

# Monitoring, reporting and verification of CO<sub>2</sub> emissions from maritime transport

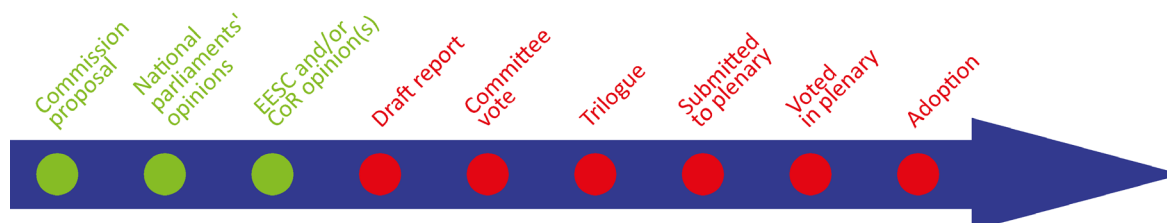
## OVERVIEW

In February 2019, the Commission adopted a proposal to revise the EU system for monitoring, reporting and verification of CO<sub>2</sub> emissions from maritime transport, in order to align it with the global data collection system introduced by the International Maritime Organization (IMO). The existing EU system requires ships above 5 000 gross tonnes using European ports to monitor and report fuel consumption and CO<sub>2</sub> emissions per voyage and on an annual basis, starting with the year 2018. The IMO system requires ships above 5 000 gross tonnes on international voyages to report consumption data for fuel oil, hours underway and distance travelled. The system entered into force on 1 March 2018, and reporting starts with the year 2019. The proposed revision aims to facilitate the simultaneous application of the two systems, while preserving the objectives of the current EU legislation.

In the European Parliament, the ENVI committee has appointed Jutta Paulus (Greens/EFA, Germany) as rapporteur for the file. The Environment Council discussed the proposal in June 2019.

**Proposal for a regulation of the European Parliament and of the Council amending Regulation (EU) 2015/757 in order to take appropriate account of the global data collection system for ship fuel oil consumption data**

<i>Committee responsible:</i>	Environment, Public Health and Food Safety (ENVI)	COM(2019) 38 final 4.2.2019
<i>Rapporteur:</i>	Jutta Paulus (Greens/EFA, Germany)	2019/0017(COD)
<i>Shadow rapporteurs:</i>	Jytte Guteland (S&D, Sweden) Catherine Chabaud (Renew Europe, France) Joëlle Mélin (ID, France) Mick Wallace (GUE/NGL, Ireland)	Ordinary legislative procedure (COD) (Parliament and Council on equal footing – formerly 'co-decision')
<i>Next steps expected:</i>	Publication of draft report	



## Introduction

In the context of EU climate policy, the European Commission adopted a legislative proposal related to CO<sub>2</sub> emissions from maritime transport on 4 February 2019. The [proposal](#) aims to revise the EU system for monitoring, reporting and verification of CO<sub>2</sub> emissions from maritime transport (Regulation (EU) 2015/757) in order to align it with the global data collection system (DCS) for the fuel oil consumption of ships introduced by the International Maritime Organization ([IMO](#)).

International maritime transport is responsible for around 2 to 3 per cent of global greenhouse gas (GHG) emissions, according to a [study](#) of the International Maritime Organization. The sector, which has higher emissions than any EU Member State, makes a significant contribution to climate change. EU-related shipping is responsible for about one-fifth of global emissions. In the EU, maritime transport accounted for 13 % of the greenhouse gas emissions from the transport sector in 2015. Maritime transport is not expressly addressed by an EU emissions reduction objective or specific mitigation measures. Likewise, the [Paris Agreement](#), adopted in December 2015, sets the overall goal of limiting the global average temperature to well below 2°C above pre-industrial levels, but does not include specific provisions on reducing emissions from the international shipping sector.

International seaborne trade volumes are expected to grow, which would lead to a significant increase in the associated emissions if mitigation measures are not put in place swiftly. According to IMO scenarios, global shipping emissions could grow by between 50 % and 250 % by 2050, depending on future economic and energy developments. If left unchecked, these emissions risk undermining the goals of the Paris Agreement and cancelling out the emission reductions achieved in other sectors. Monitoring, reporting and verification of emissions is an important instrument for developing emissions reduction policies and for setting targets.

In 2013, the European Commission formulated a [strategy](#) for reducing GHG emissions from the shipping industry, comprised of three consecutive steps:

- 1 monitoring, reporting and verification of CO<sub>2</sub> emissions from large ships,
- 2 GHG reduction targets for the maritime transport sector,
- 3 further measures, including market-based measures (in the medium to long term).

## International Maritime Organization (IMO)

The IMO published its first study on GHG emissions from ships in 2000. Measures to limit and reduce GHG emissions from international shipping have been on the agenda of the IMO Marine Environment Protection Committee ([MEPC](#)) since 2003. In 2011, the IMO adopted minimum [efficiency standards](#) for new ships. The third IMO GHG [study](#) was published in 2014.

The 70th MEPC meeting in October 2016 adopted a mandatory [data collection system](#) (described in the following section), which requires ships above 5 000 gross tonnes to report consumption data for fuel oil, hours underway and distance travelled. According to the IMO, these ships account for approximately 85 % of CO<sub>2</sub> emissions from international shipping. The system entered into force on 1 March 2018, and reporting starts with the year 2019. The data collection is a prerequisite for the definition of strategies and measures to reduce fuel consumption and the associated CO<sub>2</sub> emissions.

The 72nd meeting of the MEPC in April 2018 adopted an [initial strategy](#) on the reduction of GHG from ships, which should peak as soon as possible and fall by at least 50 % by 2050 compared to 2008, while pursuing efforts towards phasing them out entirely. The initial strategy includes candidate short-, mid- and long-term measures with possible timelines and their impacts, and identifies barriers and supportive measures. According to the IMO roadmap approved in 2016, the initial strategy is due to be revised by 2023.

The EU, which has consistently pushed for higher environmental ambition in the IMO, had aimed for more ambitious emission reductions, namely 70 % to 100 % by 2050, and [urges](#) the IMO to develop

and implement short-term measures to reduce emissions before 2023 and to start the development of other candidate measures.

The [73rd meeting](#) of the MEPC in October 2018 approved a programme of follow-up actions on the initial GHG reduction strategy. The [74th MEPC meeting](#) in May 2019 strengthened the existing mandatory requirements for energy efficiency of new ships and initiated the fourth IMO GHG study.

## Existing situation

Currently, data related to the GHG emissions of ships above 5 000 gross tonnes calling at ports in the European Economic Area (EEA) must be reported in two separate, but largely overlapping, systems: the EU MRV – which applies since 2018 – and the IMO DCS – which applies since 2019.

## EU Monitoring, Reporting and Verification (MRV) system

The EU system for monitoring, reporting and verification of CO<sub>2</sub> emissions from maritime transport ([Regulation \(EU\) 2015/757](#)) requires ships above 5 000 gross tonnes calling at EEA ports to monitor and report fuel consumption, CO<sub>2</sub> emissions and transport work per voyage and on an annual basis, starting in 2018. According to analysis by the Commission, the introduction of the EU MRV system could lead to a 2 % annual reduction in fuel consumption and emissions by increasing transparency and awareness of GHG emissions from shipping.

It covers ships above 5 000 gross tonnes calling at EEA ports for maritime transport purposes. Other ship activities (such as fisheries, dredging, laying pipelines and supporting offshore installation activities) are not subject to monitoring and reporting requirements, for reasons of proportionality. Data on voyages internal to any EU Member State is also monitored and reported, so as to provide Member States' authorities with robust and comparable data of their domestic shipping emissions.

The CO<sub>2</sub> emissions of ships within EEA ports are monitored and reported separately, in order to promote the use of available measures for reducing CO<sub>2</sub> emissions within EEA ports and to raise awareness of these emissions.

The data must be verified by accredited third parties, with the aim of providing comparable data over time and robust information for further decision-making at the EU or the global level.

Shipping companies must submit a monitoring plan for each ship to an accredited verifier. From 1 January 2018, shipping companies must monitor CO<sub>2</sub> emissions, fuel consumption and other parameters, such as distance travelled, time at sea and cargo carried for each of their ships on a per voyage basis. The data are gathered into an emissions report and submitted to an accredited verifier after each calendar year.

On 30 April of each year, companies must submit a verified emissions report for each ship to the Commission and to the flag state where the ship is registered. From 30 June of each year, ships that have performed transport activities in the EEA in the previous reporting period must carry a document of compliance on board whenever they call at an EEA port.

The EU MRV Regulation requires the publication of data on the CO<sub>2</sub> emissions and energy efficiency of individual ships. Such transparency aims to incentivise the uptake of more energy efficient technologies and behaviours in the sector.

The MRV Regulation requires the Commission to review it after adoption of an IMO data collection system, and propose amendments to align the two systems, if appropriate.

The European Maritime Safety Authority (EMSA) operates an IT system ([THETIS-MRV](#)) for MRV of shipping emissions. This system enables shipping companies to work together with accredited verifiers to prepare monitoring plans and release emission reports and documents of compliance to the European Commission and national authorities.

In July 2019, EMSA released [information](#) on CO<sub>2</sub> emissions from ships over 5 000 gross tonnes operating in the EEA in 2018. A total of 130 million tonnes of CO<sub>2</sub> emissions was reported for around 11 000 ships of different types, services and cargo (including passenger ships, bulk carriers, tankers and container ships). The European Commission plans to analyse the data and publish its report by the end of 2019.

## IMO data collection system (DCS)

The IMO [data collection system](#) requires ships above 5 000 gross tonnes to report consumption data for each type of fuel oil, hours underway and distance travelled, for all international voyages. Unlike the EU MRV, the IMO DCS covers any maritime activity carried out by ships, including dredging, pipeline laying, ice-breaking, fish-catching and off-shore installations. The system, adopted by resolution [MEPC.278\(70\)](#), entered into force on 1 March 2018. Reporting starts with the year 2019.

The Ship Energy Efficiency Management Plans of all ships covered by the IMO DCS must include a description of the methodology for data collection and reporting. After each calendar year, the aggregated data are reported to the flag state. If the data have been reported in accordance with the requirements, the flag state issues a statement of compliance to the ship. Flag states subsequently transfer this data to an IMO ship fuel oil consumption database, which is part of the Global Integrated Shipping Information System (GISIS) platform. IMO will then produce annual reports, summarising the data collected.

## Key differences between EU MRV and IMO DCS

While the two systems have the same general objective, there are [important differences](#):

- The IMO DCS comprises any activity carried out by ships in the marine environment, while the EU MRV covers only transport of goods and persons.
- The IMO DCS applies to all international voyages, while the EU MRV applies only to voyages to and from EEA ports, including domestic voyages.
- Emissions in EEA ports are reported separately in the EU MRV system.
- The IMO DCS requires annual aggregated data, while the EU MRV uses data per voyage.
- The IMO DCS requires data on the deadweight tonnage (the carrying capacity of the ship), while the EU MRV requires data related to transport work (weight of actual cargo carried or number of passengers).
- The IMO DCS requires publication of aggregated data, while the EU publishes data on the performance of individual ships.

## Parliament's starting position

The European Parliament has consistently pushed for ambitious policies to reduce GHG emissions in international shipping, and sent delegations to important MEPC meetings. The [resolution](#) 'Towards a new international climate agreement in Paris' of 14 October 2015, which set out its position before the COP21 climate change conference, called on the Parties to work within the IMO towards an effective response by setting adequate targets before the end of 2016 so as to achieve the 2°C target.

The [resolution](#) of 25 October 2018 on the 2018 UN Climate Change Conference in Katowice, Poland (COP24) welcomed the initial IMO strategy on reduction of GHG emissions from ships and called on the IMO to agree rapidly on new mandatory emissions reduction measures needed to deliver on the targets. It urged the EU and its Member States to monitor the impact and implementation of the IMO agreement and to consider additional EU action to ensure that shipping emissions are reduced in line with the Paris Agreement.

Specifically with regard to MRV, the [resolution](#) on a European strategy for low-emission mobility of 14 December 2017 called for amendment of the EU MRV system to align it with the IMO DCS, while preserving transparency, verification and the collection of data on real transport work.

## Preparation of the proposal

In reaction to the adoption of the guidelines for the global IMO DCS by the MEPC meetings in October 2016 and July 2017, the European Commission carried out the analysis required by the EU MRV Regulation. In order to gather input from stakeholders, a public on-line consultation was carried out from 8 September to 1 December 2017, followed by a targeted e-survey organised by consultants in December 2017 and January 2018. In addition, the Commission considered the feedback received in relation to its inception impact assessment. The responses received are summarised in the 'Stakeholders' views' section below.

The [impact assessment](#) analysed three policy options:

- baseline: EU MRV Regulation remains unchanged,
- streamlining of elements for which there is a design difference between the EU MRV and the IMO DCS
- high convergence: the EU MRV Regulation would adopt the requirements of the IMO DCS

The impact assessment recommends option 2, as it safeguards the expected environmental, social and economic benefits of the EU MRV Regulation, while reducing the administrative burden for ship owners.

The Regulatory Scrutiny Board gave a [positive opinion](#) of the impact assessment, but notes some opportunities for improvement, including a quantification of the cost of the baseline and the cost savings of the preferred option.

EPRS has carried out an [initial appraisal](#) of the impact assessment and identified some shortcomings.

## The changes the proposal would bring

The [proposed revision](#) of Regulation (EU) 2015/757 aims to facilitate the simultaneous implementation of the two systems, while preserving the objectives of the current EU legislation, i.e. to keep the collection of robust and verified CO<sub>2</sub> emissions data at individual ship level, to stimulate the uptake of energy efficiency solutions and inform future policy-making. By aligning some aspects of the two MRV systems such as specific definitions or monitoring parameters, the proposal aims at reducing the administrative burden and associated costs for ships that have to report under both systems.

Specifically, the proposal amends the EU MRV Regulation to align the definitions of 'company' and 'reporting period' with the global IMO DCS, in order to ensure that the same legal entities monitor and report for similarly calculated reporting periods under both the EU MRV Regulation and the global IMO DCS, for their ships' EEA-related maritime transport activities. Some monitoring and reporting requirements of the IMO DCS will be used in the EU MRV Regulation: 'deadweight tonnage' will become a mandatory parameter, while 'cargo carried' will be retained as a voluntary parameter; 'time at sea' will be replaced with the IMO DCS definition of 'hours underway'; and 'distance travelled' will be calculated according to IMO DCS guidelines.

The content of monitoring plans would be adapted so as to take into consideration the IMO 'Guidelines for the development of a Ship Energy Efficiency Management Plan (SEEMP)', except for those provisions which are necessary to ensure that only EU-related data are monitored and reported under the EU MRV Regulation.



Certain key elements of the existing EU MRV Regulation would be maintained:

- the scope in terms of ships and activities,
- monitoring and reporting of ship's CO<sub>2</sub> emissions in EEA ports and during voyages within EU Member States,
- publication of individual ships' CO<sub>2</sub> emissions and energy efficiency.

## Advisory committees

The European Economic and Social Committee, in its [opinion of 15 May 2019](#) (rapporteur: Constantine Catsambis, Employers - Group I, Greece) advocates a complete alignment of the EU MRV Regulation with the IMO system, in order to ensure an international level playing field for the European fleet. It considers that the proposed partial alignment would create ineffective double monitoring and reporting requirements that increase the workload, administrative burden and costs.

The Committee of the Regions decided not to issue an opinion.

## National parliaments

Fifteen national parliamentary assemblies [scrutinised](#) the proposal; no subsidiarity concerns were raised before the deadline.

## Stakeholders' views<sup>1</sup>

The Commission's impact assessment provides a summary of the [stakeholder input](#) received during the preparation of the proposal. Stakeholders from the shipping industry consider the minimisation of administrative burden as the most important objective, and generally favour the full alignment of the EU MRV with the IMO DCS. Civil society stakeholders generally consider it important to retain the EU system, as it provides better transparency at the individual ship level.

The [European Shippers' Association](#) favours a global approach and warns that regional regulation risks a distortion of competition as well as traffic avoidance. However, it considers the transparency of data of utmost importance, and proposes to improve the global IMO system by incorporating the EU proposal on transparency and real energy efficiency of individual ships. [AP Moller-Maersk](#), a container logistics company, calls for retaining cargo carried as a mandatory monitoring parameter, as it is needed to accurately calculate a ship's efficiency by comparing its fuel consumption with the actual transport work.

The [European Community Shipowners' Associations](#), together with other associations representing the shipping industry, calls for the full alignment of the EU MRV with the IMO DCS and opposes the publication of data about voyages from and to EEA ports. The [International Chamber of Shipping](#) also calls for full alignment of the EU MRV with the IMO DCS and expresses concerns about the publication of commercially sensitive and potentially misleading information about the operational performance of individual ships under the EU MRV system.

[Transport and Environment](#) (T&E), an environmental NGO, supports the Commission's proposal to continue publishing data about the emissions of each ship calling at EU ports, as this would incentivise shipping companies to cut their CO<sub>2</sub> emissions and provide an evidence base informing regulations to reduce emissions. The transparency of the EU system, unlike the IMO DCS, would allow shipping customers to identify the most efficient vessels.

In the view of Julien Dufour, CEO of the verification and auditing agency [Verifavia Shipping](#), the Commission proposal is a welcome step towards simplification that would allow shipping companies to monitor data in the same way for both systems.

## Legislative process

In the European Parliament, the proposal has been referred to the ENVI committee, which appointed Jutta Paulus (Greens/EFA, Germany) as rapporteur in July 2019.

The proposal has been discussed in the Council working party on the environment and in the Environment Council of 26 June 2019.

## EP SUPPORTING ANALYSIS

Pape M., [Monitoring CO<sub>2</sub> emissions in maritime transport](#), EPRS, April 2015.

Pape M., [The IMO – for 'safe, secure and efficient shipping on clean oceans'](#), EPRS, February 2016.

Pape M., [The first climate change strategy for shipping](#), EPRS, May 2018.

Vettorazzi S., [Revision of the EU system to monitor, report, and verify CO<sub>2</sub> emissions from ships](#), initial appraisal of a European Commission impact assessment, EPRS, forthcoming.

## OTHER SOURCES

[Carbon dioxide emissions from maritime transport: global data collection system for ship fuel oil consumption data](#), European Parliament, Legislative Observatory (OEL).

[Data collection system for fuel oil consumption of ships](#), International Maritime Organization, web page.

[New requirements for international shipping as UN body continues to address greenhouse gas emissions](#), International Maritime Organisation, briefing, October 2016.

Dufour J., [EU MRV and IMO DCS – what does the proposed alignment mean?](#), BLUE Communications, July 2019.

Sheridan P., Jamison O. and Keys V., [Shipping and carbon: EU and IMO systems to align](#), Verifavia, March 2019.

## ENDNOTE

<sup>1</sup> This section aims to provide a flavour of the debate and is not intended to be an exhaustive account of all different views on the proposal. Additional information can be found in related publications listed under 'EP supporting analysis'.

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