



Independent carbon emissions verification for ships under the EU MRV Regulation



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Regulation (EU) 2015/757 on the monitoring, reporting and verification of carbon dioxide emissions from maritime transport Came into force on 1 July 2015

Which ships are concerned by the EU MRV Regulation?

- Ships exceeding 5000 GT regardless of Flag or country of ownership
- Calling at an EU port from 1 January 2018
- And carrying cargo or passengers for commercial purposes

As the accountable entity, the ship must:

- Develop its own Monitoring Plan and have it assessed
- Monitor and report its emissions and activity data
- Have its Emissions Report independently verified
- Carry on-board a Document of Compliance (DOC)

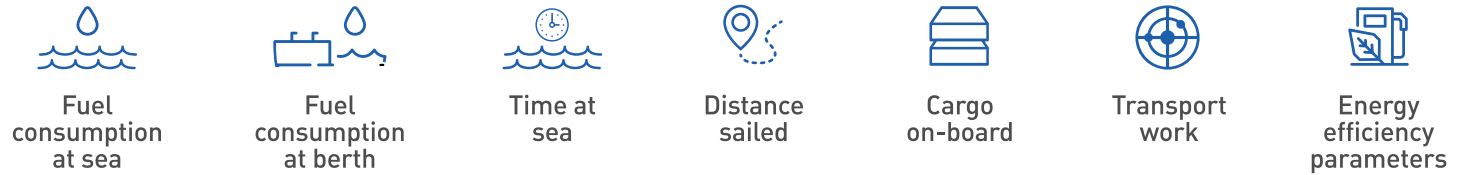


Which voyages must be reported?

- A reportable voyage is a voyage where at least one Port of Call is in the EU
- A Port of Call is a port where a ship stops to load or unload cargo or to embark or disembark passengers
- A voyage is a journey between two Ports of Call



Data to be monitored for each voyage



Monitoring methodologies

- Method A: Bunker fuel delivery note (BDN) and periodic stocktakes of fuel tanks
- Method B: Bunker fuel tank monitoring on-board
- Method C: Flow meters for applicable combustion processes
- Method D: Direct CO₂ emission measurements

Monitoring Plan structure

- Identification of ship and shipping company/shipowner
- Identification of emission sources
- Description of procedures for monitoring voyages, fuel consumption and activity data
- Methodology for data gaps
- Procedures for quality control
- Description of data flows
- Identification of responsibilities

Emission sources to be considered

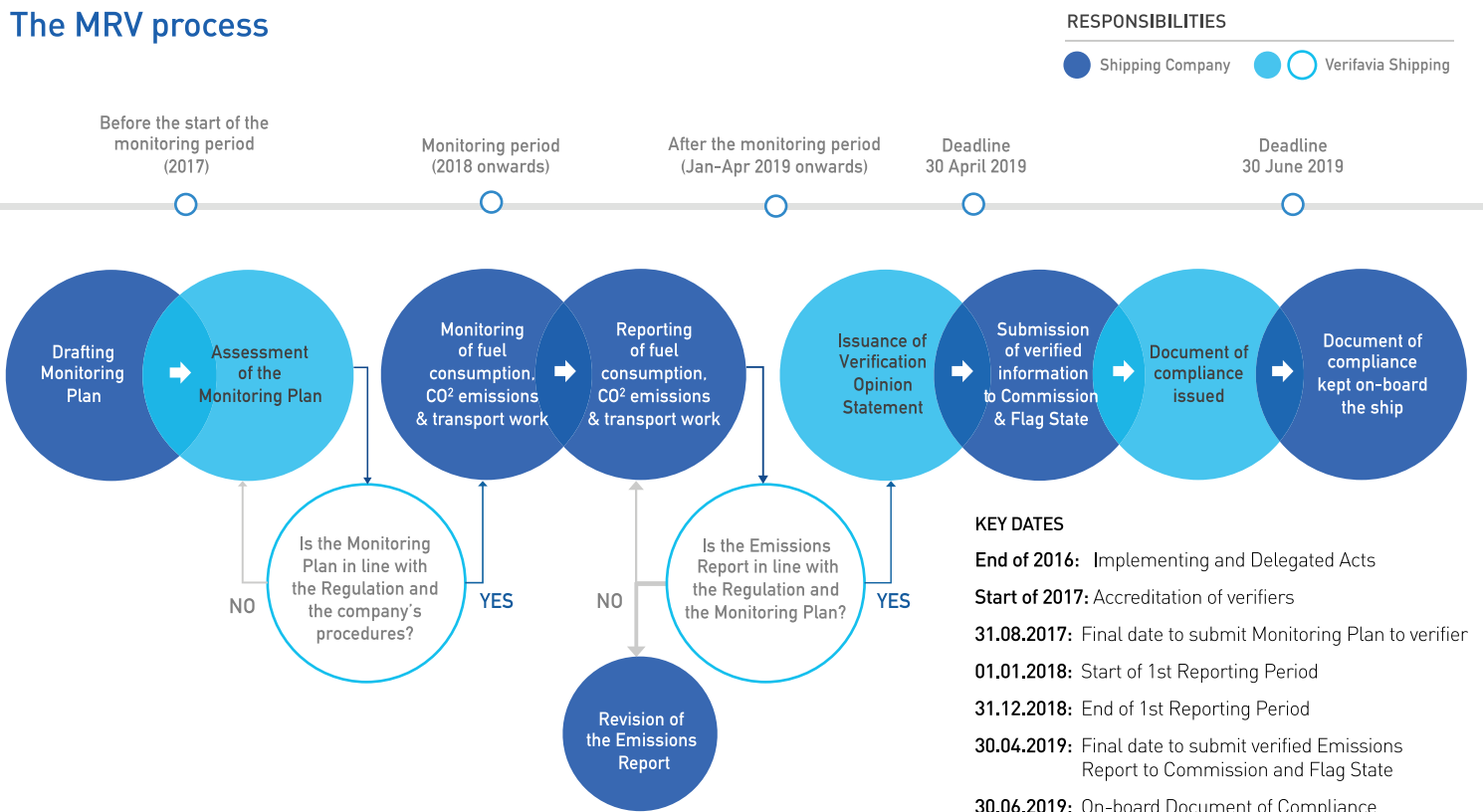
- Main engines
- Auxiliary engines
- Boilers
- Gas turbines
- Inert gas generators



Emission factors

Type of Fuel	IMO Values 2012/63 (t CO ₂ / t fuel)
Heavy Fuel Oil	3.1144
Light Fuel Oil	3.1510
Diesel/Gas Oil	3.2060
Liquefied Petroleum Gas (Propane)	3.0000
Liquefied Petroleum Gas (Butane)	3.0300
Liquefied Natural Gas	2.7500

The MRV process



MRV Roadmap for shipping companies

2016

- Pre-verification GAP-Analysis
- Draft Monitoring Plan
- MRV-Ready Certificate

- Final Monitoring Plan
- Conformity assessment of Monitoring Plan vs. EU MRV Regulation & company's procedures

2017

- Monitoring of fuel, carbon emissions, cargo and other relevant data on a per-voyage basis for each ship according to Monitoring Plan

2018

- Preparation of Emissions Report
- Independent verification of Emissions Report
- Document of Compliance (DOC)

2019

Advantages of GAP-Analysis audit for shipping companies

01
Preparation for EU MRV Regulation

02
Early identification of required corrective actions (adjustment of IT data collection / extraction...)

03
Advance on the assessment of the Monitoring Plan

04
Communication / marketing advantage

05
Compliance without delay

Responsibilities

Aim of verification is to check consistency between Regulation, Monitoring Plan and existing company procedures



In practice, we will conduct the GAP-Analysis and verification in three main phases



PHASE 1

- Preparation
- Strategic & risk analysis
- Verification plan
- Initial data analysis (for an « MRV representative » ship)



PHASE 2

- On-site visit at company's head office (optional)
- Interviews, observation of IT systems & key processes
- Review of documents and source records
- Data sampling, audit trails



PHASE 3

- Full data analysis
- Technical review
- GAP-Analysis report
- (Pre-) Verification Opinion Statement

Verifavia is a global, independent and accredited environmental verification, certification and auditing body for aviation, airports and maritime transport.



Our Vision

Verifavia strives to be the maritime industry's first choice for the provision of emissions verification information and services.

We work as a trusted partner to our customers, supporting them in achieving compliance with an independent service grounded in accuracy, integrity and expertise.



Our Mission

To provide ship owners, operators and managers with independent emissions verification information and services that enable them to navigate through the requirements of EU MRV compliance efficiently and effectively.



Our Approach

Verifavia focuses entirely on its area of expertise – independent carbon emissions verification for the transport sector.

With no other vested interests in the maritime sector, we are able to be entirely independent.

We maintain a flexible and competitive approach at all times to best meet the requirements of our clients.

We respond quickly to all enquiries, with dedicated expertise readily available to support customers whenever and wherever required.



Our Services

- MRV regulatory information and guidance
- Technical workshops & webinars
- Pre-verification GAP-Analysis audits
- Monitoring Plan assessment
- Independent carbon emissions verification
- Certification of EU MRV IT systems
- Clean Cargo Working Group (CCWG) verification



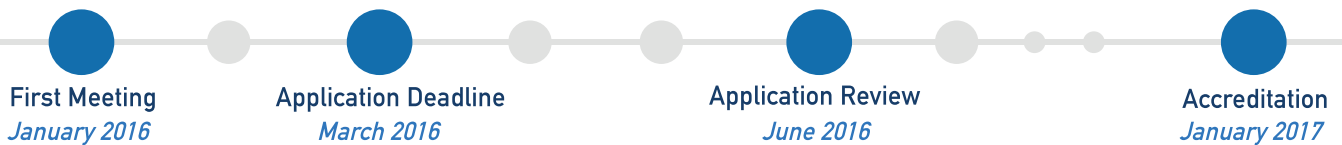
Our Achievements

- ☆ Verifavia is one of the first independent carbon emissions verifiers to conduct pre-verification GAP-Analysis audits against the requirements of the EU MRV Regulation.
- ☆ Verifavia is regularly invited to speak on MRV at international conferences and seminars, and is frequently quoted in the shipping media.
- ☆ Verifavia is the world's leading accredited verification body for the aviation sector under the EU Emissions Trading Scheme (EU ETS) Directive, with a 30% global market share.
- ☆ Verifavia is also a fast-growing provider of independent carbon emissions verification services to airports with 22 airports verified in 2015 alone.

Verifavia is an active member of the European Commission's expert groups on MRV, which ensures we are influencing the technical details of the Regulation and constantly up-to-date on regulatory developments.

Our Accreditation

Timeline of the accreditation process



Verifavia is already accredited by the United Kingdom Accreditation Service (UKAS) to ISO 14065 for the aviation sector and has requested an extension of scope to include shipping



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Our Global Presence

A world map with location pins indicating global presence in Vancouver, Paris & London, Piraeus, Cyprus, and Delhi.

Location
Vancouver
Paris & London
Piraeus
Cyprus
Delhi

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