

ANNEX

DRAFT GUIDELINES FOR BALLAST WATER MANAGEMENT AND THE DEVELOPMENT OF BALLAST WATER MANAGEMENT PLANS (G4)

1 INTRODUCTION

1.1 Ballast water is essential to control trim, list, draught, stability, or stresses of the ship. However, ballast water may contain aquatic organisms or pathogens which, if introduced into the sea including estuaries, or into fresh water courses, may create hazards to the environment, human health, property or resources, impair biological diversity or interfere with other legitimate uses of such areas.

1.2 The selection of appropriate methods of ballast water management should take into account the need ensure that Ballast Water Management practices used to comply with this Convention do not cause greater harm than they prevent to the environment, human health, property or resources of any States and the safety of ships.

1.3 The objectives of these Guidelines are to assist Governments, appropriate authorities, ships masters, operators and owners, and port authorities, as well as other interested parties, in preventing, minimizing and ultimately eliminating the risk of introducing harmful aquatic organisms and pathogens from ships' ballast water and associated sediments while protecting ships' safety in applying the International Convention for the Control and Management of Ships' Ballast Water and Sediments (hereinafter referred to as the "Convention").

1.4 These guidelines consist of two parts:

Part A – "Guidelines for Ballast Water Management", which contains guidance on the general principles of Ballast Water Management; and

Part B – "Guidelines for the development of Ballast Water Management Plans", which contains guidance on the structure and content of Ballast Water Management Plans required by Regulation B-1 of the Convention.

2 DEFINITIONS

2.1 For the purposes of these Guidelines, the definitions in the Convention apply.

2.2 Ballast Water Tank means any tank, hold, or space used for the carriage of ballast water.

3 APPLICATION

3.1 The Guidelines apply to all ships and to Flag Administrations, port States, coastal States, ship owners, ship operators, ships' personnel involved in Ballast Water Management, ship designers, ship builders, classification societies as well as other interested parties.

PART A – GUIDELINES FOR BALLAST WATER MANAGEMENT

1 SHIP OPERATIONAL PROCEDURES

1.1 Precautionary practices

Avoiding unnecessary discharge of ballast water

1.1.1 If it is necessary to take on and discharge ballast water in the same port to facilitate safe cargo operations, care should be taken to avoid unnecessary discharge of ballast water that has been taken up in another port.

1.1.2 Managed ballast water which is mixed with unmanaged ballast water is no longer in compliance is no longer in compliance with Regulations D-1 and D-2 of the Annex to the Convention.

Minimizing the uptake of harmful aquatic organisms, pathogens and sediments

1.1.3 When loading ballast, every effort should be made to avoid the uptake of potentially harmful aquatic organisms, pathogens, and sediment that may contain such organisms. The uptake of ballast water should be minimized or, where practicable, avoided in areas and situations such as:

- .1 in areas identified by the port State in connection with advice provided by ports under paragraph 2.2.2;
- .2 in darkness when organisms may rise up in the water column;
- .3 in very shallow water;
- .4 where propellers may stir up sediment; or
- .5 where dredging is or recently has been carried out.

1.2 Ballast water management options

1.2.1 Ballast Water Exchange

1.2.1.1 Ballast water exchange is to be conducted in accordance with Regulation B-4 of the Convention and in accordance with the Guidelines for Ballast Water Exchange.

1.2.1.2 The voyage should be planned taking into account when ballast water exchange in accordance with Regulation B-4 of the Convention can be carried out.

1.2.1.3 Because of the possibility that partially 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 and the ship can comply with the distance from land and minimum water depth criteria in Regulation B-4. As many complete tanks should be exchanged to the standard in Regulation D-1 as the time allows,

if for any tank the standard in Regulation D-1 can not be fully met the exchange should not be commenced for that tank.

1.2.1.4 If ballast water exchange is not undertaken for the reasons in Regulation B-4.4, i.e. if the master reasonably decides that such exchange would threaten the safety or stability of the ship, its crew, or its passengers because of adverse weather, ship design or stress, equipment failure, or any other extraordinary condition, then details of the reasons ballast water exchange was not undertaken are to be recorded in the Ballast Water Record Book.

1.2.1.5 A port State may designate areas in which exchange may be conducted taking into account the Guidelines on designation of areas for ballast water exchange. Designated areas should only be used for those ballast water tanks that are intended to be discharged in the port of that State and that could not be exchanged in accordance with Regulation B-4.1 of the Convention.

1.2.2 Ballast Water Management Systems

1.2.2.1 Ballast Water Management Systems installed for compliance with Regulation B-3 are to be approved in accordance with Regulation D-3. Such systems are to be operated in accordance with the system design criteria and the manufacturer's operational and maintenance instructions. The use of such systems should be detailed in the ship's Ballast Water Management Plan. All failures and malfunctions of the system are to be recorded in the Ballast Water Record Book.

1.2.3 Discharge to ballast water reception facilities

1.2.3.1 If ballast water reception facilities provided by a port State are utilized, Regulation B-3.6 applies.

1.2.4 Prototype ballast water treatment technologies

1.2.4.1 Prototype ballast water treatment technologies should be used within a programme approved by the Administration in accordance with Regulation D-4.

1.3 Sediment management

1.3.1 Regulation B-5 requires that all ships shall remove and dispose of sediments from spaces designated to carry ballast water in accordance with the ballast water management plan.

1.3.2 All practical steps should be taken during ballast uptake to avoid sediment accumulation, however, it is recognized that sediment will be taken on board and will settle on tank surfaces. When sediment has accumulated, consideration should be given to flushing tank bottoms and other surfaces when in suitable areas, i.e. areas complying with the minimum depth and distance described by Regulations B-4.1.1 and B-4.1.2.

1.3.3 The volume of sediment in a ballast tank should be monitored on a regular basis.

1.3.4 Sediment in ballast tanks should be removed in a timely basis in accordance with the Ballast Water Management Plan and as found necessary. The frequency and timing of removal

will depend on factors such as sediment build up, ship's trading pattern, availability of reception facilities, work load of the ship's personnel and safety considerations.

1.3.5 Removal of sediment from ballast tanks should preferably be undertaken under controlled conditions in port, at a repair facility or in dry dock. The removed sediment should preferably be disposed of in a sediment reception facility if available, reasonable and practicable.

1.3.6 When sediment is removed from the ship's ballast tanks and is to be disposed of by that ship at sea, such disposal should only take place in areas outside 200 nm from land and in water depths of over 200 m.

1.3.7 Regulation B-5 requires that ships constructed in or after 2009 should, without compromising safety or operational efficiency, be designed and constructed with a view to minimize the uptake and undesirable entrapment of sediments, facilitate removal of sediments, and provide safe access to allow for sediment removal and sampling, taking into account the Guidelines for sediments control on ships (G12). This also applies to ships constructed prior to 2009, to the extent practicable.

1.4 Additional Measures

1.4.1 Ships to which additional measures apply, under Regulation C-1, should take them into account in the ships voyage planning. Actions taken to comply with any additional measures should be recorded in the Ballast Water Record Book.

1.5 Exemptions

1.5.1 Regulation A-4 provides that an exemption may be granted from the requirements of Regulations B-3 or C-1 by a Party or Parties to a ship in specific circumstances. Applications for and the granting of such exemptions should be completed in accordance with the Guidelines for risk assessment (G7).

1.5.2 Ships granted an exemption referred to in paragraph 1.5.1 above should record the exemption in the Ballast Water Record Book and what actions have been taken with regards to the ships ballast water.

2 RECORDING PROCEDURES

2.1 Procedures for ships

2.1.1 To facilitate the administration of ballast water management and treatment procedures on board each ship, a responsible officer is to be designated in accordance with Regulation B-1 to ensure the maintenance of appropriate records and to ensure that ballast water management and/or treatment procedures are followed and recorded.

2.1.2 When carrying out any ballast water operation the details are to be recorded in the Ballast Water Record Book together with any exemptions granted in accordance with Regulation B-3 or C-1.

2.1.3 Where a port State requires information on ships ballast operations, relevant documentation, which takes account of the information requirements of the Convention, should be made available to the port State.

2.2 Procedures for port States

2.2.1 Port States should provide ships with details of their requirements concerning ballast water management including:

- .1 the location and terms of use of areas designated for ballast water exchange under Regulation B-4.2 of the Convention;
- .2 any additional measures determined under Regulation C-1 of the Convention;
- .3 warnings concerning ballast uptake and any other port contingency arrangements in the event of emergency situations; and
- .4 the availability, location, capacities of reception facilities that are provided for the environmentally safe disposal of ballast water and/or sediments, under Article 5 and Regulation B-3.6.

2.2.2 To assist ships in applying the precautionary practices described in section 1.1 of Part A, port States are required by Regulation C-2 of the Convention to endeavour to notify mariners of area(s), where ships should not uptake Ballast Water due to known conditions. Similar notification should be given for areas where the uptake of ballast water should be minimized, such as:

- .1 areas with outbreaks, infestations or known populations of harmful organisms and pathogens;
- .2 areas with current phytoplankton blooms (algal blooms, such as red tides);
- .3 nearby sewage outfalls;
- .4 areas where a tidal stream is known to be the more turbid;
- .5 areas where tidal flushing is known to be poor;
- .6 nearby dredging operations; and
- .7 nearby or in sensitive or estuarine sea areas.

3 TRAINING AND EDUCATION

3.1 Regulation B-6 requires that officers and crew shall be familiar with their duties in the implementation of Ballast Water Management particular to the ship on which they serve. Owners, managers, operators, and others involved in officer and crew training for ballast water management should consider the following:

3.2 Training for ships' masters and crews as appropriate should include instructions on the requirements of the Convention, the ballast water and sediment management procedures and the Ballast Water Record Book particularly having regard to matters of ship safety and maintenance of records in accordance with the information contained in these Guidelines.

3.3 The Ballast Water Management Plan should include training and education on ballast water management practices and the systems and procedures used on board the ship.

PART B – GUIDELINES FOR THE DEVELOPMENT OF BALLAST WATER MANAGEMENT PLANS

1 INTRODUCTION

1.1 These Guidelines have been developed to assist with the preparation of a ship's Ballast Water Management Plan (hereafter referred to as the "Plan"). The Plan must be approved by the Administration in accordance with Regulation B-1 of the Convention.

1.2 This Part is comprised of three primary sections:

- .1 General: this section provides the objectives and a general overview of the subject matter and introduces the reader to the basic concept of the Guidelines and the Plan that is expected to be developed from them. This section also contains guidance on updating and use of the Plan.
- .2 Mandatory provisions: this section provides guidance to ensure that the mandatory provisions of Regulation B-1 of the Annex to the Convention are met.
- .3 Non-mandatory provisions: this section provides guidance concerning the inclusion of other information in the Plan. This information, although not required under Regulation B-1 of the Convention, may be found useful by local authorities in ports visited by the ship, or may provide additional assistance to the ship's master.

1.3 The format for a Ballast Water Management Plan is given in Appendix 1.

2 GENERAL

2.1 Concept of the Guidelines

2.1.1 These Guidelines are intended to provide a basis for the preparation of the Plans for individual ships. The broad spectrum of ships for which Plans are required makes it impractical to provide specific guidelines for each ship type. For a Plan to be effective and to comply with Regulation B-1 of the Annex of the Convention, it must be carefully tailored to the particular ship for which it is intended. Properly used, the Guidelines will ensure that all appropriate issues that may be applicable to a particular ship are considered in developing the Plan.

2.1.2 The issues that may require consideration include but are not limited to: type and size of ship, volume of ballast carried and total capacity of tanks used for ballast, ballast pumping

capacity, ship and crew safety issues, voyage type and length, the ship's typical operational requirements, and ballast water management techniques used on board.

2.2 Concept of the Plan

2.2.1 The Plan is required to be onboard the ship and available to guide personnel in safe operation of the Ballast Water Management system employed on a particular ship. Effective planning ensures that the necessary actions are taken in a structured, logical, and safe manner.

2.2.2 For the Plan to accomplish its purpose, it must be:

- .1 realistic, practical, and easy to use;
- .2 understood by ship's personnel engaged in ballast water management, both on board and ashore;
- .3 evaluated, reviewed, and updated as necessary; and
- .4 consistent with the operational ballasting requirements of the ship.

2.2.3 The Plan envisioned by Regulation B-1 of the Annex to the Convention is intended to be a simple document. Inclusion of extensive background information on the ship, its structure, etc., should be avoided, as this is generally available elsewhere. If such information is relevant, it should be kept in annexes, or an existing document or manual reference should be made to the location of the information.

2.2.4 The Plan is a document to be used on board by the ship's personnel engaged in ballast water management. The Plan must therefore be available in a working language of the ship's personnel. A change in the personnel and or the, working language or would require the issuance of the Plan in the new language(s).

2.2.5 The Plan should be readily available for inspection by officers authorized by a Party to the Convention.

2.3 Exemptions

2.3.1 Regulation A-4 allows that exemption may be granted to a ship from Regulation B-3 or C-1.

2.3.2 Details of exemptions should be retained with the Plan.

2.3.3 Any exemption granted is to be recorded in the Ballast Water Record Book.

2.4 Additional Measures

2.4.1 The Convention, in Regulation C-1 Additional Measures, gives a Party individually or jointly with other Parties, the right to introduce measures in addition to those in Section B. Such Additional Measures are to be communicated to the Organization at least 6 months prior to the projected date of implementation.

2.4.2 The Plan should be accompanied by a most recent list of Additional measures, as communicated by the Organization relevant to the ship's trade. The Plan should contain details and advice on the actions a ship must take to comply with any additional measures that may be required in accordance with Regulation C-1 and for any emergency or epidemic situations.

2.5 Review of the Plan

2.5.1 Regular review of the Plan by the owner, operator, or master should be conducted to ensure that the information contained is accurate and updated. A feedback system should be employed which will allow quick capture of changing information and incorporation of it into the Plan.

2.5.2 Changes to the provisions of this Plan will need Administration approval.

3 MANDATORY PROVISIONS

3.1 This section provides individual guidelines for the seven mandatory provisions of Regulation B-1 of the Annex to the Convention. In addition, it provides information to assist ships personnel in managing ballast water and sediments.

3.2 Regulation B-1 of the Annex to the Convention provides that the Plan shall be specific to each ship and shall at least:

- .1 detail safety procedures for the ship and the crew associated with Ballast Water Management as required by the Convention;
- .2 provide a detailed description of the actions to be taken to implement the Ballast Water Management practices required by the Convention;
- .3 detail the procedures for the disposal of sediments at sea and to shore;
- .4 include the procedures for co-ordinating shipboard Ballast Water Management that involves discharge to the sea with the authorities of the State into whose waters such discharge will take place;
- .5 designates the officer on board in charge of ensuring that the Plan is properly implemented;
- .6 contain the reporting requirements for ships provided for under the Convention; and
- .7 be written in the working language of the ship. If the language used is not English, French or Spanish, a translation into one of these languages should be provided.

3.3 The Ballast Water Management Plan should give guidance on the ballast handling procedures to be followed, including:

- .1 uptake of ballast water;

- .2 step-by-step procedures and sequences for the Ballast Water Management System used; and
- .3 any operational or safety restrictions including those associated with the Ballast Water Management System used. This will also assist ship's personnel when responding to enquiries from inspection officers authorized by a Party.

3.4 Safety aspects of the Ballast Water Management system used should include, as applicable, guidance on:

- .1 stability to be maintained at all times to values not less than those recommended by the Organization (or required by the Administration);
- .2 approved longitudinal stress and, where applicable, torsional stress values are to be maintained within permitted values;
- .3 transfer or exchange of ballast that can generate significant structural loads by sloshing action in partially-filled tanks. If these operations include partially-filled tanks, consideration should be given to carrying out the operation in favourable sea and swell conditions such that the risk of structural damage is minimized;
- .4 wave-induced hull vibrations when carrying out ballast water exchange;
- .5 forward and aft draughts and trim, with particular reference to bridge visibility, slamming and minimum forward draft;
- .6 the effects of any potential hazards and occupational health that may affect ship's personnel shall also be identified together with any safety precautions that need to be taken; and
- .7 the possible effects of tank over pressurization.

3.5 If a ship is able to complete at least 95 per cent volumetric exchange in less than three pumped volumes, documentation indicating that this ballast water exchange process has been approved under Regulation D-1.2 should be provided in the Plan.

3.6 The Plan should also include procedures for the disposal of sediments and in particular:

- .1 on the sediment removal or reduction at sea, and when cleaning of the ballast tanks to remove sediments;
- .2 regarding the safety consideration to be taken if tank entry is required to remove sediments; and
- .3 regarding the use of port reception facilities for sediments.

3.7 The Plan should clearly identify the officer in charge of ballast water management and outline his/her duties which should include:

- .1 ensuring that the Ballast Water Management performed follows the procedures in the Plan;
- .2 ensuring that the Ballast Water Record Book and any other necessary documentation are maintained; and
- .3 being available to assist the inspection officers authorized by a Party for any sampling that may need to be undertaken.

3.8 The Plan should contain guidance on the recording requirements according to ship's Ballast Water Record Book provided for under this Convention including details of exemptions granted to the ship.

3.9 In addition to the above, the Plan should include the following:

- .1 A foreword which should provide the ship's crew with explanations on the need for ballast water management and for record keeping. The foreword should include a statement that, "This Plan must be kept available for inspection on request by an authorized authority".
- .2 Ship particulars including at least:
 - .1 ships' name, flag, port of registry, Gross Tonnage, IMO number^{*}, length (BP), beam, international call sign; deepest ballast drafts (normal and heavy weather);
 - .2 the total ballast capacity of the ship in cubic meters and other units if applicable to the ship;
 - .3 a brief description of the main ballast water management method(s) used on the ship; and
 - .4 identification (rank) of the officer in charge for implementing the Plan.
- .3 Information on Ballast Water Management System used on board, including:
 - .1 ballast tank arrangement;
 - .2 ballast capacity plan;
 - .3 a ballast water piping and pumping arrangement, including air pipes and sounding arrangements;
 - .4 ballast water pump capacities;

* In accordance with resolution A.600(15) IMO Ship Identification Number Scheme.

- .5 the Ballast Water Management System used on board, with references to operational and maintenance manuals held on board;
 - .6 installed ballast water treatment systems; and
 - .7 a plan and profile of the ship, or a schematic drawing of the ballast arrangement.
- .4 Information on the ballast water sampling points, including:
- .1 A list or diagrams indicating the location of sampling and access points in pipelines and ballast water tanks, to enable crew members to assist the authorized officers of a Party that have reason to obtain samples.
 - .2 This section should make clear that sampling of ballast water is primarily a matter for the authorized inspection officers, and there is unlikely to be any need for crew members to take samples except at the express request, and under the supervision, of the authorized inspection officers.
 - .3 The authorized inspection officers should be advised of all safety procedures to be observed when entering enclosed spaces.
- .5 Provisions for crew training and familiarization, including:
- .1 requirements of a general nature regarding Ballast Water Management;
 - .2 training and information on ballast water management practices;
 - .3 ballast water exchange;
 - .4 ballast water treatment systems;
 - .5 general safety considerations;
 - .6 the Ballast Water Record Book and maintenance of records;
 - .7 the operation and maintenance of installed ballast water treatment systems;
 - .8 safety aspects associated with the particular systems and procedures used onboard the ship which affect the safety or human health of crew and passengers and/or the safety of the ship;
 - .9 precautions for entering tanks for sediment removal;
 - .10 procedures for the safe handling and packaging of sediment; and
 - .11 storage of sediment.

4 NON-MANDATORY INFORMATION

4.1 In addition to the provisions required by Articles and regulations of the Convention, the owner/operator may include in the Plan, as appendices, additional information such as: provision of additional diagrams and drawings, shipboard equipment and reference materials. National or regional requirements that differ from the Convention may also be recorded for reference.

4.2 Non-mandatory information may also include manufactures manuals (either as extracts or complete) or reference to the location on board of such manuals and other relevant material.

4.3 The ballast water management plan may include contingency measures developed taking into account guidelines developed by the Organization*.

* Refer to the Guidance on contingency measures under the BWM Convention (BWM.2/Circ.62, as may be amended).

APPENDIX

STANDARD FORMAT FOR THE BALLAST WATER MANAGEMENT PLAN

PREAMBLE

The ballast water management plan should contain the information required by Regulation B-1 of the Convention.

For guidance in preparing the plan the following information is to be included. The plan should be specific to each ship.

INTRODUCTION

At the beginning of each plan, wording should be included to reflect the intent of the following text.

1 This Plan is written in accordance with the requirements of Regulation B-1 of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (the Convention) and the associated Guidelines.

2 The purpose of the Plan is to meet the requirements for the control and management of ship's ballast water and sediments in accordance with the Guidelines for Ballast Water Management and the Development of Ballast Water Management Plans resolution MEPC XX(YY) (The Guidelines). It provides standard operational guidance for the planning and management of ships' ballast water and sediments and describes safe procedures to be followed.

3 This Plan has been approved by the Administration and no alteration or revision shall be made to any part of it without the prior approval of the Administration.

4 This Plan may be inspected on request by an authorized authority.

Note: The Plan is to be written in the working language of the crew, if the text is not in English, French, or Spanish, the plan is to include a translation into one of these languages.

SHIP PARTICULARS

At least the following details should be included:

Ships' name;

Flag;

Port of registry;

Gross Tonnage;

IMO number*;

* In accordance with resolution A.600(15), IMO Ship Identification Number Scheme.

Length (BP);

Beam;

International call sign;

Deepest ballast drafts (normal and heavy weather);

Total ballast capacity of the ship in cubic meters and other units if applicable to the ship;

A brief description of the main ballast water management method(s) used on the ship; and

Identification (rank) of the appointed ballast water management officer.

INDEX

An index of sections should be included to reference the content of the Plan.

PURPOSE

Should contain a brief introduction for the ship's crew, explaining the need for ballast water management, and the importance of accurate record keeping.

PLANS/DRAWINGS OF THE BALLAST SYSTEM

Plans or drawings of the ballast system for example:

- 1) ballast tank arrangement;
- 2) ballast capacity plan;
- 3) a ballast water piping and pumping arrangement, including air pipes and sounding arrangements;
- 4) ballast water pump capacities;
- 5) the ballast water management system used onboard, with references to detailed operational and maintenance manuals held on board;
- 6) installed ballast water treatment systems; and
- 7) a plan and profile of the ship, or a schematic drawing of the ballast arrangement.

DESCRIPTION OF THE BALLAST SYSTEM

A description of the ballast system.

BALLAST WATER SAMPLING POINTS

Lists and/or diagrams indicating the location of sampling and access points in pipelines and ballast water tanks.

A note that sampling of ballast water is primarily a matter for the authorized authority, and there is unlikely to be any need for crew members to take samples except at the express request, and under the supervision, of the authorized authority.

OPERATION OF THE BALLAST WATER MANAGEMENT SYSTEM

A detailed description of the operation of the Ballast Water Management System(s) used on board.

Information on general ballast water management precautionary practices.

SAFETY PROCEDURES FOR THE SHIP AND THE CREW

Details of specific safety aspects of the ballast water management system used.

OPERATIONAL OR SAFETY RESTRICTIONS

Details of specific operational or safety restrictions including those associated with the management system which affects the ship and or the crew including reference to procedures for safe tank entry.

DESCRIPTION OF THE METHOD(S) USED ON BOARD FOR BALLAST WATER MANAGEMENT AND SEDIMENT CONTROL

Details of the method(s) used on board for the management of ballast and for sediment control including step-by-step operational procedures.

PROCEDURES FOR THE DISPOSAL OF SEDIMENTS

Procedures for the disposal of sediments at sea and to shore.

METHODS OF COMMUNICATION

Details of the procedures for co-ordinating the discharge of ballast in waters of a coastal State.

DUTIES OF THE BALLAST WATER MANAGEMENT OFFICER

Outline of the duties of the designated officer.

RECORDING REQUIREMENTS

Details of the record-keeping requirements of the Convention.

CREW TRAINING AND FAMILIARIZATION

Information on the provision of crew training and familiarization.

EXEMPTIONS

Details of any exemptions granted to the ship under Regulation A-4.

APPROVING AUTHORITY

Details and stamp of approving authority.