



INTERTANKO

TWENTY 24

Environmental Performance and Monitoring Database (EPMD)

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Principles and Preamble

Objectives

INTERTANKO's Environmental Performance and Monitoring Database (EPMD) tool is designed to provide Members submitting data with the means to assess the relative environmental performance of their fleet against that of the pool of data in the database for both the same tanker type and the entire pool.

It is important to recognise that the averages provided are indicative only and not absolute figures to be used for direct comparison between vessels.

Data Information

Access to the EPMD is solely granted to individuals associated with INTERTANKO Member companies. The Member company name associated with the user account will correspond directly with that entered in INTERTANKO's membership database.

Head Office and Branch Offices

As per other INTERTANKO databases and benchmarking tools, larger companies with fleets divided across different regions and offices can enter data for just those tankers managed by a single office. Alternatively, the company may enter data for the entire fleet through a single user. For more details on this, and using the platform to compare fleets within a single Member company, please contact the INTERTANKO Benchmarking and Performance Monitoring (BPM) team: **bpm@INTERTANKO.com**

Troubleshooting

If an attempt to submit a report shows an error, firstly, review the fields completed and ensure either a decimal or whole numbers are used in the correct fields. Secondly, hover over each question with the mouse where the error has occurred and a help box will appear. If you cannot resolve the issue, please contact **bpm@INTERTANKO.com**

Environmental Data Submission

The submission of data to the EPMD will be categorised by Tanker Type, Time Period, Vessel Count and the sections explained below.

The data entry fields will require either averages or totals, which will be indicated clearly for each question. It is important to note that any question identified with the INTERTANKO logo:  requires a whole number.

Submitters to the EPMD may choose to enter data for each of the Environmental Elements or simply a few specific areas based on their company's priorities and internal data collection systems, i.e., **data does not need to be entered in all the fields in order to complete and submit a report.**

The 'reporting phase' of the EPMD is split into two sections:

- 1. Company Information** – Company-specific information to provide the basis for data entry in the Environmental Elements section.
- 2. Environmental Elements** – Four key areas of environmental data focusing on Air Emissions, Pollution Prevention, Waste Management and Other Environmental elements.

The following items will go through the 'reporting phase' of the EPMD by section, providing guidance and background information to enable the report to be completed accurately and with ease.

Company Information

Environmental Initiatives

This question allows a spread of the INTERTANKO Membership's commonly used standards and initiatives. The choices include well-established initiatives such as the Poseidon Principles, Ship Recycling Policies, ISO 14001 and 50001 respectively; as well as newer concepts such as ESG and Green Award policies.

As indicated within the question, multiple selection is encouraged where applicable.

Tanker Type

The EPMD in its current form, is not a benchmarking tool. It will, however, provide a unique opportunity for Members to refer their own data to a pool of specific tanker types within the Membership. This can provide insights through industry trends while providing a secondary platform to review a tanker's performance by type:

Crude Oil (aframax, Suezmax, VLCC)

Chemical

LNG

LPG

Chemical/Oil Products

Asphalt/Bitumen

F(P)SO

FSRU

Oil Products (MR, LR1, LR2)

This selection does require separate data entry per Tanker Type, however, multiple vessels per Tanker Type can be uploaded within the same submission. Once Tanker Type (and Sub-Type where applicable) is indicated through the drop-down menu, the number of tankers of this type is requested within a reporting period.

Reporting Period

Bi-annual periods are currently set for entering information into the EPMD. This allows trends over time to be identified while reducing the burden of frequent data entries into the platform.

Environmental Data

With the data entry categorised via Tanker Types, Vessel count and reporting periods, there will be a mixture of totals and averages depending on the question. The question will be clear as to which is required when the raw data is entered during the reporting stage of the submission.

Environmental Elements

Section A – Air Emissions

A. Air Emissions

Emitted mass of CO₂

t

Insert the average amount of CO₂ emitted in tons per tanker in the survey
[View conversion factors](#)

Average EEOI per tanker

Insert the average EEOI per tanker for the time period selected
[Important notice on EEOI benchmarking](#)

Emitted mass of NO_x

t

Insert the total amount of NO_x emitted in tons by the tankers in the survey. NO_x emission figures in tons may be derived from direct measurement or theoretically calculated using the NO_x Technical Code or similar methodology, i.e. using specific NO_x emissions as per the EIAPPC (g/kWh), specific fuel consumption (g/kWh) and actual fuel consumption for the period specified.

Emitted mass of SO_x

t

Insert the total amount of SO_x emitted in tons by the tankers in the survey.

Refrigerant Gasses
Percentage refrigerant gas leakage

Average of the consumption of gas versus the capacity of the system per vessel

Type

Please select...

▼

Emitted Mass

This section focuses on the emissions of total fleets and the average per vessel. The conversion factors required for emitted CO₂ are provided both in the question as a note and below for reference.

Conversion Factors (CF)

Carbon Conversion Factors are as per 2014 Guidelines on the method of calculation of the attained EEDI for new ships, as amended (Resolution MEPC.245(66), as amended by Resolutions MEPC.263(68) and MEPC.281(70)) CF is a non-dimensional conversion factor between fuel consumption measured in grams and CO₂ emission also measured in grams based on carbon content. The subscripts ME(i) and AE(i) refer to the main and auxiliary engine(s) respectively. CF corresponds to the fuel used when determining SFC listed in the applicable test report included in a Technical File as defined in paragraph 1.3.15 of the NOX Technical Code. For VLSFO please use the viscosity that aligns more closely with the fuel types 1, 2 or 3 to determine the CF.

The value of CF is as follows:

Type of Fuel	Reference	Lower Calorific value (kJ/kg)	Carbon content	CF (t-CO ₂ /Fuel)
Diesel/Gas Oil	ISO 8217 Grades DMX through DMB	42,700	0.8744	3.206
Light Fuel Oil (LFO)	ISO 8217 Grades RMA through RMD	41,200	0.8594	3.151
Heavy Fuel Oil (HFO)	ISO 8217 Grades RME through RMK	40,200	0.8493	3.114
Liquefied Petroleum Gas (LPG)	Propane	46,300	0.8182	3
	Butane	45,700	0.8264	3.03
Liquefied Natural Gas (LNG)		48,000	0.75	2.75
Methanol		19,900	0.375	1.375
Ethanol		26,800	0.5217	1.913

Average Energy Efficiency Operating Indicator (EEOI) per tanker

There is a significant variation in the EEOI for each vessel and on each voyage, as has been demonstrated by [INTERTANKO's study](#) on sister ships submitted to the International Maritime Organization's Marine Environmental Protection Committee. The general conclusion of the study is that ***'although a ship can be managed in a consistent manner, it will still have significant inter-year variations. Within the variability of data, a given ship indicator or total CO₂ emissions in one year provide little indication of the same indicator value of CO₂ emissions in the following year'***. This means the EEOI is very much affected by the operations of the vessel rather than the actual consumption of the vessel and is therefore extremely difficult to meaningfully compare values between vessels.

With this understanding, the information provided in the 'Report' may allow the submitter to gain an **indication only** of the average CO₂ emissions per tanker and the average EEOI per tanker, in the Tanker Type category being considered.

Section B – Pollution Prevention

This section is short and direct, looking at any pollution entering the ocean. This requires both volume and frequency on the appropriate questions.

B. Pollution Prevention

Contained spills

Number of contained spills of bulk liquid (per reporting period). Minimum threshold for recording a spill = 1 barrel/0.1364m³.

Pollution at sea: number of releases

Number of incidents (per reporting period). No minimum threshold.

Pollution at sea: estimated aggregated volume (m³)

Contained Spills

The updated system allows for 0 to be entered, meaning this field can be populated to a higher degree if chosen without the implications of false barrel spills.

Pollution at Sea

These questions allow for the identification of volume per release at sea. This will allow the identification of potentially consistent releases, either in amount or reporting periods, by the Tanker Type entered.

Section C – Waste Management

This section will require all entries to be **whole numbers** (not in decimals) through the field will present itself as XX.00 in the final report. This has also been identified with the INTERTANKO symbol on each entry. This section refers to the totals in the Waste Management categories below. Please also use the reference of the latest INTERTANKO . If there is no information on a selected field, do not enter '0', please leave the field blank.

Compactors

C. Waste Management

Please refer to the latest edition of INTERTANKO's Guidance on Waste Management for Tankers

Number of vessels with compactors installed



Insert the total number of vessels with compactors installed.

Annex V Waste

Category A - Plastics

Total landed ashore



m³

Total incinerated



m³

Category B - Food waste

Total disposed at sea



m³

Total landed ashore



m³

Total incinerated



m³

The relevant MARPOL Annex V Waste substance categories included are listed here:

- A – Plastics
- B – Food Wastes
- C – Domestic Wastes
- D – Cooking Oil
- E – Incinerator Ash
- F – Operational Wastes
- I – E-Waste

As stated above, these values must be entered as whole numbers. The fields requested include total disposal at sea, total landings ashore and the total incinerated. There are subject-specific notes for the referral of multiple INTERTANKO publications for any area for both ease of access and referral as required.

Annex I Waste

As seen through waste receipts and alleged inadequate port reception facilities, Annex I is often listed in conjuncture with Annex V and, individually, is the second most referred to Annex in terms of waste on board.

Sludge

Total landed ashore

 m³

Total incinerated

 m³

Average quantity of sludge generated

 m³


Produced per day per vessel.

Bilge Water

Total oily bilge water discharged through the OWS

 m³

Total oily bilge water landed to shore reception facility

 m³

[Important notice on bilge water production benchmarking](#)

The added note on bilge water can be seen below:

Bilge water generated per vessel depends on many different factors that may vary significantly from company to company and vessel to vessel (e.g., age of the vessel, company PMS practices, trade of vessels in specific geographical areas, etc). Submitters should therefore view and assess the 'Report' for Bilge Water as being **indicative only** and not an absolute figure which can be directly benchmarked or compared from vessel to vessel or company to company.

Section D – Other Environmental Elements

Ship Recycling

The Hong Kong Convention has been recently ratified (entering into force 26/6/2025). Before this, though, higher standards of ship recycling were encouraged globally, especially with the introduction of the EU Ship Recycling Regulation. This new ratification, however, will likely trigger a review of the EU SRR for potential alignment. Therefore, please select the below options according to which of the following choices applies to the selected Tanker Type.

No IHM

IHM with a SOC for the HKC


IHM with a SOC for the EU SRR

IHM with a SOC for EU SRR and HKC

- > *IHM » Inventory of Hazardous Materials*
- > *SOC » Class issued Statement of Compliance*
- > *EU SRR » European Union Ship Recycling Regulation*
- > *HKC » Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships*

D. Other Environmental Items

Ship Recycling

Type	Number
<input type="text" value="Please select..."/>	<div> <input type="text"/></div>

Hull Management and Antifouling Systems

This section also requires whole numbers, this case the number of propeller cleanings and total hull cleans for the selected Tanker Type in the submission. INTERTANKO has also produced a [Guide to Modern Anti-Fouling Systems and Biofouling Management](#). This guide contains Coating Selection, Hull Management and Common Issues and questions faced.

Noting the [update](#) of the Biofouling Guidelines, which includes changes to the fouling rating and also to inspection frequencies.

Hull Management

Please refer to INTERTANKO's Guide to Modern Anti-fouling Systems and Biofouling Management.

Total number of propeller cleanings

Provide the total number of propeller cleanings in the reporting period for the fleet entered

Total number of hull cleans

Provide the total number of hull cleanings for the fleet entered. An average will be generated for the entire INTERTANKO fleet.

This section also provides an area to identify which coatings have been used on the vessels within the Tanker Type selection. To show the abundance of systems, if there is one not listed, please select 'other' and input the system in use and the respective number of vessels this applies to in the selection.

Antifouling Systems

Type	Number
Please select...	<div><div></div><div></div></div>

Greywater and Blackwater (Sewage)

This section aims to identify the treatment plans for sewage including the presence of treatment plants, the use of other tanks such as aft-peak tanks use for storage and the typical holding tanks used across the selected fleet per Tanker Type. These answers are required to be whole numbers.

Regarding the use of treated sewage and greywater being stored in aft-peak tanks, the expectation is that guidelines will be produced in 2024, and updates will be provided as available and applicable.

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