofuels or synthetic natural gas, that is, natural gas that does not have a fossil origin. This means that the ships are technically ready to operate carbon-neutral today; the challenge is a sufficient supply of alternative fuels and their significantly higher prices. The consortium's work has included finding solutions to make the ships more energy efficient in order to reduce the need for fuel. The consortium also evaluates opportunities for stepping up the use of alternative fuels until the supply meets the demand and the price becomes economically justifiable.

Sustainability Campaign 2022



In autumn 2022, Viking Line presented a sustainability campaign to highlight environmentally smart measures in various areas. At the same time, we advised our travellers about how they can make a difference with smart choices. Together we will be even better!

The campaign, which included Viking Line's terminals, vessels, websites and social media, drew attention to environmentally smart choices in several different areas.

With a new theme every month, the company presented its environmental thinking on a broad level, from reduced emissions to recycling of materials, locally produced food and sustainable product choices in the shops on board.

Reduced emissions

Our goal is to reduce the use of fossil fuel. We're holding a steady course towards the global goals and an ambitious agenda! By using LNG and low-sulphur fuel, we can reduce nitrogen and greenhouse gas emissions, and by using a land-based power

supply in port during the day, the emissions of air pollutants are reduced. We also plan our timetables and routes so that service can be as fuel-efficient as possible, for a cleaner environment.

Fuel saving

One important focus area in Viking Line's sustainability work is the optimization of fuel use through several different measures. Examples include Viking Glory's six highly efficient 31DF multi-fuel engines and a number of smart systems from the Finnish technology group Wärtsilä. The 31 DF engine is actually so smart that it beat the Guinness World Record for the most efficient 4-stroke engine in the world!

Continuity

When we talk about sustainability, it is important to highlight that it is a matter of continuity. Never giving up, but instead always working for new solutions, finding new ways of improving, developing and doing our share for a sustainable future. Recycling of materials, reduced food waste in the buffet restaurants, cooperation with

local producers and environmentally smart cleaning routines are just a few examples of the work carried out on all our ships.

Digital information

By using digital information about current store offers instead of printed campaign

magazines, we save 70 tonnes of paper per year. Travellers can also peruse our selection of restaurants and artists on digital screens on board. With the ongoing development of the Viking Line app, we can further reduce our paper consumption through expanded digital information about things such as booking, check-in and on-board services.

Shop sustainably

We offer a large selection of goods in our shops on board. When we plan our purchases, sustainability is always one of our most important criteria for choosing products in all product categories. Customers can easily make sustainable choices by checking out the shelf labelling and signage in our stores.

Small actions can make a big difference

By highlighting small everyday things like turning off the light when you leave your cabin and not leaving the tap running unnecessarily, we can all reduce our environmental impact.

Yhdessä entistä paremmaksi!

Tee vastuullinen valinta ja säästä vettä.

Hjälp oss bli ännu bättre!

Gör ett hållbart val och spara på vattnet.

VIKING LINE
Think Smart - On Red

Yhdessä entistä paremmaksi!

Tee vastuullinen valinta. Sammuta valot ja televisio lähtiessäsi hytistä.

Hjälp oss bli ännu bättre!

Gör ett hållbart val och släck lampen samt stäng av tv:n när du lämnar hytten.

VIKING LINE
Think Smart - On Red

Sustainability wins

In connection with the celebration of Baltic Sea Day on 25 August 2022, Viking Line announced a recipe competition under the theme of sustainability for the entire staff.

Viking Line's restaurant function has already been working towards sustainability for many years, for example, by choosing locally produced ingredients, adapting the buffet selection according to the actual number of guests with reservations and presenting the food in portioned bowls and smaller tasting servings, to reduce food waste. As part of this development and as part of Viking Line's sustainability campaign in au-

tumn 2022, a recipe competition was announced for the entire staff.

Aim of the recipe competition

The aim of the competition was to focus on innovative solutions and to bring in new sustainable dishes or components as part of Viking Line's assortment. The jury's assessment criteria were, in addition to the taste of the entry, the story behind the entry and how well it represented sustainability, the archipelago and the Baltic Sea.

Many innovative contributions

The recipe competition brought together many innovative entries that

greatly impressed the jury. A total of four winners were chosen, and at the top of the podium was **Karl Fagerström**, with an exciting product and a well-thought-out concept: hÖstersjö iced tea.

hÖstersjö iced tea, with bladderwrack in your teacup

hÖstersjö iced tea is the name of the innovative new tea developed by Karl Fagerström. The product considers the sustainability aspects on several different levels, from the ingredients and packaging to purchasing from a local start-up company.



FACTS ABOUT BLADDERWRACK

Bladderwrack is a large brown algae and the Baltic Sea's most important perennial structure-forming algae. The species has two reproduction periods, one at the end of May-June and one in late autumn. It is important for many other organisms as a living substrate or hiding place. Bladderwrack is commonly found in the Baltic Sea and is both nutritious and fiber rich. In Åland, bladderwrack is called *hötter*.



Cooperation to promote the welfare of the Baltic Sea

For us, it is as important as it is necessary to work for climate-smart travel with the welfare of the Baltic Sea in mind. And we are proud to lead the way when it comes to new solutions to reduce our environmental impact. However, our opportunities to influence the environment outside of our own operations are limited. Therefore, we have decided to include organizations in our value chain that have concrete means and opportunities to promote the development of a healthy Baltic Sea.

We believe in effective and measurable measures and are convinced of the importance of research and conveying information and knowledge. In 2022, we have chosen to support three main partners, who are working to improve the condition of the Baltic Sea.

John Nurminen Foundation

The goal of the John Nurminen Foundation, founded in 1992, is to safeguard the Baltic Sea and its cultural heritage for future generations. The foundation has been awarded for its imparting of knowledge and production of sea-related cultural information. Through the foundation's projects, the condition of the Baltic Sea is improved with concrete measures that reduce both the burden on the sea and the environmental risks. The work is guided with the help of measurable results and impact. The foundation has launched 40 environmental projects, of which 34 have been finalized. The projects aim to reduce the nutrient load and environmental risks faced by the sea.



Read more at
www.johnnurmisen-saatio.fi/en/

Keep the Archipelago Tidy Association

Established in 1969, Keep the Archipelago Tidy Association (Pidä Saaristo Siistinä ry) is a Finnish environmental organisation for boaters and all those travelling in and around Finnish waterways. The Association serves the archipelago and coastal regions, as well as the network of lakes in the Finnish Lakeland region. The association's service area includes the Archipelago Sea, Saimaa, Lake Päijänne, the Gulf of Bothnia, Pirkanmaa and the Eastern Gulf of Finland. All activities aim to keep the Finnish sea areas, lakes, beaches and archipelago clean. The association promotes and seeks solutions that will make boating and other water activities as well as port operations more environmentally friendly.



Read more at
www.pidasaaristo-siistina.fi/en

University of Helsinki – Tvärminne Zoological Station

Tvärminne Zoological Station (TZS) is a marine station located at the entrance to the Gulf of Finland in the northern Baltic Sea, where coastal research has been conducted for over 120 years. TZS is one of three biological research stations belonging to the Faculty of Biological and Environmental Sciences at the University of Helsinki. The stations serve as centres for a variety of top-class biological research and provide facilities for field courses and seminars. Research conducted at TZS includes examining the climate effects of the coastal environments of the Baltic Sea.

TVÄRMINNE ZOOLOGISKA STATION



Read more at www.helsinki.fi/en/research-stations/tvarminne-zoological-station



Retirees are an important resource

The availability of labour has hampered the post-pandemic recovery of the tourism industry worldwide. At Viking Line, too, passenger figures have rapidly climbed back to pre-pandemic levels.

The demand for travel recovered quickly in the spring of 2022, and this enabled the company to recruit staff for the vessels again after a long pause. To assist in the high season, many pensioners returned to work on a short-term basis. One of them is **Lena Blankenstein-Holmström**, who retired in 2020 from her job as intendant on Viking Grace. In June 2022, she started working on a short-term basis at the café in the conference facilities on board Viking Glory. "I was welcomed with open arms and was immediately part of the team. Working on a short-term basis, I can enjoy the best advantages of working at sea and choose when I want to work myself," says Lena Blankenstein-Holmström. She began her carrier at sea in 1980 on Viking Sally, where

"I was welcomed with open arms!"

she cleaned cabins. All in all, she has worked on seven Viking Line vessels, among other things in the duty-free shop at the main register and as a cleaning services and hotel manager.

Unique 'we' spirit

"I love the sea, customer service and the multifaceted working relationships on board the vessel. I give one hundred per cent of myself in this job, and I get at least as much back. There is a truly unique 'we' spirit on Viking Line's vessels: employees are loyal not just to one another but also to their employer. The company has always taken good care of us, even in tough times."



Emissions from Viking Line's vessels have decreased by a third in 15 years

Over the past 15 years, Viking Line has succeeded in reducing carbon dioxide emissions from its vessels by nearly a third. Environmental investments have been made in the Baltic Sea's most climate-smart vessels and in the technology on board every vessel.

Viking Glory and Viking Grace are already equipped to start running on green fuels, which will enable truly carbon-neutral service in the future. "We have mainly achieved emission reductions through innovative technological solutions that are not very visible to passengers. The

Innovative technical solutions

technology is developing at a rapid pace, and many of these innovations originated in Finland. When Viking Grace, which is powered by natural liquefied gas, was placed in service, emissions of nitrogen and particulate matter decreased 85 per cent and greenhouse gas emissions decreased 15 per cent com-

pared to a vessel that runs on oil. Now ten years later, Glory in turn produces ten per cent fewer emissions than Grace. Meanwhile, emissions from our older vessels have also decreased, since we update the technology on our vessels throughout their life cycle," says Dani Lindberg, Sustainability Manager at Viking Line.



More than 10,000 gigs a year, an important venue for artists

Viking Line offers passengers on its vessels customized entertainment every day of the year. For the artists, it means a job and a venue that audiences have easy access to.

When Viking Line's entertainment flagship, Viking Grace, sets out from the Port of Turku on a weekend evening for Stockholm, the vessel is full of passengers craving entertainment—and to their delight, there is a wide array of professional entertainers on board. Since a variety of entertainment

acts are offered on all six Viking Line vessels every day of the year, the shipping company is one of Finland's biggest commissioners of entertainment acts. A total of 10,000 gigs are arranged each year on Viking Line's vessels.



Baltic Sea theme

Baltic Sea Day was celebrated on Thursday 25 August 2022.

Viking Line marked the day by donating 30,000 euros from the duty-free shops' sales of plastic bags to the John Nurminen Foundation. At the same time, the autumn sustainability theme was launched on Viking Line's vessels, in the terminals and on the communication channels with the aim of involving passengers in the important work to help the Baltic Sea.



Viking Line best in the industry in both customer satisfaction and sustainability

EPRI Rating's survey investigates customer views on passenger transport providers, such as shipping companies, airlines and bus, local transport and taxi companies. Viking Line was ranked first in both customer satisfaction and customer loyalty.

For the survey, a total of 3,010 people over the age of 18 and living in Finland were interviewed in June. Compared to many other industries, the themes of sustainable development and social responsibility are extremely important to passenger transport customers. Most respondents thought the passenger transport industry should take

greater social responsibility, and 44 per cent indicated that they would make even more sustainable choices when they travel in Finland over the next few years.

"Credit for this performance goes to all our personnel, who have worked under varying conditions with a fine service attitude. Good service is an issue we feel really strongly about, so we are especially pleased that people who responded to the survey also gave the best marks in the industry for our employees' customer service. For us, employee satisfaction and customer satisfaction go hand in hand," says **Ninna Suominen**.

Viking Line tops the sustainability index for passenger transport in the survey

"We have carried out ambitious environmental work ever since the 1980s and have succeeded in reducing carbon dioxide emissions from our fleet of vessels by 30 per cent per nautical mile compared to 2008. Our most recent investment for the environment was building the most climate-smart passenger ship on the Baltic Sea, Viking Glory. It is great that customers continuously challenge us to improve in sustainability. We want to involve them even more in our sustainability work," says Nina Suominen.



Double victory for Viking Line

At the Finnish Travel Gala in October 2022, Viking Line was chosen as both Sustainable Business of the Year and Transport Company of the Year.

One factor that weighed heavily in both choices was the shipping company's long-term investment in environmentally-friendly technology and in innovations that renew the passenger experience.

"We have already been working more than 60 years for safe, sustainable maritime traffic, and using that same recipe, we are creating the travel experiences of the future. The double honour we have been awarded means an especially great deal to us after these exceptional years of pandemic, which have hit the entire travel industry hard. "Because of our roots in the archipelago, the protection of the Baltic Sea has special importance to us at Viking Line. Our sustainability work began as far back as in the 1980s, and our climate-smart Viking Glory is the latest milestone on this journey. With the new vessel, we can offer our customers more with less consumption," says Dani Lindberg, Sustainability Manager at Viking Line.

Fuels of the Future



What fuels will we use in the future? Can we find cost-effective and safe solutions, and how should we meet the new environmental standards? These questions are highly topical because all EU countries have committed to reducing their carbon dioxide emissions.

Mathias Sundberg, Technical Manager of Marine Operations, explains the concepts within the topic of future fuels.

How was it before, Mathias, for example in the 90s?

– Viking Line was actually an environmental pioneer in the 90s also. At the beginning of the 90s, heavy fuel oil was used on board the vessels, but Viking Line was already in

the process of renewing it and switching to low-sulphur oil. Changing to the low-sulphur oil was one of the first steps for us on our environmental journey.



When did we first start looking at LNG?

– At Viking Line, we first started looking at LNG in 2008, as a fuel alternative for a new ship. When Viking Grace began to be built, we decided to invest in LNG, as it is the fossil fuel with the lowest emissions. The biggest challenge was to build a completely new logistics chain from scratch and to make the bunkering work smoothly. However, it turned out to work better than expected.

The Baltic Sea became a SECA in 2015. What does that mean?

– The abbreviation SECA stands for Sulphur Emission Control Area, and in practice this means that, since 2015, the sulphur content in our fuels may not exceed 0.1%. So for many years now, we have had strictly

defined requirements regarding the fuels we use.

How can we reduce fuel consumption and costs?

– When it comes to reducing fuel consumption, we can immediately resort to various methods such as slowing down and adapting our tour timetables.

We can also reduce fuel consumption through various technical measures. Of course, we continuously follow developments in the industry, in order to find new long-term solutions. Glory and Grace have a lot of new technology, but also on Cinderella and Gabriella we make a difference by using waste heat from exhaust gases and cooling water. Electricity is also produced from waste heat from exhaust gases on board Viking Glory.



Will battery-powered operation be the solution for us in the future?

– Pure battery operation is already used on a smaller scale on smaller road ferries in Norway, but on larger ships the energy density is an Achilles' heel. However, there is development in the field all the time, and batteries will develop enormously in the coming years. Hybrid operation, where you combine battery operation with engine operation, has already been developed for larger ships as well. In our service area, battery operation could be an option on the Tallinn route and on the Mariehamn–Kapellskär route.

Are there other alternatives?

Other possible alternatives are fossil-free

We are following developments closely

fuels that go under the collective name **Power-to-X** fuels, i.e. fuels produced with fossil-free electricity, such as **e-methanol, e-methane, e-ammonia** and **e-hydrogen**.

E-methanol of fossil-free origin can be used in ordinary tanks and the logistics work with tankers. However, it is not yet available in our immediate area in the quantities we need.

Regarding e-hydrogen, investigations are underway in Åland and at Viking Line. The major disadvantage with hydrogen is its handling, as it is explosive and difficult to transport and store.

E-ammonia is also being discussed, but there are two camps here. Some think this is a possible solution for the passenger

ships, some do not. E-ammonia is a toxic and highly corrosive substance, which of course must be taken into account in the planning.

Viking Grace and Viking Glory are already ready to use bio-methane or e-methane. At the moment, this is not financially justifiable, but we are following developments closely.

So, we can state that Viking Line is probing the market regarding various future solutions, but there is no completely obvious alternative yet.

What other things do you work with in Marine Operations?

– Most of our working time is taken up by various tasks regarding our existing fleet and keeping the traffic running according to the established timetables

24/7. In addition, we plan things like docking and service work. Keeping ourselves up-to-date on new regulations and working on new solutions is also an important part of the work.

What do we need to think about if new vessels become relevant in the future?

– When planning any new vessels in the future, we must ensure that they can be operated completely fossil-free within their lifetime. Emission allowance trading will be used starting in 2024, and in 2025 we will therefore pay the fees for 2024. The penalty for emissions is around €70–100/tonne, which means very large sums per year.



Recycling



Increased recycling reduces our climate impact.

It requires much less energy to recycle materials than to extract new ones from nature. Eco-cycles benefit the climate.

Carpet

Since 2014, nearly 94,000kg of carpet has been returned from the company's vessels to carpet supplier Tarkett, which launched a pioneering project a few years ago to reuse used carpets from its corporate customers. The carpets are collected at the end of their life and reprocessed into raw material for new carpets.

Textiles

At the end of 2022, Viking Line entered into an agreement with the Finnish company Rester Oy regarding the receiving and recycling of old textiles. Through various processes, old textiles from the ships are broken down into fibres, which can then be reused in new material. Rester's concept is completely new in Finland, and at Viking Line we are both proud and joyful that we are able to participate in the important work of recycling textile waste to reduce the environmental impact.

Food waste

The food waste collected on Viking XPRS, Viking Grace and Viking Glory continues its eco-cycle as raw material for biogas production. During the year, we collected 1,307 tonnes of food waste; this produces around 99,000 cubic metres of biogas, which corresponds to 112,000 litres of petrol.

Glass

During the year, 286 tonnes of glass packaging were collected on board. When recycled glass is melted down to make new glass, the process consumes 20 percent less energy than starting from sand, soda ash and limestone as raw materials. Glass packaging can be recycled any number of times without deteriorating in quality.

Scrap metal

Recycling of steel, for example from food tins, consumes 75% less energy than production from iron ore. The company has collected 50 tonnes of scrap metal during the year.

Paper

Recycling paper and cardboard means we do not need to cut down as many trees. A tonne of recycled paper is equivalent to about 14 trees. Paper can be recycled approximately seven times. During the year, 346 tonnes of paper/cardboard were sent from the vessels for recycling.

Environmental figures

Our vessels never discharge waste-water into the sea. Everything is pumped to municipal treatment plants on land.

A vessel generates three main kinds of waste-water: grey water from showers and other washing activity, black water from toilets, and bilge water that is separated from water in engine rooms and contains traces of oil.

Nitrogen oxides (NO_x)

Nitrogen oxides is an umbrella term for nitric oxide and nitrogen dioxide, which form when oxygen in the air and nitrogen react at high temperatures. Nitrogen oxide emissions are thus closely linked to combustion processes. Nitrogen oxides are toxic and also contribute to the formation of ozone together with organic pollutants.

Sulphur oxides (SO_x)

Sulphur dioxide is a colourless gas that causes coughing. It is produced in the burning of fossil fuels and other materials containing sulphur but also through natural processes, such as volcanic eruptions. Sulphur dioxide is oxidized in the atmosphere and forms sulphuric acid, which contributes to acidification.

Carbon dioxide (CO₂)

The main cause of global warming is the change in the chemical composition of the atmosphere caused by humans through the emission of greenhouse gases, primarily carbon dioxide. Greenhouse gases enhance the ability of the atmosphere to capture energy emitted by the Earth's surface, thereby reinforcing the so-called greenhouse effect.



VIKING LINE SHIPS	2022	2021	2020
Volumes			
Passengers	4,945,564	2,315,137	1927302
Passenger cars	630,651	442,484	356,809
Cargo units	117,777	129,278	125693
Total distance (thousand km)	1,083	877	802
Resource consumption			
Oil (tonnes):	74,478	51,003	51,698
Lubricating oil (m3):	432	432	398
Urea (tonnes):	40	151	240
Fresh water (m³):	237,737	133,832	125,663
LNG (tonnes):	12,155	12,523	14,609
Emissions (tonnes)			
Nitrogen oxides (NOx):	4,278	2,909	2,532
Sulphur oxides (SOx):	134	104	93
Carbon dioxide (CO2):	268,701	217,418	203,074
Residual products (tonnes)			
Solid waste for incineration:	1,577	1,030	1,065
Waste for landfill:	86	31	67
Waste for recycling:	757	388	464
Biowaste:	1,307	494	470
Hazardous waste:	17	18	36
Waste-water pumped ashore (m3)			
Grey and black water	222,311	131,116	120,717
Bilge water:	5,787	5,409	7,148
Waste oil (m3):	1,048	1,058	977
VIKING LINE BUSS AB	2022	2021	2020
Number of kilometres driven	865,973	655,987	681,084
Amount of diesel consumed (litres)	271,811	204,650	196,870
Water consumption (m3)	362	274	325
Garage electricity consumption (kWh)	55,324	65,584	67,935

Viking Line's environmental journey

The Ocean Marine energy recovery system is installed on Viking Grace. Heat is converted into electricity using a unique vacuum process.

All of Viking Line's vessels are issued **ballast water certificates** as proof that the vessels comply with the requirements set out by the Ballast Water Management Convention.

The environmental performance of four of the company's vessels is certified under **Clean Shipping Index standards**.

The company's first **land-based power supply** in Mariehamn.



Reducing food waste
The company's first project to reduce the amount of food waste per passenger begins.

The 2020s

The company's first **land-based power supply** in Tallinn.

Viking Glory, the company's second LNG-powered ship, is delivered to Viking Line.



Circular economy

The shipping company returns used carpets from the ships to the manufacturer for reuse.

In late 2014, all of Viking Line's vessels except Viking Grace switch to **diesel oil** with a sulphur content of less than 0.1 per cent by weight.

Recycling of biowaste. Three ships dispose of biowaste ashore to be used for biogas production.

The company's first **land-based power supply** in Helsinki.



Viking Grace begins its service in 2013. Viking Grace is the first passenger vessel of its size class to use **entirely sulphur-free, liquefied natural gas (LNG)** as fuel. Compared to oil, nitrogen and particulate matter emissions are cut by 85% and greenhouse gas emissions are cut by 15%.

Viking Line Abp's subsidiary Viking Line Buss Ab is certified in compliance with **ISO 14001** environmental management standards (2012).

The 2010s



The 2000s

All vessels and the main office are certified in compliance with **ISO 14001** environmental management standards (2001–2002).

Installation of technology to reduce nitrogen emissions. The Humid Air Motor reduction technology is a globally unique method, which reduces nitrogen oxide emissions by lowering the engine's combustion temperature.

Catalytic (SCR) converters are installed on Viking Cinderella to reduce nitrogen oxide emissions.

Processed bilge water is **pumped ashore** to municipal waste-water treatment plants.



Recycling of biowaste begins on two vessels. Biowaste is transported to anaerobic digestion facilities for the production of biogas.

Exhaust gas boilers are installed and used to heat the vessels' ventilation air with the help of **energy recovered from flue gases**.

Sea water is used to cool the vessels' ventilation air.

Dosage devices are installed to **reduce the use of chemicals** on board.



Grey and black water are **pumped ashore** to municipal waste-water treatment plants.

Transition to **low-sulphur fuel** (<0.5 per cent by weight) on all vessels to reduce sulphur oxide emissions.

The 1990s

The 1980s

Use of toxic paint for the bottoms of vessels ends. **Brushing of vessels' bottoms** with the help of divers begins.



Waste recycling on board the vessels begins.



The company's **first land-based power supply** in Stockholm.



Viking Line Buss

The bus company Viking Line Buss, which belongs to the Group, is environmentally certified according to ISO 14001.

Viking Line Buss works continuously to reduce the environmental impact of its operations.

Environmental Policy

Viking Line Buss is committed to reducing emissions to air, water and land and to continuing to work on improvements in these areas.

Specific measures:

- We sort waste from our buses as well as waste generated at our depot.
- We buy green electricity and have installed motion sensors for the lighting at our depot to minimize electricity consumption.
- When purchasing, we prefer eco-labelled products wherever practical.
- We continuously train/inform our staff on environmental issues.
- We follow the development of new technological solutions that contribute to reducing our climate impact.



Viking Line Buss is environmentally certified according to ISO 14001

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