



Republic of the Philippines  
Department of Transportation  
**MARITIME INDUSTRY AUTHORITY**  
Bonifacio Drive cor. 20<sup>th</sup> Street, Port Area, Manila



**MARINA Circular No. SR 2021-05**  
**Series of 2021**

**TO : ALL SHIPOWNERS, SHIP MANAGERS, MASTERS AND OFFICIERS OF THE PHILIPPINE REGISTERED SHIPS ENGAGED IN THE INTERNATIONAL TRADE, RECOGNIZED ORGANIZATIONS AND OTHER CONCERNED ENTITIES.**

**SUBJECT : RULES AND REGULATIONS ON THE IMPLEMENTATION OF SHIPS' ENERGY EFFICIENCY MANAGEMENT PLAN (SEEMP) AND DATA COLLECTION SYSTEM (DCS) FOR FUEL OIL CONSUMPTION FOR ALL PHILIPPINE REGISTERED SHIPS**

Pursuant to Presidential Decree No. 474, Presidential Decree No. 1059 and its Implementing Rules and Regulations, Executive Order Nos. 125/125-A, Republic Act 9295 and its Implementing Rules and Regulations, in compliance with MARPOL 73/78 ANNEX VI, the following rules and regulations are hereby adopted and prescribed.

**I. OBJECTIVE**

1. To ensure that all Philippine Registered Ships shall comply with the Parts 1 and 2 of the Ships' Energy Efficiency Management Plan (SEEMP) regulation 22A of MARPOL 73/78 Annex VI where the Philippines is a party to the Convention.
2. To promote operational measures that establishes a mechanism to improve the energy efficiency of a ship in a cost-effective manner.
3. To promote the effective control of all sources of **marine pollution** and to take all practicable steps to reduce air pollutions and greenhouse gases from ships.

**II. COVERAGE**

1. All Philippine registered ships with 400 GT and above plying in international trade shall comply with the Parts 1 of SEEMP.
2. All Philippine registered ships with 5,000 GT and above plying in international trade shall comply with the Part 2 (Data Collection System) of the SEEMP.



3. All Philippine registered ships with 400 GT and above plying in domestic trade shall comply with the Part 1 of SEEMP.
4. All Philippine registered ships with 400 GT and above plying in domestic trade shall only comply with the Part 2 (Data Collection System) of the SEEMP.

### III. EXEMPTIONS

The following ships are exempted:

1. For the Part 1 of SEEMP, the Administration exempts all ships below 400 GT.
2. For the Part 2 of SEEMP, the Administration shall exempt ships:
  - 2.1 Solely plying in international voyage with below 5000 GT;
  - 2.2 All domestic Philippine registered ships with below 400 GT;
  - 2.3 Ships not propelled by mechanical means; and,
  - 2.4 Platforms, including FPSOs, FSUs and drilling rigs.

### IV. DEFINITION OF TERMS

1. **"Administration"** refers to the Maritime Industry Authority (MARINA).
2. **"Bunker Delivery Note (BDN)"** refers to the standard document required by Administration, which contains information on fuel oil delivery.
3. **"Data Collection System (DCS)"** refers to annual reports on fuel consumption, distance travelled and hours underway submitted to the Administration, according to the Methodology set out in the Part II of the Ship Energy Efficiency Monitoring Plan (SEEMP).
4. **"Fuel oil"** refers to any fuel delivered to and intended for combustion purposes for propulsion or operation on board a ship, including gas, distillate and residual fuels.
5. **"MARPOL Convention"** refers to the International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocols of 1978 and 1997 and as amended.
6. **"MARPOL Annex VI"** refers to the revised Annex VI to the MARPOL Convention containing regulations for the prevention of pollution by air from ships.





7. **"Recognized Organization (RO)"** refers to an organization that has been assessed by the Administration and have complied with the RO Code and has entered into a MOA with the Administration.
8. **"Ship Energy Efficiency Management Plan (SEEMP)"** refers to the management plan designed to improve the ship energy efficiency by implementing operational or technical measures such as but not limited to speed optimization, weather routing, propeller polishing, and other Energy Saving Devices.
9. **"Ship or Vessel"** may be used interchangeably and shall mean any kind, class or type of craft or artificial contrivance capable of floating in water, designed to be used, or capable of being used, as a means of floating in water transport in the domestic trade for the carriage of passengers or cargo, or both, utilizing its own motive power or that of another.

## V. GENERAL PROVISION

1. Philippine registered ships covered by **SEEMP Part I** of this Circular shall provide a possible approach for monitoring ship and fleet efficiency performance over the time and some options to be considered when seeking to optimize the performance of the ship.
2. Philippine registered ships covered by **SEEMP Part II** of this Circular shall provide methodologies for ships of 5,000 GT and above (for international seagoing ships); and, 400 GT and above (for Domestic ships), to collect the data required pursuant to regulation 22A of MARPOL Annex VI and the processes that the ship shall use to report the data to the Administration or any of its recognized organizations.
3. The Administration recommends that shipping companies to have an environmental management system (EMS) in place under ISO 14001 which contains procedures for selecting the best measures for particular vessels and setting objectives for the measurement of relevant parameters, along with relevant control and feedback features. Monitoring of operational environmental efficiency shall therefore be treated as an integral element of broader company management systems.

## VI. SPECIFIC PROVISION

### 1. PART 1: SHIP ENERGY EFFICIENCY MANAGEMENT PLAN

- 1.1. All Philippine registered ships covered by SEEMP Part 1 of this circular shall adhere to **regulation 22A of the MARPOL ANNEX VI**.





- 1.2. All Philippine registered ships covered by this circular shall adopt the guidelines for the Ship Energy Efficiency Management Plan (SEEMP) **Resolution MEPC.282 (70)**, and subsequent amendments thereof.
- 1.3. All shipping companies and/or ship shall establish a mechanism to improve the energy efficiency of a ship's operation under Part I of the SEEMP. This aspect of the ship-specific SEEMP is linked to a broader corporate energy management policy for the company that owns, operates or controls the ship, recognizing that no two shipping companies are the same, and that ships operate under a wide range of different conditions.
- 1.4. All shipping companies and/or ship shall develop a ship-specific plan that shall reflect the efforts to improve a ship's energy efficiency through four steps: **planning, implementation, monitoring, and self-evaluation and improvement**. These components play a critical role in the continuous cycle to improve ship energy efficiency management. With each iteration of the cycle, some elements of Part I of the SEEMP will necessarily change while others may remain as before.
- 1.5. The Administration shall require the Part I of the SEEMP be part of the ship's Safety Management System.

## 2. PART 2 OFF SEEMP: SHIP FUEL OIL DATA COLLECTION SYSTEM

- 2.1. All Philippine registered ships covered by Part II of the SEEMP shall include a description of the methodology that will be used to collect the data required by regulation 22A.1 of MARPOL Annex VI and the processes that will be used to report the data to the Administration. Under Part II of the SEEMP, the Ship Fuel Oil Consumption Data Collection Plan (hereinafter referred to as "**Data Collection Plan**") contains such methodology and processes.
- 2.2. The guidelines prescribed under regulation 22A provide guidance for developing a ship-specific method to collect, aggregate, and report ship data with regard to annual fuel oil consumption, distance travelled, hours underway and other data required by regulation 22A of MARPOL Annex VI to be reported to the Administration.
- 2.3. Pursuant to regulation 5.4.5 of MARPOL Annex VI, the Administration shall ensure that each ship's SEEMP complies with regulation 22.2 of MARPOL Annex VI prior to collecting any data
- 2.4. All Philippine registered ships covered by this circular shall adopt the 2016 Guidelines for the Development of a Ship Energy Efficiency Management Plan (SEEMP) **Resolution MEPC.282 (70)** and subsequent amendments of the guidelines





- 2.5. A Certificate of Compliance for SEEMP Part II shall be issued by the Administration or ROs and shall be part of the documentary requirement for renewal/audit of the company's ISM-DOC under its ship management system.

## **VII. METHODOLOGY FOR COLLECTING DATA ON FUEL OIL CONSUMPTION, DISTANCE TRAVELLED AND HOURS UNDERWAY**

### **1. Fuel oil consumption**

Fuel oil consumption should include all the fuel oil consumed on board including but not limited to the fuel oil consumed by the main engines, auxiliary engines, gas turbines, boilers and inert gas generator, for each type of fuel oil consumed, regardless of whether a ship is underway or not. Methods for collecting data on annual fuel oil consumption in metric tonnes include the following:

- 1.1. method using bunker delivery notes;
- 1.2. method using flow meters; and
- 1.3. method using bunker fuel oil tank monitoring on board

Any corrections, e.g. density, temperature, if applied, should be documented

### **2. Conversion factor (CF)**

If fuel oils were used do not fall into one of the categories as described in the 2014 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships (resolution MEPC.245 (66)), as amended, and have no CF-factor assigned (e.g. some "hybrid fuel oils"), the fuel oil supplier should provide a CF-factor for the respective product supported by documentary evidence

### **3. Distance travelled**

Appendix IX of MARPOL Annex VI specifies that distance travelled should be submitted to the Administration and:

- 3.1. distance travelled over ground in nautical miles should be recorded in the log-book in accordance with SOLAS regulation V/28
- 3.2. the distance travelled while the ship is underway under its own propulsion should be included into the aggregated data of distance travelled for the calendar year; and
- 3.3. other methods to measure distance travelled accepted by the Administration may be applied. In any case, the method applied should be described in detail in the Data Collection Plan.

### **4. Hours underway**





Appendix IX of MARPOL Annex VI specifies that hours underway should be submitted to the Administration. Hours underway should be an aggregated duration while the ship is underway under its own propulsion.

#### **5. Data quality**

The Data Collection Plan should include data quality control measures which should be incorporated into the existing shipboard safety management system. Additional measures to be considered could include:

- 5.1. the procedure for identification of data gaps and correction thereof; and
- 5.2. procedure to address data gaps if monitoring data is missing, for example, flow meter malfunctions.

#### **6. A standardized data reporting format**

Regulation 22A.3 of MARPOL Annex VI states that the data specified in appendix IX of the Annex are to be communicated electronically using a standardized form developed by the IMO. The collected data should be reported to the Administration in the standardized format shown in appendix 3.

### **VIII. DIRECT CARBON DIOXIDE (CO<sub>2</sub>) EMISSIONS MEASUREMENT**

Direct CO<sub>2</sub> emission measurement is not required by regulation by this administration.

Direct CO<sub>2</sub> emissions measurement, if used, should be carried out as follows:

1. This method is based on the determination of CO<sub>2</sub> emission flows in exhaust gas stacks by multiplying the CO<sub>2</sub> concentration of the exhaust gas with the exhaust gas flow. In case of the absence or/and breakdown of direct CO<sub>2</sub> emissions measurement equipment, manual tank readings will be conducted instead;
2. The direct CO<sub>2</sub> emissions measurement equipment applied to monitoring is located exhaustively so as to measure all CO<sub>2</sub> emissions in the ship. The locations of all equipment applied are described in this monitoring plan; and,
3. Calibration of the CO<sub>2</sub> emissions measurement equipment should be specified. Calibration and maintenance records should be available on board.

### **IX. SURVEY AND CERTIFICATION**

#### **1. Part I**

- 1.1 The Administration or ROs shall approve the SEEMP after the successful completion of the evaluation in accordance with this Circular.



- 1.2 The Administration or ROs shall issue **International Energy Efficiency Certificate (IEEC)** for Philippine Registered Ships in the international trade.
- 1.3 The Administration or ROs shall issue an **Energy Efficiency Certificate (EEC)** for domestic ships after shipping companies complied with the necessary requirements and data under this circular.
- 1.4 The Administration shall undertake periodic random inspection of all Philippine registered ships calling any Philippine ports to ensure compliance with this Circular.
- 1.5 All Philippine registered ships plying international trade shall be subjected to survey/ inspection under MC MS-2020-02 on the oversight function of the Administration.

## 2. Part II

- 2.1. The annual ship fuel oil consumption data collection report will contain at least the following information as per the Appendix IX of the MARPOL Annex VI. Please Refer to Annex 2 of the Circular for the minimum data required to be submitted to the Administration.
- 2.2. Please refer to Annex 1 for the sample form to be used for the manual submission of the Ship Fuel Oil Consumption Data Collection Plan.
- 2.3. The Administration or its ROs shall issue a **Certificate of Compliance** after shipping companies complied with the necessary requirements and data under the part II of SEEMP.
- 2.4. The Certificate of Compliance of SEEMP Part II issued by the Administration or its ROs shall be part of the documentary requirement for renewal/audit of the company's ISM-DOC under its ship management system. Failure to submit the required data under this circular can be a basis for non-renewal of the ship's ISM-DOC

## X. TRANSITORY PROVISION

1. For all Philippine registered ships plying international trade covered by this Circular shall comply with the Part 1 and Part 2 of the SEEMP upon effectivity of this circular.
2. For all Philippine registered ships 400 GT and above plying in the Philippine waters shall comply with the Part 1 of SEEMP on the next intermediate or renewal survey, whichever comes first, after 01 January 2025.
3. Upon the effectivity of this circular, all Philippine registered ships 400 GT and above plying in Philippine waters shall comply with the Part 2 (Data collection





system) and submit to the Administration all data required by this circular under annexes 1 and 2 with the following transition period:

- 3.1 For ships 5000 GT and above shall comply within 30 days after the effectivity of this circular;
  - 3.2 For ships 1000 GT- 4999 GT shall comply within 60 days after the effectivity of this circular; and,
  - 3.3 For ships 400 GT- 999 GT shall comply within 90 days after the effectivity of this circular.
4. Within three (3) months after the end of each calendar year, the company/ship shall report to the Administration the Part 2 (Data collection system) and submit all data required by this circular under annexes 1 and 2, via electronic or manual means.

#### **XI. SEPARABILITY CLAUSE**

Should any provision or part of this Circular be declared by competent authorities to be invalid or unconstitutional, the remaining provisions or parts thereof shall remain in full force and effect and shall continue to be valid and effective.

#### **XII. EFFECTIVITY**

This Circular shall take effect fifteen (15) days after its publication once in a newspaper of general circulation in the Philippines and a copy filed with the UP-Law Center.

Manila, Philippines, this 4<sup>th</sup> day of January 2022

BY THE AUTHORITY OF THE BOARD:

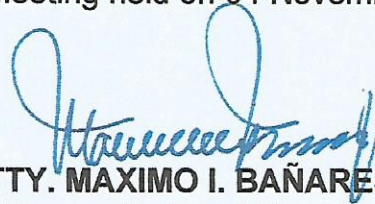


**VADM ROBERT A EMPEDRAD AFP RET)**  
Administrator



**SECRETARY'S CERTIFICATE**

This is to certify that MARINA Circular No. SR-2021-05 has been approved by the MARINA Board in its 288<sup>th</sup> Regular Board Meeting held on 04 November 2021.



**ATTY. MAXIMO I. BAÑARES, JR.**  
Corporate Board Secretary

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