



Office of Deputy
Commissioner of
Maritime Affairs

THE REPUBLIC OF LIBERIA
LIBERIA MARITIME AUTHORITY

Marine Notice

POL-014

Rev. 05/2024

**TO: ALL SHIPOWNERS, OPERATORS, MASTERS AND OFFICERS OF
MERCHANT SHIPS AND AUTHORIZED CLASSIFICATION SOCIETIES**

**SUBJECT: Implementation, Survey and Certification under the International Convention
for the Control and Management of Ship's Ballast Water and Sediments, 2004
(BWM Convention)**

**Reference: (a) Maritime Regulation 2.35
(b) International Convention for the Control and Management of Ship's
Ballast Water and Sediments, 2004 (BWM Convention), as amended**

Supersedes Marine Notice POL-014, dated 08/2023.

The following changes have been included:

- a. Updated paragraph 2.19 on interim guidance when operating in ports with challenging water quality.**
- b. Added new paragraph 2.20 on storage of treated sewage and/or grey water.**
- c. Amended paragraph 2.24 to include crew familiarization and training for operation in ports with challenging water quality conditions.**

PURPOSE:

The purpose of this Marine Notice is to provide guidance on implementing the requirements of the BWM Convention which entered into force on 8 September 2017, including the survey and certification of ships.

BACKGROUND:

The UN Convention on the Law of the Sea (Article 196) provides the global framework by requiring States to work together to prevent, reduce and control pollution of the marine environment including the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment, which may cause significant and harmful changes thereto.

In 1991 the Marine Environment Protection Committee (MEPC) adopted the International Guidelines for preventing the introduction of unwanted aquatic organisms and pathogens from ships' ballast water and sediment discharges (resolution MEPC.50(31)); while the United Nations Conference on Environment and Development (UNCED), held in Rio de Janeiro in 1992, recognized the issue as a major international concern.

In November 1993, the IMO Assembly adopted resolution A.774(18) based on the 1991 Guidelines requesting the MEPC and the MSC to keep the Guidelines under review with a view to developing internationally applicable, legally-binding provisions. While continuing its work towards the development of an international treaty, the Organization adopted, in November 1997, resolution A.868(20) - *Guidelines for the control and management of ships' ballast water to minimize the transfer of harmful aquatic organisms and pathogens*, inviting its Member States to use these new guidelines when addressing the issue of invasive aquatic species.

After more than 14 years of complex negotiations between IMO Member States, the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) was adopted by consensus at a Diplomatic Conference held at the IMO on 13 February 2004. The entry-into-force criteria for the BWM Convention were met on 8 September 2016 with the fifty-second (52nd) State acceding to the Convention and consequently the Convention entered into force on 8 September 2017. Liberia was the fourteenth (14th) State to accede to the BWM Convention on 18 September 2008.

Liberia actively promoted the revision to the IMO ballast water management systems (BWMS) approval Guidelines (G8) and participated in the revision to make them more transparent, robust and fit for purpose with full confidence that discharges of ballast using the systems comply with the Convention standard. The revised 2016 Guidelines (G8) in MEPC Resolution 279(70), now the **BWMS Code** entered into force on 13 October 2019 and ballast water management systems installed on ships on or after 28 October 2020 shall be approved taking into account the BWMS Code.

Further, as a result of a shortage in dockyard capacity for retro-fitting BWMS coupled with lack of commercial availability of BWMS type approved in accordance with the revised Guidelines (G8), Liberia and other interested IMO Member States proposed an alternate implementation schedule of Regulation B-3 at MEPC 70. The draft **alternate** implementation schedule of Regulation B-3 in **MEPC Resolution 297(72)** along with the associated draft MEPC Resolution 298 (72) on the determination of the survey referred to in Regulation B-3 as amended, entered into force on 13 October 2019.

At MEPC 75, draft amendments to Regulation E-1 requiring commissioning testing of ballast water management systems and draft amendments to the form of the International Ballast Water Management Certificate (Appendix 1) in **MEPC Resolution 325(75)** were adopted for entry into force on 1 June 2022.

From 8 September 2017, ships to which the BWM Convention applies are required to carry on board an approved ballast water management plan, ballast water record book and conduct ballast water management in accordance with regulation B-3, as amended. Ships to which the BWM Convention applies, excluding floating platforms, FSUs, and FPSOs, are also required to be surveyed and issued a certificate.

APPLICABILITY:

The BWM Convention shall apply to all ships flying the Liberian flag including those Liberian flagged ships operating under the authority of another Party to the BWM Convention.

Except where excepted, exempted, or complying by equivalent means, the discharge of Ballast Water shall only be conducted through Ballast Water Management in accordance with the provisions of the BWM Convention.

The BWM Convention does not apply to:

- (a) ships not designed or constructed to carry Ballast Water;
- (b) ships flying the Liberian flag which only operate in waters under the jurisdiction of the Republic of Liberia, unless the Liberia Maritime Authority determines that the discharge of Ballast Water from such ships would impair or damage the environment, human health, property or resources, or those of adjacent or other States;
- (c) ships flying the Liberian flag which only operate in waters under the jurisdiction of another Party to the BWM Convention, subject to the authorization of that Party for such exclusion.
- (d) ships flying the Liberian flag which only operate in waters under the jurisdiction of one Party to the BWM Convention and on the high seas, except for ships not granted an authorization pursuant to sub-paragraph (c), unless such Party determines that the discharge of Ballast Water from such ships would impair or damage their environment, human health, property or resources, or those of adjacent of other States;
- (e) any warship, naval auxiliary or other ship owned or operated by a State and used, for the time being, only on government non-commercial service. However, each Party shall ensure, by the adoption of appropriate measures not impairing operations or operational capabilities of such ships owned or operated by it, that such ships act in a manner consistent, so far as is reasonable and practicable, with the BWM Convention; and
- (f) permanent Ballast Water in sealed tanks on ships, that is not subject to discharge.

[BWM.2/Circ. 52/Rev.1](#) provides guidance on entry or re-entry of ships (such as mobile offshore units and ships that may need to undertake a single international voyage to a dry-dock) into exclusive operation within waters under the jurisdiction of a single Party to the BWM Convention under sub-paragraphs (b), (c), and (d) above.

EXCEPTIONS

Ships to which the BWM Convention applies are excepted from complying with regulation B-3 of the BWM Convention regarding ballast water management and other stringent measures and special requirements in certain areas under Article 2.3 and Section C of the BWM Convention when:

- .1 taking in or discharging Ballast Water and Sediments necessary for the purpose of ensuring the safety of a ship in emergency situations or saving life at sea; or

- .2 accidentally discharging or taking in Ballast Water and Sediments as a result of damage to a ship or its equipment:
 - .1 provided that all reasonable precautions have been taken before and after the occurrence of the damage or discovery of the damage or discharge for the purpose of preventing or minimizing the discharge; and
 - .2 unless the owner, Company, or officer in charge willfully or recklessly caused damage; or
- .3 taking in and discharging Ballast Water and Sediments for the purpose of avoiding or minimizing pollution incidents from the ship; or
- .4 taking in and subsequently discharging on the high seas the same Ballast Water and Sediments; or
- .5 discharging 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. If mixing has occurred, the Ballast Water taken from other areas is subject to Ballast Water Management in accordance with this Annex.

EXEMPTIONS

A Party or Parties to the BWM Convention, in waters under their jurisdiction, may grant exemptions to any requirements to apply regulations B-3 related to ballast water management or C-1 related to additional measures, in addition to those exemptions contained elsewhere in the BWM Convention, but only when they are:

- .1 granted to a ship or ships on a voyage or voyages between specified ports or locations; or to a ship which operates exclusively between specified ports or locations;
- .2 effective for a period of no more than five years subject to intermediate review;
- .3 granted to ships that do not mix Ballast Water or Sediments other than between the ports or locations specified in paragraph 1.1; and
- .4 granted based on the 2017 Guidelines (G7) on risk assessment in [MEPC Resolution MEPC.289\(71\)](#).

Exemptions granted pursuant to sub-paragraph .1 shall not be effective until after communication to the Organization and circulation of relevant information to the Parties.

Any exemptions granted under this regulation shall be recorded in the Ballast Water record book.

EQUIVALENT COMPLIANCE

Equivalent compliance with for pleasure craft used solely for recreation or competition or craft used primarily for search and rescue, less than 50 meters in length overall, and with a maximum.

Ballast Water capacity of 8 cubic meters, shall be determined by the Administration taking into account Guidelines (G3) in **MEPC Resolution MEPC.123(53)**.

1.0 DEFINITIONS:

Definitions have been taken from the BWM Convention [as amended] [and where necessary, Liberian National interpretations].

- 1.1 **Administration:** The Government of the State under whose authority the ship is operating. With respect to a ship flying the Liberian flag, the Administration means the Office of Deputy Commissioner, Liberia Maritime Authority, the Republic of Liberia. With respect to floating platforms engaged in exploration and exploitation of the sea-bed and subsoil thereof adjacent to the coast over which the coastal State exercises sovereign rights for the purposes of exploration and exploitation of its natural resources, including Floating Storage Units (FSUs) and Floating Production Storage and Offloading Units (FPSOs), the Administration is the Government of the coastal State concerned.
- 1.2 **Ballast Water:** Water with its suspended matter taken on board a ship to control trim, list, draught, stability, or stresses of the ship.
- 1.3 **Ballast Water Management:** Mechanical, physical, chemical, and biological processes, either singularly or in combination, to remove, render harmless, or avoid the uptake or discharge of Harmful Aquatic Organisms and Pathogens within Ballast Water and Sediments.
- 1.4 **Harmful Aquatic Organisms and Pathogens:** aquatic organisms or pathogens which, if introduced into the sea including estuaries, or into freshwater courses, may create hazards to the environment, human health, property or resources, impair biological diversity or interfere with other legitimate uses of such areas.
- 1.5 **Sediments:** Matter settled out of Ballast Water within a ship.
- 1.6 **Ship:** Vessel of any type whatsoever operating in the aquatic environment and includes submersibles, floating craft, floating platforms, FSUs and FPSOs
- 1.7 **Recognized Organization (RO):** A classification society which is recognized by the Administration in accordance with the provisions of regulation XI-1/1. A list of RO's is provided on Liberian Registry website www.lisr.com under the "Maritime" icon "Maritime Services" and "Technical".
- 1.8 **Anniversary date:** The day and the month of each year corresponding to the date of expiry of the Certificate.
- 1.9 **Ballast Water Capacity:** the total volumetric capacity of any tanks, spaces or compartments on a ship used for carrying, loading or discharging Ballast Water, including any multi-use tank, space or compartment designed to allow carriage of Ballast Water.
- 1.10 **Company:** The owner of the ship or any other organization or person such as the

manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the owner of the ship and who on assuming such responsibility has agreed to take over all the duties and responsibilities imposed by the International Safety Management Code.

1.11 Constructed: in respect of a ship means a stage of construction where:

- .1 the keel is laid; or
- .2 construction identifiable with the specific ship begins; or
- .3 assembly of the ship has commenced comprising at least 50 tons or 1 percent of the estimated mass of all structural material, whichever is less or
- .4 the ship undergoes a major conversion.

1.12 Major conversion: Conversion of a ship:

- .1 which changes its ballast water carrying capacity by 15 percent or greater, or
- .2 which changes the ship type, or
- .3 which, in the opinion of the Administration, is projected to prolong its life by ten years or more, or
- .4 which results in modifications to its ballast water system other than component replacement-in-kind. Conversion of a ship to meet the provisions of regulation D-1 shall not be deemed to constitute a major conversion.

In accordance with [BWM.2/Circ.45](#), the Administration does not consider a new installation of ballast water management systems as a "major conversion"; and

Change of ship type refers to a conversion that:

- .1 substantially alters the dimensions or carrying capacity of the ship; or
- .2 changes the type of cargo carried through a major alteration of the ship.

1.13 From the nearest land: From the baseline from which the territorial sea of the territory in question is established in accordance with international law except that, for the purposes of the BWM Convention, "from the nearest land" "off the north-eastern coast of Australia shall mean from a line drawn from a point on the coast of Australia in

latitude 11°00' S, longitude 142°08' E
to a point in latitude 10°35' S, longitude 141°55' E
thence to a point latitude 10°00' S, longitude 142°00' E

thence to a point latitude 9°10' S, longitude 143°52' E
thence to a point latitude 9°00' S, longitude 144°30' E
thence to a point latitude 10°41' S, longitude 145°00' E
thence to a point latitude 13°00' S, longitude 145°00' E
thence to a point latitude 15°00' S, longitude 146°00' E
thence to a point latitude 17°30' S, longitude 147°00' E
thence to a point latitude 21°00' S, longitude 152°55' E
thence to a point latitude 24°30' S, longitude 154°00' E
thence to a point on the coast of Australia
in latitude 24°42' S, longitude 153°15' E.

- 1.14 Active Substance:** Substance or organism, including a virus or a fungus, that has a general or specific action on or against Harmful Aquatic Organisms and Pathogens.
- 1.15 Installed:** Means the contractual date of delivery of the Ballast Water Management System to the ship. In the absence of such a date, the word "installed" means the actual date of delivery of the Ballast Water Management System to the ship.

2.0 COMPLIANCE GUIDANCE

2.1 Ballast water management plan (BWM plan)

Each ship to which the BWM Convention applies shall have on board and implement a BWM Plan. For information on development and approval of the plan, refer to [Marine Notice POL-005](#).

2.2 Ballast Water Record Book (BWR Book)

Each ship to which the BWM Convention applies shall have on board a Ballast Water record book that may be an electronic record system, or that may be integrated into another record book or system and, which shall at least contain the information specified in Appendix II to this Marine Notice.

The Ballast Water record book entries shall be maintained on board the ship for a minimum period of two years after the last entry has been made and thereafter in the Company's control for a minimum period of three years.

In the event of the discharge of Ballast Water pursuant to exceptions, exemptions and discharge to a reception facility or in the event of other accidental or exceptional discharge of Ballast Water not otherwise exempted by the BWM Convention, an entry shall be made in the Ballast Water record book describing the circumstances of, and the reason for, the discharge.

The Ballast Water record book shall be kept readily available for inspection at all reasonable times and, in the case of an unmanned ship under tow, may be kept on the towing ship.

Each operation concerning Ballast Water shall be fully recorded without delay in the Ballast Water record book. Each entry shall be signed by the officer in charge

of the operation concerned and each completed page shall be signed by the master. The entries in the Ballast Water record book shall be in the working language of the ship. If that language is not English, French or Spanish the entries shall contain a translation into one of those languages.

Officers duly authorized by a Party may inspect the Ballast Water record book on board any ship to which the BWM Convention applies while the ship is in its port or offshore terminal, and may make a copy of any entry, and require the master to certify that the copy is a true copy. Any copy so certified shall be admissible in any judicial proceeding as evidence of the facts stated in the entry.

Ballast Water record books and electronic versions are acceptable provided that the record book is officially issued by the Administration, and the electronic record book (ERB) is approved by the Administration. To order the books, please complete the publications order form using the link: [Order Publications](#)

For ERBs approved by the Administration, please refer to:
[List of Approved Electronic Record Books \(ERBs\)](#)

2.3 Ballast Water Management for Ships

The BWM Convention requires, inter alia, the development of individual ships' BWM Plan, the maintenance of appropriate Ballast Water records and the compliance with certain concentration-based discharge limits which are dependent on the date of construction and ballast-water capacity of the ship in question.

The BWM Convention stipulates two standards for discharged ballast water. The D-1 standard addresses ballast water exchange (BWE) while the D-2 standard is the ballast water performance standard.

The applicable date for compliance with the D-2 standard for all existing ships is that of the IOPP renewal survey as provided below:

- .1 the first renewal survey on or after 8 September 2017 if:
 - .1 this survey is completed on or after 8 September 2019; or
 - .2 a renewal survey is completed on or after 8 September 2014 but prior to 8 September 2017; and
- .2 the second renewal survey on or after 8 September 2017, if the first renewal survey on or after 8 September 2017 is completed prior to 8 September 2019, provided that the conditions of sub-paragraph .1.2 above are not met.

Ships constructed on or after entry into force on 8 September 2017 are required to meet the D-2 standard on delivery.

Oil tankers of less than 150 GT and every other ship of less than 400 GT, constructed before 8 September 2017, to which the IOPP renewal survey does not

apply, shall conduct ballast water management in accordance with regulation D-2 no later than 8 September 2024.

Compliance with the BWM Convention can be achieved, inter alia, through one of the following options:

- .1 as an interim measure exchange the ballast water as specified by regulation D-1 until regulation D-2 applies for the specific ship; or
- .2 treat the ballast water by using a type approved ballast water management system to meet the performance standards in regulation D-2; or
- .3 implement other methods of ballast water management accepted as alternatives to the standards described in regulations D-1 and D-2, provided that such methods ensure at least the same level of protection to the environment, human health, property, or resources, and are approved in principle by the Marine Environment Protection Committee (MEPC).

The requirements for Ballast Water management do not apply to ships that discharge Ballast Water to a reception facility designed taking into account the Guidelines (G5) in [MEPC Resolution MEPC.153\(55\)](#).

2.4 IOPP Renewal Survey

The Liberian Administration notes there is no requirement in Regulation 10 of MARPOL or the Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), [Assembly Resolution 1156\(32\)](#) that prohibits a shipowner or operator from completing an IOPP renewal survey early or to de-harmonize the IOPP certificate from other statutory certificates.

The Administration encourages shipowners and operators to maintain the harmonization of all statutory certificates in accordance with the HSSC, however, recognizes that there may be circumstances where the shipowner or operator determines de-harmonization is necessary and decides on this course of action. In such cases, the owner should inform the Administration and the vessel's classification society that issued the affected HSSC certificates.

If the IOPP certificate is de-harmonized, the shipowner or operator should ensure action is taken for its future harmonization with all statutory certificates under the HSSC at the earliest practical opportunity.

2.5 Ballast Water Exchange (BWE)

BWE aims at reducing the number and viability of organisms discharged at ports and in coastal waters following transportation in ballast tanks. BWE is to meet the ballast water exchange standard as per regulation D-1 Ballast water exchange allows for implementation of the BWM Convention by initially requiring ships to carry out an exchange of ballast water taken in port or coastal areas with water from the open sea, defined as 200 nautical miles from the nearest land whenever possible,

but in all cases at least 50 nautical miles from the nearest land, and in water at least 200 meters in depth. This procedure aims at reducing the number and viability of organisms discharged in ports or coastal areas following transportation in ballast tanks. Aquatic organisms taken up with ballast water from the open sea are likely to be far fewer in number and less capable of causing a transfer of harmful aquatic organisms and pathogens into the receiving coastal waters, particularly when these receiving waters are fresh. Ships carrying out BWE should do so in accordance with 2017 Guidelines (G6) in **MEPC Resolution 288(71) as amended by MEPC Resolution 371(80)**.

A ship shall not be required to deviate from its intended voyage, or delay the voyage, in order to comply with any particular requirement for distances from the nearest land or water depths after taking into account guidance in **BWM.2/Circ.63**. In such a case, the port State may designate areas, in consultation with adjacent or other States, as appropriate, where a ship may conduct ballast water exchange implemented as referred to in paragraph 10.3 of the Guidelines on designation of areas for ballast water exchange (G14) in **MEPC Resolution MEPC.151(55)**.

A ship conducting ballast water exchange shall not be required to comply with regulation D-1 if the master reasonably decides that such exchange operation would threaten the ship's stability or in general the safety of the ship, its crew, or its passengers because of adverse weather, ship design or stress, equipment failure, or any other extraordinary condition.

When a ship is required to conduct ballast water exchange and does not do so in accordance with Regulation B-4 of the BWM Convention, the reasons shall be entered in the BWR Book.

A ship that operated with ballast water exchange should be designed and constructed taking into account considerations set out in Guidelines (G11) in **MEPC Resolution 149(55)** in order to assist compliance with Regulation D-1 of the BWM Convention.

Classification Societies are urged to include provisions for ballast water exchange, sediment discharge system design and procedures in their rule requirements providing to the ship's master the necessary information for same in the ship's stability booklet.

Ship's masters and officers involved in ballast water exchange at sea should read the 2017 Guidelines (G6) in **MEPC Resolution 288(71), as amended by MEPC Resolution 371(80)** and work with the vessel owners and operators to ensure that the vessel specific instructions are accurate and reflect the safety aspects identified in the Guidelines.

2.6 Ballast Water Exchange Standard (Regulation D-1 of the BWM Convention)

Ships performing ballast water exchange in accordance with Regulation D-1 shall do so in with an efficiency of at least 95 percent volumetric exchange of ballast water.

For ships exchanging ballast water by the pumping-through method, pumping through three times the volume of each ballast water tank shall be considered to meet the standard described in the paragraph above. Pumping through less than three times the volume may be accepted provided the ship can demonstrate that at least 95 percent volumetric exchange is met.

2.7 Ballast Water Performance Standard (Regulation D-2 of the BWM Convention)

The BWM Convention specifies the biological performance standard for ballast water discharge but does not prescribe the method(s) a ship should use to meet the requirements. The most effective and efficient method to meet the performance standard will vary depending on various factors for each ship. The majority of ships are expected to install an approved BWMS to achieve the performance standard. Therefore, to implement and achieve the ballast water performance standard in regulation D-2, a ship's officer in charge of ballast water management shall follow the appropriate procedures specified in the approved BWM Plan.

The ballast water performance standards in Regulation D-2 are summarized below.

Performance standard

	Performance standard
Organisms, size $\geq 50 \mu\text{m}$ ^(a)	< 10 viable organisms/m ³
Organisms, size ≥ 10 and $< 50 \mu\text{m}$ ^(a)	< 10 viable organisms/mL
Toxicogenic <i>Vibrio cholerae</i>	< 1 cfu ^(b) /100 mL
<i>Escherichia coli</i>	<250 cfu ^(b) /100 mL
Intestinal Enterococci	<100 cfu ^(b) /100 mL

(a) Minimum dimension

(b) Cfu : Colony-forming unit

2.8 Sampling for verification of compliance with BWE standard

In-tank samples may be taken via sounding or air pipes and manholes by using pumps, sampling bottles or other water containers. Samples may also be taken from the discharge line. Sampling for compliance verification of BWE can involve checking the ballast water salinity. Additional information regarding sampling and analysis methodologies to verify compliance with Regulation D-1 can be found in the Guidance on ballast water sampling and analysis for trial use in accordance with the BWM Convention and [Guidelines \(G2\)-MEPC Resolution 173\(58\) in BWM.2/Circ.42/Rev.2](#).

2.9 Sampling for verification of compliance with BW performance standard

Samples should be taken from the sampling point on the discharge line, as near to the point of discharge as practicable, during ballast water discharge whenever possible. Samples should be representative of the whole discharge of ballast water from any single tank or any combination of tanks being discharged.

In cases where the ballast system design does not enable sampling from the discharge line, other sampling arrangements may be necessary. Sampling via manholes, sounding pipes, or air pipes is not the preferred approach for assessing compliance with Regulation D-2. Scientific trials have shown that using these sampling locations may not provide accurate estimates of organism concentrations that would occur in the discharge, i.e. such sampling may provide an under or over-estimate of the concentration or organisms.

In-tank sampling should only be used if ballast water treatment occurs on uptake prior to or whilst ballast water is in the tank. If any part of the treatment process occurs during the ballast water discharge, then in-tank sampling will be inappropriate.

In light of these potential shortcomings, sampling to determine compliance with Regulation D-2 should, whenever practicable to do so, be carried out in the discharge line near the discharge point.

An exception to this case is the case when tanks are emptied through direct overboard discharge valves, as in upper side wing tanks, rather than through the ballast pumps. In such cases, tank sampling may be an appropriate approach.

Additional information regarding sampling and analysis methodologies to assess non-compliance with Regulation D-2 can be found in the Guidance on ballast water sampling and analysis for trial use in accordance with the BWM Convention and Guidelines ([G2](#))-MEPC Resolution 173(58) in [BWM.2/Circ.42/Rev.2](#). The ability of compliance monitoring devices used to assess non-compliance with the D-2 Standard using indicative analysis methods should be verified in accordance with the protocol in [BWM.2/Circ.78](#).

2.10 Stripping operations using eductors

When ballast water is managed by a BWMS that upon discharge meets the required standard, as may be verified in accordance with [BWM.2/Circ.42/Rev.2](#), then following the discharge of the bulk of the ballast water from a tank or group of tanks through the ballast water main system, it is accepted that the remainder of the ballast water in the tanks will also be compliant and may be discharged via an eductor system using local water as driving water without additional management or monitoring.

2.11 Trial Period for Sampling and Analysis

Ballast water sampling and analysis is still evolving and, as a result, has in some cases not been adequately validated for port State control (PSC) use. Consequently, the required sampling and analysis methods are not yet integrated into PSC procedures and therefore their use in determining compliance with the BWM Convention cannot yet be assessed.

MEPC 65 agreed in principle with recommendations related to a trial period as set out in annex 6 to document [BLG 17/18](#) in order to trial and validate ballast water sampling approaches. The trial period could extend to three years or more as

appropriate following entry into force. The results of the trial will be monitored and reviewed by the Marine Environment Protection Committee and, when appropriate, the trial will be halted or extended. The goal at the end of the trial period will be to have a suite of accepted procedures that can be used for sampling and analyzing ballast water in a globally consistent way.

It should be noted that the Guidelines for Port State Control under the BWM Convention in **MEPC Resolution 252(67)** provides that port States should refrain from applying criminal sanctions or detaining a ship based on sampling during the trial period agreed by the Organization, provided the ship has evidence that the BWMC is type approved and has been maintained and operated in accordance with ship's approved BWM plan.

This does not prevent the port State from taking preventive measures to protect its environment, human health, property or resources. The port State will retain its right to exercise enforcement jurisdiction, including sanctions and detaining ships, during the trial period if an alleged violation is proven by means other than sampling and analysis.

2.12 Ballast Water Management Systems (BWMS)

BWMS used in order to comply with the BWM Convention approved not later than 28 October 2018, taking into account Regulation D-3 of the BWM Convention and the Guidelines (G8) adopted by **MEPC Resolution 174(58)**, may be installed on board ships before 28 October 2020. In addition, BWMS that make use of Active Substances shall be approved by the Organization in accordance with the Procedure for approval of BWMS that make use of active substances Guidelines (G9) in **MEPC Resolution 169(57)**.

It was anticipated that all BWMS approved in accordance with Guidelines (G8) MEPC Resolution 174(58) could meet the discharge performance standard, regardless of where a ship may operate globally. However, it has since been agreed that the Guidelines (G8) were not sufficiently detailed to ensure BWMS were adequately challenged during the process to provide the required confidence that BWMS will meet the required discharge standard in all physical and environmental conditions, such as temperature, salinity ranges and sediment loads, ships normally encounter in worldwide trade.

Using guidance in **BWM.2/Circ.43** and **BWM.2/Circ.43/Rev.1**, the Liberian Administration conducted additional assessments of IMO type approved BWMS intended for installation on Liberian flagged ships in order to identify if there were any limitations during previous testing. Potential operational limitations are identified and listed on the Liberian Type Approval Certificate issued to the manufacturer. This additional information assisted ship owners in their decisions on BWMS. A list of BWMS assessed by Liberia can be found on its website: [Ballast Water Management – Approved Ballast Water Treatment System](#)

BWMS installed on ships on or after 28 October 2020 shall be approved in accordance with the BWMS Code. While BWMS's approved to the BWMS Code by other Administrations may be installed on Liberian flagged ships, the

Administration is also undertaking type approval of BWMS under the BWMS

Code, including submitting applications for basic and final approval to the Organization under Guidelines (G9). Manufacturers should contact the Administration at RegsandStandards@lisr.com for information on the type approval process.

In accordance with operative paragraph 5 of **IMO Resolution MEPC.300(72)** “BWMS Code”, the word "installed" means the contractual date of delivery of the ballast water management system to the ship. In the absence of such a date, the word "installed" means the actual date of delivery of the ballast water management system to the ship.

A copy of the Type Approval Certificate of the BWMS, specifying the main particulars of the apparatus and any limiting conditions on its usage necessary to ensure its proper performance should be carried on board ships fitted with such a system at all times. A reference to the test protocol and a copy of the test results should be available for inspection on board the vessel.

Upon installation and commissioning of the BWMS on board, the authorized Recognized Organization (RO) shall conduct an installation survey in accordance with the Guidelines (G8) or the BWMS Code, as applicable and which shall ensure that the required documentation is on board in a suitable format. From 1 June 2022 the survey shall confirm that a commissioning test has been conducted to validate the installation of any ballast water management system to demonstrate that its mechanical, physical, chemical and biological processes are working properly, taking into account the guidelines in **BWM.2/Circ.70/Rev.1**.

In case an installed BWMS on board a ship undergoes an upgrade or change to a major component as defined under paragraph 3.9 of the **BWMS Code**, the BWMS should be regarded as a newly installed BWMS. A commissioning test should be conducted in accordance with regulation E-1.1.5 of the BWM Convention and an International Ballast Water Management Certificate (IBWMC) for that ship should be re-issued accordingly.

BWMS are to be operated in accordance with the system design criteria and the manufacturer’s approved operations and technical manual. The specific operational and safety restrictions which affects the ship and crew including reference to procedures for safe tank entry should be detailed in the ship’s BWM plan. All failures and malfunctions of the system are to be recorded in the BWM record book.

2.13 Options for Offshore Support Vessels

Procedures for application of the BWM Convention to offshore support vessels are described in **BWM.2/Circ.44**. These procedures are intended to relate to the activities of offshore support vessels. Operationally, these vessels differ from the operational models associated with deep-sea trading vessels by being designed to operate in near-coastal waters characterized by carrying materials to facilities and vessels working in offshore energy fields.

The purpose of these procedures is to provide options available for complying with the requirements of the BWM Convention.

2.14 Application of the Convention to Mobile Offshore Units

Procedures for application of the BWM Convention to mobile offshore units are described in [BWM.2/Circ.46](#). The procedures are divided into operations at the location of operation and during transit to other areas.

The Administration does not consider water in spud cans as ballast water.

2.15 Guidance on entry or re-entry of ships into exclusive operation within waters under the jurisdiction of a single Party

[BWM.2/Circ.52/Rev.1](#) provides guidance on entry or re-entry of ships (such as mobile offshore units and ships that may need to undertake a single international voyage to a dry-dock) into exclusive operation within waters under the jurisdiction of a single Party to the BWM Convention. Refer to sub-paragraphs (b), (c), and (d) under APPLICABILITY above.

2.16 Application of the BWM Convention to Hopper Dredgers

Applicability of the BWM Convention to hopper dredgers is determined in [BWM.2/Circ.32](#). Hoppers are not considered to be ballast tanks, therefore water in hoppers is considered as outboard water.

2.17 Exceptional discharge of ballast water from the cargo tanks of oil tankers

Discharge of ballast water carried in cargo tanks of oil tankers shall be discharged in accordance with MARPOL Annex I. In addition to recording the discharge in the Oil Record Book Part II, it should also be recorded in the Ballast Water record book as an exceptional discharge as specified in paragraph 3.5 of Appendix II of this Marine Notice.

2.18 Contingency Measures

Any shipboard contingency measures implemented to discharge non-compliant ballast water without posing unacceptable risks to the environment, human health, property and resources should be conducted in accordance with guidance developed in [BWM.2/Circ.62](#) after communicating with and acceptance by the port State.

Where the ballast water exchange standard in regulation D-1 is implemented in a contingency as a result of a failure of the BWMS, upon agreement by the Administration, the IBWMC should be reissued with the appropriate expiry date for the time needed to rectify the deficiency.

2.19 Interim Guidance to Ships Operating in Ports with Challenging Water Quality

Ships that experience challenging water quality conditions at ports due to high levels of total suspended solids and turbidity, should develop procedures in the

BWM Plan taking into account interim guidance in [MEPC Resolution 387\(81\)](#). The procedures should be ship-specific, reflect the Operations, Maintenance and Safety Manual (OMSM) of the BWMS, and include at least:

1. Equipment maintenance procedures and intervals;
2. Predetermined mitigating measures that may preserve and optimize the treatment process in marginal conditions;
3. A table of critical alarms that justify challenging water quality action;
4. Ship-specific alternatives to bypassing the BWMS;
5. Safe bypass procedures that minimize the exposure of tanks/piping to unmanaged water; and
6. A decontamination procedure that reflects this Guidance and is safe for the ship and crew;

2.20 Temporary storage of treated sewage and/or grey water in ballast water tanks

Where ballast water tanks are used for the temporary storage of treated sewage and/or grey water, the BWM Plan of the ship should taking into account guidance in [MEPC.2/Circ.82](#), include a ship-specific change-over procedure, from ballast water storage to treated sewage/grey water storage and back to ballast water storage, including pump and piping associated with the dual-purpose ballast water tanks, with specific details on how the flushing is conducted. The ballast water tanks to be used for temporary storage of treated sewage/grey water should be identified in the BWM Plan.

2.21 Calibration of BWMS Components

In accordance with paragraph 4.10 of the [BWMS Code](#) and taking into account guidance in [BWM.2/Circ.66/Rev.5](#), the performance of BWMS components that take measurements shall be checked in accordance with calibration procedure and intervals specified in the manufacturer's instructions. A calibration certificate certifying the date of the last calibration check shall be retained on board for inspection purposes. Only the manufacturer or persons authorized by the manufacturer shall perform the accuracy checks.

2.22 Sediment Management

All ships that remove and dispose of sediments from spaces designated to carry ballast water shall do so in accordance with the provisions of the ship's BWM Plan.

Sediment management is essential for any form of ballast water management. Ships will not be able to comply with the BWM Convention if proper disposal of

sediments from ballast water management is not carried out on an adequate scale. Ships should, without compromising safety or operational efficiency, be designed

and constructed with a view to minimizing the uptake and undesirable entrapment of sediments, removal and sampling. The Guidelines (G12) in [MEPC Resolution 209\(63\)](#) provide details on ballast water tanks and how their internal structure should be designed to avoid accumulation of sediments.

Ships should, during ballasting operations, as far as practicable, make every effort to limit the uptake of ballast water with potential high concentrations of sediments.

2.23 Biofouling Management Plan and Record Book

It is recommended that every ship should have a Biofouling Management Plan. The intent of the plan should be to provide effective procedures for biofouling management. The Biofouling Management Plan may be a stand-alone document or integrated in part or fully into existing ships' operational and procedural manuals and/or planned maintenance system. The Biofouling Management Plan should be specific to each ship and included in the ships' operational documentation.

It is recommended that a Biofouling Record Book is maintained for each ship. The book should record details of all inspections and biofouling management measures undertaken on the ship. This is to assist the ship owner and operator to evaluate the efficacy of the specific anti-fouling systems and operational practices on the ship in particular, and of the biofouling management plan in general. The record book could also assist interested State authorities to quickly and efficiently assess the potential biofouling risk of the ship, and thus minimize delays to ship operations. The Biofouling Record Book may be a stand-alone document, or integrated in part, or fully, into the existing ships' operational and procedural manuals and/or planned maintenance system. It is recommended that the Biofouling Record Book be retained on the ship for the life of the ship.

The plan and record book should be developed taking into account Guidelines in [MEPC Resolution 378\(80\)](#). A separate Biofouling Management Plan on board that has been developed in accordance with the IMO Guidelines and referenced in the BWM Plan will be adequate to meet the requirements under [USCG Regulation 33 CFR section 151.2050\(g\)\(3\)](#). The Administration is offering shipowners/operators a Biofouling Record Book which may be ordered by completing the publications order form using the link: [Order-publications](#).

2.24 Duties of officers and Crew

Officers and crew shall be familiar with their duties in the implementation of ballast water management particular to the ship on which they serve and shall, appropriate to their duties, be familiar with the ships' BWM plan.

Officers and crew engaged in ballast water operations shall be familiarized and trained in the operation of the BWMS and their associated duties. In addition to instructions in the general aspects of ballast water management and the requirements of the BWM Convention, ship-specific training should include operational procedures and maintenance of the BWMS; all related safety considerations, as detailed in the BWM Plan and the BWMS operating manual; and

if applicable, relevant aspects of operating in ports with challenging water quality conditions and the environmental risk of bypassing the BWMS and steps to avoid/minimize them..

Records of familiarization and training of officers and crew shall be maintained with the BWM Plan.

3.0 SURVEY AND CERTIFICATION REQUIREMENTS FOR BALLAST WATER MANAGEMENT

Survey and certification guidelines for the purpose of complying with the BWM Convention are provided in Annex 4 of the Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), 2021 in [Assembly Resolution A.1156\(32\)](#).

3.1 Surveys

1. Ships of 400 gross tonnage and above to which this BWM Convention applies, excluding floating platforms, FSU's and FPSOs, shall be subject to surveys below:
 - .1 An initial survey before the ship is put into service or before the International Ballast Water Management Certificate (IBWMC) is issued for the first time. This survey shall verify that the BWM Plan and any associated structure, equipment, systems, fitting, arrangements and material or processes comply fully with the requirements of this BWM Convention; and from 1 June 2022, this survey shall confirm that a commissioning test has been conducted to validate the installation of any ballast water management system to demonstrate that its mechanical, physical, chemical and biological processes are working properly, taking into account the guidelines in [BWM.2/Circ.70/Rev.1](#). The collection and analysis of the representative sample needs be done by a person or company that is independent of the BWMS manufacturer or supplier; the ship's crew or shipyard worker may collect and use the equipment to test the samples. If a laboratory is used, it should be ISO/IEC 17025 certified for performing that work.
 - .2 A renewal survey at intervals specified by the Administration, but not exceeding five years, except where Regulations E-5.2, E-5.5, E-5.6 or E-5.7 of the BWM Convention is applicable. This survey shall verify that the BWM Plan, other required documentation and any associated structure, equipment, systems, fitting, arrangements and material or processes comply fully with the applicable requirements of the BWM Convention.
 - .3 An intermediate survey within three months before or after the second Anniversary date or within three months before or after the third Anniversary date of the Certificate, which shall take the place of one of the annual surveys specified in sub-paragraph .4 below. The intermediate surveys shall ensure that the equipment, associated systems, and processes for Ballast Water Management fully comply with the applicable requirements and are in good working order. Such intermediate surveys shall be endorsed on the Certificate issued under regulation E-2 or E-3.

- .4 An annual survey within three months before or after each Anniversary date, including a general inspection of the structure, any equipment, systems, fittings, arrangements and material or processes associated with the BWM plan to ensure that they have been maintained in accordance with the provisions of the BWM Convention and remain satisfactory for the service for which the ship is intended. Such annual surveys shall be endorsed on the Certificate issued under regulation E-2 or E-3.
 - .5 An additional survey either general or partial, according to the circumstances, shall be made after a change, replacement, or significant repair of the structure, equipment, systems, fittings, arrangements and material necessary to achieve full compliance with the BWM Convention. The survey shall be such as to ensure that any such change, replacement, or significant repair has been effectively made, so that the ship complies with the requirements of the BWM Convention. When an additional survey is undertaken for the installation of any ballast water management system, this survey shall confirm that a commissioning test has been conducted to validate the installation of the system by demonstrating that its mechanical, physical, chemical and biological processes are working properly, taking into account the guidelines in **BWM.2/Circ.70/Rev.1**.
2. Ships that are not subject to the paragraph 3.1.1 above shall be inspected annually in order to ensure that the applicable provisions of the BWM Convention are complied with.
 3. The Liberian Administration has informed its Recognized Organization's (RO) that from 22 April 2017, the Administration will review and approve all BWM Plans and issue the IBWMC for existing Liberian flagged ships implementing only the BWE standard in regulation D-1.

Owners and operators requiring IBWMC for existing Liberian flagged ships, implementing only the BWE standard in regulation D-1, shall provide the following information to the Administration at RegsandStandards@liscr.com

- .1 Verification that the BWM Plan comply fully with the requirements of the BWM Convention;
- .2 Verification that the approved BWM Plan and record book are on-board and being implemented;
- .3 Company attests that no modifications or conditions on-board affecting ballast operations and ballast water exchange have been made since last periodical survey;
- .4 Declaration from the ship's Master that the BWM Plan; Ballast Water record book; and notification or communication with coastal States is being implemented and that the BWM officer has been designated and the crew have been provided with the necessary training and familiarization; and

- .5 A copy of the International Oil Pollution Prevention Certificate.
- .6 Item .3 and implementation of item .4 will be verified at the next attendance of the flag State inspector.

The surveys of ships implementing the ballast water exchange standard in Regulation D-1 of the BWM Convention have not been delegated to the RO's and the Administration will carry out the relevant surveys for Liberian flagged ships until enforcement of the performance standard in regulation D-2.

The Administrations auditors shall conduct the surveys during the annual safety inspection (ASI) and/or ISM/ISPS/MLC audit/inspection. The Administration will consider advancing or extending the date of the ASI to harmonize it with the applicable survey for ballast water management.

Owners and operators should be guided accordingly when scheduling the survey. For more information on scheduling the survey and fees associated with the survey, please contact RegulationsandStandards@liscr.com or telephone +1 703 790 3434.

For scheduling the survey, including advancing or extending the date of the ASI, please contact Audit@liscr.com.

4. IBWMC already issued by an authorized RO prior to 22 April 2017 will continue to remain valid until they expire, or the ship implements the ballast water performance standard in regulation D2, whichever is earlier.
5. The condition of the ship and its equipment, systems and processes shall be maintained to conform with the provisions of the BWM Convention to ensure that the ship in all respects will remain fit to proceed to sea without presenting a threat of harm to the environment, human health, property or resources.
6. After any survey of the ship under sub-paragraph 3.1.1 above has been completed, no change shall be made in the structure, any equipment, fittings, arrangements or material associated with the BWM Plan and covered by the survey without the sanction of the Administration, except the direct replacement of such equipment, fittings or non-major components.

3.2 Form of the IBWMC

1. The Certificate shall be drawn up in the English in the form set forth in Annex I to this Marine Notice.
2. For the purpose of completing the International Ballast Water Management Certificate, "Date installed" in relation to "Method of ballast water management used shall be the date when commissioning has been completed in accordance with section 8 of the Guidelines (G8) or the BWMS Code, as applicable.

3.3 Duration and Validity of the IBWMC

1. The IBWMC shall be issued for a period specified by the Administration that

shall not exceed five years.

2. For renewal surveys:
 - .1 Notwithstanding the requirements of sub-paragraph 1 above, when the renewal survey is completed within three months before the expiry date of the existing IBWMC, the new IBWMC shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing IBWMC.
 - .2 When the renewal survey is completed after the expiry date of the existing IBWMC, the new IBWMC shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing IBWMC.
 - .3 When the renewal survey is completed more than three months before the expiry date of the existing IBWMC, the new IBWMC shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of completion of the renewal survey.
3. If the IBWMC is issued for a period of less than five years, the Administration may extend the validity of the IBWMC beyond the expiry date to the maximum period specified in sub-paragraph 1 above, provided that the surveys referred to in Regulation E-1.1.3 of the BWM Convention applicable when the IBWMC is issued for a period of five years are carried out as appropriate.
4. If a renewal survey has been completed and a new cannot be issued or placed on board the ship before the expiry date of the existing IBWMC, the person or organization authorized by the Administration may endorse the existing IBWMC and such IBWMC shall be accepted as valid for a further period which shall not exceed five months from the expiry date.
5. If a ship at the time when the IBWMC expires is not in a port in which it is to be surveyed, the Administration may extend the period of validity of the Certificate but this extension shall be granted only for the purpose of allowing the ship to complete its voyage to the port in which it is to be surveyed, and then only in cases where it appears proper and reasonable to do so. No IBWMC will be extended for a period longer than three months, and a ship to which such extension is granted shall not, on its arrival in the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port without having a new IBWMC. When the renewal survey is completed, the new IBWMC shall be valid to a date not exceeding five years from the date of expiry of the existing Certificate before the extension was granted.
6. An IBWMC issued to a ship engaged on short voyages which has not been extended under the foregoing provisions of this regulation may be extended by the Administration for a period of grace of up to one month from the date of expiry stated on it. When the renewal survey is completed, the new IBWMC shall be valid to a date not exceeding five years from the date of expiry of the existing IBWMC before the extension was granted.

7. In special circumstances, as determined by the Administration, a new IBWMC need not be dated from the date of expiry of the existing IBWMC. In these special circumstances, the new IBWMC will be valid to a date not exceeding five years from the date of completion of the renewal survey.
8. If an annual or intermediate survey is completed before the survey window specified in sub-paragraph 3.1.4 above, then:
 - .1 the Anniversary date shown on the IBWMC shall be amended by endorsement to a date which shall not be more than three months later than the date on which the survey was completed;
 - .2 the subsequent annual or intermediate survey shall be completed at the intervals prescribed by that regulation using the new Anniversary date;
 - .3 the expiry date may remain unchanged provided one or more annual or intermediate surveys, as appropriate, are carried out so that the maximum intervals between the surveys does not exceed 18 months.

3.4 Authority of Recognized Organizations (RO's)

Further to the authorization to the RO's in sub-paragraph 3.1.3 above, The Administration has also authorized the RO's conducting surveys described above in sub-paragraph 3.1.1 for implementation of the ballast water performance standard in Regulation D-2 of the BWM Convention to:

- .1 require a ship that they survey comply with the provisions of the BWM Convention; and
- .2 carry out the surveys and inspections if requested by the appropriate authorities of a port State that is a Party.

The list of authorized RO's can be found on the LISCR website:

<https://www.liscr.com/maritime/regulations-and-standards#recognized-organizations>

Owners and operators of existing ships that have installed ballast water management systems (BWMS) and intend to voluntarily implement the ballast water performance standard in regulation D-2 ahead of the enforcement date, should contact an authorized RO for the relevant survey and certification.

3.5 Non-compliance with the BWM Convention

When the Administration, a nominated surveyor, or the RO determines that the ship's ballast water management does not conform to the particulars of the IBWMC or is such that the ship is not fit to proceed to sea without presenting a threat of harm to the environment, human health, property or resources, the Administration, nominated surveyor or RO will immediately ensure that corrective action is taken to bring the ship into compliance.

In cases where the corrective action has not been undertaken, the IBWMC should be withdrawn, and the Administration notified immediately. If the ship is in the port

of another Party, the Administration would also notify the appropriate authorities of the port State.

3.6 Damage or defect to equipment

Whenever an accident occurs to a ship or a defect is discovered which substantially affects the ability of the ship to conduct ballast water management in accordance with the BWM Convention, the shipowner, operator or other person in charge of the ship shall report at the earliest opportunity to the Administration, the RO or the nominated surveyor responsible for issuing the IBWMC, who will cause investigations to be initiated to determine whether a survey as required under subparagraph 3.1.1 is necessary.

If the ship is in a port of another Party, the shipowner, operator or other person in charge shall also report immediately to the appropriate authorities of the port State and the nominated surveyor or RO shall ascertain that such report has been made.

3.7 ‘Cease to be valid’ IBWMC

An IBWMC shall cease to be valid in any of the following cases:

- .1 if the structure, equipment, systems, fittings, arrangements and material necessary to comply fully with the BWM Convention is changed, replaced or significantly repaired and the IBWMC is not endorsed accordingly;
- .2 upon transfer of the ship to the flag of another State;
- .3 if the relevant surveys are not completed within the periods specified; or
- .4 if the IBWMC is not endorsed accordingly.

3.8 Violation of the Requirements of the BWM Convention

Any violation of the requirements of the BWM Convention shall be prohibited and sanctions will be established under Liberian Maritime Law, wherever the violation occurs. If the Administration is informed of such a violation, it will investigate the matter and may request the reporting Party to furnish additional evidence of the alleged violation. If the Administration is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it will cause such proceedings to be taken as soon as possible, accordance to its law. The Administration will promptly inform the Party that reported the alleged violation, as well as the Organization, of any action taken. If the Administration has not taken any action within 1 year after receiving the information, it will so inform the Party which reported the alleged violation.

Any sanctions imposed will be adequate in severity to discourage violations of the BWM Convention wherever they occur and may include warning, detaining or excluding the ship from flying the Liberian flag.

4.0 INSPECTIONS OF SHIPS BY PORT STATE CONTROL

A ship to which this BWM Convention applies may, in any port or offshore terminal of another Party, be subject to inspection by officers duly authorized by that Party for the purpose of determining whether the ship is in compliance with the BWM Convention. The PSC procedure can be described as a four-stage inspection using the Guidelines for port State control under the BWM Convention in **MEPC Resolution 252(67)**:

- .1 First stage or “initial inspection”:
 - (a) verifying that there is onboard a valid IBWMC, which, if valid, shall be accepted; and
 - (b) verifying there is an approved BWM Plan on board and inspection of the Ballast Water record book, and/or
 - (c) a sampling of the ships’ ballast water, carried out in accordance with **BWM.2/Circ.42/Rev.2**. However, the time required to analyze the samples shall not be used as a basis for unduly delaying the operation, movement or departure of the ship.
- .2 Second stage or “more detailed inspection”, where a ship does not carry a valid IBWMC or there are clear grounds for believing:
 - (a) the condition of the ship or its equipment does not correspond substantially with the particulars of the IBWMC; or
 - (b) the master or the crew are not familiar with essential shipboard procedures relating to ballast water management or have not implemented such procedures.
- .3 Third stage: Sampling is envisaged to occur during this stage of PSC which relies on indicative analysis, to identify whether there is no exceedance of the ballast water performance standard D-2 by a threshold specific to the validated indicative analysis method being used as set out in **Guidelines (G2)** in **MEPC Resolution 173(58)** and **BWM.2/Circ.42/Rev.2**.
- .4 Fourth stage: If necessary, incorporated detailed analysis to verify compliance with the D-2 standard.

As instructed by MEPC 64, the sampling and analysis procedures to be used for enforcement of the BWM Convention should result in no more stringent requirements than what is required for Type Approved BWMS.

When testing for compliance, the sampling protocol used should result in a representative sample of the whole discharge of the ballast water from any single tank or any combination of tanks being discharged.

It should be noted that **MEPC Resolution 252(67)** provides that port States should refrain from applying criminal sanctions or detaining a ship based on sampling during the trial

period agreed by the Organization. This does not prevent the port State from taking preventive measures to protect its environment, human health, property or resources. The port State retains its right to exercise enforcement jurisdiction, including sanctions and detaining ships, during trial period if an alleged violation is proven by means other than sampling and analysis.

MEPC Resolution 290(71) specifies that during the ballast water experience-building phase, a ship should not be penalized (sanctioned, warned, detained or excluded) solely due to an exceedance of the D-2 standard following use of an approved BWMS provided that:

- .1 the BWMS is approved in accordance with Regulation D-3.1 of the Convention;
 - .2 the BWMS has been installed correctly;
 - .2 the approved BWM Plan is followed, including the operational instructions and the manufacturers' specifications for the BWMS;
 - .3 the BWMS has been maintained in accordance with the manufacturers' instructions; and
 - .4 either the self-monitoring system of the BWMS indicates that the treatment process is working properly, or the port State has been advised that the BWMS is defective prior to discharge of any ballast water.
1. The principles above do not pertain to other actions of the port State pursuant to Articles 9.3 and 10.3 of the BWM Convention concerning protection of the environment, human health, property and resources.
 2. The port State, flag State and shipowner should take into account any guidelines in **BWM.2/Circ.70/Rev.1** on contingency measures in determining the most appropriate solution to allow for the discharge of non-compliant ballast water.

5.0 EXPERIENCE BUILDING PHASE (EBP)

In accordance with Article 2.5 of the BWM Convention related to the continued development of ballast water management and standards and Regulation D-5 related to review of the standards by the Organization, it was agreed in **MEPC Resolution 290(71)** that the trial period associated with the Guidance on ballast water sampling and analysis (**BWM.2/Circ.42/Rev.2**) be expanded into an experience building phase of an appropriate length, upon entry into force of the BWM Convention.

The purpose of the EBP is to allow the Marine Environment Protection Committee (the Committee) to monitor the implementation of the BWM Convention. The EBP includes data gathering and analysis to allow the Committee to identify aspects of the Convention's implementation that are working well and to shed light on issues that require further attention. The EBP also includes a systematic and evidence-based process for reviewing and improving the BWM Convention.

The EBP is structured into three stages:

- .1 a data gathering stage;
- .2 a data analysis stage; and
- .3 a BWM Convention review stage

During stage one of the EBP, Liberian flagged ships and stakeholders are requested to voluntarily provide the Liberian Administration, ballast water sampling analysis results from ships, including type of BWMS installed; and port States, when requested, ballast water samples for analysis and any other information that may assist in analyzing data, taking into account guidance in **BWM.2/Circ.67/Rev.1**.

It is recognized and agreed by the Committee that a ship should not be penalized (sanctioned, warned, detained or excluded) during the experience building phase.

* * * * *



THE REPUBLIC OF LIBERIA

LIBERIA MARITIME AUTHORITY

APPENDIX I

INTERNATIONAL BALLAST WATER MANAGEMENT CERTIFICATE

Issued under the provisions of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (hereinafter referred to as "the Convention") under the authority of the Government of

The Republic of Liberia

by the Office of the Deputy Commissioner, Liberia Maritime Authority

Particulars of the ship¹

Name of ship

Distinctive number or letters

Port of registry

Gross tonnage

IMO number²

Date of Construction

Ballast Water Capacity (in cubicmetres).....

Details of Ballast Water Management Method(s) Used

Method of Ballast Water Management used:

.....

Date installed (if applicable)

Name of manufacturer (if applicable)

¹ Alternatively, the particulars of the ship may be placed horizontally in boxes.

² IMO Ship Identification Number Scheme adopted by the Organization by resolution A.1117(30).

The principal Ballast Water Management method(s) employed on this ship is/are:

- in accordance with regulation D-1....
- in accordance with regulation D-2
(describe)
- the ship is subject to regulation
- other approaches in accordance with regulation

THIS IS TO CERTIFY:

- 1 That the ship has been surveyed in accordance with regulation E-1 of the Annex to the Convention; and
- 2 That the survey shows that Ballast Water Management on the ship complies with the Annex to the Convention.

This certificate is valid until.....subject to surveys in accordance with regulation E-1 of the Annex to the Convention.

Completion date of the survey on which this certificate is based:

Issued at

(Place of issue of certificate)

.....

Date of issue
certificate)

.....

(Signature of authorized official issuing the

(Seal or stamp of the authority, as appropriate)

ENDORSEMENT FOR ANNUAL AND INTERMEDIATE SURVEY(S)

THIS IS TO CERTIFY that a survey required by regulation E-1 of the Annex to the Convention the ship was found to comply with the relevant provisions of the Convention:

Annual survey: Signed
(Signature of duly authorized official)
Place
Date.....

(Seal or stamp of the authority, as appropriate)

Annual*/Intermediate survey*: Signed
(Signature of duly authorized official)
Place
Date.....

(Seal or stamp of the authority, as appropriate)

Annual*/Intermediate survey*: Signed
(Signature of duly authorized official)
Place
Date.....

(Seal or stamp of the authority, as appropriate)

Annual survey: Signed
(Signature of duly authorized official)
Place
Date.....

(Seal or stamp of the authority, as appropriate)

*Delete as appropriate

THIS IS TO CERTIFY that, at an annual/intermediate survey in accordance with regulation E-5.8.3 of the Annex to the Convention, the ship was found to comply with the relevant provisions of the Convention:

Signed
(Signature of authorized official)

Place

Date.....

(Seal or stamp of the authority, as appropriate)

ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID FOR LESS THAN 5 YEARS WHERE REGULATION E-5.3 APPLIES

The ship complies with the relevant provisions of the Convention, and this Certificate shall, in accordance with regulation E-5.3 of the Annex to the Convention, be accepted as valid until.....

Signed
(Signature of authorized official)

Place

Date.....

(Seal or stamp of the authority, as appropriate)

ENDORSEMENT WHERE THE RENEWAL SURVEY HAS BEEN COMPLETED AND REGULATION E-5.4 APPLIES

The ship complies with the relevant provisions of the Convention and this Certificate shall, in accordance with regulation E-5.4 of the Annex to the Convention, be accepted as valid until

Signed
(Signature of authorized official)

Place

Date.....

(Seal or stamp of the authority, as appropriate)

*
Delete as appropriate

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF SURVEY OR FOR A PERIOD OF GRACE WHERE REGULATION E-5.5 OR E-5.6 APPLIES

This Certificate shall, in accordance with regulation E-5.5 or E-5.6 of the Annex to the Convention, be accepted as valid until

Signed
(Signature of authorized official)

Place

Date.....

(Seal or stamp of the authority, as appropriate)

ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE WHERE REGULATION E-5.8 APPLIES

In accordance with regulation E-5.8 of the Annex to the Convention the new Anniversary date is

Signed
(Signature of authorized official)

Place

Date.....

(Seal or stamp of the authority, as appropriate)

In accordance with regulation E-5.8 of the Annex to the Convention the new Anniversary date is

Signed
(Signature of duly authorized official)

Place

Date.....

(Seal or stamp of the authority, as appropriate)

*
Delete as appropriate

APPENDIX II

FORM OF BALLAST WATER RECORD BOOK

**INTERNATIONAL CONVENTION FOR THE CONTROL AND
MANAGEMENT OF SHIPS' BALLAST WATER AND SEDIMENTS**

Period From: To:

Name of Ship

IMO number

Gross tonnage

Flag

Total Ballast Water capacity (in cubic meters)

The ship is provided with a Ballast Water Management plan

Diagram of ship indicating ballast tanks:

1 Introduction

In accordance with regulation B-2 of the Annex to the International Convention for the Control and Management of Ships' Ballast Water and Sediments, a record is to be kept of each Ballast Water operation. This includes discharges at sea and to reception facilities.

2 Ballast Water and Ballast Water Management

“Ballast Water“ means water with its suspended matter taken on board a ship to control trim, list, draught, stability, or stresses of a ship. Management of Ballast Water shall be in accordance with an approved Ballast Water Management plan and taking into account Guidelines developed by the Organization.

3 Entries in the Ballast Water Record Book

Entries in the Ballast Water record book shall be made on each of the following occasions:

3.1 When Ballast Water is taken on board:

³ Refer to the Guidelines for the control and management of ships' ballast water to minimize the transfer of harmful aquatic organisms and pathogens adopted by the Organization by resolution A.868(20) or the Guidelines for ballast

water management and development of ballast water management plans (G4) adopted by the Organization by resolution MEPC 127(53) as amended.

- .1 Date, time and location port or facility of uptake (port or lat/long), depth if outside port
 - .2 Estimated volume of uptake in cubic meters
 - .3 Signature of the officer in charge of the operation.
- 3.2 Whenever Ballast Water is circulated or treated for Ballast Water Management purposes:
- .1 Date and time of operation
 - .2 Estimated volume circulated or treated (in cubic meters)
 - .3 Whether conducted in accordance with the Ballast Water Management plan
 - .4 Signature of the officer in charge of the operation
- 3.3 When Ballast Water is discharged into the sea:
- .1 Date, time and location port or facility of discharge (port or last/long)
 - .2 Estimated volume discharged in cubic meters plus remaining volume in cubic meters
 - .3 Whether the approved Ballast Water Management plan had been implemented prior to discharge
 - .4 Signature of the officer in charge of the operation.
- 3.4 When Ballast Water is discharged to a reception facility:
- .1 Date, time, and location of uptake
 - .2 Date, time, and location of discharge
 - .3 Port or facility
 - .4 Estimated volume discharged or taken up, in cubic meters
 - .5 Whether the approved Ballast Water Management plan had been implemented prior to discharge
 - .6 Signature of an officer in charge of the operation
- 3.5 Accidental or other exceptional uptake or discharges of Ballast Water:
- .1 Date and time of occurrence
 - .2 Port or position of the ship at the time of occurrence

- .3 Estimated volume of Ballast Water discharged
- .4 Circumstances of uptake, discharge, escape or loss, the reason therefore and general remarks.
- .5 Whether the approved Ballast Water Management plan had been implemented prior to discharge
- .6 Signature of an officer in charge of the operation

3.6 Additional operational procedure and general remark

4 Volume of Ballast Water

The volume of Ballast Water onboard should be estimated in cubic meters. The Ballast Water record book contains many references to the estimated volume of Ballast Water. It is recognized that the accuracy of estimating volumes of ballast is left to interpretation.

RECORD OF BALLAST WATER OPERATIONS

SAMPLE BALLAST WATER RECORD BOOK PAGE

Name of Ship:

Distinctive number or letters

Date	Item (number)	Record of operations/signature of officers in charge

Signature of master