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Ballast Water Management Convention

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International Convention for the Control and Management of Ships' Ballast Water and Sediments (Ballast Water Management Convention)

Legal background

The International Maritime Organization (IMO) adopted the Ballast Water Management Convention (BWM Convention) in February 2004. On 8th September 2016 Finland acceded the BWM Convention as 52nd State and thereby increased the tonnage to 35.14 %. Consequently, the convention entered into force on 8th September 2017.

In Germany, the Bundesamt für Seeschifffahrt und Hydrographie (BSH, Federal Maritime and Hydrographic Agency) is the competent authority for measures to prevent the introduction of alien species by ships, including the testing, approval and monitoring of ballast water management systems, as well as the necessary preparatory actions and international approval procedures, see § 5 Abs. 1 Nr. 4c i.V.m. § 1 Abs. 1 Nr. 16 "Gesetz über die Aufgaben des Bundes auf dem Gebiet der Seeschifffahrt (SeeAufgG)" (Federal Maritime Responsibilities Act).

Germany joined the BWM Convention on 13th February 2013 with the Ballast Water Act. On 20th June 2013 the appropriate instrument of ratification was deposited with the IMO Secretary General. Additional regulations to the BWM Convention and in regard to infringement procedures were stipulated in the "See-Umweltverhaltensverordnung

(SeeUmwVerhV)" (ordinance on maritime environmental performance) and in some federal state's regulations.

Overview

The convention itself accepts two standards for the management of ballast water to minimize the risk of transporting unwanted alien species. These are the:

- D-1 standard and the
- D-2 standard.

The D-1 standard can be achieved by ballast water exchange but will be allowed only for a certain period of time after the entry into force of the BWM Convention. The stricter D-2 standard, however, can as a general rule only be achieved by a type approved ballast water management system. However, ships are not required to be equipped with a ballast water management system.

Whether Regulation D-1 or D-2 applies depends on the individual age of the ship in the framework of the relevant IMO requirements:

- Newly built ships have to comply with Regulation D-2 immediately. Usually the date of laying keel applies (Regulation A-1.4 of the BWM Convention).
- Existing ships which had the renewal of their IOPP Certificate between 8.9.2014 and 8.9.2017 or after 8.9.2017 must comply with D-2 after the first following IOPP renewal survey after 8.9.2019.
- Existing ships which have their renewal survey for the IOPP Certificate within the first two years after the entry into force of the BWM Convention on 8.9.2017 benefit

from a postponement. They only need to comply with Regulation D-2 after the second IOPP renewal survey after the entry into force of the BWM Convention – this means at the latest by 8.9.2024.

- Existing ships which decoupled the IOPP Certificate stay in the decoupled schedule and do not benefit from the decoupling of the IOPP Certificate for a second time within the first two years after the entry into force of the BWM Convention.
- Ships under 400 GT have to comply with Regulation D-2 by 8.9.2024 at the latest.

Therefore, initially, all ships – with the exception of newly built ships – have to comply with the interim Regulation D-1 (exchange of ballast water) from 8.9.2017.

The IMO has developed a large number of guidelines and circulars regarding the implementation of the BWM Convention, which are available at https://www.deutsche-flagge.de/en/applications-and-documents/documents/environmental-protection.

Required documents

As of the entry into force of the BWM Convention, every ship is required to have a Ballast Water Management Plan and International Ballast Water Management Certificate (IBWM Certificate) as well as keep a Ballast Water Record Book.

Ballast water exchange (D-1 standard)

The ballast water management is initially carried out according to interim Regulation D-1 (except for newly built ships). This means that ships must carry out a ballast water exchange on the basis of their approved ballast water management plan until Regulation D-2 applies for them (unless an exemption applies). Ships calling at a German port coming from outside the North or Baltic Sea must carry out an exchange in compliance with Regulation D-1 outside the North and Baltic Sea, unless they are already covered by Regulation D-2.

As a general rule, an exchange is required to take place at a distance of at least 200 nm distance from the nearest land, i.e. from the baseline, and at a depth of at least 200 m. Only if this is not possible the distance can be reduced to at least 50 nm distance. The water depth of 200 m must nevertheless be maintained.

Alternatively, the exchange may take place in designated exchange areas, provided that such an area has been designated and is on the route of the ship.

In cases where an exchange is not or not completely possible, MEPC 71 has adopted Circular BWM.2/Circ.63 for clarification.

Regulation D-1 for ballast water exchange requires that ships performing a ballast water exchange under this regulation shall do so with an efficiency of at least 95 per cent volumetric exchange of the ballast water. For vessels

exchanging the ballast water with the pumping-through method, the volume of each ballast water tank shall be pumped through three times to comply with the standard referred to in paragraph 1. If the volume is pumped through less than three times, Regulation D-1 is nevertheless considered as being fulfilled, provided that the ship can prove that an exchange of at least 95 per cent of the ballast water volume has been achieved. The ballast water exchange can be carried out according to different methods, as set out in Guideline G6 of the BWM Convention (VkBl. 14/2011 No. 145 p. 486; NfS 35/2011). There are three methods for ballast water exchange: the sequential method, the flow-through method and the dilution method. The flow-through method and the dilution method are considered "pumping-through" methods. The three accepted methods can be described as follows:

- Sequential method – a process by which a ballast tank intended for the carriage of ballast water is first emptied and then refilled with replacement ballast water to achieve at least a 95 per cent volumetric exchange.
- Flow-through method – a process by which replacement ballast water is pumped into a ballast tank intended for the carriage of ballast water, allowing water to flow through overflow or other arrangements.
- Dilution method – a process by which replacement ballast water is filled through the top of the ballast tank intended for the carriage of ballast water with simultaneous discharge from the bottom at the same flow rate and maintaining a constant level in the tank throughout the ballast exchange operation.

If the requirements of Regulation D-1 (distance from the nearest land, i.e. from the baseline/water depth) are not met throughout the journey and an exchange area does not exist, an exchange is not required. However, the circumstance must be documented in the Ballast Water Record Book. It is not necessary to deviate from the planned route to comply with D-1. Also, it is not required to apply Regulation D-2 in advance if D-1 is not possible.

If only a partial exchange can take place en route, the rule is that tanks should always be exchanged completely. Under no circumstances should a partial exchange take place within a tank. Because of the possibility that partial exchange may encourage re-growth of organisms, ballast water exchange should only be commenced in any tank if there is sufficient time to complete the exchange to comply with the standard in Regulation D-1. As many complete tanks should be exchanged as the time allows without delaying the journey. If the standard in Regulation D-1 cannot be fully met, the exchange should not be commenced for that tank.

Which special regulations apply to ballast water exchange in the North Sea?

The OSPAR States designated an exchange area for intra North Sea traffic (see BWM.2/Circ.56,https://www.deutsche-flagge.de/de/redaktion/dokumente/dokumente-sonstige/imo-bwm-2_circ-56.pdf). This sets out that:

- Ships on voyage in intra North Sea traffic (and only these) are required to conduct an exchange in the designated exchange area of the North Sea if the exchange area is on their way. Ships are not obliged to divert from the planned travel route or to delay the voyage to conduct a ballast water exchange. They are possibly required to conduct a partial exchange only (see above).
  Example: A ship on voyage from Rotterdam/Felixstouwe to Wilhelmshaven may not have enough time to entirely comply with the exchange rules. Nevertheless, it is required to start and finish the exchange with suitable tanks as far as possible. If e. g. a complete exchange of one tank would be impossible due to lack of time, the exchange of that ballast water tank should not be commenced. It is important that these circumstances are clearly documented in the Ballast Water Record Book.
  Example: A ship on voyage from Hamburg to Cuxhaven for loading/unloading does not pass the designated exchange area. The ship is not required to conduct a ballast water exchange. However, the circumstances thereof need to be documented in the Ballast Water Record Book. Neither is such a ship required to divert from the planned travel route in order to conduct a ballast water exchange in compliance with Regulation D-1 nor is it required to adopt Regulation D-2 (see above).

- Intra North Sea traffic comprises all ships that operate within the North Sea only and take up or discharge ballast water in that area. This includes all rivers opening into the North Sea, as well as the Kiel Canal, which forms part of the river system Elbe. In each case, each section of the voyage has to be considered separately, i. e. even though a ship is heading for the Baltic Sea, it is considered as being intra North Sea traffic if it takes up or discharges ballast water in the North Sea/Kiel Canal.
  Example: A ship takes up ballast water in Rotterdam and plans to discharge it near Brunsbüttel in order to reach the Kiel Canal's required load line mark. In such a case the prior exchange of ballast water in one of the designated exchange areas for intra North Sea traffic is necessary. In contrast, if the ship passes the Kiel Canal without discharging ballast water, and discharges ballast water only in its port of destination in the Baltic Sea, it is not required to conduct a ballast water exchange.

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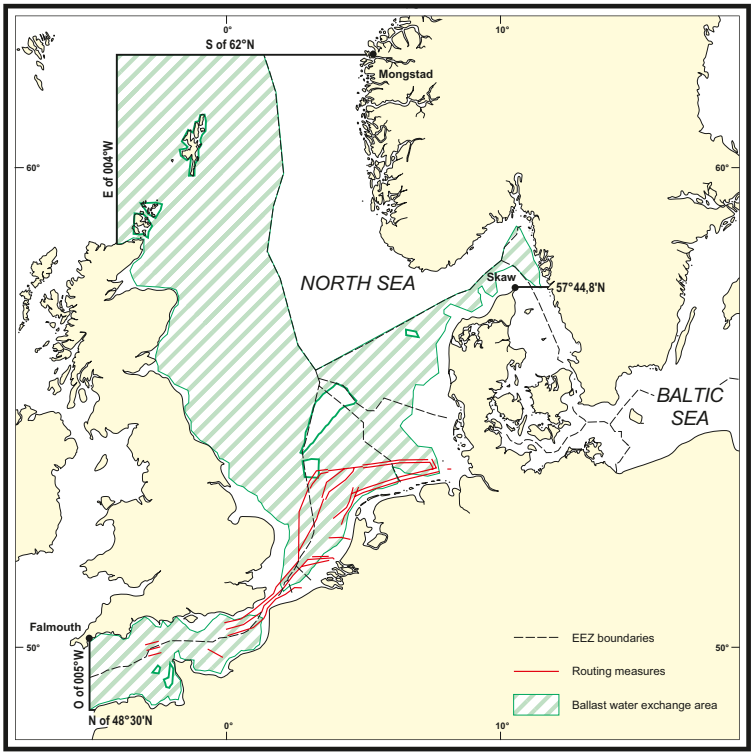
- A map and the coordinates of the exchange area can be found in the Annex to BWM.2/Circ.56. On the basis of these data the following map was developed to allow for a better visualization (exchange areas are any areas shaded in green):



Note: Norway's territorial waters and EEZ are excluded from the scope of BWM.2/Circ.56 and national regulations apply there. Norway has designated its own ballast water exchange areas. Further information and contact details can be found here: https://www.sdir.no/en/shipping/vessels/equipment-and-technical-requirements/ballast-water/

- Ships with their port of departure or their destination outside the North Sea shall not exchange their ballast water in the North Sea exchange area but rather use the 200 nm and at least 200 m water depth on their way before or after traveling the North Sea (or if this is impossible 50 nm/200 m water depth).
  Example: A ship takes up ballast water in Casablanca and plans to discharge it in Hamburg. Such a ship is required to conduct the ballast water exchange in the Atlantic before reaching the North Sea.
- The intra North Sea exchange area does not apply to ships coming from the Baltic Sea or coming from the North Sea calling at a Baltic Sea port either; ships on these kinds of voyages need not conduct an exchange in accordance with D-1.
  Example: A ship takes up ballast water in Malmö and plans to discharge it in Hamburg. An exchange of ballast water is not required.
- Regulation D-2 does not have to be adopted by ships which fall under the regime of the D-1 standard but do not reach an exchange area (see General ruling of the Federal Maritime and Hydrographic Agency).
- All ballast water operations have to be kept in the Ballast Water Record Book.

Which special regulations apply to ballast water exchange in the Baltic Sea?

- Ships traveling between two ports in the Baltic Sea do not have to conduct a ballast water exchange. There is no ballast water exchange area in the Baltic Sea.
  Example: A ship takes up ballast water in Tallinn and plans to discharge it in Kiel. An exchange of ballast water is not required.
- Ships coming from North Sea areas traveling into the Baltic Sea do not have to conduct an exchange in accordance with D-1, because they do not pass an exchange area that applies for them. The intra North Sea exchange area only applies for intra North Sea traffic.
  Example: A Ship takes up ballast water in Rotterdam and plans to discharge it in Rostock. An exchange of ballast water is not necessary.
- Ships coming from other areas (Atlantic etc.) to the Baltic Sea conduct a ballast water exchange according to the D-1 standard. Therefore, on long voyages, the exchange takes place before entering the Baltic Sea provided that circumstances (200 nm/200 m or 50 nm/200 m distance from the nearest land, i.e. from the baseline/water depth or a usable exchange area) will allow it.
  Example: A ship takes up ballast water in Dakar and plans to discharge it in Kiel. Such a ship is required to conduct the ballast water exchange in the Atlantic before reaching the North or Baltic Sea.
- Regulation D-2 does not need to be applied prematurely if the ship still falls under the regime of Regulation D-1 but does not reach an exchange area (see General

ruling of the Federal Maritime and Hydrographic Agency).
- All ballast water operations have to be kept in the Ballast Water Record Book.

General ruling of the Federal Maritime and Hydrographic Agency for ballast water exchange

If a ship travels in the North and Baltic Seas and no ballast water exchange is possible, the Federal Maritime and Hydrographic Agency (BSH) has issued a general ruling which clarifies that in these cases the D-2 standard is not applied in advance:

If a ship, which has not yet to comply with the standard D-2 according to Regulation B-3 on the BWM Convention, operates in the North Sea or the Baltic Sea without a possibility to carry out an exchange in accordance with section 18 paragraph 1 number 1 of the "See-Umweltverhaltensverordnung (SeeUmwVerhV)" (ordinance on maritime environmental performance) in conjunction with Regulation B-4.1 and D-1 of the Annex to the BWM Convention, the following applies:

1. The ship is not required to manage ballast water according to the D-2 standard ahead of schedule.
2. The ship is not required to proceed under Regulation B-3.6 (Discharge to a ballast water reception facility), B-3.7 (Other methods) or A-4 (Exemptions) of the BWM Convention.

Note:

1. The ship is required, however, to enter the reasons for not carrying out exchange in the Ballast Water Record Book in accordance with regulation B-4.5 of the Annex of the BWM Convention.
2. For intra North Sea traffic the exchange areas according to BWM.2/Circ.56 still apply.

Ballast water treatment (D-2 standard)

Regulation D-2 of the BWM Convention stipulates that ships meeting the requirements of the convention by achieving the ballast water performance standard shall:

- discharge less than 10 viable organisms per cubic metre greater than or equal to 50 micrometres in minimum dimension;
- discharge less than 10 viable organisms per millilitre less than 50 micrometres in minimum dimension and greater than or equal to 10 micrometres in minimum dimension;
- and the discharge of the indicator microbes shall not exceed the following concentrations that are considered as being safe for human health:
  - Toxicogenic Vibrio cholerae (O1 and O139) with less than 1 colony forming unit (cfu) per 100 millilitres or less than 1 cfu per 1 gram (wet weight) zooplankton samples;
  - Escherichia coli less than 250 cfu per 100 millilitres;
  - Intestinal Enterococci less than 100 cfu per 100 millilitres.

The advanced D-2 standard can first of all be complied with an appropriate ballast water management system or by discharging ballast water to a port reception facility. There is no mandatory equipment requirement. Delivery to an external ballast water management system (e. g. on a barge or at land) is also possible, provided that they comply with the requirements of the G8/G9 approval guidelines. The handling of the ballast water must be determined in the Ballast Water Management Plan. All ballast water procedures are to be noted in the Ballast Water Record Book accordingly.

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Exceptions

Intended exceptions from ballast water management in accordance with Regulation A-3 are:

- ensuring the safety of a ship in emergency situations or saving life at sea;
- accidental discharge resulting from a damage provided that all reasonable precautions have been taken to prevent or reduce the discharge and that the damage was not caused willfully or recklessly;
- the uptake and discharge of ballast water and sediments when being used for the purpose of avoiding or minimizing pollution incidents from the ship;
- the uptake and subsequent discharge of the same ballast water and sediments on the high seas;
- the discharge of ballast water and sediments from a ship at the same location where the whole of that ballast water and those sediments originated and provided that no mixing with unmanaged ballast water and sediments from other areas has occurred. The definition of “same location” for ports lies within the countries competence.

Exemptions

Regulation A-4 provides the possibility of granting an exemption of the ballast water management requirement for a ship operating exclusively between specific ports or locations. An exemption is only granted in cases of acceptable low risk for the environment, health, material assets and/or resources based on a port survey and an appropriate risk assessment. The port survey and risk assessment are done in accordance with the “HELCOM/OSPAR Joint Harmonized Procedure” in conjunction with IMO Guideline G7. Exemptions have to be documented in the Ballast Water Record Book.

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