

First results of the EU-ETS Observatory

20 February 2026

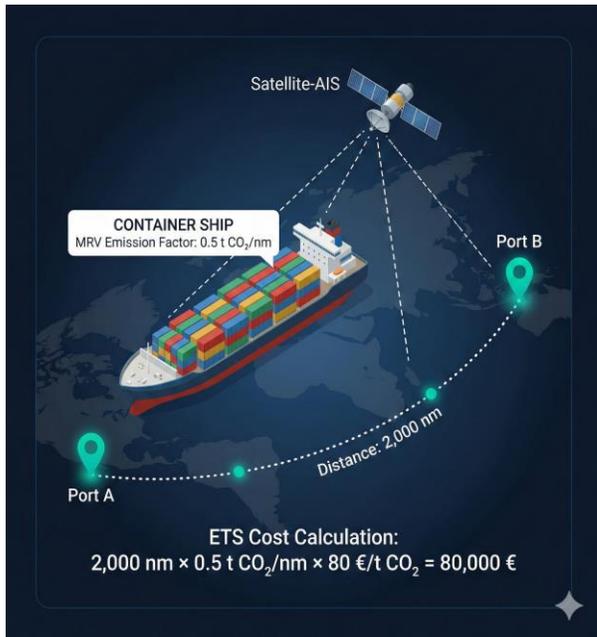
Puertos del Estado



Based on Report 1 version 2.2 ES
Data up to September 2025

The EU-ETS Observatory

The observatory has a duration of three years and is being developed by a consortium made up of three companies with experience in the maritime sector.



AIS dataset make it possible to accurately describe the structure and evolution of maritime routes.

Based on this information, emission estimates are obtained and calibrated using MRV-EMSA emissions dataset

The observatory provides the following services:

- **Monitoring:** Tracking the evolution of routes and emissions based on AIS and EMSA data.
- **Prediction:** Forecasting the risk of route changes based on statistical transport models.

The monitoring service tracks the evolution, among others, of the following parameters:

- Number of port calls
- Number of port calls by deep-sea route vessels
- Distances sailed
- Vessel capacity
- CO₂ equivalent emissions
- TEU_Mile
- TEU-mile market share

Factors that may have influenced the reconfiguration of maritime routes

End of the CBER

(breakup of alliances)

On 25 April 2024, the European Commission stopped renewing the CBER (Consortia Block Exemption Regulation), which allowed shipping companies to establish cooperation agreements that, under certain conditions, were exempt from the antitrust rules applicable within the EU.

Red Sea Crisis

At the end of 2023, in response to attacks on maritime traffic in the Red Sea, shipping companies stopped using the Suez Canal and switched to the Cape of Good Hope route

EU-ETS

Since 1 January 2024, merchant vessels with a gross tonnage of 5,000 GT or above have been brought within the scope of the EU Emissions Trading System (EU ETS).

For large container vessels operating on transoceanic routes, the implementation of this regulation is expected to **increase navigation costs by around 28 per cent**. For instance, for a 20,000 TEU container vessel sailing between Singapore and Rotterdam via the **Suez Canal**, **fuel costs** would amount to approximately **€1.1 million**, with a further **€335,000** arising from the **application of the EU ETS**. On the same voyage undertaken via the **Cape of Good Hope**, **fuel costs** would rise to around **€1.6 million**, with an **additional €476,000** due to the **application of the EU ETS**.

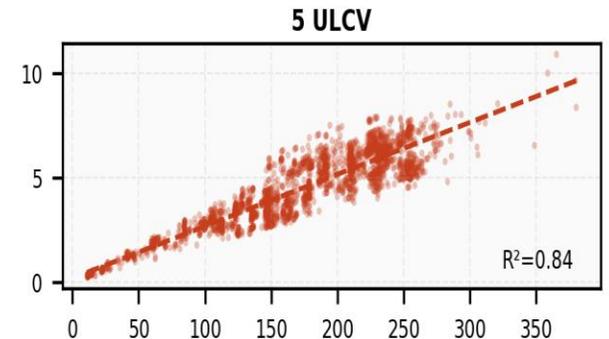
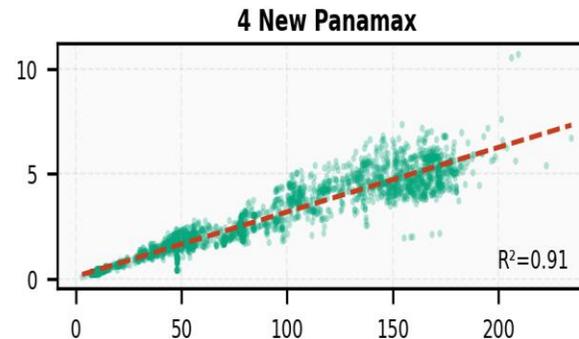
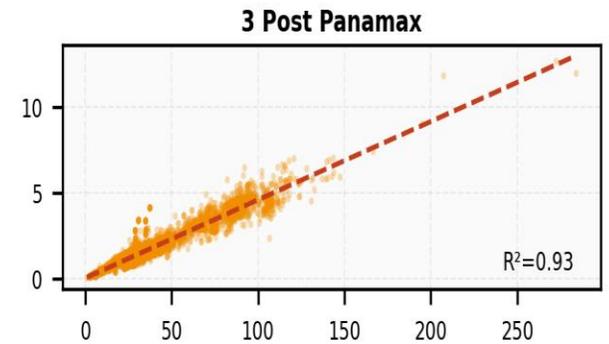
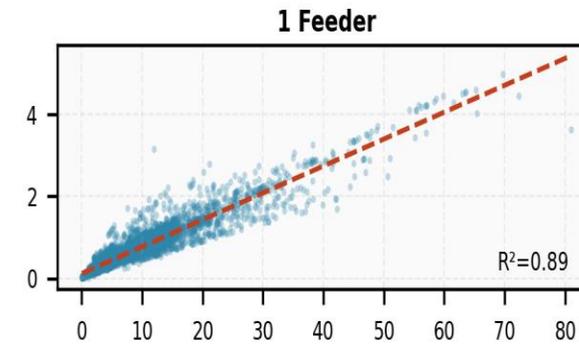
The TEU-mile indicator

- **TEU-miles of a vessel** = Vessel TEU capacity × (distance to the origin port + distance to the destination port)
- **TEU-miles of a port** = Sum of the TEU-miles of all vessels calling at the port.
- **Share_TEU-mile** = Percentage of total EUROMED TEU-miles attributable to a port.

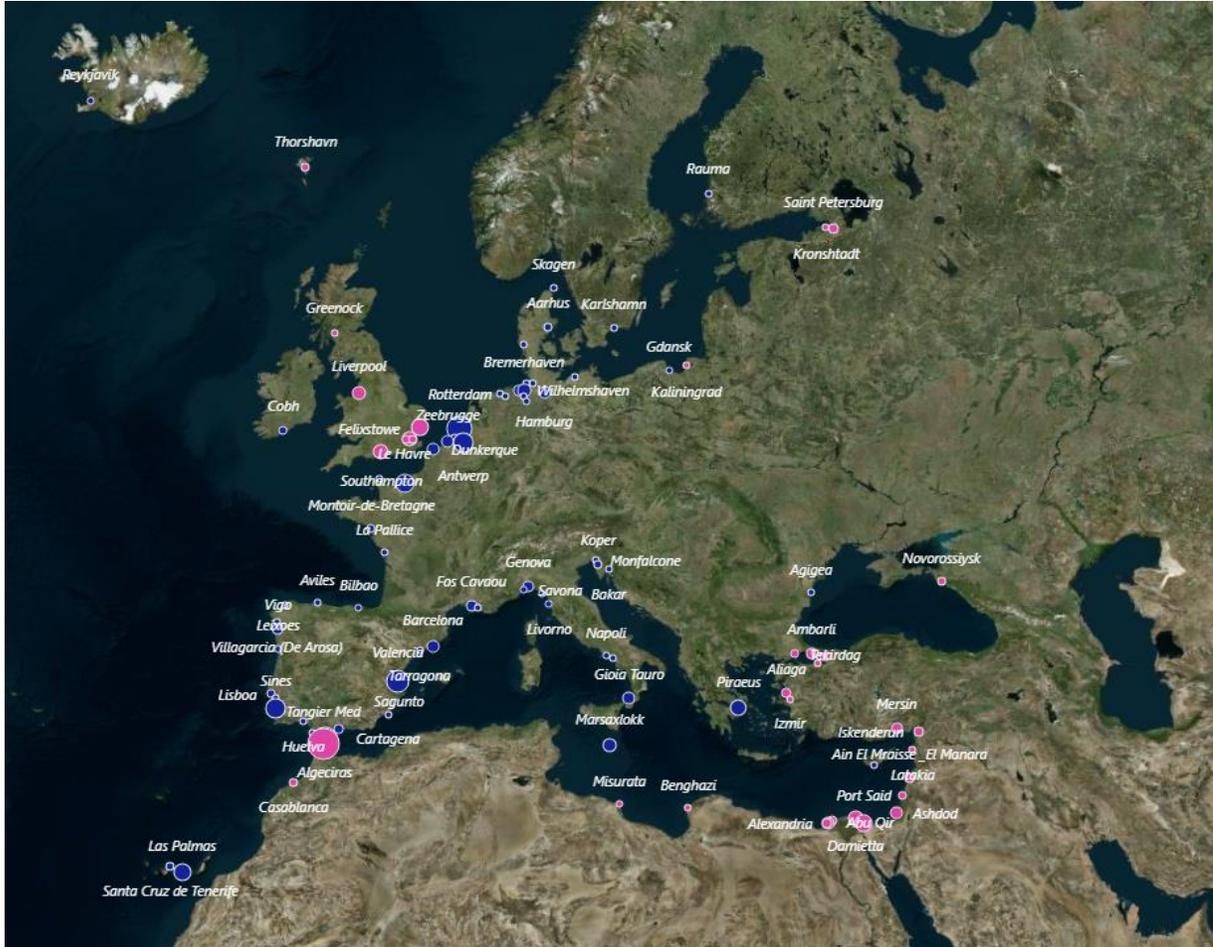
Advantages of the TEU_mile share_TEU_mile

- **CO₂ emissions:** Strongly correlated with the CO₂ emissions reported by vessels.
- **Connectivity:** Enables the identification of changes in port connectivity.
- **Fast:** Fast computation and automated data exploration capability.
- **Robust:** The TEU-mile share makes it possible to identify changes in the traffic balance between the EU and its neighboring countries (*EEA ports vs EEA+ ports*), even in situations involving structural changes such as those introduced by the Red Sea crisis.

kTEU-Miles vs CO₂ - EUROMED EXTRA (Individual Calls)



Regional scope



● EEA

Ports in EU Member States

● EEA+

Ports in EU neighboring countries located within 300 nautical miles.

EUROMED

Ports in the EEA and EEA+ regions

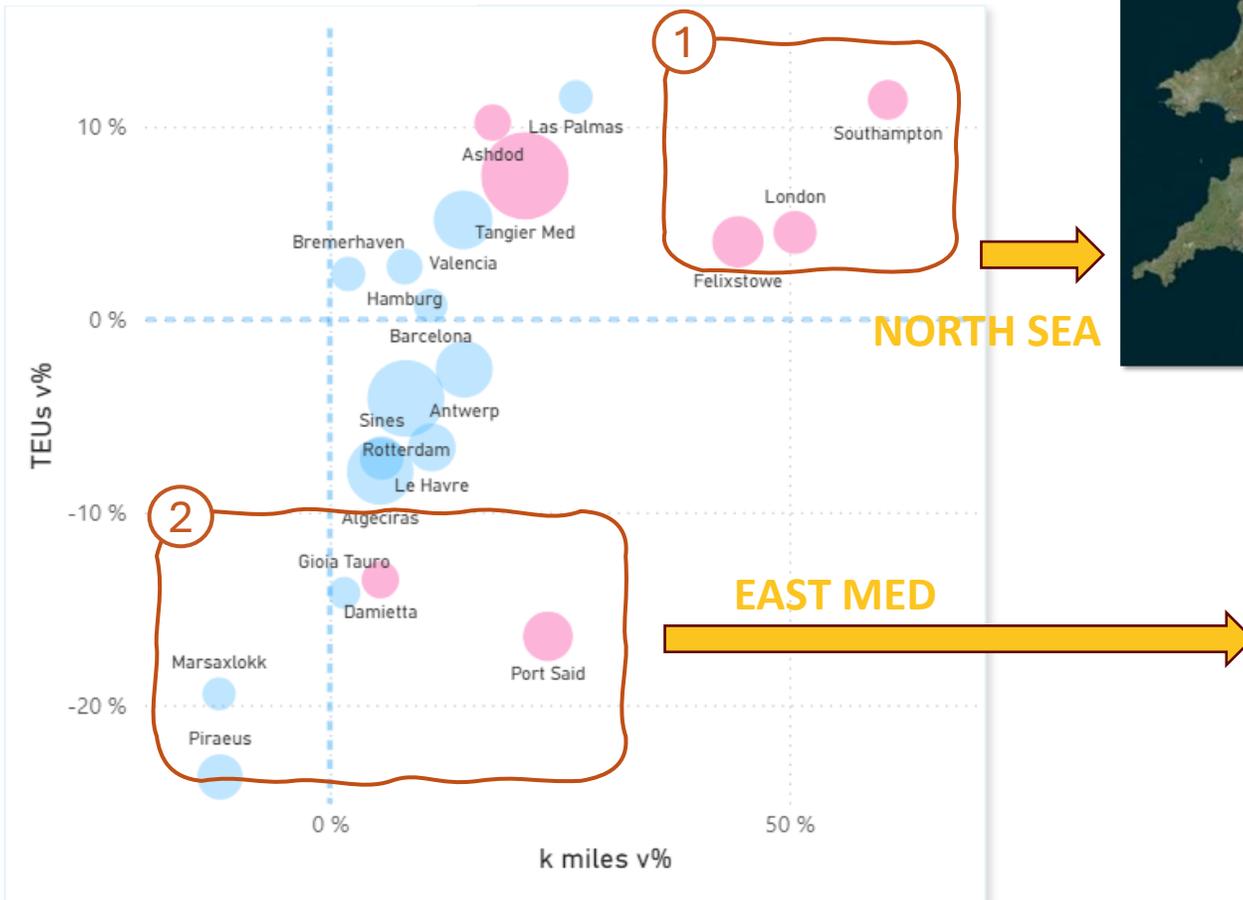
EUROMED Gateway Calls

Calls at EUROMED ports by vessels operating on transoceanic (deep-sea) routes.

Where is the TEU-mile balance changing?

Main EEA and EEA+ ports

TEU variance vs miles variance. Bubble size = k TEU mile
 [oct 2024 - sep 2025] vs [2023]



NORTH SEA - CASE STUDY.



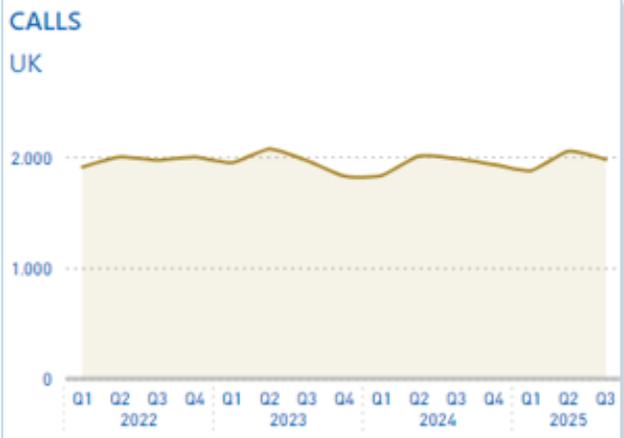
● EEA Ports of EEA countries

● EEA+ Ports of neighbouring countries. All neighbouring ports are within 300 miles.

NORTH SEA - CASE STUDY. Time evolution of port calls

EUROMED

ALL CONTAINER SHIPPING ROUTES



EUROMED GATEWAY

DEEP-SEA CONTAINER SHIPPING ROUTE

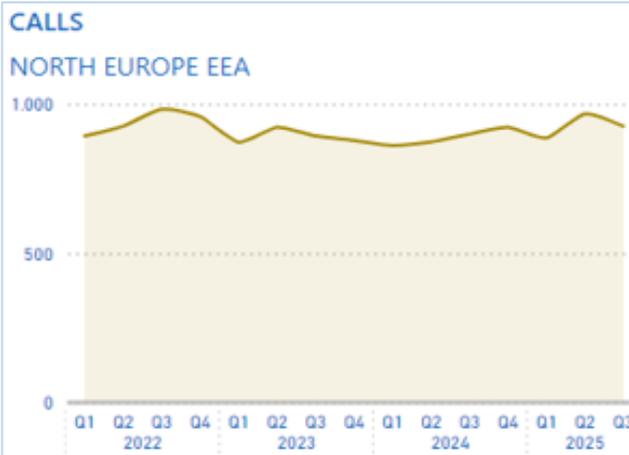
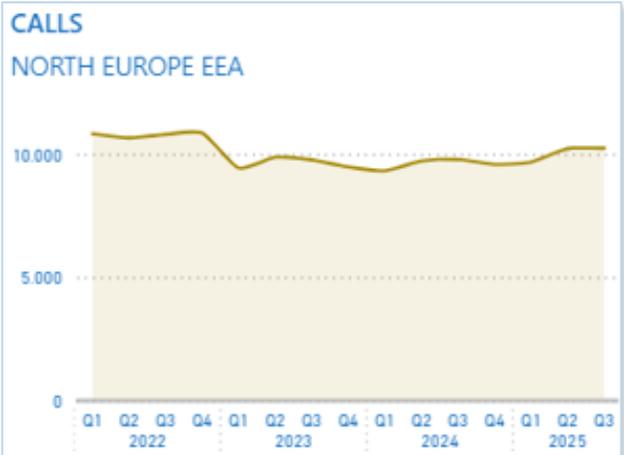


UNITED KINGDOM

NUMBER OF PORT CALLS

NORTHERN EUROPE

NUMBER OF PORT CALLS



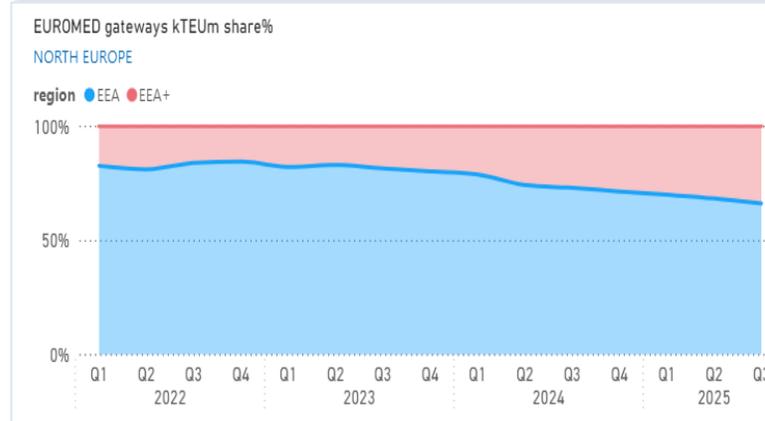
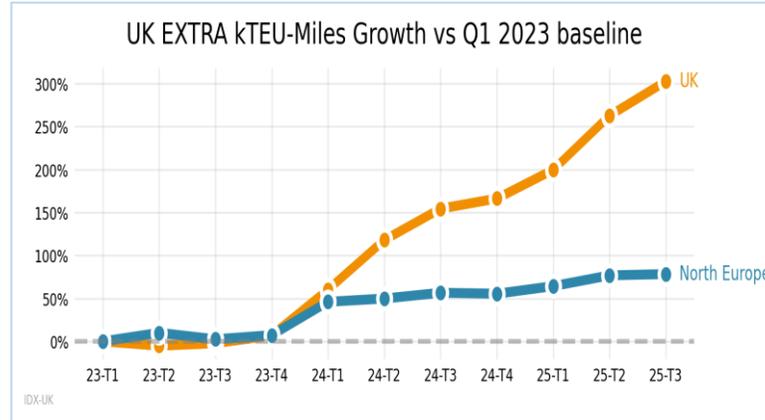
The analysis of the number of container ship calls at ports in the United Kingdom and at ports in Northern European EU countries shows no significant changes since 2022.

However, when the analysis focuses on container ship calls on transoceanic routes, UK ports show sustained growth from late 2023 through the second quarter of 2025.

This highlights the importance of focusing the analysis on the study of entry and exit routes to the EUROMED region.

NORTH SEA - CASE STUDY. Time evolution of TEU_miles

DEEP-SEA CONTAINER SHIPPING ROUTE



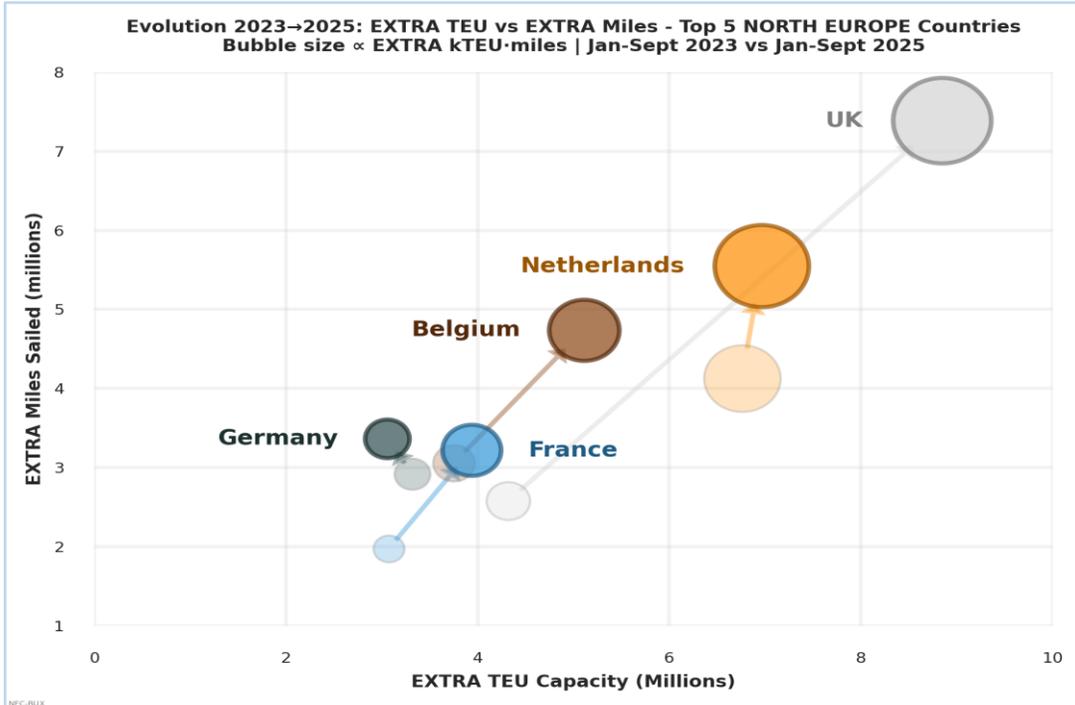
Percentage growth of the TEU-mile indicator relative to Q1 2023. This chart shows, first, a faster and sustained growth of the TEU-mile indicator in UK ports, and second, a flattening of the indicator's growth in Northern European EU ports at the end of the period.

The evolution of the share kTEUm show these findings as a consistent and sustained expansion of the UK ports' share relative to Northern European EU counterparts.

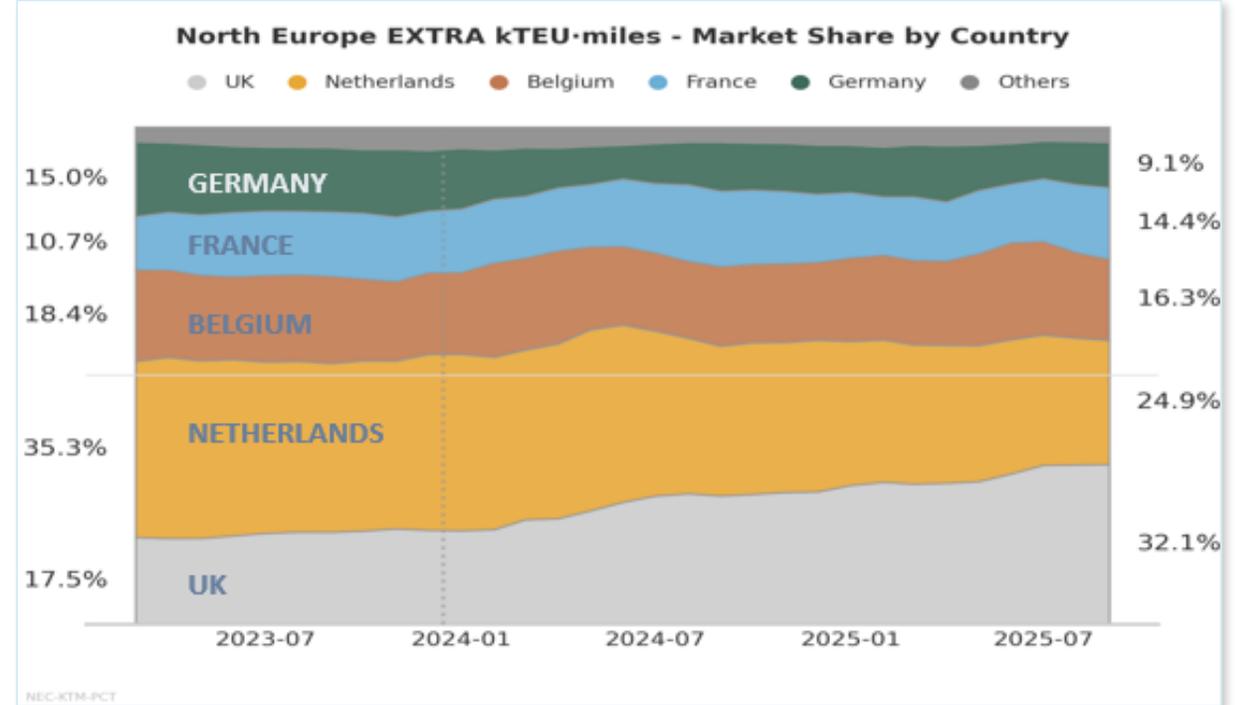
The evolution of the kTEU_mile indicator shows a sharp increase at the end of 2023 in response to the Red Sea crisis. From that point onward, sustained growth is observed in the United Kingdom, with no signs of deceleration. This increase is also recorded in ports in Northern Europe, although at a slower growth rate

NORTH SEA - CASE STUDY. Time evolution of TEU_miles share

DEEP-SEA CONTAINER SHIPPING ROUTE



The light circles show the status of each country in 2023. The dark circles show the status in oct.2024-sep.2025. The UK surpasses the northern European countries in both the total vessel capacity calling at its ports and the nautical miles sailed by ships arriving at or departing from them.



Evolution of kTEU-mile share over time. The area chart illustrates a clear reallocation of kTEU-miles: the United Kingdom's increase of around 15 percentage points in TEU-mile share is almost symmetrically reflected in the combined decrease of the Netherlands and Germany.

NORTH SEA - CASE STUDY

Asia-North Europe 2023



NORTH SEA - CASE STUDY

Asia-North Europe 2025



NORTH SEA - CASE STUDY

Asia-North Europe 2025



In certain cases, Asia–Northern Europe routes have been reconfigured so that entry to and exit from the region take place via British ports

EAST - MED CASE STUDY.



● EEA Ports of EEA countries

● EEA+ Ports of neighbouring countries.
All neighbouring ports are within 300 miles.

EAST - MED CASE STUDY. Time evolution of port calls

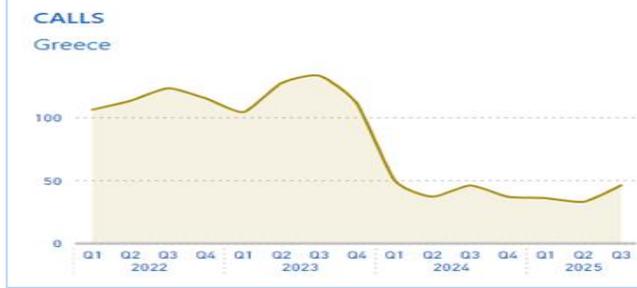
EUROMED

ALL CONTAINER SHIPPING ROUTES



EUROMED GATEWAY

DEEP-SEA CONTAINER SHIPPING ROUTES



GREECE

NUMBER OF PORT CALLS

EGYPT

NUMBER OF PORT CALLS



TURKEY

NUMBER OF PORT CALLS



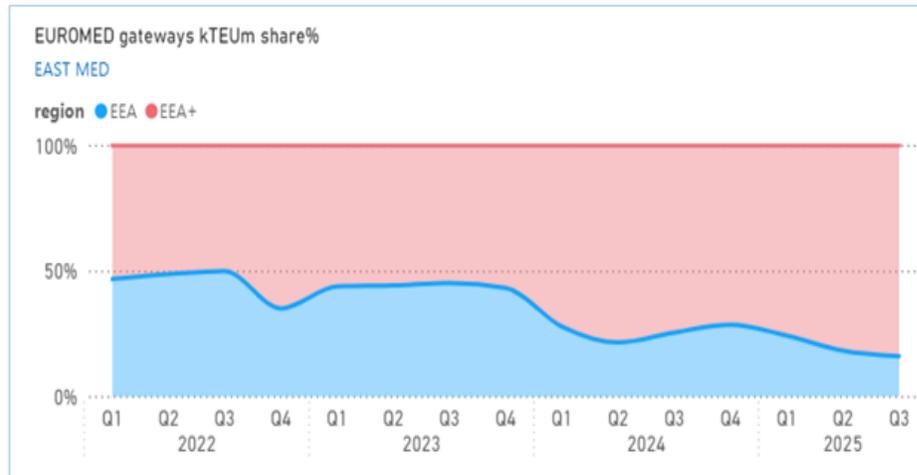
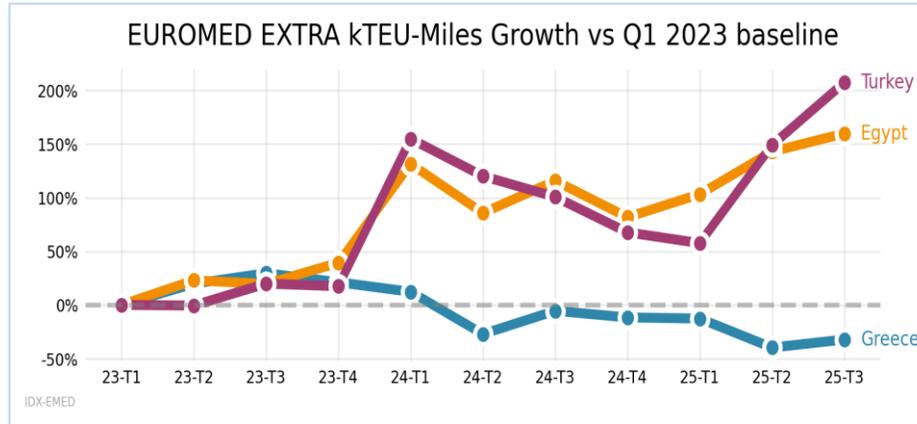
When all routes are analysed, the number of port calls remains stable in Greece and shows a slow but sustained increase in Egypt and Turkey.

If the analysis focuses on calls on trans-oceanic routes, a sharp drop in port calls is observed in Greece and Egypt at the end of 2023. In Egypt, after this decline, there is a sustained recovery up to levels close to those of the first quarter of 2022. By contrast, in Greece port calls do not recover.

In Turkey, the canal closure triggers a rapid increase in deep-sea route calls, which levels off in the third quarter of 2024.

EAST - MED CASE STUDY. Time evolution of TEU_miles

DEEP-SEA CONTAINER SHIPPING ROUTES



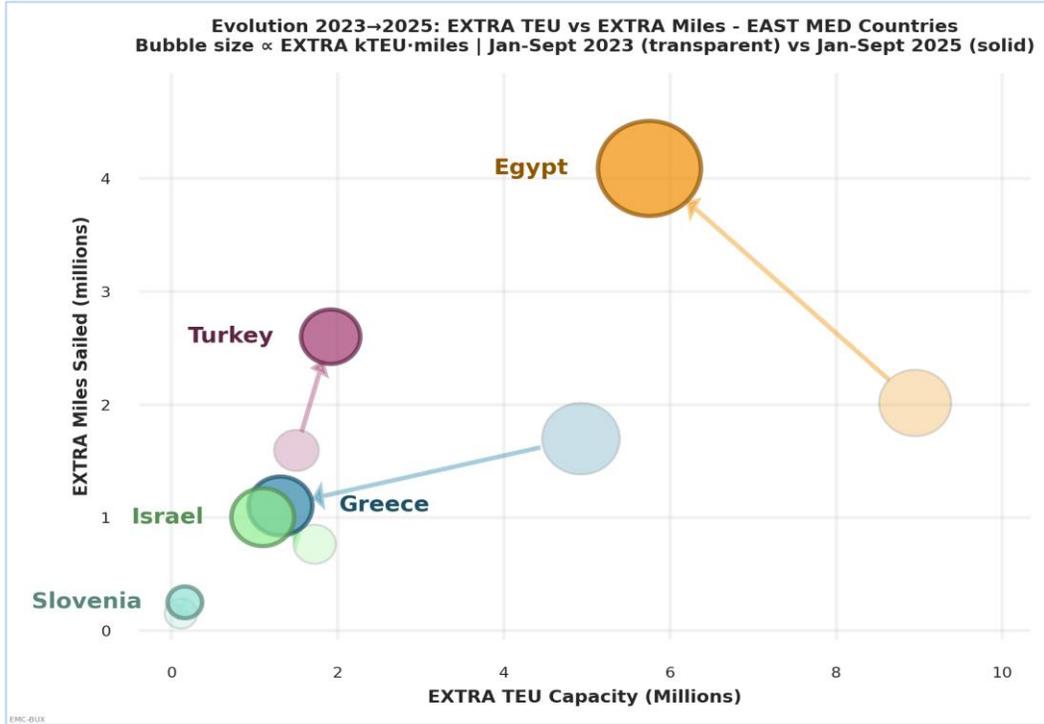
Percentage growth of the TEU-mile indicator relative to Q1 2023. In Egypt and Turkey, the indicator exhibits rapid and sustained growth. By contrast, in Greece the indicator shows a gradual and steady decline.

There has been a steady and sustained decline in the EU countries' share of TEU-miles in the Eastern Mediterranean, relative to that of their neighbouring states (mainly Egypt, Turkey and Israel)

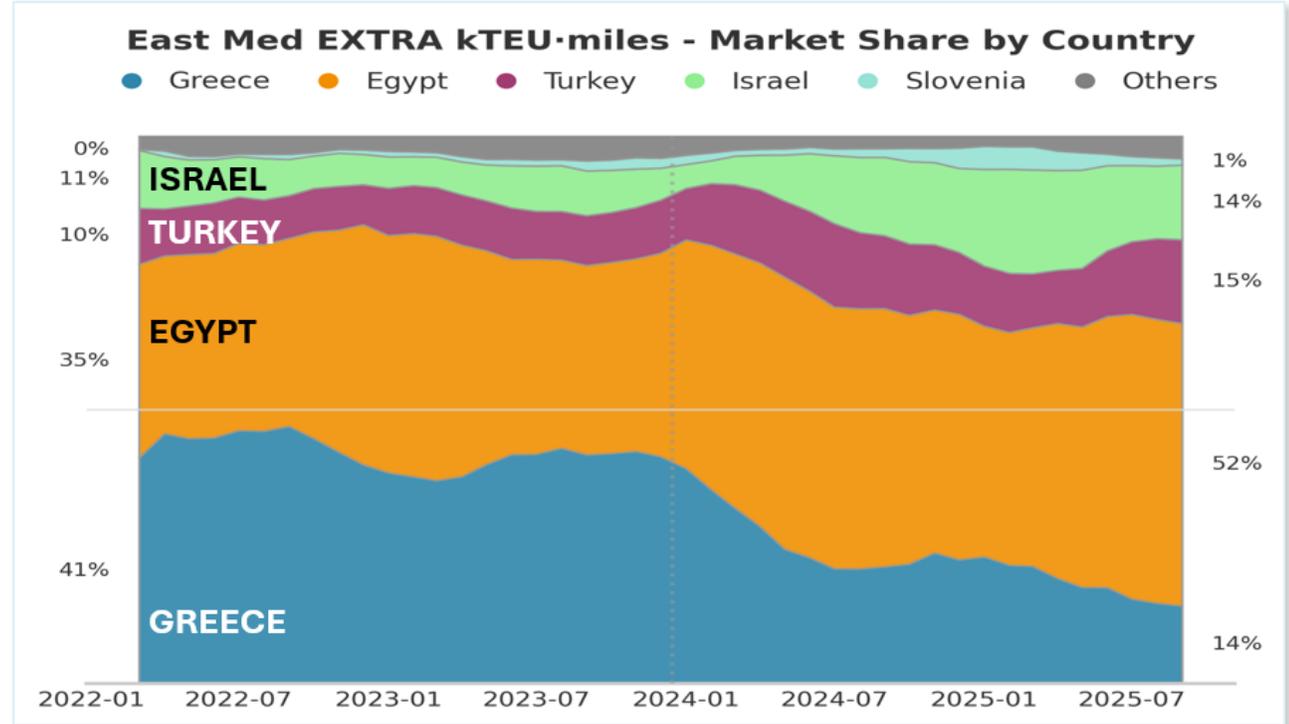
In Greece, the TEU-mile indicator reacts to the Red Sea crisis with a sharp drop, followed by a slow and sustained decline. In Egypt and Turkey, the TEU-mile indicator responds to the canal closure with sudden increases.

EAST - MED CASE STUDY. Time evolution of TEU_miles share

DEEP-SEA CONTAINER SHIPPING ROUTES

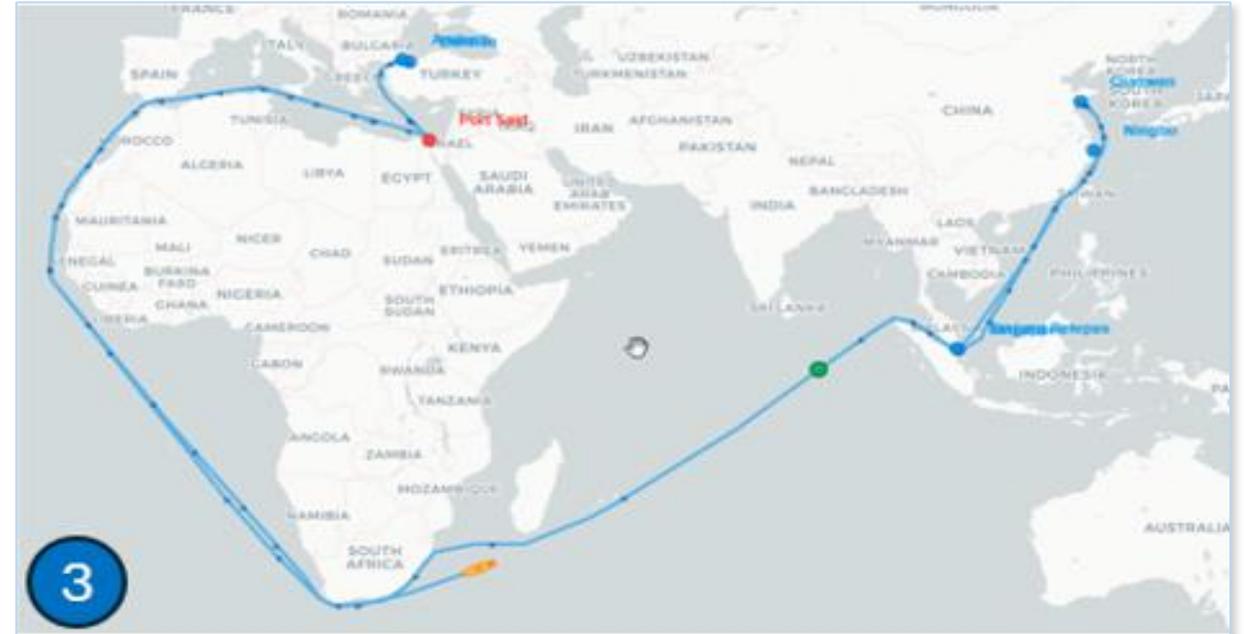
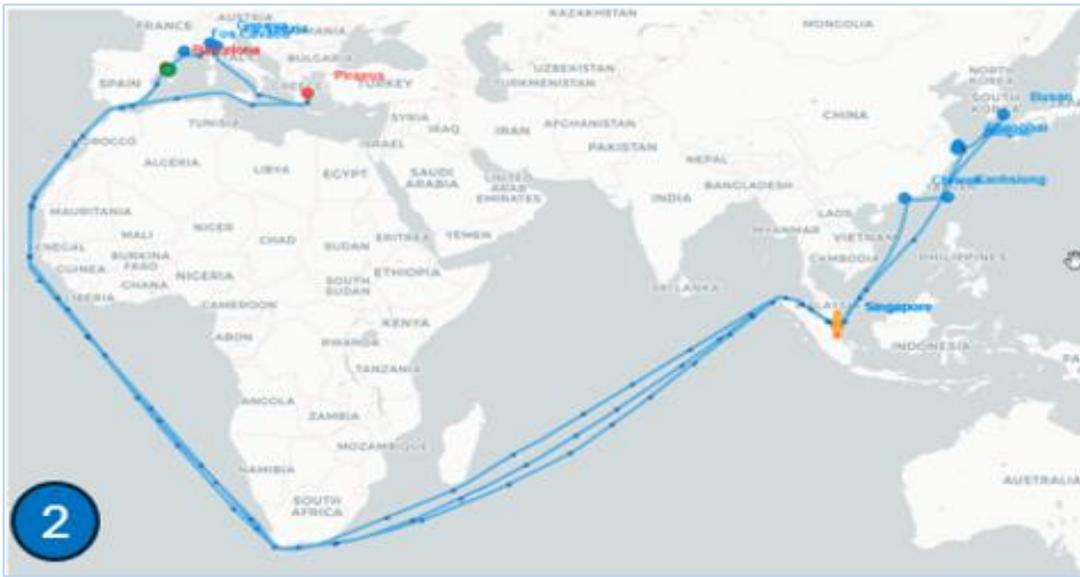
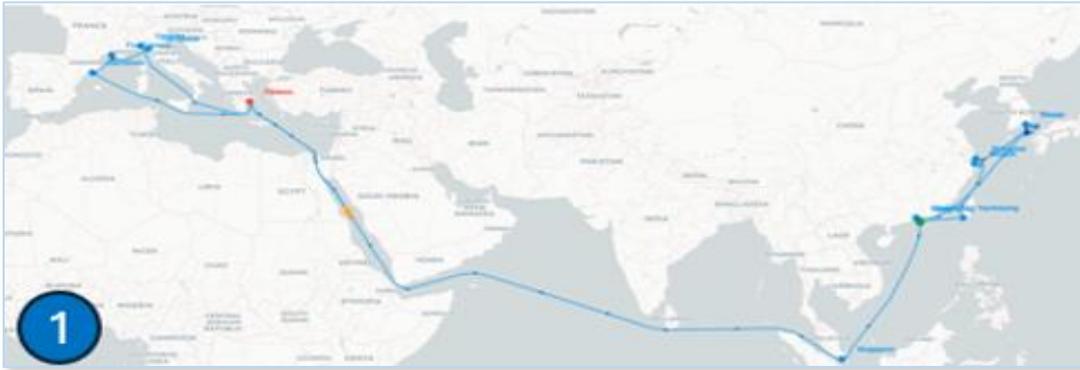


Greece is the country that loses the most connectivity, in both, the total vessel capacity calling at its ports and the nautical miles sailed by ships arriving at or departing from them (light circles, 2023; dark circles, oct.2024-sep.2025).



After the Red Sea crisis, Greece has progressively lost TEU-mile share, while Turkey, Israel and Egypt have gained TEU-mile share, with Egypt showing both the largest TEU-mile share and the strongest growth trend.

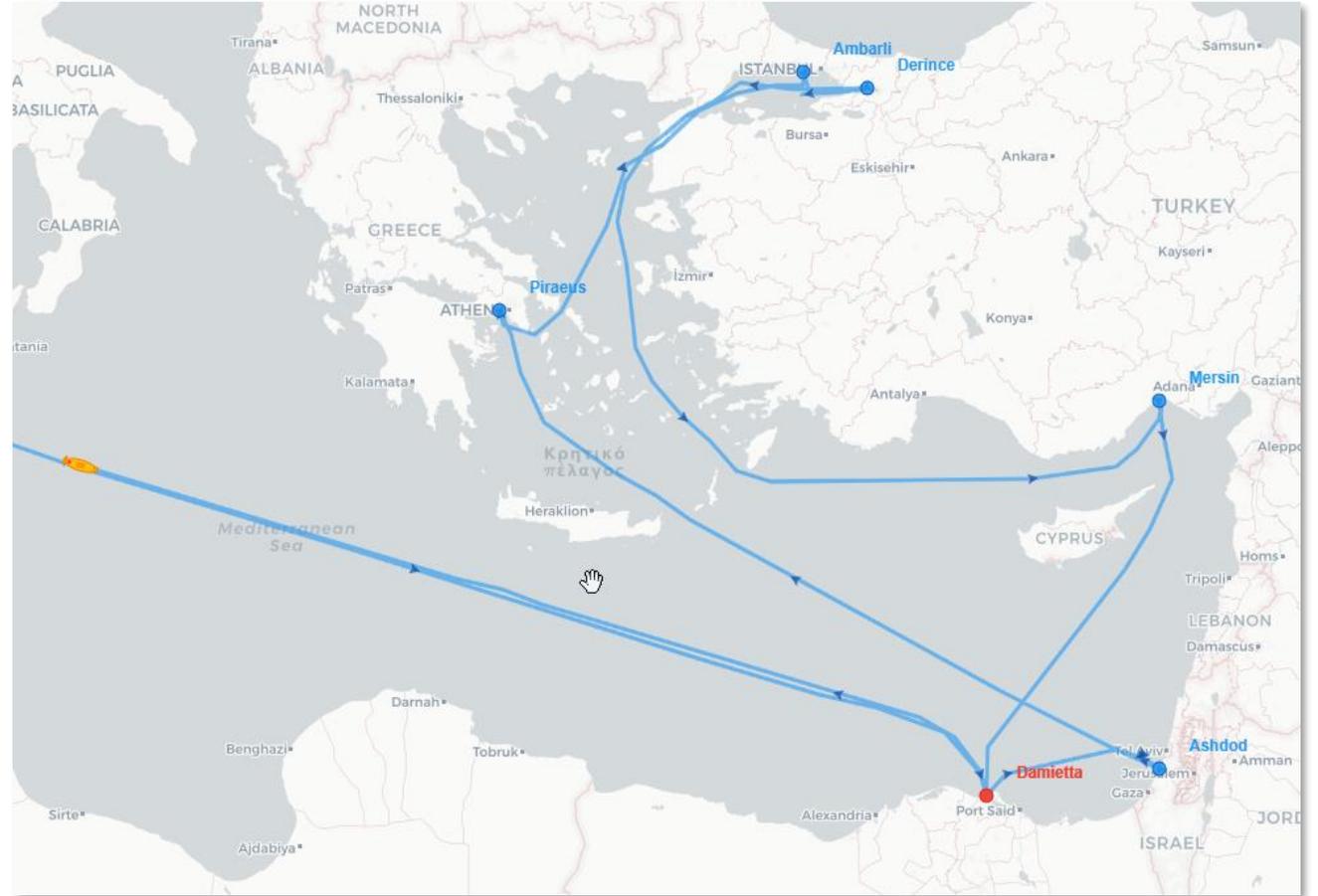
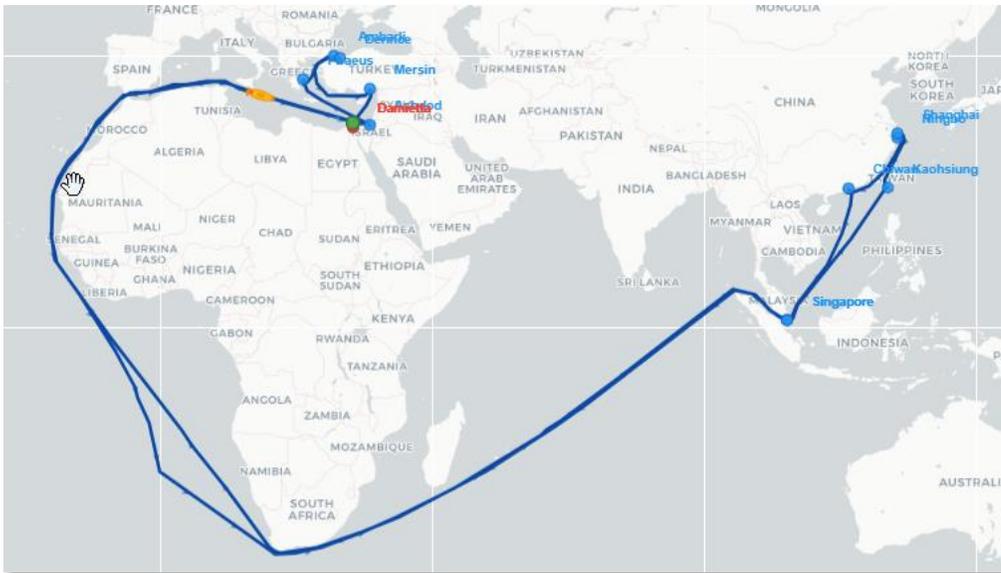
EAST - MED CASE STUDY. Changes over time in the route



1. **2023** Piraeus is the HUB port in the Eastern Mediterranean
2. **2024** The service via the Cape of Good Hope is maintained
3. **2025** Port Said becomes the new HUB of the Eastern Mediterranean

EAST - MED CASE STUDY

New maritime service in the Mediterranean with 14 Panamax vessels, using the port of Damietta as the regional gateway. The service includes a call at Piraeus as an intermediate port on its Mediterranean route



Investments in container terminals in ports of neighboring countries

Since 2021, significant investments have been made in ports of EU neighbouring countries

- **New ports:**

Morocco: Nador West Med and Dakhla Atlantique

- **New terminals:**

Egypt: Abu Qir, Damietta and Alexandria **Turkey:** Mersin **UK:** London Gateway

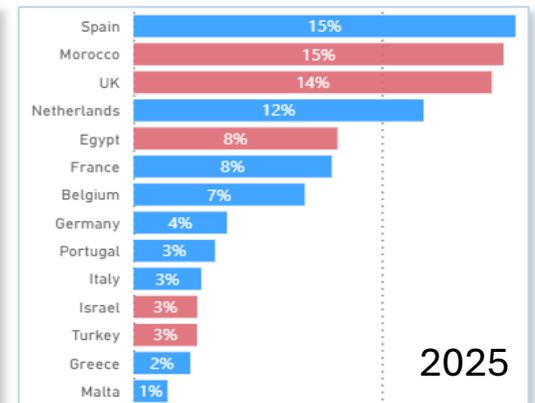
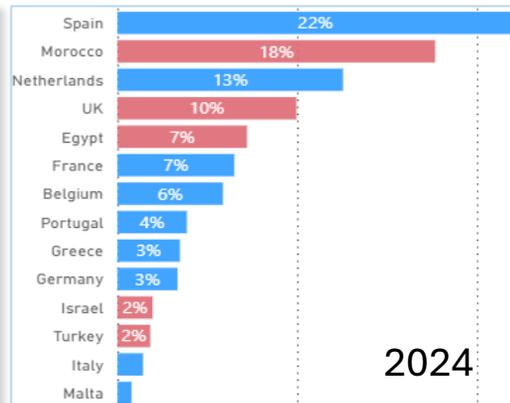
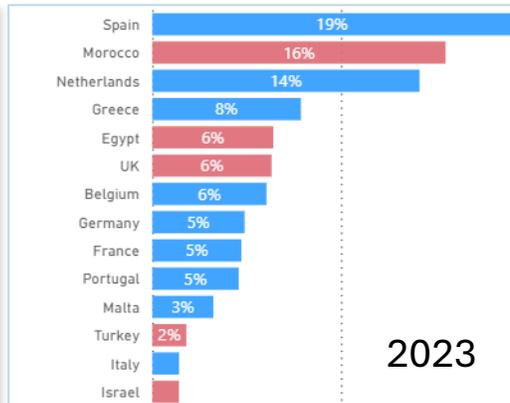
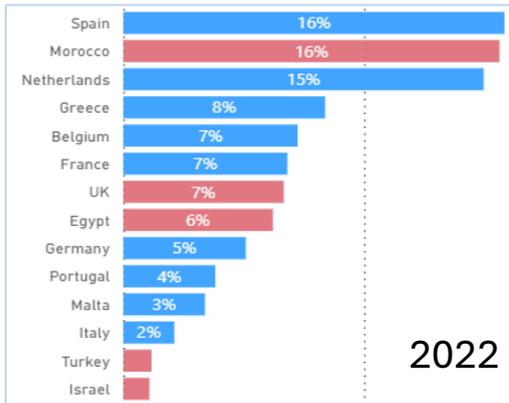
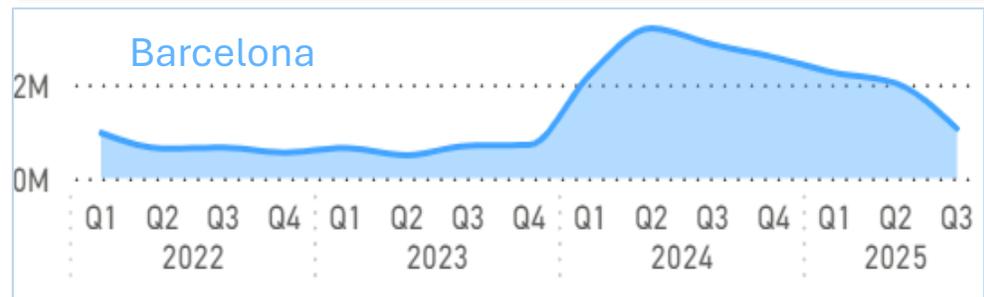
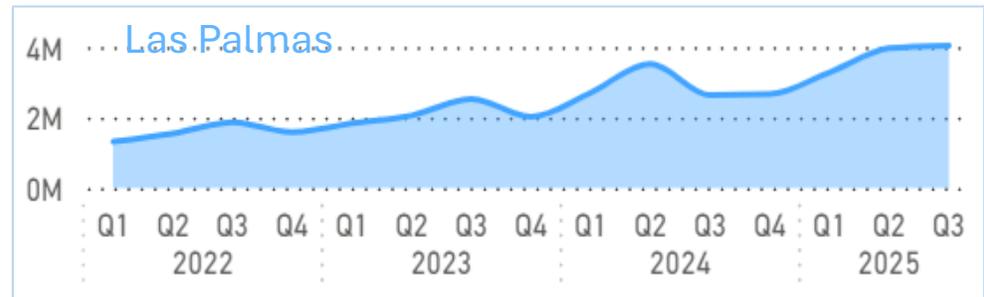
- **Improvement of existing facilities** (increase draught, expand berthing lines and storage surfaces, and install new handling equipment)

Egypt: Port Said **Israel:** Ashdod **Turkey:** Aliaga **UK:** Felixstowe, Southampton

- Executed or planned investments in Morocco, Israel, Egypt, Türkiye, and UK, in the period 2021-2029: **€7.428 billion.**
- Estimated combined operational capacity of the ports listed above before 2024: **32,35 million TEU per year.**
- Estimated combined operational capacity of the ports listed above by 2029: **51,5 million TEU per year** (60% increased compared to the pre-2024 level)

Evolution of control indicator in Spanish ports

EUROMED GATEWAY. EVOLUTION OF kTEU_mile (oct. 2024 – sep. 2025 vs 2023)



Next Steps

Evolution of the situation in 2026, with Suez Canal re-opened

Analysis of other regions in the Mediterranean area: Central and West Med

Development of new statistical analyses at route-structure level

Analysis of the ro-ro services

Complete development of the route choice model

Proposal of measures

Test of possible future situations (new terminals under operation)



THANK YOU FOR YOUR ATTENTION