

GEFO Shipping Group Sustainability report 2022

Decades of experience. Shaping a sustainable future.





GEFO Shipping Group combines tradition and progress.

GEFO Shipping Group was founded in Hamburg in 1961. What began as an exclusively inland operation barging mineral oil products on the Rhine is now a thriving international network specialising in chemical liquids, liquid gases, mineral oil products and worldwide bunker trading. Currently, the GEFO Shipping Group fleet comprises around 150 modern coastal and inland vessels. Successfully shipping more than 16 million metric tons per year and building on our commitment to rigorous HSSEQ, we continue to register safe and sustainable growth.

Shaping a sustainable future.

In 2022, the European shipping industry again faced major challenges. GEFO Shipping Group has performed excellently in these uncertain times. Undeterred, we continue to pursue our plans.

With innovations in shipbuilding and digitization, with enhanced trainings for our employees in the offices and on board, and with a focus on sustainability, we continue to work towards becoming the safest, most reliable, and highest-quality logistics service provider for our customers.

In 2022, we successfully completed the last newbuilding series of the Deep sea fleet and delivered the first newbuildings of the Inland fleet. These include the innovative low-water carrier Canaletto with its revolutionary eco-friendly hybrid propulsion system.

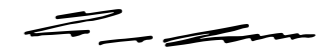
Sustainability is an important aspect integrated within our services. At GEFO, every effort is made to reduce the environmental footprint; we have proven to our customers and partners that they can rely on us to be a forward-looking company. Receiving the Green Award and the Ecovadis Silver Medal again proves that we walk our talk.

In our Sustainability Report 2022, you will find the key facts and figures on our commitment to a sustainable future. We would like to walk this path together with you. We hope you enjoy reading it.

Best regards,
GEFO Shipping Group
General Management



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Our vision and our values.

Our vision is to be the first-choice shipping partner for the chemical, gas and oil industry in North-West-Europe. At GEFO Shipping Group, we know that our people are the heart of our success. We're a team – committed to providing our customers with the best possible service and sustain success – and to improving it every day. Today ... and for generations to come.

5 points we stand for:

1. SAFETY

We value the safety and well-being of our coworkers, communities, and the environment. Everything we do includes the goal of sustaining them for the future. We believe in a zero-incident-industry. We watch out for each other and set plans and take actions to continually improve our shipping services through robust integrated (HSSEQ) management systems.

4. PERFORMANCE

We perform best as a team with an approach for action and a can-do attitude. We contribute our best to the team and accept personal responsibility for our performance and development.

2. CUSTOMER FOCUS

Our actions are driven by customer insights to exceed their expectations in terms of quality and service. They inspire us to create solutions that add value. We believe their success is our success.

5. SUSTAINABILITY

Sustainability and social responsibility have been at the heart of GEFO Shipping Group's corporate culture for more than 60 years. This includes the responsibility for our world's eco-systems, especially the soundness of the marine environment. We strive to go beyond today's industrial standards. We reduce our environmental footprint by saving energy and resources and we invest in new technologies – ensuring success today and for future generations.

3. HONESTY & INTEGRITY

We believe in honesty and integrity in all relationships with our clients. Our actions match our words. We do the right thing at all times, make realistic promises and keep them.

4 Key facts

1.600⁺
employees ashore
and on board

150⁺
vessels

7
years average age of
the Deep sea fleet

14
years average age of
the Inland fleet

Successful in six major market segments.

GEFO Stainless Steel

At the end of 2022, GEFO established a separate Stainless Steel division.

Built today for tomorrow's challenges

The modern fleet consists of 11 specialized double-hull stainless steel tankers, which we have assembled from the Inland Chemical and GEFO Mineral Oil fleets. In addition, 9 low-water-optimized newbuildings will start operations as of 2023. In particular, our new Canaletto, with its low-emission hybrid propulsion and revolutionary hull design, proves that GEFO is driving innovation for a sustainable future. You can count on our experienced team in Duisburg and Antwerp when it comes to the highest safety standards, maximum reliability, and customer focus. We are ready for the challenges of today and tomorrow.

No shipments yet in 2022

GEFO Gas

Headquartered at the heart of the ARA region in Antwerp, our gas specialists are ideally placed to ship liquid gases throughout the north-west European inland waterway network.

Safely, efficiently and reliably – for all our clients.

New fleet, experienced hands

The GEFO liquid gas fleet is a shining example of our commitment to the highest safety standards and the very best technology. Literally. It is the youngest fleet in the gas shipping industry. In 2022, we shipped more than 1.200.000 metric tons in 22 triple-hull gas tankers.

Our gas experts in Antwerp are hands with the experience and motivation that comes from more than 20 years of success. As our client, you benefit from consistent, efficient and dynamic performance. Should you face a challenge, Antwerp has the know-how and agility to react.

1.250.152
Metric tons shipped in 2022

1.209
Shipments in 2022

GEFO Chemicals

GEFO is one of Europe's leading providers of chemical shipping. To ensure our clients the best possible service, we operate two distinct corporate divisions in this segment. GEFO Deep sea specializes in coastal routes. UNITAS is your partner for inland barging.

Our Deep sea fleet: tankers you can trust

As our client, you rely on robust supply chains to make the most of your business potential. This is precisely what GEFO is best equipped to provide.

As one of Europe's leading chemical tanker operators, we ensure reliability through continuous investments. In our people, in our fleet, and all the technologies that enable us to understand and serve you, our clients, in the best, safe and sustainable way possible. In our understanding of your needs. And in the outstanding specifications of our Deep sea fleet.

Our modern and highly specialized fleet consists of 25 stainless steel and coated tankers for commodity and specialty chemicals. We operate from the Baltic and North Sea, through the English Channel and the Bay of Biscay to the western Mediterranean.

3.075.975
Metric tons shipped in 2022

1.069
Shipments in 2022

Inland Chemicals barging: reliably yours

From our offices at the heart of the ARA region in Antwerp, UNITAS United Shipping and Trucking Company has been barging bulk chemicals to and from all the majors and chemical producers for more than 40 years. With a total capacity of up to 140.000 cbm, our fleet of more than 40 double-hull tank barges has the versatility and specifications required to satisfy both the needs of our clients and the highest safety standards.

7.295.132
Metric tons shipped in 2022

4.005
Shipments in 2022

Successful in six major market segments.

GEFO Mineral Oil + Light Chemicals

GEFO was built on excellence in oil barging. With more than 60 years of experience and more than 40 double-hull tankers, we remain a top 3 inland barging operator for light liquid chemicals and mineral oil products.

Specialists for black gold

The black gold in our barges may not shine but our track record does. For our clients that's a resource as valuable as any precious metal. With more than 60 years of experience shipping mineral oil products and liquid chemicals, GEFO ensures reliable, high-quality, cost-efficient supply.

Versatility is another key strength of our high-spec barging assets. For example, a variety of vessel lengths from 85 to 135 meters gives us access to the full north-west European inland waterway network – from the Belgian and Dutch seaports up into the Rhine tributaries and key German canals.

4.894.826
Metric tons shipped in 2022

3.747
Shipments in 2022

GEFO Bunker Trading

Since 1971, GEFO Bunker Trading is a global player. Substantiated by our own shipping fleets, which in Europe serve all the chemical and oil majors, our reputation for first-class bunkering solutions has long since spread worldwide.

Seven seas, one global trader

GEFO is one of the world's oldest bunker trading operations, with an excellent reputation for quality products and service among clients and suppliers all over the world. To maintain that reputation, we go the extra mile.

Whatever your bunker challenge is, our team has what it takes to find the ideal solution: expertise, dedication and connections. With the backing of our shipping operations in Europe, our credit credentials are rock solid and we have the payment principles to match.

314.000
Tons traded in 2022

2.501
Numbers of bunkering in 2022



Safety first: HSSEQ Management.

GEFO Shipping Group is unarguably proven to have successfully exercised safety and operational excellence, a performance which even shines brighter given the highly challenging conditions of our agitated times. GEFO Shipping Group is ready for the future.



Our safety performance is superior. We will improve it even further.

Safety comes first in everything we do. The wellbeing of our coworkers, communities and environment is – and will always be – our highest priority. That is why we are proud to report that the safety performance of GEFO Shipping Group is at such a superior level. Our high safety standard is clearly demonstrated by the vessel inspection reports of the various vetting schemes and by the TMSA office audits. It is also evident in our awards from the Green Award Foundation and in the EcoVadis CSR scheme.

In 2022, we successfully continued and even expanded programs such as the Barge Safety Folder, our ISO team and Senior Management Visits campaign (SMV). Our commitment to safety continues.

Member of the PZI

People are at the heart of our success. None of our crew members should be working in unsafe environments or be exposed to any risks. That's why GEFO is a co-founder and strong supporter of PZI (Platform Zero Incidents) and has been a member of the steering committee for several years. A solid interaction between crews and the platform in exchanging near misses and incident learnings ensures steady progress towards an ever-safe working place, preventing injuries and damage to environment, property and life.

Trainings and campaigns

To promote safety on board our ships, we support our employees with trainings and development programs, e-learning and simulation training.

The **BSF (Barge Safety Folder)** for 2022 includes LETs (Learning Engagement Tools) covering important safety trainings:

- LET "What were if ...?"
- LET Safety Barriers
- LET First Aid
- LET Fire Extinguishers
- LET Portable Explosimeter
- Safety Exercises
- Emergency Procedure & Notification
- Good Spot
- LMRA and Stop Work
- E-Learning

Our popular training events **Crew Days (Inland fleet)** were held virtually in 2022 and reached numerous crew members. The **Crew Seminars (Deep sea fleet)** also attracted a lot of interest. See following pages.

The **barge risk assessment program** with quarterly weighing of all operated barges has remained a backbone in our safety strategy. Corrective measures and follow-ups have positively convinced several barge crews to step up and improve. Based on the weak



signals emitted by crews and vessels through our profound risk analysis, Senior Management Visits (SMV) are organized. These visits have proven to be a success.

The **cross-departmental GEFO ISO team** has developed into an auditor team with a member – the jumper – per division within GEFO. Cross-learning is our most important goal, as this supports continuous improvement by analyzing the processes of the other divisions/departments. Giving us a clear overview of easy manageable processes and supporting newcomers in each department efficiently understanding their roles and responsibilities.

Senior Management Visits

We see teamwork as one of the most important foundations of our success. Hence also our hashtag #weareGEFO, we work as ONE team towards a zero industry. To strengthen the bond between our crews on board the vessels with the management staff, we have launched the Senior Management Visits (SMV) and SMV light campaigns. By visiting the workplace, the "hometurf" of the employees on board, we show our support and commitment and ensure that they can work safely in all conditions.

The **Senior Management Visits** are carried out by the General Management & Management Team and are predominantly driven by weak signals on board. **SMV Light Visits** are carried out by individual members of the commercial and operational departments. Further ship visits are made by **Technical department and HSSEQ**. Topics discussed include near misses, safety awareness, wellbeing, training on board (barge safety folder) and ad hoc topics. Just as important, however, is the appreciation of the hard work on board: ONE team, on board and ashore, working together towards safety and operational excellence!

Ship Visits in 2022

149
SMV total

44
SMV light

Inland fleet		Deep sea	
129 Tech dpt	272 HSSEQ	54 Tech dpt	80 HSSEQ

Virtual Crew Days 2022 – for more safety on board.

To promote safety on board our ships, we support our employees with regular training events, the popular Captain's Days. After pandemic-related cancellations, we are now holding the events virtually. The big advantage: not only the captains but all crew members can be reached. Consequently, we have renamed the traditional event: Welcome to the new Crew Days!

Exciting presentations and discussions

On six dates in 2022, the crews of our Inland fleets were invited to our online training events, organized out of Studio Schuttevaer/ ProMedia Studios.

Following the opening statement by GEFO Managing Director Sven von Appen, the focus was on important safety and operational topics.

Topics of the safety videos

- Defensive navigation and the use of ECDIS
- Vetting process and crew conduct
- Degassing – legislation and real world
- Tank loading and flushing
- Planned maintenance

During broadcasting of the pre-produced video fragments, the participants were able to ask questions via a chat box, which were then asked to the panel of GEFO HSSEQ Specialists by Rene Quist (Editor in chief of Schuttevaer).



The response was excellent

The opportunity for interactivity was well used and resulted in a total of 400 chat messages with relevant questions. Attendance was also high, with a total of 280 captains, helmsmen, ABs and students participating (over 30% more than 2019) and providing excellent feedback. The videos are still available as e-learning for the crews.

This year, we will go one step further and organize four Crew Days both with physical presence and livestreams within each event. This way, we enable more interpersonal contacts and reach even more crew members.

Crew seminars for the Deep sea fleet

We also held two-day crew seminars in Gdynia and Malmö for our Deep sea fleet crews in 2022. Dr. Professor Manuel of WMU Malmö lectured mental health for our seafarers. Mental health was an important topic during the Covid-19 Pandemic, and remains underrated across the maritime workforce.

It has thus been decided that not only the Ship's staff and officers should be addressed, but the ratings equally well.

The Near Miss Report – step by step towards the “zero accidents” goal.

The health of all GEFO employees as well as their safety is the utmost goal; strive for zero is not just a slogan. In 2022, the KPI for LTIF (Lost Time Injury Frequency) was 0,84, but with a significantly increased number of exposure hours. The TRCF (Total recordable case frequency) went down to 2,09 compared to 2,35 in 2021. The target for the next years remains unchanged: 0 accidents, thus a total of 0 per 1.000.000 working hours shall be achieved! No employee of GEFO Shipping Group should suffer any harm during their work, respectively recreational activities on board our vessels.

The GEFO Shipping Group Deep sea vessels reported in total 880 “near misses” (including good spots) in 2022. This is again a good result, taking into account that the fleet was growing only moderate in 2022. Therefore the growing amount of reports reflects a very good acceptance within our fleet.

Aim of creating so-called good spot reports was to enable reporting of positive examples of good working practice/best practice. For 2022, the good spots reflected a share of 9% of the total amount of reports – an excellent result.

In total, 979 NM (near misses) have been reported by our crews on board the Inland fleets, on about 118 (average) vessels throughout the year. The fleet is split up in GEFO Gas, UNITAS (chemicals) and GEFO Mineral Oil and Light Chemicals and can furthermore be differentiated in owned and private barges. Nevertheless, is the safety and quality management system on board all vessels equal, as well as reporting system and targets.

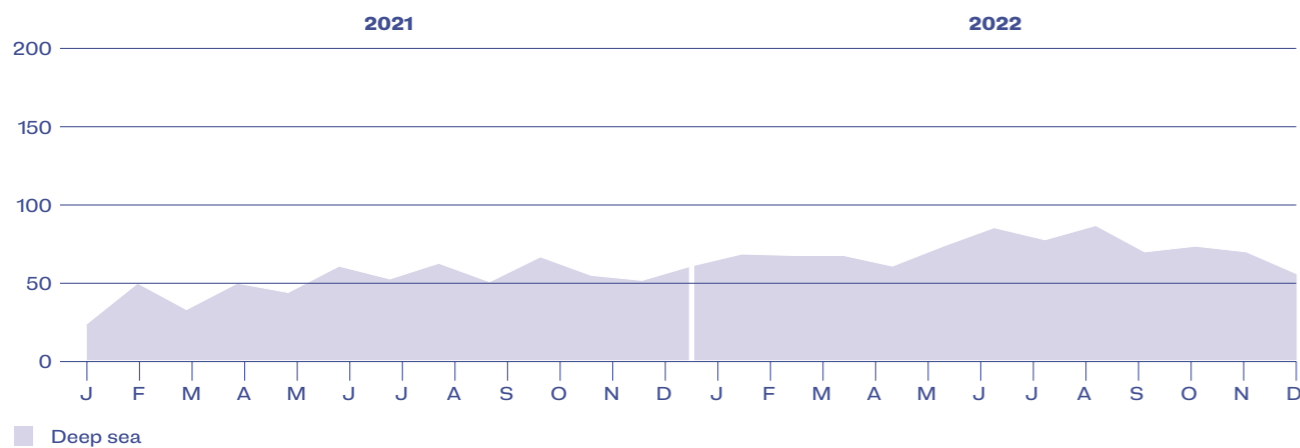
The amount of NM has been found close to the initial target KPI of 1 NM per month per vessel per month per vessel, herewith slowly moving away from the actual KPI but strongly improving on qualitative content. For 2022, the KPI achievement was 0,75 with 979 NM out of our operated fleet of 118 vessels. GEFO GAS was the high flyer when this KPI is considered by fleet, with 11,6 NM per vessel on average over the year, followed by BARGING with 9,1 per vessel.

Both within the Inland fleets and the Deep sea fleet, assessments of the navigational performance are conducted. Data collected are circulated to all crew members by means of circular letters. More importantly, these assessments are initiated based on incidents and near misses in the past. This is a strong and effective tool to measure the navigational standard as well as training our crew members on the job.

KPI	2020	2021	2022
Near Miss Reports (without accidents)*	518	675	880

* per fleet

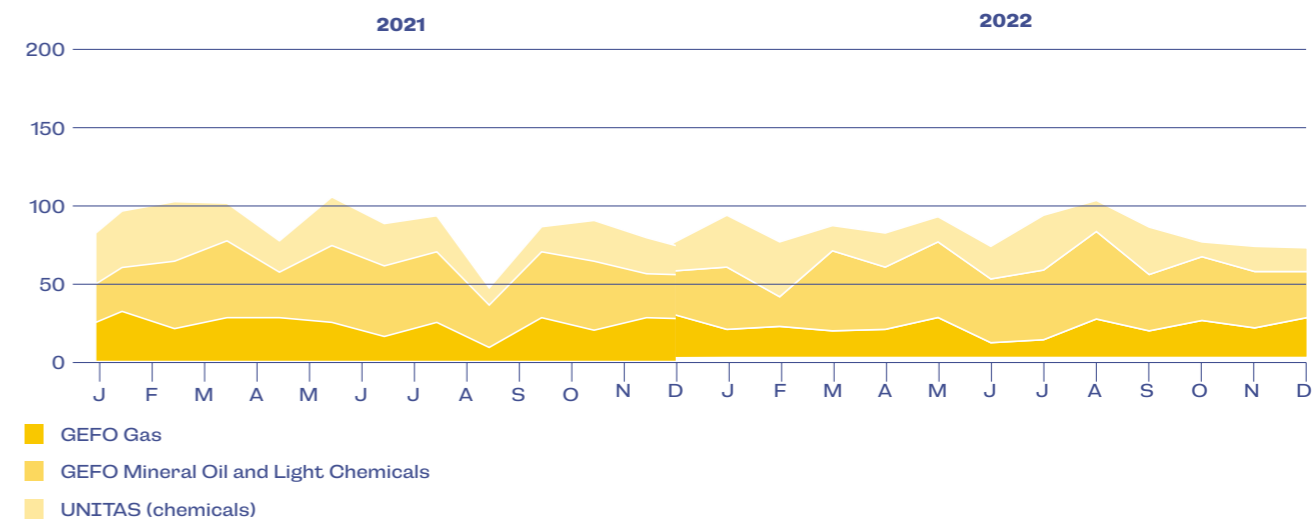
Deep sea: Near Miss Reports at a glance 2021 & 2022



KPI	2020	2021	2022
Near Miss Reports registered in Barge Control*	1.072	1.034	979

* per fleet

Inland fleets: Near Miss Reports at a glance 2021 & 2022



■ GEFO Gas
■ GEFO Mineral Oil and Light Chemicals
■ UNITAS (chemicals)

Inspections and Audits – excellent results in all parts of the fleet.

Safety inspections

GEFO Shipping Group always strives to improve the safety of its vessels. Therefore, GEFO Shipping Group regularly participates in various safety initiatives. With our inspection reports, we also contribute to the continuous improvement of safety and quality in the maritime industry all over the world.

- On average 2,69 observations were noted during **SIRE inspections** (3,62 in 2021)
- On average 4,46 observations were noted during **CDI inspections** (4,80 in 2021).

These excellent results were achieved by solid teams in our existing and very well managed fleet. Several inspectors made a point in 2022 that GEFO is one of the best (if not THE BEST) chemical tanker operator in Europe!

External observations on average (SIRE and CDI)

	2019	2020	2021	2022
Average observations	3,79	3,11	4,04	3,58

TMSA reviews and audits

The company passed **TMSA and management reviews** carried out by our customers. The submission GEFO has laid down on the basis of the self reflection of 2022, shows a consistent score of 3 in all elements. This self assessment has been confirmed by both auditing companies independently of one another. Both TMSA reviews were completed without major non-conformity, respectively high risk findings and the HSSEQ review was concluded successfully as well.

The **ISM annual DoC audit** for Cyprus was carried out by DNV GL and passed without any non-conformity. An additional DoC audit was conducted in Hamburg.



External inspection programs

GEFO Shipping Group participates in several external inspection programs. In addition, our internal audits ensure the high quality and safety standards of our vessels.

- The inspection regime under **OCIMF** has now ran in its second year. As was to be expected, a better and more profound knowledge of the inspectors has led to a rise of observations. This can also be stated on average in our fleet, with a subtle observation rise from 3,63 to 4,05. GEFO has joined the working group (iBEQ OCIMF) preparing a new barge inspection questionnaire (BIQ) and barge particulars questionnaire (BPQ) as a representative for the inland barging industry.
- Many **Internal audits** were scheduled and conducted in view of the ISO9001:2015 Audit schedule. The outcome has proven that the company has matured but still has a development laid out into the future. That is of course what continuous improvement is all about.
- In 2022, five different companies invited themselves over to conduct **TMSA Office Reviews** in Duisburg. With one exception, every audit lasted for two consecutive days and was conducted by two auditors. The overall score laid down in the 2022 TMSA submission reflects a solid 2 across all important elements, where often even the third level has been accomplished. A continuous improvement is stated by all auditors, and the consistent and hard work of the HSSEQ and Technical departments is largely credited.



Health and contentment: We care for our staff.

Our more than 1.600 employees on board and ashore work as ONE team (#weareGEFO) and thus ensure that our vessels are operated safely and efficiently. That is why it is important to us that officers and crews find optimal working conditions. A healthy working environment in which employees feel comfortable is therefore very close to our hearts.

Contentment in the team guarantees continuity in ship operations and thus a safe, qualitative and fast delivery. GEFO Shipping Group is considered an excellent and reliable employer, and this is reflected in our high retention rates.

Retention Rate Deep sea

KPI	2019	2020	2021	2022
Retention Rate Officers	94,0 %	98,8 %	96,6 %	95,4 %
Retention Rate Crew	88,7 %	98,4 %	98,1 %	99,5 %

Deep sea

Retention Rate Inland fleets

KPI	2019	2020	2021	2022
Retention Rate Captains	97,2 %	96,1 %	96,0 %	93,3 %
Retention Rate Crew	94,9 %	92,1 %	91,4 %	89,6 %

Inland fleet

Retention Rate Office Staff

KPI	2019	2020	2021	2022
Retention Rate Office Staff	99,0 %	97,0 %	99,0 %	99,0 %

Code of Conduct

The General Management of GEFO has adopted this Code of Conduct for the Group.

Business Integrity

- ✓ We are committed to maintain the highest degree of integrity in all our dealings with potential, current and past clients.

Anti-Corruption and Anti-Bribery

- ✓ We will conduct business honestly, fairly, ethically, free from corruption and in compliance with all applicable laws.
- ✓ GEFO does not engage in or tolerate bribery or corruption.
- ✓ We require our own employees as well as our contractors to comply with applicable anti-corruption and anti-bribery laws.

Conflicts of Interest

- ✓ We will not use our position within the Company to obtain improper personal benefits.
- ✓ We will not offer any benefit or other advantage to government officials or business partners where such benefit or advantage would affect a decision and/or violate applicable laws.

Confidentiality and Privacy

- ✓ We will not disclose any of our business partner's knowledge, data and information marked or understood as confidential to third parties.

Protection and Proper Use of Company Assets

- ✓ We will protect the Company's assets and ensure their efficient use.
- ✓ We will protect any asset entrusted to us by our business partners (such as cargo) with the highest degree of diligence.

Compliance with Laws, Rules and Regulations

- ✓ We will comply with all applicable laws, rules and regulations.
- ✓ We will comply with all applicable anti-bribery and anti-money laundering laws.

Information Protection

- ✓ We will not share sensitive and/or confidential information.
- ✓ We will protect our IT Tools.
- ✓ We will follow Cyber Security measures implemented by GEFO.

Diversity & Inclusion

- ✓ We are inclusive.
- ✓ We believe that diversity drives innovation and sustainability.

- ✓ We are building a culture where difference is valued.
- ✓ We foster a top-down as well as a grassroots approach.
- ✓ We do not tolerate racism, sexism or any other sort of discrimination.

Alcohol and Drug Guideline

- ✓ We will fully adhere to the Company's Alcohol and Drug Guideline (A&D Guideline).
- ✓ We will prevent the abuse of alcohol and drugs on board Company vessels.
- ✓ We will ensure a safe working environment for the safety and well-being of Company employees, visitors and contractors.
- ✓ An A&D Guideline is in force. It is an integral part of the Company's Safety Management System and is reflected in the Captain's Handbook – chapter 5 for the Inland fleet and in the Fleet Manual – B12.00.00 for the Deep sea fleet as cargo) with the highest degree of diligence.



Our environmental engagement: we invest in new ideas.

GEFO continues to reduce its environmental footprint by minimizing energy consumption and pollutant emissions. With both our Inland and our Deep sea fleets, we are involved in several customized projects where safety and sustainability are top priorities. Because for us, safety and sustainability go hand in hand. The reward for these efforts and motivation at the same time are the awards we receive.



Our sustainability awards: recognition and inspiration.

GEFO Shipping Group has sustainability and future viability at the heart of its corporate culture. The success of this long-standing commitment is repeatedly confirmed by certifications and awards. These honors are both gratification and inspiration for us. We will not slow down in our efforts. Therefore, we are convinced that we will continue to play a leading role not only in safe but also in sustainable, environmentally friendly shipping in the years to come.



Top-rating from EcoVadis

As in previous years, GEFO Shipping Group opted for an assessment by EcoVadis. The internationally recognized rating agency evaluates topics such as environment, fair labour practices, ethics/fair business practices and supply chain. We are very proud that EcoVadis has awarded us a silver certificate again this year, giving us a positive recognition especially in the areas of environment and ethics. GEFO is rated amongst the 12 % best companies within our industry.

Certified with the Green Award

To further improve in terms of its environmental standards, GEFO has successfully embedded the Green Award program into its core activities. Our HSSEQ/Technical Department has been certified, as well as numerous vessels. The Green Award can only be obtained by vessels that go above and beyond the industry standards in terms of safety, quality, and environmental performance. It is one of the most important quality marks in the shipping industry.

70 GEFO vessels were certified in 2022



Employer of the future

The German Innovation Institute for Sustainability and Digitalisation has subjected GEFO 2022 to a comprehensive, multi-stage auditing process. We were awarded the "Employer of the Future" seal for our future viability.



GEFO Shipping Group's contribution to low-emission shipping.

The maritime industry is vital to the global economy: It accounts for about 90 % of the volume of global trade. Thus, the demands on shipping to reduce global greenhouse gas emission in line with the goals of the Paris Agreement are intensifying.

GEFO Shipping Group is well on the way to achieving this. Thanks to the introduction of new technologies and innovative propulsion systems, we are gradually reducing the fleet's pollutant emissions. In 2022, emissions were higher because we had more vessels in operation. Almost all of our ships were heavily utilized throughout the year and therefore produced more CO₂-emissions.

CO₂-Emissions of GEFO Shipping Group's Deep sea fleet

KPI	2019	2020	2021	2022
Emission CO ₂ (MT per nautical mile)	0,131	0,126	0,132	0,143
Emission CO ₂ (total MT)	69.398	69.153	96.536	108.139
Emission (tons/fleet size (DWT))	1,022	1,000	0,920	1,037

CO₂-Emissions of GEFO Shipping Group's Inland fleet

KPI	2020	2021	2022
Emission CO ₂ (gCO ₂ e/tokm)	56	53	54
Emission CO ₂ (total MT)	51.277	52.591	48,222
Emission (tons/fleet size (DWT))	0,495	0,476	0,403

Climate neutrality by 2045

Besides the European Commission who strives for climate neutrality by 2050, Germany has already decided on climate neutrality by 2045 with the last amendment to the Climate Change Act. GEFO Shipping Group strongly supports this goal. Thus we are highly involved in own and customer driven initiatives to realize alternative engine and propulsion systems and contribute to the German goal of climate neutrality by 2045.



The future of shipping, developed by GEFO: the new Canaletto.

In December 2022, GEFO launched the newbuilding Canaletto, a highly innovative tanker optimized for extreme low-water situations. With a whole range of innovative features, the multi-purpose barge makes a significant contribution to reducing pollutant emissions and strengthening the inland waterway as a mode of transport.

Innovative and eco-friendly

The Canaletto is equipped with a diesel-electric hybrid propulsion system whose generators are well below the latest EU Stage V emissions standard. They undercut the EU Stage V emission standard for oxides by more than 50 % and for particulate matter by more than 70 %.

In addition, the specially developed water-cooled marine batteries enable all-electric sailing at times as well as complete power supply when at berth. Emissions are avoided entirely!

Our answer to climate change

Low water periods are expected to become more frequent in the near future. That is why we have developed a new ship design. At critical points, such as the Middle and Upper Rhine, the Canaletto can still maneuver safely with a cargo of 500 tons even at a level of 30 centimeters at Kaub gauging station. Under these conditions the Canaletto carries about 50 % more than other tankers with comparable dimensions. This makes it the best low-water carrier on the Rhine.

Other technical innovations, such as an early warning system to protect against bridge collisions, contribute to increased safety.



Key data Canaletto	
Dimensions	110 m long x 11,45 m wide
Capacity	2.921 m ³
Tanks	8 stainless steel tanks, 2 of which rubberized
Developed by	GEFO/Neptun Ship Design
Launched	December 2022
Generators	4 x Volvo Penta D13 MH

One of the youngest fleets among its competitors.

GEFO Shipping Group already has a young and modern fleet. With a huge investment program of over 400 million Euro, we are rejuvenating the fleet even further, in both the seagoing and inland shipping sectors. This will benefit the environment, as the newbuildings are designed with state-of-the-art technology. With modern alternative propulsion technologies, we are reducing emissions sustainably.



Sustainable investments in the GEFO fleet.

While vessels transport 90% of all goods worldwide, they cause only 2% of manmade CO₂-emissions. Nevertheless, shipping must of course do its part to reduce greenhouse gas emissions in order to meet the climate targets of the Paris Agreement and stop global warming.

Our 400 Mio. Euro investment program reflects our engagement for climate and environment. "Green" propulsion systems and emissions reduction are top priorities for all newbuildings. In both the sea-going shipping and inland water transportation sectors we are investing in a sustainable future. The investment program will be completed in 2024. But the fleet will also be steadily renewed in the coming years.

New Inland fleet barges and sea going vessels 2022.

Name	Typ	Capacity m ³	Propulsion system	Entry into service
Slot Dover	G	2.280	Stage V	2022
Slot York	G	2.830	Stage V	2022
Schloss Tramontana	G	2.830	Stage V	2022
Canaletto	C	2.948	Hybrid System/Stage V	2022

Name	Typ	Capacity m ³	Propulsion system	Entry into service
Diabelli	-	3.882	LNG ready	2022
Scarlatti	-	3.800	LNG ready	2022

New inland fleet barges 2023–2024.

Name	Typ	Capacity m ³	Propulsion system	Entry into service
Tintoretto	C	3.040	Stage V	02/2023
Allegretto	C	3.040	Stage V	03/2023
Benedetto	C	3.040	Stage V	05/2023
Schloss Imola	G	2.824	Stage V	05/2023
Schloss Quedlinburg	G	2.824	Stage V	06/2023
Caravaggio	C	2.150	Stage V	Q3/2023
Correggio	C	2.150	Stage V	Q3/2023
Belotto	C	3.040	Stage V	Q3/2023
Grechetto	C	3.040	Stage V	Q3/2023
Tiepolo	C	3.040	Stage V	Q3/2023
Chirico	C	3.040	Stage V	Q2/2024

Reduction in pollutant emissions

The partial renewal of the fleet is expected to achieve fuel savings of up to 30% and a reduction in pollutant emissions to the same extent, also up to 30%.

Particularly in the inland tanker segment, the use of engines and exhaust systems that comply with the new EU Stage V standard, emissions of hydrocarbons will be reduced by 81%, nitrogen oxides by 97% and particulate matter by 95%.

In accordance with the Paris Agreement GEFO is endeavoring to make its ships carbon-neutral by 2045. The current modernization of the fleet has successfully initiated the process towards a climate-neutral fleet and will be consistently pursued over the next two decades.

We invest in new ideas.

GEFO is participating in many projects within shipping and sustainability, keeping a finger on the racing pulse of developments around us.

Here we would like to introduce you to some of our new projects.

The CO₂ transportation projects

GEFO Shipping Group is involved in the early stages of several projects enabling the transportation of CO₂ on barges and sea-going vessels as part of the required infrastructure for current and future Carbon Capture and Storage (CCS) projects from the entire supply chain of industrial sites up to special gas fields in the North Sea.

Green shipping initiatives

GEFO is participating in several initiatives and projects with regulatory institutions and foremost with major clients in the oil and chemical industry regarding "green shipping". These projects involve the use of green fuels such as green methanol, ammonia or hydrogen for alternative propulsion systems of inland barges or deep sea vessels and the role of a logistics service provider to transport these new alternative energy sources within the whole European inland barging and short-sea region.

The Flettner Rotor project

The quest for saving fossil fuels poses huge challenges for us as chemical tanker operator on short sea trades. One step beyond switching to alternative fuels, is installing aids to mechanical propulsion. One project which has been largely brought to a finalized plan, is the installation of a Flettner Rotor on one of our larger deep sea vessels. It will deliver additional thrust to the vessel thus reducing burning of traditional fossil fuel by as much as 15 %.

Reducing plastic bottles on board

On board, people mostly drink water from single-use plastic bottles. This form of water supply is costly and environmentally harmful, because PET takes up to 450 years to dissolve. Therefore, we are working on the feasibility to implement and install drinking water filling stations on the deep sea vessels to avoid PET bottles and reduce the environmental footprint.

More safety: The launch of the new digitization campaign

In 2022, we launched a comprehensive and innovative IT change process across the GEFO Shipping Group to align with current challenges and address future innovation initiatives. The GEFO digitization campaign includes the following steps:

- Roll-out in 2022 of a **centralized GEFO IT platform** to integrate all commercial departments as well as HSSEQ, Technical and Crewing departments on one IT platform.
- Introduction of **new GEFO IT standards** (hardware and software) within GEFO's own Inland fleet together with integration on the central GEFO IT platform for digitization across the complete GEFO Shipping Group.

These steps will simplify processes and make it easier for crews to work on board. In addition, we are setting new industry standards in automated IT chartering tools which will **increase safety in the shipping industry**:

- Automated hazardous product information based on government regulations combined with technical vessel information.
- IT integration for industry reporting schemes such as automated direct communication with European safety institutions.

With the new system, we are taking account of the increased importance of **cyber security**. In recent months, attacks on the IT structure of companies in the so-called critical infrastructure have been on the rise. Our new IT structure is an important component of GEFO's cyber security strategy. Training is another point when it comes to cyber security. Among other things, we train our employees how to identify dangerous phishing emails.





Engagement and collaboration.

For us as a tanker owner and operator it is a vital part of our safety culture to develop training scenarios with a real expert organization like WMU, not only with regard to our demanding customers, but also with regard to the safety of our crew and environment. The cooperation with WMU is in all respects beneficial and has improved our efforts towards accident prevention as well as the resilience and mental health of our crews.

Successful collaboration with the WMU.



A good, motivated crew is probably the most fundamental keystone for sustainable success. Training in our ever-evolving high-tech industry is of the utmost importance. And protecting the health of our personnel on board is also a top priority for GEFO Shipping Group. We address both topics in collaboration with the World Maritime University (WMU) in Malmö/Sweden. The WMU is the global center of excellence for postgraduate maritime education, research and capacity building, recognized by the IMO and the United Nations General Assembly.

Attending courses on seafarer health and well-being

The cooperation with the WMU, which had started back in 2014, has continued also in 2022. In September, a group of 25 professionals from GEFO participated in an customized **Executive and Professional Development Course (EPDC)** on seafarer health and well-being, delivered by Dr. Michael Manuel, WMU Professor. Specific topics addressed included workload stress, social isolation, alcohol & drug issues, interrelation between corporate practices and individual perceptions, and characteristics on health and well-being. It has thus been decided that not only the Ship's staff and officers should be addressed, but the ratings equally well. For 2023, a WMU seminar for the ratings has been organized. WMU President Dr. Cleopatra Doumbia-Henry emphasizes the close relationship between WMU and GEFO: **"The WMU is proud to have a great relationship with GEFO.** The company's commitment to employee education and development through WMU is a testament to their dedication to excellence and innovation in the maritime industry".

Mental training strengthens the resilience

To empower the well-being of our maritime workforce, we conduct training sessions. **GEFO's mental training initiative** strengthens the resilience of crew members by improving their situational awareness and mental preparedness. Through the training, crew members gain a deep understanding for the various causes that often trigger dangerous situations and internalise action plans for dealing with them in the most optimal way. As a result, the individual "toolbox" grows with every training session and with it the probability of having the right tool at hand for solving a specific problem. The applied methods enhance the stress coping and decision-making skills of each individual but also of the crew as an operational unit. Topics discussed during our training sessions include stressors at sea, social isolation, possible conflicts and prevention of the same, as well as resolution, and optimizing wellbeing and mental health onboard. Putting the before said into an applicable context for each crew member, strengthens the ability to deal with stressors and leads to a high level of resilience for each individual.



More than 60 years of success in the shipping industry.

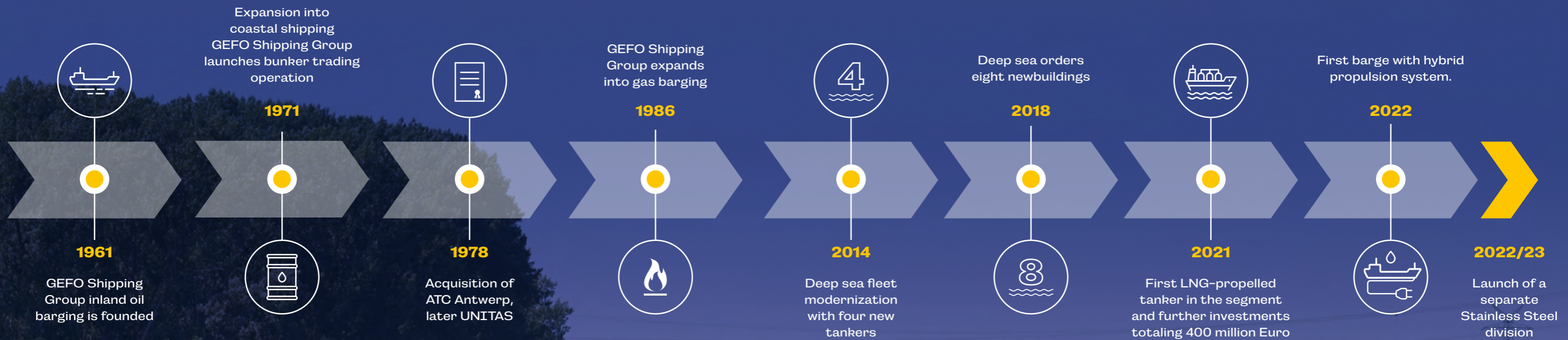
GEFO Shipping Group was founded in 1961 in Hamburg as a part of Marquard & Bahls. Written out in full, the name GEFO Gesellschaft für Öltransporte mbH translates as GEFO Company for Oil Transport Ltd, which shows just how far we have grown since the 60s. GEFO Shipping Group has gone from success to success and is now a top 3 service provider in the chemical shipping industry.

To sum it up:

Decades of experience. Shaping a sustainable future.



Important milestones





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