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Subject:	REPORT FROM THE COMMISSION Monitoring of the implementation of Directive 2003/87/EC in relation to maritime transport

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REPORT FROM THE COMMISSION

Monitoring of the implementation of Directive 2003/87/EC in relation to maritime transport

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1. Introduction

The extension of the EU Emissions Trading System (EU ETS) to maritime transport came into effect in January 2024, marking a significant milestone in the EU's efforts to reduce greenhouse gas emissions from shipping.

This extension brings new obligations for shipping companies. Each year, they have to purchase and surrender emission allowances to cover the amount of greenhouse gas emissions released into the atmosphere, linked to their activities under the ETS scope.

This also brings significant environmental benefits. Indeed, by capping the amount of greenhouse gases that can be emitted under the system, the EU ETS[1] ensures that all the sectors covered under its scope, including maritime transport, contribute to the EU's climate objectives and to the objectives of the Paris Agreement. Furthermore, the EU ETS provides a carbon price signal which, together with other EU policies such as the FuelEU Maritime Regulation, makes investments in energy efficiency and low-carbon solutions more financially attractive for shipping companies. It also reduces the price difference between alternative fuels and traditional fuels. In addition, the revenues generated by the sale of EU allowances are important enablers to encourage innovation and the shift to cleaner technologies.

As it is the first time that such a system is put in place in the shipping sector, careful monitoring of its implementation and effectiveness is essential to ensure it delivers on its objectives, while avoiding unintended economic, environmental and operational risks. This is the reason why the EU ETS Directive requires the Commission to monitor the implementation of the ETS extension to maritime transport and report its findings every two years.

One of the objectives of this monitoring clause is to detect possible changes in shipping companies' behaviours at an early stage, notably the ones trying to evade the requirements of the EU ETS Directive. If appropriate, the EU ETS Directive requires the Commission to propose measures to ensure an effective implementation of the ETS in shipping, in particular measures to address possible risks of evasion.

In addition, the monitoring clause covers other possible impacts of the EU ETS extension to maritime transport, such as possible transport cost increases, implications in terms of competitiveness or impacts on those shipping services that constitute essential services of territorial continuity, including giving consideration to the EU outermost regions, which represent the most remote parts of the EU.

[1] Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC (OJ L 275, 25.10.2003, p. 32).

This report describes the work undertaken so far to monitor the impacts of the extension of the EU ETS to maritime transport, with a focus on the potential evasive behaviours. The analysis presented in this report builds on a study carried out by a consortium of contractors.[2]

2. Implementation of ETS to maritime transport

2.1. State of play of implementation

Text box 1: Functioning of the EU ETS for maritime transport

The extension of the EU ETS to maritime transport took effect in January 2024. It applies, from 2024, to vessels over 5 000 gross tonnage (GT) transporting cargo and passenger for commercial purposes, and from 2027, also to offshore ships over 5 000 GT. The inclusion of maritime transport into the EU ETS follows a transitional phase, where, during the first two years, emission allowances are to be surrendered for a portion of the verified emissions (40% of verified emissions to be covered in 2024, 70% in 2025, and 100% as from 2026).

From 2026 onwards, the EU ETS for maritime transport will also cover greenhouse gases beyond CO_2, namely methane (CH_4) and nitrous oxide (N_2O). The geographical scope of the EU ETS for maritime emissions includes 100% of emissions from voyages between EU ports and within EU ports, and 50% of emissions from voyages between an EU port and a port outside the EU jurisdiction, allowing third countries to decide how to address the remaining 50% in the absence of any equivalent pricing measure at global level.

The system builds on the monitoring, reporting and verification requirements of the EU MRV Maritime Regulation[3], which were first introduced in 2018. In 2023, almost 12 000 vessels of over 5 000 GT reported their verified emissions under the THETIS-MRV system[4], representing 127 million tonnes of CO_2.

At the time of writing this report, the implementation of the EU ETS has made significant progress, with encouraging signs in terms of overall compliance. Feedback received from shipping companies, both within and outside the EU, suggests a genuine willingness to implement the ETS legal obligations in a timely manner. So far, over 5 000 shipping companies have registered in THETIS-MRV (accounts with active ships), and more than 15 000 ships have submitted their assessed monitoring plans to their responsible administering authorities.

These positive compliance signs are notably the outcome of several outreach activities conducted since end 2023, with the support of the European Maritime Safety Agency (EMSA) and with a view to reinforce stakeholders' readiness. Five webinars were organised between December 2023 and March 2024 to explain the EU ETS rules and the IT tools to shipping companies, with a high

[2] Ricardo et al., 2024 – "Supporting study for the implementation of the ETS Directive and MRV requirements for maritime transport", publication upcoming

[3] Regulation (EU) 2015/757 of the European Parliament and of the Council on the monitoring, reporting and verification of greenhouse gas emissions from maritime transport, and amending Directive 2009/16/EC (OJ L 123 19.5.2015, p. 55, ELI: http://data.europa.eu/eli/reg/2015/757/2024-01-01).

[4] THETIS-MRV is the IT system to report greenhouse gas emissions from maritime transport pursuant to the MRV Maritime Regulation (https://mrv.emsa.europa.eu/#public/eumrv).

level of participation (around 500-700 attendants at each webinar). Those remain available online[5]. Additionally, the Commission has published more than 100 Frequently Asked Questions[6] to provide clarity on the EU ETS requirements and a dedicated Helpdesk (co-managed with EMSA) has responded to more than 1 400 questions in less than a year.

Furthermore, two guidance documents have been published in July 2024. The first guidance is an extensive document explaining the MRV and ETS requirements for shipping companies.[7] The second one is a guidance about the process of approval of monitoring plans by administering authorities[8]. A third guidance document is also under finalisation about verification and accreditation activities.

2.2. Main risks and concerns related to the ETS extension to maritime transport emissions

As commercial agents competing in a global market, shipping companies are expected to adopt measures to increase their competitiveness and minimise their costs, including ETS compliance costs. To achieve this, companies may typically consider implementing operational solutions to reduce their GHG emissions, such as slow steaming, route optimisation, or using renewable and low-carbon fuels or investing in cleaner ships and energy efficient retrofits (e.g. wind propulsion assistance, improved hull design, etc.). However, companies may also consider implementing practices that could be considered as evasive behaviours. Evasive behaviours can be defined in a broad sense as operational adjustments that circumvent ETS rules and reduce the amount of GHG emissions to be reported under ETS scope, without actually implementing GHG mitigation measures such as improvements in energy-efficiency or use of alternative fuels/cleaner ships.

Evasive behaviours from shipping companies are problematic in three ways. First, they can compromise the environmental integrity of the EU ETS system, as shipping companies engaging in evasive behaviours will surrender less ETS allowances, without actually reducing their emissions. In some cases, evasion mechanisms can even lead to increased GHG emissions for equivalent transport activity (e.g. if they increase sailing distances to include an additional port call or move part of the operation to other transport modes with higher emissions). Second, some evasive behaviours could reduce traffic and connectivity of EU container transhipment hubs and lead to negative wider macroeconomic implications. A loss of connectivity resulting from evasive behaviours can impact businesses adversely (e.g. reduced, or more expensive access to important overseas markets, less opportunities to forward cargo to other ports). Third, evasion mechanisms can lead to reduced ETS revenues, resulting in less money available to support the decarbonisation of the maritime transport sector or the wider climate objectives.

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[5] European Commission website, https://climate.ec.europa.eu/eu-action/transport/reducing-emissions-shipping-sector_en#events

[6] European Commission website, https://climate.ec.europa.eu/eu-action/transport/reducing-emissions-shipping-sector_en#faq

[7] Guidance Document n°1: The EU ETS and MRV Maritime – General guidance for shipping companies (https://climate.ec.europa.eu/eu-action/transport/reducing-emissions-shipping-sector_en#documentation)

[8] Guidance Document n°2: ETS and MRV Maritime Regulation – General guidance on the process for approval of monitoring plans by administering authorities (https://climate.ec.europa.eu/eu-action/transport/reducing-emissions-shipping-sector_en#documentation)

Evasive behaviours could become attractive to shipping companies in case compliance costs (ETS payments in the present case) outweigh evasion costs (additional costs associated with the evasive behaviour, including vessel operating costs and port costs). It also depends on the capacity of shipping companies to pass their ETS compliance cost to their final consumers. Beyond such economic considerations, shipping companies will also consider other important factors such as possible impacts on their services (e.g. deviation time, waiting time), the feasibility of implementing evasive behaviours (e.g. non-EU ports' accessibility, berth availability, connectivity or compatibility with their network and investment policies) or other specific risks (e.g. reputational considerations, security risks, potential disruptions in supply chains, geopolitics and global trade patterns).

To mitigate evasion risks, the ETS Directive includes a strict "port of call" definition (i.e. obligation to actually load/unload or embark/disembark cargo and passenger), which prevents companies from making artificial port of calls for ETS evasion purposes. In addition, the ETS Directive excludes "neighbouring container transhipment ports"[9] from the "port of call" definition. This means that stops at these non-EU ports cannot be considered under the Directive as the beginning or the end of a voyage, hence reducing the incentive to stop at these non-EU hubs before or after calling EU ports. Based on the criteria set out in the ETS Directive, the Commission has already identified such neighbouring container transhipment ports[10] and this work will be updated every two years. Currently, the neighbouring container transhipment ports encompass the ports of East Port Said in Egypt and Tanger Med in Morocco, which represent around 70% of the transhipment activities taking place in non-EU Mediterranean countries. As mentioned above, the Directive also addresses the risk of evasion through the monitoring requirements and biennial reports.

Beyond the risk of evasion, another concern is the risk of increased shipping costs for shippers and consumers as shipping companies are likely to pass, at least partially, the ETS compliance costs into the final transport price. Given the importance of maritime transport as the backbone of global trade but also for the connectivity of some islands or other remote territories, in particular EU outermost regions, such an increase in transport costs could lead to unintended impacts.

The Directive already includes specific measures to mitigate potential impacts on connectivity of remote regions by exempting specific voyages until 2030 including:

- Voyages between a port in outermost regions and a port within the same Member State;

[9] Defined in Article 3ga(2) of the EU ETS Directive as ports where 1) the share of transhipment of containers exceeds 65% of the port's total container traffic, 2) the port's location is outside the EU but less than 300 nautical miles from a port under the jurisdiction of a Member State, 3) the port is located in a non-EU country for which that non-EU country does not effectively apply measures equivalent to this Directive.

[10] Commission Implementing Regulation (EU) 2023/2297 of 26 October 2023 identifying neighbouring container transhipment ports pursuant to Directive 2003/87/EC of the European Parliament and of the Council (OJ L, 2023/2297, 27.10.2023, ELI: http://data.europa.eu/eli/reg_impl/2023/2297/oj).

- Certain voyages by passenger ships between a Member State with no land connection and another closest Member State in the context of a transnational public service contract/obligation (PSC/PSO)[11];
- Certain voyages by passenger ships between ports in Member States' islands (with no road or rail link with the mainland) with fewer than 200 000 permanent residents[12] and other ports within the same Member State.

2.3. What is being monitored

Following the monitoring requirements of Article 3gg(3) of the EU ETS Directive, the following evasive behaviours and broader impacts have been analysed (Table 1).

Table 1: Evasive behaviours and broader impacts monitored

Impact	Description
Possible evasive behaviours	
Relocation of transhipment activities	Container transhipment is the practice of offloading containers from one vessel at a port and then loading them onto other container ships for onward delivery to a destination, which may be relatively close ('feeder transhipment') or may involve longer voyages ('relay transhipment'). Container transhipment is an activity that has grown considerably in recent years. A number of ports, in particular in the Mediterranean, have recently expanded their capacity to be able to play a role in the transhipment market. Vessel operators may decide to relocate their container transhipment activities from EU transhipment ports to non-EU neighbouring ports to reduce their ETS compliance costs. In some cases, this would bypass payment for emissions altogether if origin and destination of cargo are both non-EU. When the final destination of cargo is in the EU, cargo would need to be transported by feeder vessels from the non-EU transhipment port to the EU transhipment port or directly to the final destination (or the other way around when the origin is in the EU).
Evasive port calls or change in order of port calls	Shipping companies may decide to add an extra port call to reduce the length of the last leg before calling at an EU port (or the length of the first leg after leaving an EU port). Similarly, operators may change the order of calls to minimise their ETS exposure. It should be noted that under the EU MRV Maritime Regulation, a port call requires a shipping operator to load or unload cargo or embark or disembark passengers. As such, it

[11] The list of transnational routes under PSC/PSO concerned by this derogation is published in Implementing Decision (EU) 2023/2895: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02023D2895-20240101

[12] The list with islands and ports concerned by this derogation is published in Implementing Decision (EU) 2023/2895: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02023D2895-20240101

Impact	Description
	would be necessary for a shipping operator to perform business operations in these additional port calls.
Shifting demand to other transport modes with higher environmental impacts	Freight companies may move freight transport from maritime to other modes (in particular road transport), which have higher emissions than maritime. This would be rather affecting Short Sea Shipping (SSS) routes which face stronger competition from land-based modes.
Assigning best performing vessels to EU routes	Vessel operators may decide to use their most efficient vessels (with lowest GHG emissions per tonne-mile) to routes that include calls at EU ports and use their less well-performing vessels on other routes. This could have environmental benefits for the EU, including for air quality, but not reduce total greenhouse gas emissions.
Use of ships below size threshold	Vessel operators, particularly those that operate smaller vessels (but still above 5 000 GT), may choose to use vessels (slightly) below the 5 000 GT threshold that are excluded from the ETS scope.
Use of ship-to-ship transfers outside EU ports	Vessel operators may use ship-to-ship transfers outside EU's ports (particularly of liquid cargoes) to avoid making EU port calls and thereby reduce their obligations under the EU ETS.
Other possible impacts	
Impacts on transport costs	The purchase of allowances by shipping companies to ensure compliance with EU ETS or the costs linked to the implementation of mitigation measures are likely to impact overall shipping costs. Some shipping companies pass through ETS costs to their customers in the forms of ETS surcharges.
Impacts on essential services for territorial continuity	Increased shipping costs could lead to changes in the supply and price of ferry (RoPax) services connecting EU islands and remote territories to the mainland.
Impacts on Outermost Regions	Increased shipping costs could lead to changes in the supply and price of shipping services connecting Outermost Regions. Furthermore, services to Outermost Regions could also be impacted by evasive behaviours described above.

3. Monitoring approach

3.1. Constraints of the analysis

Impacts of the Red Sea crisis on shipping traffic

As a result of the Houthi attacks which commenced in November 2023, many of the vessels that previously transited through the Suez Canal re-routed around South Africa, via the Cape of Good Hope. The transits through the Suez Canal decreased by around 60% in 2024 compared to the situation in 2022/2023, with the decrease reaching close to 70% for containerships[13].

This led to a reduction in port calls (notably from deep sea routes and larger container ships) and traffic in East Mediterranean ports and in some Central Mediterranean ports from Q1 2024. At the same time, the re-routing caused an increase in activity levels in West Mediterranean ports, with more feeder services to East Mediterranean ports. This distortion creates a significant challenge in monitoring evasive behaviours in the Mediterranean as the types of voyages and vessels affected by the Red Sea crisis (deep sea routes and larger container vessels) coincide with those likely to be mostly impacted by potential evasive behaviours.

To isolate the effect of the EU ETS from those of the Red Sea crisis, the following approach has been adopted:

- Differentiated analysis of Mediterranean basins (West, Central and East) to account for varying impacts of Red Sea crisis on each area.
- Comparison of EU and non-EU ports within the same Mediterranean basin to control for broader Red Sea crisis effects affecting the whole basin.
- Two EU control groups have been established: a Southern group, further differentiated by Mediterranean basin and a Northern control group (when applicable) for comparing with trends observed in EU transhipment ports and detect possible broader market trends affecting all ports (i.e. not only transhipment activities).

Timing of the analysis

Due to the legal deadline provided in the Directive for this first report, the analysis has been carried out during 2024. This report builds on the most recent information and data available at the time of the analysis, which covers for 2024 the period from the entry into force of the EU ETS for maritime transport (January 2024), until the end of the third quarter of 2024 (30 September 2024). In some instances, however, data was only available for the first half of the year.

Given the high volatility of maritime traffic, particularly in transhipment operations, this partial coverage limits the ability to reach definitive conclusions from traffic data analysis.

In addition, 2024 is the first year of the ETS phase-in period, where only 40% of emissions are subject to ETS compliance costs. This may have impacts on the extent of evasive behaviours, as these are notably influenced by the trade-off between evasive costs and ETS pricing of emissions (which will only apply in full as from 2026).

[13] Source: EMSA own analysis on the Impact of developments in the Red Sea on maritime traffic.

This timing constraint will be addressed by monitoring ETS implementation on a continuous basis. The present report is part of an ongoing process: the evolution of relevant indicators will continue to be analysed on a regular basis.

Transhipment data availability

Data on transhipment operations is not publicly available in a consistent manner for all ports under the scope of this report. To fill this gap, commercial data from Econdb was used. Econdb data is extracted from a sample of tracked containers, which represent a small percentage of the global fleet (around 2%) but are distributed representatively. Hence, container movements (including transhipments) data from Econdb may not be fully accurate when considered at an individual port and month level; however, they provide a useful overview of trends over time and across regions.

Econdb data was sense-checked against equivalent and official data (total container and transhipment movements) for Spanish ports, as published by Puertos del Estado. Inputs from port questionnaires were also used for sense-checking purposes. The comparison reveals that Econdb data is sufficiently robust to use for trends and for relative comparisons between ports with significant levels of transhipment activity. However, this data would be less appropriate to analyse absolute transhipment levels in detail, and when considering ports with low transhipment activity.

3.2. Method and tools

This monitoring exercise has been structured around a set of research questions and a suite of indicators to answer each of them. The exercise includes both backward-looking and forward-looking analyses. Backward-looking analysis aim at detecting evidence of possible evasive behaviours or broader impacts that might have already occurred during the monitored period, while forward-looking analyses aim at identifying potential future risks and impacts beyond the monitored period.

Indicators used for the backward-looking analysis include port activity data (port calls, traffic volume, transhipment operations, connectivity) and vessel data. In contrast, the forward-looking analysis mostly relied on qualitative information on route announcements, legislative changes in neighbouring non-EU countries and data on port capacity expansion projects.

When assessing these indicators, two main comparative analyses have been performed:

- **Comparison over time**: Data over the monitored period is compared against the situation before the entry into application of the EU ETS for maritime transport, covering 2022 and 2023 data. For this purpose, quarterly data over the period Q1 2022 to Q3 2024 is analysed to extract relevant trends. In addition, a year-on-year comparison is performed by analysing differences in Q1-Q3 2024 data vis-à-vis Q1-Q3 2023. This aims to control for the seasonality and volatility of maritime traffic data.
- **Comparison with control groups**: This analysis helps discern potential shifts attributable to evasive behaviour from broader trends (e.g. driven by global economic context, trade policies, geopolitics, including the Red Sea crisis as mentioned above, developments in port infrastructure and operational efficiency, port fees, etc.). The two control groups of EU ports (Southern and Northern control groups) are used to represent baseline trends.

They include ports with lower levels of transhipment activity, which are, to a certain extent, less likely to be impacted by the risk of transhipment relocation.

Additionally, several case studies are considered where relevant to focus the analysis on specific geographies or market segments likely to be most impacted. These include a case study looking at EU-US flows (i.e. expected to be less affected by the Red Sea crisis) for the monitoring of the risk of evasive port calls and two additional case studies looking at evidence of possible modal shift in freight transport between Spain and Italy and between Bulgaria and other non-EU countries in the Black Sea, respectively.

3.3. Data sources

Data sources used in this study are summarised below in Table2.

Table 2: Data sources used

Source	Use
Port call data from MARINFO database	Data on number of port calls by type of voyage and vessel type/size. This data is used to monitor trends in relation to evasive behaviours (transhipment relocation, evasive port calls and modal shift) and impacts on shipping services in remote territories and Outermost regions.
Route modelling tool developed by the European Maritime Safety Agency (EMSA)	Data on historic maritime traffic on specific routes, including intermediate port calls, to understand how the nature of routes including EU ports has evolved. This tool builds on MARINFO port call data.
Commercial data from Econdb	Data concerning container traffic by service and statistics by port (including on transhipment). This is used to analyse trends on transhipment operations in EU and non-EU ports.
UNCTAD	Data on port liner shipping connectivity index (EU and non-EU ports) to assess trends in relation to port connectivity.
THETIS - MRV	Data on vessel technical efficiency data to monitor potential assignment of best performing vessels in the EU and CO_2 emissions data used to estimate EU ETS costs.
Survey of port authorities	Additional data on EU port activities (including on investments) and information on the impacts of the EU ETS at a port level
Publicly available port statistics	Cross-check with other data sources used for port activity and to provide additional insights

Source	Use
Desk review of publicly available information	Identify information on routes used by vessel operators, including announced changes to those routes (or new routes) and announced investments in ports (to increase ports' capacity, in particular).
Commercial reports (including from Drewry)	Additional information on the trends identified and on deals and investments at relevant ports.
Eurostat international road freight transport data	Quarterly data on road freight transport between Spain and Italy and Bulgaria and other non-EU countries (Georgia, Türkiye) analysed to identify possible evidence of modal shift towards road transport.

3.4. Ports included in the analysis

The analysis covers specific ports or sets of ports (with geographic groupings in some cases), which allows for meaningful comparison of trends. Grouping of ports aims at facilitating the identification of overall impacts. The choice of the port groups has been discussed with Member States representatives in dedicated expert group meetings and are described in Table 3. The names of all ports considered under each group are listed in Annex to this report.

Table 3: Port groups used

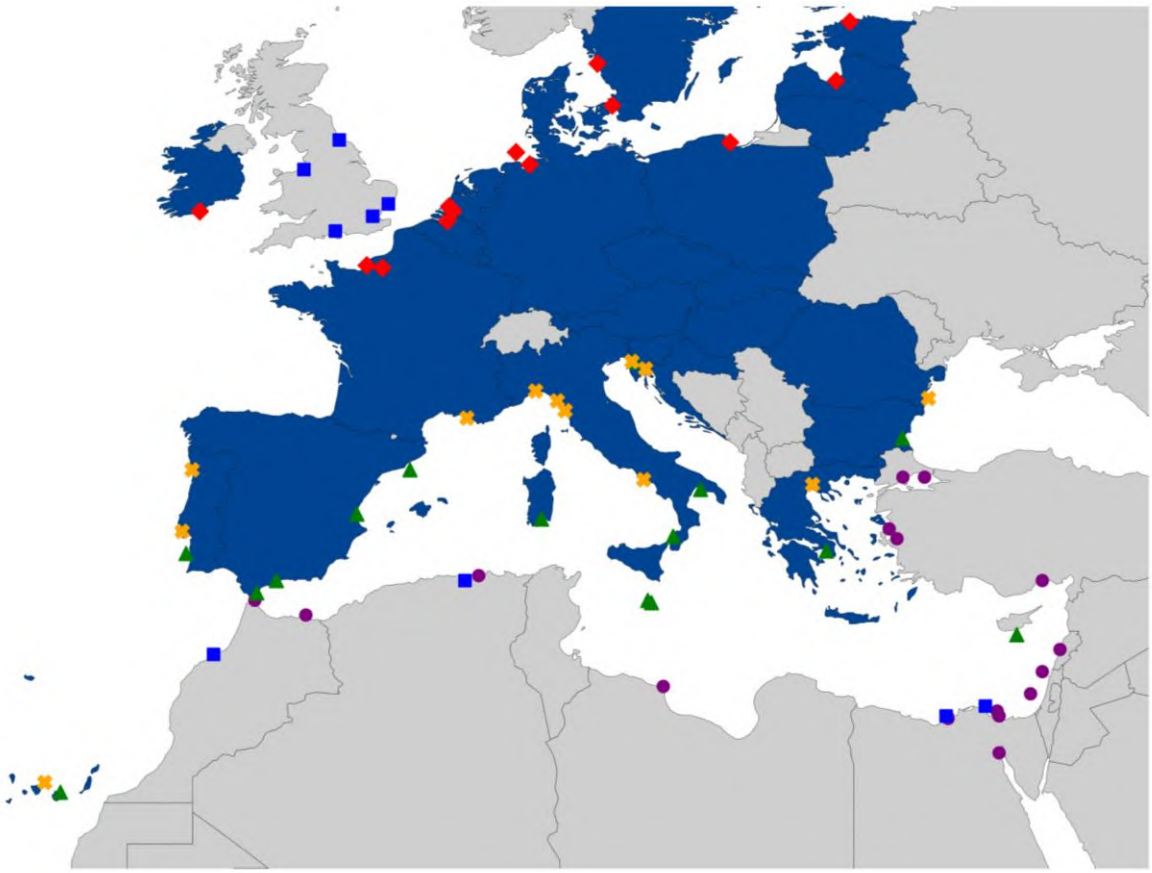
Port group	Definition and selection criteria	Use
EU transhipment ports at risk	EU ports with high levels of container transhipment incidence and considered most exposed to the transhipment relocation risk, notably given the proximity of non-EU transhipment ports.	Monitoring of evidence of transhipment relocation outside the EU. The following disaggregation was used for the analysis: - Western Mediterranean - Central Mediterranean - East Mediterranean - Black sea - Other
Neighbouring non-EU ports (transhipment)	Non-EU ports considered most likely to potentially benefit from additional activity arising from the transhipment relocation risk. This includes:	Monitoring of evidence of transhipment relocation outside the EU. The following disaggregation was used for the analysis: - Western Mediterranean - Central Mediterranean

Port group	Definition and selection criteria	Use
	- Ports within 300 nautical miles distance from an EU port[14] - Ports with existing container transhipment capability, or which may develop that capability in the short term	- East Mediterranean
Neighbouring non-EU ports (evasive port calls)	Non-EU ports that have the highest potential to be used for evasive port calls (i.e. within 300 nautical miles of EU ports). This includes ports that are close to EU ports and with capacity to accommodate large deep-sea vessels. This category encompasses: - all ports falling under the above category ('neighbouring non-EU ports (transhipment)'), except those beyond 300 nautical miles; - additional ports within this distance range even if not specialised in transhipment activities	Monitoring of evidence on evasive port calls. For the analysis, the following disaggregation was used: - UK ports - Ports in Türkiye and North Africa
Southern control group	EU container ports in the Mediterranean for whom transhipment is not the major contribution to their activities.	Control for changes in overall traffic patterns in the Mediterranean, regardless of transhipment operations, for comparison with those identified at the EU transhipment ports. Disaggregated by basin: - Western Mediterranean - Central Mediterranean - East Mediterranean
Northern control group	EU container ports in Northern Europe for whom transhipment is not the major contribution to their activities (and that would be expected to be less affected by changes to traffic patterns in the	Control for general changes in EU maritime activity, regardless of traffic patterns in the Mediterranean, for comparison

[14] Some other non-EU ports further away have been considered, as deemed relevant.

Port group	Definition and selection criteria	Use
	Mediterranean such as those due to Red Sea crisis).	with those identified at the EU transhipment ports.
Ports in islands and outermost regions	Main ports located in EU islands and Outermost Regions.	Monitoring of impacts on essential shipping services for territorial continuity and on Outermost Regions

Figure 1: Map of ports included in each grouping [not showing 'Ports in islands and outermost regions']



Port categories	
●	Neighbouring non-EU ports (transhipment)
■	Neighbouring non-EU ports (evasive port calls)
▲	EU transhipment ports at risk
◆	Northern control group
✖	Southern control group

4. Monitoring of possible evasive behaviours in 2024 (Q1-Q3)

4.1. Monitoring of the risk of transhipment relocation

- There is currently no evidence to support the existence of a discernible trend in the relocation of container transhipment activities from EU to non-EU transhipment ports.
- There is an overall increase in traffic of containerships in EU ports located in West Mediterranean and a decrease in traffic (in particular extra-EU voyages) at the EU ports in the East Mediterranean basin (e.g. Piraeus). However, such trends are generally similar across EU and non-EU ports in the region and seem to be largely driven by the Red Sea situation.

Port data up to Q3 2024 has been analysed by Mediterranean basin, including number of containerships' port calls by type of voyage and vessel size, levels of container transhipment operations and port liner shipping connectivity index. Main results are presented in Table below. These results do not present evidence of generalised relocation of transhipment activities from EU to non-EU ports so far. Changes in port activity observed in West Mediterranean and East Mediterranean are considered consistent with the Red Sea crisis effects.

Table 4: Summary of results from analysis of port activity data by Mediterranean basin

	West Med	Central Med	East Med
Port calls (Q1-Q3 2024 vs 2022-2023)	**Number of port calls**: Similar upward trend in number of port calls is found in both EU and neighbouring non-EU transhipment ports.	**Number of port calls**: Trends observed at EU transhipment ports are generally comparable to those found in the control group and in neighbouring non-EU transhipment ports.	**Number of port calls**: Similar small reduction in container vessel port calls in both EU and neighbouring non-EU transhipment ports. This is consistent with the Red Sea crisis effects.
	Vessel size distribution: Increase in port calls from both feeder and large vessels can be observed in EU ports, consistent with trends in neighbouring non-EU ports.	**Vessel size distribution**: Increase in port calls from feeder vessels and reduction in port calls from large vessels, consistent with trends in neighbouring non-EU ports.	**Vessel size distribution**: Similar decrease in port calls from larger vessels is found in both EU and neighbouring non-EU transhipment ports.
	Voyage type distribution: No	**Voyage type distribution**: No general	**Voyage type distribution**:

	West Med	Central Med	East Med
	reduction in extra-EU port calls at EU transhipment ports (both non-EU/EU/non-EU and non-EU/EU/EU voyages slightly increased).	decrease in non-EU/EU/non-EU voyages at EU transhipment ports, but a slight decrease in non-EU/EU/EU voyages, which does not seem to be driven by any specific vessel size.	Decrease in extra-EU port calls at EU transhipment ports (both non-EU/EU/non-EU and non-EU/EU/EU voyages), primarily from larger vessels (above 14 500 TEU[15]).
Transhipment operations (Q1-Q3 2024 vs 2022-2023)	Generally increasing levels of transhipment operations, both at EU and neighbouring non-EU transhipment ports.	An increase in container transhipment activities over time at EU and at neighbouring non-EU transhipment ports. Total container throughput and transhipment trends do not show any significant differences between the EU transhipment ports, the control group ports and the non-EU transhipment ports.	Total throughput and transhipment operations remained relatively stable, with similar general trends in EU and neighbouring non-EU transhipment ports. Information for individual ports, however, shows decreased transhipment activity in some EU ports (e.g. Piraeus) coupled with increases in some Turkish ports. The increase in traffic in Turkish ports may be influenced by the Israel/Hamas crisis, potentially redirecting some traffic from Israel to Türkiye.
Connectivity (Q1-Q3 2024 vs 2022-2023)	No significant difference in the evolution of connectivity of EU transhipment ports	No significant difference in the overall evolution of connectivity of EU transhipment ports compared to neighbouring	Connectivity increased in Limassol but decreased in Piraeus compared to 2023.

[15] TEU: Twenty-Foot Equivalent Unit, a standard measure of cargo capacity based on a 20-foot shipping container.

	West Med	Central Med	East Med
	compared to neighbouring non-EU transhipment ports.	non-EU transhipment ports. When looking at individual ports, however, there are some differences: Cagliari, Marsaxlokk and Taranto show significant reductions in connectivity while the majority of the other ports in the Central Mediterranean, both EU and non-EU, show much less variation.	Similar overall variation found in neighbouring non-EU transhipment ports.
General remarks	**Increased activity levels, with no significant differences between EU and non-EU transhipment ports.**	**No significant variations in trends for EU or non-EU transhipment ports. However, there are some notable differences between EU ports.**	**Variation in trends in both EU and neighbouring non-EU transhipment ports overall consistent with effects of the Red Sea crisis. While some changes in specific ports (i.e. decrease in activity in Piraeus coupled with increases in some Turkish ports) might suggest some evasive behaviours, the main drivers seem to be the effects of the Israel-Hamas crisis and the Red Sea crisis.**

4.2. Monitoring of the risk of evasive port calls or changes in order of port calls by containerships

- Overall, there is no evidence of a generalised implementation of additional port calls at neighbouring non-EU ports by shipping companies or systematic changes in order of port calls by containerships to circumvent ETS rules.

- There is no significant increase in containerships' calls at UK ports before (or after) calling EU ports over the monitored period. Further detailed analysis of flows from the US to EU shows however an increase in the share of intermediate port calls in the UK when comparing 2024 to 2023.
- There is no evidence of trend of evasive port calls (or changes in order of port calls) taking place before (or after) calling at Mediterranean EU ports.

Overview at EU level

Results from the EMSA route modelling tool show no overall increase (in terms of containerships' port calls and total vessel capacity) of intermediate stops at neighbouring non-EU ports before (or after) calling EU ports. Similarly, the analysis of average distance on first/last leg after/before leaving/arriving at EU ports does not point to any reduction associated with evasive calls or change in the order of port calls. On the contrary, average distance of the first/last leg has increased slightly over the monitored period compared to 2023 and 2022, most likely due to re-routing caused by the Red Sea crisis.

Risk of evasive port calls in the UK

Aggregate port call data shows no significant increase in containerships' calls at relevant UK ports before (or after) calling at EU ports (also when looking at Northwest European ports only) over the monitored period.

However, when looking specifically at flows from the US to the EU, an increase in the share of voyages with intermediate port calls in the UK can be observed in recent years. Such voyages represented 30% of US-EU voyages in 2023 and 34% in 2024.

Risk of evasive port calls in Türkiye or North Africa

Overall, with the ongoing crisis in the Red Sea affecting the number of port calls in the region, it is difficult to pinpoint the extent of the effects of the implementation of the EU ETS in this region, if any. In any case, detailed results from the EMSA route modelling tool show no overall increase (both in terms of total vessel capacity and total number of calls) of intermediate port calls at non-EU Mediterranean ports before (or after) calling at EU Mediterranean ports.

4.3. Monitoring of the risk of shifting demand to other transport modes

- The examined case studies (Spain-Italy and connections across the Black Sea to Bulgaria) reveals no evidence of a trend towards increased modal shift to road freight.

Case study Spain-Italy (RoRo and RoPax services)

Ro-Ro and RoPax services between Spain and Italy face competition with land transport alternatives (mostly road freight), given the relatively short distance between these two countries for both land and maritime connections. To investigate potential impacts on modal shift since the implementation of the EU ETS extension, port calls from RoPax and Ro-Ro cargo vessels between Spain and Italy have been monitored and compared against EU-wide trends for these vessel types. In addition, road freight traffic data up to Q1 2024 has been collected to compare against Ro-Ro and RoPax traffic and detect potential trends in modal shift.

Overall, the data do not point to a general or systematic reduction in the level of maritime traffic between these countries, nor to an increase in road freight transport in the transport of goods between the two countries. There is therefore no clear evidence of a trend towards increase modal shift to road transport. However, as data available are limited to a very short period following the introduction of the ETS, it is too early to reach any firm conclusion. Additional data on the level of maritime and road freight traffic is considered necessary to further substantiate the analysis in future reports.

Case study Bulgaria - neighbouring countries (RoPax and containerships)

To further examine the possible risk of modal shift, data for port calls from RoPax ships and containerships at the ports of Burgas and Varna in Bulgaria have been monitored.

The analysis shows that there are slight fluctuations in traffic since the start of 2024 when considering specific vessel types but, overall, there is no available evidence at this point of any significant reduction in maritime traffic to the port of Burgas and Varna from neighbouring ports that would indicate an increased use of other transport modes (mainly road transport) to deliver the goods.

4.4. Monitoring of the risk of assigning best performing vessels to EU routes

- The analysis shows that a slightly higher share of recent vessels (expected to be more energy-efficient) has called at EU ports in 2024 compared to 2023; however, other considerations (such as global fleet replacement) are considered more likely to influence such findings.
- Analyses of energy efficiency indexes of vessels visiting EU ports do not show any sudden improvements when comparing 2024 to 2023.

Analyses by EMSA show that 14% of the container vessel fleet visiting EU ports in 2024 are 5 years of age or less, compared to 12% in 2023. At the same time, 20% of the fleet in 2024 is at least 20 years of age, compared to 19% in 2023. There is, therefore, some evidence that the fleet visiting EU ports in 2024 is, on average, slightly younger than in 2023 (and, hence, assumed slightly more energy efficient). However, the evidence that such a trend is linked to evasive behaviour is not conclusive as other considerations (such as global fleet replacement levels) are considered more likely to influence the results. For instance, it is estimated that the percentage of the worldwide fleet of containerships less than 5 years of age was 17% in 2024, compared to 14,5% in 2023.[16]

Furthermore, the analysis of energy efficiency index reported by vessels visiting EU ports from 2022 to 2024 shows only a small improvement in the fleet's average efficiency from 2022 to 2023, and none from 2023 to 2024. It provides therefore no indications of a significant change in the energy efficiencies of vessels used on routes to and from the EU since 2024.

4.5. Monitoring of the potential use of ships below size threshold

[16] United Nations Conference on Trade and Development, *2024 Review of Maritime Transport* (UNCTAD/RMT/2024) and *2023 Review of Maritime Transport* (UNCTAD/RMT/2023).

- There is no evidence of an increased use of vessels between 4 000 GT and 5 000 GT in 2024 compared to the previous year.

If shipping companies were to use smaller vessels to circumvent ETS rules, they would most likely use vessels between 4 000 GT and 5 000 GT to reduce their overall operator costs. When examining these vessels, the analysis shows that they form a small percentage of the total number of port of calls at EU ports, with some disparities among ship types. For general cargo vessels, considered as the most relevant vessel category for this risk, about 11% of port visits on incoming extra-EU routes were by vessels in this size range in 2024. This represents a very small increase relative to 2022 and 2023 levels (levels were 10,6% and 9,9%, respectively). On intra-EU routes, the percentage of port visits by general cargo vessels between 4 000 GT and 5 000 GT is also small, at about 9% in 2024; it has remained very stable since 2022.

For other vessel categories that percentage of the port calls by vessels of this size is also small, for example 0.5% for container vessels and 12% for oil tankers on incoming extra-EU voyages. Overall, the comparisons of the percentages for port calls in 2024 with those for previous years do not indicate any significant increase in the use of vessels above 4 000 GT and below 5 000 GT for any vessel category.

4.6. Monitoring of the potential use of ship-to-ship transfers

- Overall, there is no evidence of an increase in the number of ship-to-ship transfers of cargo taking place in EU waters since January 2024.

Analyses of ship-to-ship transfers in EU waters identified that, while the number of transfers increased significantly in 2022 following the Russian invasion of Ukraine, there has been no overall further increase since January 2024 (compared to 2023) that could indicate a greater use of ship-to-ship (STS) transfers as a potential evasive behaviour following the extension of the EU ETS to maritime transport.

5. Forward-looking: Review of relevant findings beyond the monitored period

- In terms of routes announcements, while there are a few examples that may suggest a risk of evasion in relation to stops added in the UK, an analysis of transatlantic routes for 2025 does not provide indications of any discernible evasive trend through UK ports. Routes involving ports in the Mediterranean are likely to continue being impacted by the Red Sea crisis.
- In terms of investments, there is currently no clear evidence to conclude that a change of investment patterns in ports is taking place leading to a general reduction of investments being made at EU ports coupled with accelerated investments at non-EU neighbouring ports. The most relevant findings for investments at non-EU neighbouring ports are the recent capacity expansion in the Port of Damietta in Egypt as it could make this port more prone to attract further transhipment operations. In addition, in 2027, the container handling capacity of Nador in Morocco is also expected to be substantially expanded. These ports should be closely monitored in the next years, among others.
- In terms of legislative and regulatory news, there is no identified developments in non-EU neighbouring countries that would increase evasion risks in the future. On the contrary, the recently announced carbon pricing system for maritime transport by Türkiye may contribute

to mitigate evasion risks in relation to Turkish ports. The inclusion of domestic maritime emissions within the UK ETS– and possibly the other half of UK-EU maritime emissions – should also partially mitigate evasion risks. Further developments will be continuously monitored.

5.1. Routes changes of container lines

Overall, there are limited announcements on route changes affecting East Mediterranean ports. Announcements from shipping operators related to this region tend to confirm that vessels are expected to continue to bypass the Red Sea in 2025 and use the Cape of Good Hope, due to the situation in the Red Sea remaining volatile. It is therefore anticipated that traffic at Piraeus port will continue being diverted away. Some of the diverted services from Piraeus are expected to continue instead opting to use smaller feeders from West Mediterranean ports (EU ports in many cases) to transport cargo into the East Mediterranean. There is no evidence on routes diverted from Piraeus for reasons other than for re-routing around the Red Sea crisis.

In the case of Central Mediterranean ports, there is no clear identification of new routes announcements that may affect Central Mediterranean ports on a systematic basis across the region and that may be caused by the ETS implementation. It is anticipated that a diversion of larger vessels away from Malta Freeport might continue in 2025, essentially due to the continuation of the Red Sea crisis.

In West Mediterranean ports, there are several examples of non-EU ports (particularly Tanger Med) being added to existing routes operating in this area. Besides, there is evidence of operators adding EU West Mediterranean ports (e.g. Sines, Valencia, Barcelona) to Far East and Middle East connections. Therefore, such changes are considered to be mostly related to impacts from the Red Sea situation.

In the North Sea, there are several announcements of route changes, with some adding port calls in the UK that could suggest a possible risk of evasion. The detailed analysis comparing routes between North America and Northwest Europe in 2024 with those announced for 2025 points to various examples of routes being modified from 2024 to 2025. According to this case study, while few transatlantic routes include in 2025 a new stop in the UK, there are other routes where an EU port call is added and/or a UK port call removed. At this stage, it is therefore difficult to identify any clear trend of evasive behaviour planned for 2025, also in the North Sea region.

5.2. Investments in container ports capacity expansion

A significant number of ports capacity expansion projects for containers have been identified in both EU and non-EU neighbouring ports. Many European ports continue following an organic growth in the context of a mature market, with existing container terminals gradually increasing their capacity to improve their competitiveness and market share. Driven by a strong market dynamic (67% increase in container volumes since 2010 in non-EU Mediterranean countries), neighbouring non-EU ports continue their swift developments, with some important projects located away from older city centres.

When summing up ports container capacity increases identified for 2025-2035, these represent 25 million additional TEU for EU ports, compared with 34 million TEU for non-EU neighbouring

ports. For the latter, this is mainly driven by investments in the East Mediterranean (i.e. Turkey and Egypt) and West Mediterranean (i.e. Morocco).

These include for instance investments in the ports of Damietta and Nador. At Damietta (Egypt), a new terminal with 3.3 million TEU annual capacity is expected to start operations in 2025 (compared to 1.2 million TEU capacity currently) and aim to become Hapag-Lloyd's dedicated strategic transshipment hub in the East Mediterranean. At Nador (Morocco), the project to expand container handling capacity at the Nador West Med Terminal is progressing after a decade of planning. Once fully operational by 2027, the terminal will offer a capacity of 3.4 million TEUs annually (compared to negligible container handling capacity at Nador currently). A joint venture between CMA CGM and Marsa Maroc will equip and operate 50% of the new container terminal. This capacity expansion aims to complement transhipment capacity of Tanger Med.

Currently, there is no clear evidence to conclude that a change of investment patterns in ports is taking place (i.e. investments being cancelled or reduced at EU ports and accelerated in competing non-EU ports) as a result of ETS. However, given the planned investments, it is important to continue closely monitoring these fast-expanding neighbouring ports.

5.3. Legislation changes in neighbouring countries

There are no legislative and regulatory developments in non-EU neighbouring countries that could potentially increase evasion risks in the future. On the contrary, two of these neighbouring countries, the UK and Türkiye, have announced plans on implementing carbon pricing mechanisms for the shipping sector.

The UK plans to expand the scope of the UK ETS to cover maritime emissions as from 2026. A consultation was launched in November 2024[17] with the objective to look at different implementation options as well as to consult on potential future expansion of the UK ETS to additional maritime emissions. The consultation mentions the possibility to cover half of UK-EU emissions on top of UK domestic emissions, and potentially half of emissions from international voyage which starts or ends in the UK from overseas, should multilateral action through the IMO be delayed or prove insufficient in reducing GHG emissions from international shipping.

In Türkiye, the Parliament has amended its ports law in July 2024 with the intention to oblige commercial ships calling at Turkish ports to pay for their GHG emissions. A regulation should further detail the coverage of the system (tonnage, types of voyages), emission fee rates, and procedures for monitoring, reporting, and verifying emissions. It is therefore yet unclear whether the ETS will only apply to TK-EU voyages, domestic voyages, and/or whether it would also apply to extra-TK voyages, in which case it would fully address the evasion risk in relation to Turkish ports.

[17] UK Emissions Trading Scheme Scope Expansion: Maritime: A joint consultation of the UK Government, the Scottish Government, the Welsh Government and the Department of Agriculture, Environment and Rural Affairs for Northern Ireland. Closing date: 23 January 2025.
https://assets.publishing.service.gov.uk/media/6747627277462f7809147537/uk-ets-scope-expansion-maritime-consultation.pdf

Egypt has also recently launched a voluntary carbon market, however there is no mention of maritime coverage.

No announced relevant legislation changes have been identified in Morocco nor in any other neighbouring countries that would be relevant for the present analysis.

Besides these national legislation changes in neighbouring countries, the EU is also fully engaged at global level to push for an ambitious regulatory framework. There are ongoing discussions at the level of the International Maritime Organisation (IMO) with a view to agree on concrete measures to achieve the objectives agreed under the revised IMO GHG strategy. Outcomes at IMO level will be duly considered, including in the context of the monitoring of the implementation of the ETS Directive in relation to maritime transport.

6. Monitoring of other impacts

- ETS costs are estimated to represent on average an increase of 3,7% in overall shipping costs in 2024, with great variation across vessel categories.
- An analysis of ETS costs and surcharges shows that containership operators fully pass on ETS costs to shippers. The impact of the announced ETS surcharges on transport prices for shippers represent an increase of around 1% to 5% on freight rates. At the same time, global freight rates for container shipping grew approximately by 120% from October 2023 to June 2024 due mostly to the Red Sea crisis.
- There is also evidence of specific ETS surcharges being applied on short sea shipping routes. An analysis of various ferry routes suggests that the impact of ETS costs on ticket prices largely varies across routes selected, with a price increase ranging from 3% to 11%.
- There is currently no evidence to suggest that a reduction in shipping services to EU islands has occurred, based on the trend in port calls analysed.
- Analysis of port traffic in Outermost Regions does not indicate any unusual reductions in any of the Outermost Regions in 2024. Furthermore, there is little indication of any differences in trends of port calls in Outermost Regions depending on the origin of the voyage. Transhipment activities are relatively minimal in ports of the Outermost Regions, except for the Canary Islands, and no significant evasive behaviours were identified.

6.1. Impacts on transport costs

Considering an average price for ETS allowances at 64 EUR/tCO_2 in 2024, and the 40% phase-in, it is estimated that shipping companies will surrender around 34 million EU allowances in 2024 (assuming 2023 activity levels), which would imply a cost of around EUR 2,200 million to acquire ETS allowances. When compared to total shipping costs (e.g. fuel costs, staff costs, ports fees, capital costs, etc.), this represents an increase of around 3,7% if no energy efficiency or emissions reduction measures are taken by operators and/or shipowners.

Cost impacts vary greatly across vessel categories, depending on their relative share of intra and extra-EU emissions. For instance, containerships, tankers or bulk carriers usually have a higher share of extra-EU related emissions compared to passenger ships.

Total ETS cost impacts in 2024 for a selected route from Far East to North Europe (Shanghai to Rotterdam with containership built in 2015 carrying around 14 000 TEUs) using only fossil fuels

were estimated at around EUR 145 000 per trip when re-routing via the Cape of Good Hope and at EUR 106 000 when sailing via the Suez Canal. This represents an additional cost of around 10 EUR/TEU and 7 EUR/TEU, respectively, with an estimated load factor of 78%.

Liner operators have announced ETS surcharges to pass through ETS costs to shippers. As an illustration, ETS surcharges on the route Asia to North Europe amount to 30 EUR/TEU on average (and 20 EUR/TEU in the opposite direction), in both cases higher than the cost of 7-10 EUR/TEU estimated above for this route in 2024. This seems to indicate that liner operators can fully pass through ETS costs, and it shows that such surcharges do not necessarily reflect the true EU ETS costs expected on a specific route.

The analysis of ETS surcharges in comparison to freight rates shows that the impact of ETS on transport prices for shippers is likely to be limited in 2024. Announced ETS surcharges by liner operators are mostly within the range of 1 – 5% of container freight rates. This compares against the 120 percentage points increase in container freight rates from October 2023 to June 2024, mostly attributable to the Red Sea crisis, as estimated by UNCTAD.[18]

There is also evidence of specific ETS surcharges being applied on short sea shipping routes. An analysis of various ferry routes in the EU shows that the impact of ETS costs on ticket prices varies across routes, with a price increase ranging from 3% to 11% in 2024.

6.2. Impacts on essential services for territorial continuity

The analysis of port calls for top 10 ferry services to EU islands shows that, in those cases where there are no exemptions for domestic services to islands with fewer than 200 000 residents, ETS can be expected to bring relatively sizeable impacts to the total annual voyage costs, with greater impacts in the following years. In 2024, the ETS cost is estimated to be an additional 8% over the total shipping cost for ferry routes that are using 100% fossil fuels. In 2025 and 2026 the ETS cost is expected to increase in accordance with the phase-in approach regarding ETS allowances to be surrendered. To this point, there is currently no evidence to suggest that a reduction in shipping services to islands has occurred, based on the trend in port calls analysed, both for exempted and non-exempted island ports. Responses to the questionnaire sent to port authorities does not provide any additional evidence on supply adjustments in ferry services to islands. Therefore, the ETS cost in the current year does not seem to have affected the frequency of shipping services to islands or deterred companies from undertaking these routes, based on the data available.

6.3. Impacts on shipping services to/from Outermost Regions

The impact assessment on the extension of the EU ETS to maritime transport identified that the most remote EU territories, the outermost regions, are particularly exposed to economic impacts from changes in the shipping sector. This is due to several factors, including significantly longer voyage legs to outermost regions than intra-EU journeys (some outermost regions are 10 000 kilometres away from Europe) and significantly lower GDP per capita in these regions compared to their national (and wider EU) averages. It is for all these reasons that, in line with Article 349

[18] UNCTAD, *2024 Review of maritime transport* (Chapter 3) RMT 2024 - Chapter III. Freight rates, maritime transport costs and their impact on consumer prices and economic activity

of the Treaty on the Functioning of the European Union, the ETS Directive includes specific derogations in relation to shipping emissions linked to EU outermost regions.

The analysis of port calls at the different Outermost Regions in 2024 reveals trends consistent with previous years or linked to changes in regional traffic (in particular within the Caribbean). There is no evidence of unusual reductions in traffic across any of the outermost regions in 2024.

Furthermore, there is little variation in the trends of port calls in Outermost Regions depending on the origin of the voyage. In the Canary Islands, there is a greater increase in 2024 of port calls on voyages from non-EU countries, but these appear to be related to the impacts of the situation in the Red Sea, rather than to the extension of the EU ETS. There is also no indication of any reduction in traffic from other EU Member States towards outermost regions, or increases in national traffic from the European continental territory of a given Member State towards its outermost regions nor between outermost regions of the same State, which could have indicated changes in routes (i.e. changes in the order of port calls) seeking to reduce ETS payments by using existing derogations for voyages within the same Member State.

Container transhipment activity at ports in EU outermost regions is predominately driven by ports in the Canary Islands, which experienced a significant increase in early 2024. This surge is deemed due to the impacts of the situation in the Red Sea. In contrast, transhipment activity in ports of other outermost regions remained at low level. Therefore, it is not possible to identify any direct effects of the EU ETS on these activities in 2024.

7. Conclusions

This report provides an initial analysis of the impacts of the EU ETS extension to maritime transport, which commenced on 1 January 2024, with the objectives of detecting potential evasive trends at an early stage and assessing the broader implications of the system, including its effects on transport costs and key shipping services.

When looking at market trends over the first three quarters of 2024, the available data shows that important changes in maritime traffic and routes occurred in 2024. However, these changes seem mainly related to the ongoing impacts of the Red Sea crisis, which resulted in many shipping companies deviating their routes around South Africa, via the Cape of Good Hope.

To disentangle the effects of the Red Sea from the ones from the ETS extension to the extent possible, the analysis compares trends at EU and non-EU ports, taking into account their economic activity, location and exposure to the Red Sea crisis. The analysis shows no concrete evidence of a general trend in relocation of container transhipment activities, whereby neighbouring non-EU ports would profit from a decrease in port activity at EU ports. There is also no clear evidence suggesting that shipping companies are adding stops at neighbouring non-EU ports or modifying the order of their port calls to circumvent ETS obligations. In addition, analysis of available data on two case studies (Spain-Italy and Bulgaria-neighbouring countries) provides no evidence of modal shift towards road transport. Furthermore, available data do not point to an increase in the use of smaller ships outside the scope of the system or ship-to-ship transfers, which could have suggested that companies are implementing such evasive behaviours.

When examining forward-looking indicators, including route announcements for 2025 and planned investments in ports, the analysis reveals no discernible trends that could indicate a change in market behaviour resulting from the ETS extension to maritime transport. Meanwhile, the study highlights the shipping industry's highly dynamic landscape, e.g. with container shipping companies rapidly adapting their routes and operations in response to the Red Sea crisis. Although a few examples suggest that companies may be considering circumvention behaviours when designing their future routes, the analysis does not provide conclusive and generalised evidence of such a trend. In addition, planned investments in ports, both in the EU and neighbouring countries, are not experiencing a noticeable turnaround compared to already ongoing trends in recent years, with many ports that continue planning ambitious investments to increase their competitiveness and market share, particularly for container transhipment activities.

In terms of broader impacts, the ETS extension to maritime transport and the obligation for shipping companies to surrender EU allowances is expected to increase, on average, total shipping costs by 3,7% in 2024, if no energy efficiency or emissions reduction measures are taken by operators and/or shipowners. Higher increases are anticipated in 2025 and 2026, linked to the phase-in approach. These costs are generally passed on to shippers by shipping companies, with relatively limited impact on total transport prices. ETS surcharges imposed by shipping companies in 2024 represent an increase of freight rates between 1% and 5% for deep sea container services and between 3% and 11% for various ferry lines in Europe. The analysis does not show evidence of reduced shipping services to EU islands or Outermost Regions, with port traffic and transhipment activities remaining relatively stable.

While this first report does not find evidence of major changes directly attributable to the introduction of the EU ETS, these conclusions should be viewed with caution due to the limitations of this analysis. Notably, the significant spill-over impacts of the Red Sea crisis on maritime traffic, the limited time since its introduction and therefore limited experience in the implementation of the system for maritime emissions, and data limitations all factor into the limitations of the analysis. This initial report should therefore be seen as the first step of an ongoing process providing the foundation for future analysis and for possible enhancements of the monitoring approach, in particular when it comes to considering future perspectives – including consideration of the entry into application of the FuelEU Maritime Regulation as from January 2025. In this endeavour, the Commission will continue its monitoring activities as required by the ETS Directive and will seek active support and collaboration of Member States, agencies, and relevant stakeholders to ensure the rapid identification of new trends, patterns, and emerging issues that will inform decision-making and policy development.