

EU MRV 2022

Technical note

July 2023

1. Introduction

The Monitoring, Reporting and Verification (MRV) Regulation allows us to analyse the environmental impact of the shipping sector and the performance of individual ships that call at ports in the EU. Ship operators must monitor and report inter alia their entire fuel burn, operational efficiency scores, and CO₂ emissions from journeys to, from, between and at EU ports, and have these reports third-party verified before submitting them to the European Commission. On 1 July 2023, the reporting for the year 2022 was released¹.

T&E previously published an analysis of the 2018 MRV data release with a detailed methodology note on data treatment.² This analysis and dashboard using the 2022 MRV data employs the same methodology unless specified. Section 2 explains how emissions from container and cruise ships were allocated to different shipping companies.

In order to compare emissions across the whole period despite the change in geographical scope in 2021 (when the EU MRV Regulation ceased to apply in the United Kingdom), we have in some cases adjusted 2018-20 emissions to reflect estimated 'EU-27' levels. This was done by estimating the share of voyages which feature port calls in the UK but not the remaining EU countries, using analysis of 2019 AIS data. For the shipping sector as a whole, we assume that EU-27 emissions are equivalent to 91.1% of reported EU-28 emissions for each year.

¹<https://mrv.emsa.europa.eu/#public/emission-report>.

² <https://www.transportenvironment.org/publications/european-shippings-climate-record>

2. Ship companies allocation

As in our previous MRV analysis, we allocated containership emissions reported under the MRV regulation to container shipping operators based on whether they owned and/or operated those ships in 2022, using an external database from Alphaliner. Specifically, we allocated a ship to an operating company if that ship was operated by the company on both 1 March 2022 and 1 October 2022.

For a number of vessels, for example where vessel names have changed, or where there were minor differences in naming between Alphaliner and EU-MRV data, we performed manual searching and matching. Clarksons data was also used as part of this verification process.³ As a result of this exercise, 96% of containerships were allocated to an operating company (including ships with multiple companies, for which emissions were not counted towards either), covering 98% of CO₂ emissions.

As the 2022 Alphaliner database was broken down by company subsidiaries, these subsidiaries were also combined in order to allocate emissions to parent companies. The parent-subsidiary relationships used in the analysis, based on data from Alphaliner,⁴ are provided below. All other individual operators are treated as both parent and subsidiary.

Parent company	Subsidiaries
Maersk	Maersk A/S, Hamburg Sud, Alianca, Sealand Asia, Sealand Americas, Sealand Europe & Med
MSC	MSC, WEC Lines, Log-In Logistica
CMA CGM Group	CMA CGM, APL, ANL, CNC, CoMaNav, Containerships, Feeder Associate System, MacAndrews, Mercosul Line, Sofrana ANL Pte Ltd
COSCO Group	COSCO Shipping, OOCL, Shanghai Pan Asia Shipping, New Golden Sea Shipping Pte Ltd (GSS), COSCO (Coheung), COSCO Shipping (Diamond Line)
Hapag-Lloyd	Hapag-Lloyd, NileDutch, Deutsche-Afrika Linien (DAL)
Evergreen Group	Evergreen Line, Italia Marittima
Zim (Ziss)	Zim, Gold Star Line

³ <https://www.clarksons.net/portal>

⁴ <https://alphaliner.axsmarine.com/PublicTop100/>

PIL (Pacific International Lines)	PIL, ACL, Mariana Express Lines
IRISL Group	IRISL, HDS Lines, Valfajr Eight Shipping Co, Khazar Shipping
Sinokor Merchant Marine	Sinokor, Heung-A Line
Transworld Group	Transworld Feeders, Straits Orient Lines (SOL)
Shanghai Jin Jiang Shipping	Shanghai Jin Jiang Shg (SJJ), HASCO
Swire Shipping	Swire Shipping, Westwood Shipping, Pacifica Shipping
UniFeeder	UniFeeder, Unimed Feeder Services (UFS), Feedertech Pte Ltd Shreyas Shipping
Rifline	Rifline, Kalypso

A similar aggregation exercise was also performed for the major cruise operating groups. This analysis used the allocation of companies published in T&E’s study (2023) on cruise ship air pollution.⁵ Given the more limited extent of sale and purchase activity in the cruise segment, each ship is assumed to be operated by the same company throughout 2022. The parent and subsidiary relationships for the 4 largest cruise operator groups are shown in the below table.

Parent company	Subsidiaries
Carnival	Costa Cruises, Carnival, Aida Cruises, Holland America Line NV, Princess Cruise Lines Ltd, Cunard Line Ltd, Carnival Cruise Line, Seabourn Cruise Line Ltd, Carnival Australia, CSSC Carnival Italy Cruise
MSC	MSC
Royal Caribbean Group	Royal Caribbean Cruises, Celebrity Cruises Inc, Silversea Cruises Ltd
Norwegian Cruise Line Holdings	Norwegian Cruise Line, Oceania Cruises Inc, Regent Seven Seas Cruises Inc

⁵ <https://www.transportenvironment.org/wp-content/uploads/2023/06/The-return-of-the-cruise-June-2023.pdf>

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