



# A First in Turkey: Reducing Carbon Footprint with Bio24F Biofuel

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### How have we achieved this?

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# Maritime Sector Accelerates Its Green Transition in 2025

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### **Alternative Fuels Gain Traction**

The use of low-carbon fuels such as LNG, hydrogen, and ammonia is rapidly expanding. Since 2022, LNG has been used in 20% of newly built vessels, while major players are actively testing ammonia-based engines.



# TOTALUS We are happy to share the latest developments in our sustainability projects and our journey toward decarbonization in every issue.

developments in our sustainability

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\_\_\_\_\_\_\_ 2025: Pivotal Year of the Ocean

# Our Decarbonization Journey: Propeller Retrofit and Scrubber **Technologies**



Ship operations account for approximately 98% of our total carbon footprint. Enhancing efficiency, reducing fuel consumption, and minimizing our environmental impact remain our top priorities. Entering 2025, we've implemented propeller retrofits and scrubber installations to boost operational efficiency and lower our environmental footprint.

Our first propeller retrofit and scrubber installation were successfully completed on the vessel Emma A in February.

The propeller retrofit initiative optimizes water flow, significantly improving energy efficiency and reducing fuel consumption across our fleet.

# **Benefits of the Propeller Retrofit:**

- Fuel savings up to 8%
- Reduced greenhouse gas emissions linked to lower fuel consumption
- Weight optimization achieved by reducing propeller weight from 47 to 37 tons
- Enhanced performance and energy efficiency through optimized water flow design

In addition to propeller upgrades, our scrubber installations aim to lower the sulfur content in our global emissions below 0.1%.

As of May 1,2025, the Mediterranean Sea has been declared an Emission Control Area (ECA), mandating the reduction of sulfur oxide (SOx) emissions to 0.1%. Updating our fleet accordingly ensures compliance and strengthens our environmental commitment.

## **Advantages of Scrubber Systems:**

- Emission Reduction: Up to 98% reduction in SOx emissions
- Fuel Cost Savings: Continued use of highsulfur fuel, significantly reducing costs
- Sustainability: Full compliance with ECA regulations, lowering environmental impact
- Operational Efficiency: Continuous and reliable performance through exhaust gas cleaning systems

By complying with IMO environmental regulations, we are building a cleaner maritime future. This transformation not only reduces fuel consumption but also strengthens circular economy practices in maritime shipping, supporting our broader sustainability goals.



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- **What is Bio24F?**
- ISCC EU Certification: Fully compliant with EU sustainability and greenhouse gas emission reduction criteria.
- Composition: An innovative biofuel consisting of 24% Used Cooking Oil Methyl Ester (UCOME) collected from restaurants and food processing facilities in Turkey and 76% low-sulfur fuel oil (FO).
- Emission Reduction: Reduces carbon emissions by up to 23% compared to traditional marine fuels.
- Low sulfur content helps reduce air pollution.

Decarbonizing Supply Chains with Our Biofuel Solution: Book for Green In March 2025, Arkas Line launched the "Book for Green" initiative to help customers achieve their net-zero goals and reduce Scope 3 emissions. Through this initiative, our customers can partner with Arkas Line in biofuel use, reducing emissions in their supply chains.

Customers interested in biofuel transportation can contact us via:

- 1. Arkas Line Sales Offices
- 2. Website: Ship with BIO24F Arkas Line
- 3. Book for Green Email: bookforgreen@arkasline.com.tr

Customers will receive verified certificates showing greenhouse gas reductions through Book for Green.

At Arkas Line, we continue taking environmentally responsible steps through sustainable transportation solutions.

Through the Book for Green initiative, we invite our customers to join us in this goal by providing eco-friendly, low-emission transportation services."



# Digitizing Sustainability: Arkas Line x Map360 Collaboration



For Arkas Line, maritime transportation means safely carrying not just cargo, but also a more livable future. In late 2024, we partnered with ESG software provider MAP360 to accurately analyze our ESG (Environmental, Social, and Governance) data, define our long-term sustainability objectives, and proactively prepare for upcoming reporting standards.

Starting in early 2025, all our sustainability data will be managed through a digital platform.

- Through this collaboration, we aim to:
- Make data-driven decisions to effectively manage our ESG performance
- Reduce our carbon footprint and optimize energy management
- Foster transparent communication and build trust with our stakeholders through comprehensive reporting

# Transformation Begins in the Supply Chain: Growing Together

The maritime industry plays a crucial role in the global supply chain. The European Union's Corporate Sustainability Reporting Directive (CSRD) now requires companies to report not only on their own activities but also on sustainability practices throughout their supply chains and to take necessary measures to mitigate negative impacts.

At Arkas Line, sustainable supply chain management is among our top priorities. To monitor our efforts, set development targets, and create action plans, we established the "Sustainable Supply Chain Committee" in December 2024.

Within our Integrated Management System, we enhanced our annual supplier evaluation processes by incorporating ESG questionnaires, using this data for assessments.

Using the data collected from our suppliers, we aim to strengthen our sustainability strategies and manage potential risks within our supply chain.

Through sustainable supply chain management, our goals include:

- Setting measurable sustainability targets for our suppliers,
- **☑** Encouraging reduction of their carbon footprints,
- Supporting the development of all participants and stakeholders within the supply chain.

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# A New Era Sustainability Reporting

Sustainability reporting is undergoing significant changes, shifting from voluntary practices to mandatory standards, becoming more comprehensive and transparent.

### 2000'ler: Rise of GRI

GRI Standards provided a global framework for organizations voluntarily reporting sustainability, offering transparency on ESG (Environmental, Social, and Governance) indicators.

2021: Announcement of CSRD
The European Union announced the
Corporate Sustainability Reporting
Directive (CSRD), shifting sustainability
reporting from voluntary to mandatory,
replacing the Non-Financial Reporting
Directive (NFRD), thus broadening the
scope to include more companies.

2023: TSRS Published
Turkey introduced the TSRS (Turkish
Sustainability Reporting Standards),
aiming for more transparent and
auditable sustainability reporting.

## 2024: Mandatory Implementation

- CSRD became mandatory for companies already reporting under NFRD.
- TSRS became mandatory for large companies meeting certain criteria in Turkey.

## **Proposed Changes to CSRD Scope:**

- Narrowed Scope: The European Commission proposed limiting the scope to companies with over 1,000 employees, significantly reducing the number initially covered (from around 50,000 to excluding 80% of companies).
- Flexibility for Small Businesses: Smaller businesses exempted from providing sustainability data required by larger firms.

## **TSRS Exceptions:**

- Companies listed on the Istanbul Stock Exchange's Watchlist Market and Venture Capital Market are excluded from TSRS requirements. Companies not publicly listed and issuing securities without public offerings are also exempt.
- Small Banks and Financial Institutions: Those with fewer than 250 employees or only one branch are exempted from mandatory disclosure of Scope 3 greenhouse gas emissions; this reporting is voluntary.

As sustainability reporting becomes increasingly mandatory and comprehensive, companies are committed to transparent and accountable reporting practices.

At Arkas Line, we published our first sustainability report in 2024 according to GRI standards, marking a significant step toward transparency and accountability. We will continue strengthening our reporting practices with the same approach this year.

# Arkas Line Social Impact Program: Acting for Global Impact!



In 2024, Arkas Line launched the "Best Impact" Project to contribute positively to communities across all regions where we operate and spread our social responsibility efforts globally. Involving our international offices, we invited project ideas aimed at benefiting people, communities, nature, and animals in their local cities.

Our "Blue for Green" initiative focuses on environmental and nature conservation projects, while "Blue for Life" centers around community welfare, education, and social wellbeing.

Best Impact projects, executed in collaboration with local NGOs and institutions, will be overseen by our country managers throughout 2025. Results and impacts will be shared with all employees at the end of the year.

# Our Eco Vadis and CDP Ratings





Sustainability (ESG) ratings help companies mitigate climate-related risks and build trust through transparency with stakeholders.

- EcoVadis: Since 2015, Arkas Line has participated in EcoVadis assessments, a globally recognized corporate rating platform evaluating companies on Environment, Human Rights, Ethics, and Sustainable Procurement. In 2024, we achieved a Bronze Medal, placing us in the top 35% of companies assessed.
- CDP (Carbon Disclosure Project): CDP is a global reporting system encouraging transparency on environmental impacts related to climate change, water security, and deforestation. Arkas Line has been reporting to CDP on climate change since 2023, and in 2024, we attained a "C" rating.

These ratings guide us in identifying areas for improvement, updating our sustainability goals, and continuously elevating our performance each year.

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# Arkas Line and Arkas Bunker at Green Shipping Summit Rotterdam 2025



In late January 2025, Arkas Line, Arkas Bunker, and Arkas Holland participated in the 9th Green Shipping Summit in Rotterdam. Arkas Line contributed to the summit's agenda committee, while Seçkin Gül, General Manager of Arkas Bunker, spoke at the panel titled "Future of Alternative Fuels and Next-Generation Fuel Strategies in Maritime." During the panel, Gül introduced Arkas Bunker's pioneering ISCC-certified Bio24F biofuel produced for the first time in Turkey, sharing insights about low-carbon and renewable fuels and Arkas Bunker's experiences in this area.

- Conference Highlights:
- ▼ Fuel efficiency through digital twin technologies and artificial intelligence
- Preparing for a multi-fuel future in maritime
- Port optimization with the "Just-in-Time" arrival concept

We continue leading our sector toward a more sustainable and digital future.

# Penn State MBA Students Visit Arkas Line



MBA students from Penn State, one of America's distinguished universities, visited Arkas Line during their field trip to Turkey. They learned about our sustainability initiatives and the maritime industry.

Serra Tükel, Sustainability Director at Arkas Maritime Group, shared insights on the significance of Arkas Holding and Arkas Line in Turkey's maritime sector, the climate-focused transformation process, and our sustainability efforts from leadership and innovation perspectives.

We were delighted to engage with the inspiring questions of future international business leaders and emphasize the importance of sustainable transformation in the maritime sector!

Stay tuned! Together, we're building a more sustainable future!

# Meaningful Donation from Arkas Hellas to Special Elementary School of Penteli!

With the valuable contributions of our Greece office, Arkas Hellas, our volunteer team successfully carried out an initiative to construct a wooden outdoor storage unit for the Special Elementary School of Penteli.

The school established in 1980 and designated as a special school in 1982, originally served the children of the PIKPA Penteli sanatorium.

Over time, it transitioned to meeting the needs of children with mobility and intellectual difficulties from the surrounding area.

As part of this initiative, members of our volunteers Lena Apostolidou, Katerina Goula, and Dimitris Kassimatis visited the school. They spent time engaging with the children through games, conversations, and shared experiences, fostering a sense of connection and community. The activities allowed the children to participate in cooperative games, helping them develop communication and teamwork skills. These activities brought joy and meaningful moments, leaving a lasting impact on both the children and the volunteers.

By supporting projects like this, Arkas Line continues to promote sustainability inclusion, and community well-being, paving the way for a brighter future for all.









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# <u>Technology and Hybrid Systems Take the</u> <u>Lead</u>

Hybrid propulsion technologies, automated energy management systems, and onboard carbon capture solutions are becoming more widespread. For example, Norway's Coastal Administration vessel OV Bøkfjord is being retrofitted with hybrid systems to significantly reduce its emissions.

Regulations Are Reshaping the Industry
The European Union's Emissions Trading
System (ETS) was extended in 2024, and
by 2025, commercial vessels over 5,000
gross tons will be required to pay for their
carbon emissions.

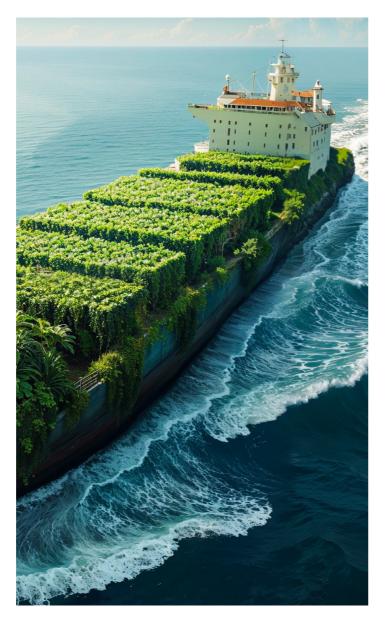
This could raise operational costs by 10–15% for companies involved in longhaul shipping.

## **Ports and Wind-Assisted Shipping**

Major hubs like Rotterdam, Singapore, and Los Angeles are developing green corridors that prioritize low-emission vessels. Ships equipped with wind-assist technologies can reduce fuel consumption by up to 30%.

# **Looking Ahead**

Industry experts predict that by 2035, half of the world's maritime transport will be powered by vessels running on alternative fuels. However, infrastructure gaps and high costs remain critical factors that will dictate the pace of this transition.



# 2025: Pivotal Year for the Ocaen



The oceans are sounding the alarm in the face of climate change. As sea surface temperatures reach record highs, plastic pollution and biodiversity loss are accelerating at an alarming pace. Yet under the United Nations' Sustainable Development Goals (SDGs) for 2030, SDG 14 (dedicated to the conservation of oceans) remains one of the least funded goals. The return of U.S. President Donald Trump has also cast uncertainty over progress, with offshore wind energy projects being suspended and resource extraction prioritized.

However, 2025 could mark a turning point in ocean governance and protection. This year is expected to see the implementation of several critical international agreements and regulations related to ocean health.

# **High Seas Treaty**

Aimed at safeguarding international waters, this treaty requires ratification by at least 60 countries to enter into force. The upcoming UN Ocean Conference (UNOC) is seen as a key opportunity to accelerate this process.

# Elimination of Harmful Fisheries Subsidies

Adopted by the World Trade Organization (WTO), this agreement needs ratification by 111 member states to take effect. The goal is to secure the necessary support within 2025.

### **Global Plastics Treaty**

A binding international agreement to combat plastic pollution in oceans is under negotiation, with 2025 marking a decisive year for its development and adoption.

## **Deep-Sea Mining Regulations**

The International Seabed Authority (ISA) is set to hold a critical meeting in July to finalize global regulations for deep-sea mining.

In addition, key events such as the UN Ocean Conference (UNOC), Our Ocean Conference (OOC), the IUCN World Conservation Congress, and COP30 will gather world leaders and private sector stakeholders, urging them to take concrete steps toward sustainable ocean governance.





In every issue, we bring you the latest news from Arkas Line, he sustainability journey of the maritime industry, and innovative, inspiring projects from around the world.

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