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**REPORT OF THE MARINE ENVIRONMENT PROTECTION COMMITTEE
ON ITS SEVENTY-SECOND SESSION**

Attached are annexes 1 to 16 to the report of the Marine Environment Protection Committee on its seventy-second session (MEPC 71/17).

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ANNEX 1

**RESOLUTION MEPC.296(72)
(adopted on 13 April 2018)**

**AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE CONTROL AND
MANAGEMENT OF SHIPS' BALLAST WATER AND SEDIMENTS, 2004**

**Amendments to regulations A-1 and D-3
(Code for Approval of Ballast Water Management Systems (BWMS Code))**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

NOTING article 19 of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (the BWM Convention), which specifies the amendment procedure and confers upon the Marine Environment Protection Committee of the Organization the function of considering amendments thereto for adoption by the Parties,

NOTING ALSO resolution MEPC.300(72), by which it adopted the Code for Approval of Ballast Water Management Systems (BWMS Code),

HAVING CONSIDERED, at its seventy-second session, proposed amendments to regulations A-1 and D-3 of the BWM Convention to make the provisions of the BWMS Code mandatory,

1 ADOPTS, in accordance with article 19(2)(c) of the BWM Convention, amendments to regulations A-1 and D-3, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 19(2)(e)(ii) of the BWM Convention, that the amendments shall be deemed to have been accepted on 13 April 2019 unless, prior to that date, more than one-third of the Parties have notified the Secretary-General that they object to the amendments;

3 INVITES the Parties to note that, in accordance with article 19(2)(f)(ii) of the BWM Convention, the said amendments shall enter into force on 13 October 2019 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article 19(2)(d) of the BWM Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to the BWM Convention;

5 REQUESTS ALSO the Secretary-General to transmit copies of the present resolution and its annex to Members of the Organization which are not Parties to the BWM Convention;

6 REQUESTS FURTHER the Secretary-General to prepare a consolidated certified text of the BWM Convention.

ANNEX

AMENDMENTS TO THE ANNEX TO THE BWM CONVENTION

(BWMS Code)

Section A – General provisions

Regulation A-1 – Definitions

1 A new paragraph 8 is added as follows:

"8 "BWMS Code" means the *Code for Approval of Ballast Water Management Systems* adopted by resolution MEPC.300(72), as may be amended by the Organization, provided that such amendments are adopted and brought into force in accordance with article 19 of the present Convention relating to amendment procedures applicable to the Annex."

Section D – Standards for ballast water management

Regulation D-3 – Approval requirements for ballast water management systems

2 Paragraph 1 is replaced with the following:

"1 Except as specified in paragraph 2, ballast water management systems used to comply with this Convention shall be approved by the Administration as follows:

.1 ballast water management systems installed¹ on or after 28 October 2020 shall be approved in accordance with the BWMS Code, as may be amended; and

.2 ballast water management systems installed¹ before 28 October 2020 shall be approved taking into account the guidelines² developed by the Organization or the BWMS Code, as may be amended."

1 Refer to paragraph 2 of the Unified interpretation of appendix I (Form of the International Ballast Water Management Certificate) of the BWM Convention related to "date installed" contained in BWM.2/Circ.66.

2 Refer to resolutions MEPC.125(53), MEPC.174(58) or MEPC.279(70), as appropriate."

ANNEX 2

**RESOLUTION MEPC.297(72)
(adopted on 13 April 2018)**

**AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE CONTROL AND
MANAGEMENT OF SHIPS' BALLAST WATER AND SEDIMENTS, 2004**

Amendments to regulation B-3

(Implementation schedule of ballast water management for ships)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

NOTING article 19 of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (the BWM Convention), which specifies the amendment procedure and confers upon the Marine Environment Protection Committee of the Organization the function of considering amendments thereto for adoption by the Parties,

HAVING CONSIDERED, at its seventy-second session, proposed amendments to regulation B-3 of the BWM Convention concerning the implementation schedule of ballast water management for ships,

RECALLING resolution MEPC.287(71), by which it resolved that the Parties should implement the amended regulation B-3 immediately after the entry into force of the BWM Convention, in lieu of the implementation schedule recommended in resolution A.1088(28) on the application of the BWM Convention and notwithstanding the schedule set forth in regulation B-3, with a view to avoiding the creation of a dual treaty regime during the time period between the entry into force of the BWM Convention and the entry into force of the amended regulation B-3,

1 ADOPTS, in accordance with article 19(2)(c) of the BWM Convention, amendments to regulation B-3, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 19(2)(e)(ii) of the BWM Convention, that the amendments shall be deemed to have been accepted on 13 April 2019 unless, prior to that date, more than one-third of the Parties have notified the Secretary-General that they object to the amendments;

3 INVITES the Parties to note that, in accordance with article 19(2)(f)(ii) of the BWM Convention, the said amendments shall enter into force on 13 October 2019 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, for the purposes of article 19(2)(d) of the BWM Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to the BWM Convention;

5 REQUESTS ALSO the Secretary-General to transmit copies of the present resolution and its annex to Members of the Organization which are not Parties to the BWM Convention;

6 REQUESTS FURTHER the Secretary-General to prepare a consolidated certified text of the BWM Convention.

ANNEX

AMENDMENTS TO THE ANNEX TO THE BWM CONVENTION

(Implementation schedule of ballast water management for ships)

Section B – Management and control requirements for ships

Regulation B-3 – Ballast water management for ships

1 The text of regulation B-3 is replaced with the following:

"1 A ship constructed before 2009:

- .1 with a ballast water capacity of between 1,500 and 5,000 cubic metres, inclusive, shall conduct ballast water management that at least meets the standard described in regulation D-1 or regulation D-2 until the renewal survey described in paragraph 10, after which time it shall at least meet the standard described in regulation D-2;
- .2 with a ballast water capacity of less than 1,500 or greater than 5,000 cubic metres shall conduct ballast water management that at least meets the standard described in regulation D-1 or regulation D-2 until the renewal survey described in paragraph 10, after which time it shall at least meet the standard described in regulation D-2.

2 A ship constructed in or after 2009 and before 8 September 2017 with a ballast water capacity of less than 5,000 cubic metres shall conduct ballast water management that at least meets the standard described in regulation D-2 from the date of the renewal survey described in paragraph 10.

3 A ship constructed in or after 2009, but before 2012, with a ballast water capacity of 5,000 cubic metres or more shall conduct ballast water management in accordance with paragraph 1.2.

4 A ship constructed in or after 2012 and before 8 September 2017 with a ballast water capacity of 5,000 cubic metres or more shall conduct ballast water management that at least meets the standard described in regulation D-2 from the date of the renewal survey described in paragraph 10.

5 A ship constructed on or after 8 September 2017 shall conduct ballast water management that at least meets the standard described in regulation D-2.

6 The requirements of this regulation do not apply to ships that discharge ballast water to a reception facility designed taking into account the Guidelines developed by the Organization for such facilities.

7 Other methods of ballast water management may also be accepted as alternatives to the requirements described in paragraphs 1 to 5 and paragraph 8, 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 Committee.

8 A ship constructed before 8 September 2017 to which the renewal survey described in paragraph 10 does not apply, shall conduct ballast water management that at least meets the standard described in regulation D-2 from the date decided by the Administration, but not later than 8 September 2024.

9 A ship subject to paragraphs 2, 4 or 8 will be required to comply with either regulation D-1 or regulation D-2, until such time as it is required to comply with regulation D-2.

10 Notwithstanding regulation E-1.1.2, the renewal survey referred to in paragraphs 1.1, 1.2, 2 and 4 is:

- .1 the first renewal survey, as determined by the Committee,¹ 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, as determined by the Committee,¹ 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 paragraph 10.1.2 are not met."

¹ Reference is made to resolution MEPC.298(72).

ANNEX 3

**RESOLUTION MEPC.298(72)
(adopted on 13 April 2018)**

**DETERMINATION OF THE SURVEY REFERRED TO
IN REGULATION B-3, AS AMENDED, OF THE BWM CONVENTION**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution from ships,

NOTING resolution MEPC.297(72), by which it adopted amendments to regulation B-3 of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (the BWM Convention),

NOTING ALSO that paragraph 10 of regulation B-3 of the BWM Convention, as amended, states that the Committee shall determine the renewal survey to which paragraphs 1.1, 1.2, 2 and 4 of regulation B-3 of the BWM Convention shall apply,

DETERMINES that the renewal survey referred to in paragraph 10 of regulation B-3 of the BWM Convention is the renewal survey for the ship associated with the International Oil Pollution Prevention Certificate pursuant to Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL).

ANNEX 4

**RESOLUTION MEPC.299(72)
(adopted on 13 April 2018)**

**AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR THE CONTROL AND
MANAGEMENT OF SHIPS' BALLAST WATER AND SEDIMENTS, 2004**

Amendments to regulations E-1 and E-5

**(Endorsements of additional surveys on the
International Ballast Water Management Certificate)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

NOTING article 19 of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (the BWM Convention), which specifies the amendment procedure and confers upon the Marine Environment Protection Committee of the Organization the function of considering amendments thereto for adoption by the Parties,

HAVING CONSIDERED, at its seventy-second session, proposed amendments to regulations E-1 and E-5 of the BWM Convention concerning endorsements of additional surveys on the International Ballast Water Management Certificate,

1 ADOPTS, in accordance with article 19(2)(c) of the BWM Convention, amendments to regulations E-1 and E-5, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 19(2)(e)(ii) of the BWM Convention, that the amendments shall be deemed to have been accepted on 13 April 2019 unless, prior to that date, more than one-third of the Parties have notified the Secretary-General that they object to the amendments;

3 INVITES the Parties to note that, in accordance with article 19(2)(f)(ii) of the BWM Convention, the said amendments shall enter into force on 13 October 2019 upon their acceptance in accordance with paragraph 2 above;

4 INVITES FURTHER the Parties to consider the application of the aforesaid amendments to the BWM Convention as soon as possible to ships entitled to fly their flag;

5 REQUESTS the Secretary-General, for the purposes of article 19(2)(d) of the BWM Convention, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to the BWM Convention;

6 REQUESTS ALSO the Secretary-General to transmit copies of the present resolution and its annex to Members of the Organization which are not Parties to the BWM Convention;

7 REQUESTS FURTHER the Secretary-General to prepare a consolidated certified text of the BWM Convention.

ANNEX

AMENDMENTS TO THE ANNEX TO THE BWM CONVENTION

**(Endorsements of additional surveys on the
International Ballast Water Management Certificate)**

Section E – Survey and certification requirements for ballast water management

Regulation E-1 – Surveys

1 In paragraph 1.5, the last sentence "Such surveys shall be endorsed on the Certificate issued under regulation E-2 and E-3" is deleted.

Regulation E-5 – Duration and validity of the Certificate

2 In the chapeau of paragraph 8, the words "annual survey" are replaced by "annual or intermediate survey".

3 In paragraph 8.3, the words "annual surveys" are replaced by "annual or intermediate surveys".

4 The existing paragraph 9.1 is deleted and the existing paragraphs 9.2 to 9.4 are renumbered as paragraphs 9.1 to 9.3, respectively.

ANNEX 5

**RESOLUTION MEPC.300(72)
(adopted on 13 April 2018)**

**CODE FOR APPROVAL OF BALLAST WATER MANAGEMENT SYSTEMS
(BWMS CODE)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

NOTING that regulation D-3 of the Annex to the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (the BWM Convention), provides that ballast water management systems used to comply with the Convention must be approved by the Administration,

NOTING ALSO that it adopted, by resolution MEPC.125(53), *Guidelines for approval of ballast water management systems* (Guidelines (G8)), and by resolutions MEPC.174(58) and MEPC.279(70) revisions thereof,

DESIRING to make the Guidelines (G8) mandatory under the BWM Convention in the form of a code for approval of ballast water management systems,

NOTING resolution MEPC.296(72), by which it adopted amendments to regulations A-1 and D-3 of the BWM Convention to make the provisions of the Code for Approval of Ballast Water Management Systems referred to above mandatory,

RECALLING that it agreed, at its sixty-eighth session, to provisions for non-penalization of early movers that have installed ballast water management systems approved taking into account resolutions MEPC.125(53) and MEPC.174(58), as contained in the Roadmap for the implementation of the BWM Convention,

BEARING IN MIND the Organization's established practice with regard to the validity of type approval certification for marine products (MSC.1/Circ.1221), which is that the Type Approval Certificate itself has no influence on the operational validity of existing ballast water management systems approved and installed on board a ship and manufactured during the period of validity of the relevant Type Approval Certificate, meaning that the system need not be renewed or replaced due to expiration of such Certificate,

HAVING CONSIDERED, at its seventy-second session, the draft Code for Approval of Ballast Water Management Systems,

1 ADOPTS the *Code for Approval of Ballast Water Management Systems (BWMS Code)*, as set out in the annex to the present resolution;

2 INVITES Parties to the BWM Convention to note that the BWMS Code will take effect on 13 October 2019 upon entry into force of the associated amendments to the BWM Convention;

3 AGREES to keep the BWMS Code under review in the light of experience gained with its application and to amend it as necessary;

4 DECIDES that ballast water management systems approved not later than 28 October 2018, taking into account the Guidelines (G8) adopted by resolution MEPC.174(58), may be installed on board ships before 28 October 2020;

5 RESOLVES that, for the purpose of operative paragraph 4 of this resolution, 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;

6 RESOLVES that references to the Guidelines (G8) and 2016 Guidelines (G8) in existing IMO instruments should be read to mean references to the BWMS Code;

7 AGREES that the dates referenced in this resolution will be considered in any reviews carried out in accordance with regulation D-5 of the BWM Convention, to determine whether a sufficient number of appropriate technologies are approved and available;

8 RESOLVES to revoke the *2016 Guidelines for approval of ballast water management systems* (G8) adopted by resolution MEPC.279(70) when the BWMS Code takes effect;

9 REQUESTS the Secretary-General to transmit certified copies of the present resolution and the text of the BWMS Code contained in the annex to all Parties to the BWM Convention;

10 REQUESTS FURTHER the Secretary-General to transmit copies of the present resolution and the text of the BWMS Code contained in the annex to the Members of the Organization which are not Parties to the BWM Convention.

ANNEX

**CODE FOR APPROVAL OF BALLAST WATER MANAGEMENT SYSTEMS
(BWMS CODE)**

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1 INTRODUCTION

General

1.1 The Code for Approval of Ballast Water Management Systems (BWMS Code) is aimed primarily at Administrations, or their designated bodies, in order to assess whether ballast water management systems (BWMS) meet the standard set out in regulation D-2 of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (the Convention). In addition, the Code is intended for manufacturers and shipowners as a reference on the evaluation procedure that equipment will undergo and the requirements placed on BWMS. The Code should be applied in an objective, consistent and transparent way and its application should be evaluated periodically by the Organization.

1.2 Articles and regulations referred to in this Code are those contained in the Convention.

1.3 The Code includes general requirements concerning the design, installation, performance, testing, environmental acceptability, technical procedures for evaluation and procedures for issuance of Type Approval Certificates of BWMS and reporting to the Organization.

1.4 The Code is intended to fit within an overall framework for evaluating the performance of systems that includes the experimental shipboard evaluation of prototype systems under the provisions of regulation D-4, approval of BWMS and associated systems that comply fully with the requirements of the Convention, and port State control sampling for compliance under the provisions of article 9 of the Convention.

1.5 The approval requirements of regulation D-3 stipulate that BWMS used to comply with the Convention must be approved by the Administration, in accordance with this Code. In addition to such BWMS approval, as set forth in regulation A-2 and regulation B-3, the Convention requires that discharges of ballast water from ships must meet the regulation D-2 performance standard on an on-going basis. Approval of a system is intended to screen out BWMS that would fail to meet the standards prescribed in regulation D-2 of the Convention. Approval of a system, however, does not ensure that a given system will work on all ships or in all situations. To satisfy the Convention, a discharge must comply with the D-2 standard throughout the life of the ship.

1.6 BWMS shall be designed to not impair the health and safety of the ship or personnel, nor to present any unacceptable harm to the environment or to public health.

1.7 BWMS shall meet the standards of regulation D-2 and the conditions established in regulation D-3 of the Convention. The Code serves to evaluate the safety, environmental acceptability, practicability and biological effectiveness of the systems designed to meet these standards and conditions. The cost effectiveness of type-approved equipment will be used in determining the need for revisions of the Code.

1.8 To achieve consistency in its application, the approval procedure requires that a uniform manner of testing, analysis of samples, and evaluation of results is developed and applied. Amendments to this Code shall be duly circulated by the Secretary-General. Due consideration shall be given to the practicability of the BWMS.

Goal and purpose

1.9 The goal of the Code is to ensure uniform and proper application of the standards contained in the Convention. As such the Code should be updated as the state of knowledge and technology may require.

1.10 The purpose of the Code is to provide a uniform interpretation and application of the requirements of regulation D-3 and to:

- .1 define test and performance requirements for the approval of BWMS;
- .2 set out appropriate design, construction and operational parameters necessary for the approval of BWMS;
- .3 provide direction to Administrations, equipment manufacturers and shipowners in determining the suitability of equipment to meet the requirements of the Convention and of the environmental acceptability of treated water; and
- .4 ensure that BWMS approved by Administrations are capable of achieving the standard of regulation D-2 in land-based and shipboard evaluations and do not cause unacceptable harm to the ship, the crew, the environment or public health.

Applicability

1.11 This Code applies to the approval of BWMS in accordance with the Convention.

1.12 This Code applies to BWMS intended for installation on board all ships required to comply with regulation D-2.

1.13 BWMS approved taking into account the 2016 Guidelines (G8) adopted by resolution MEPC.279(70) shall be deemed to be in accordance with the BWMS Code.

2 BACKGROUND

2.1 The requirements of the Convention relating to approval of BWMS used by ships are set out in regulation D-3.

2.2 Regulation D-2 stipulates that ships conducting ballast water management in accordance with the ballast water performance standard of the Convention shall discharge:

- .1 less than 10 viable organisms per cubic metre greater than or equal to 50 μm in minimum dimension;
- .2 less than 10 viable organisms per millilitre less than 50 μm in minimum dimension and greater than or equal to 10 μm in minimum dimension; and

- .3 less than the following concentrations of indicator microbes, as a human health standard:
 - .1 Toxicogenic *Vibrio cholerae* (serotypes O1 and O139) with less than 1 colony forming unit (cfu) per 100 mL or less than 1 cfu per 1 g (wet weight) of zooplankton samples;
 - .2 *Escherichia coli* less than 250 cfu per 100 mL; and
 - .3 Intestinal Enterococci less than 100 cfu per 100 mL.

3 DEFINITIONS

For the purpose of this Code:

3.1 *Active Substance* means a substance or organism, including a virus or a fungus, that has a general or specific action on or against harmful aquatic organisms and pathogens.

3.2 *Ballast water management system (BWMS)* means any system which processes ballast water such that it meets or exceeds the ballast water performance standard in regulation D-2. The BWMS includes ballast water treatment equipment, all associated control equipment, piping arrangements as specified by the manufacturer, control and monitoring equipment and sampling facilities. For the purpose of this Code, BWMS does not include the ship's ballast water fittings, which may include piping, valves, pumps, etc., that would be required if the BWMS was not fitted.

3.3 *Ballast water management plan* means the plan referred to in regulation B-1 of the Convention describing the ballast water management process and procedures implemented on board individual ships.

3.4 *Control and monitoring equipment* means the equipment installed for the effective operation and control of the BWMS and the assessment of its effective operation.

3.5 *Convention* means the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004.

3.6 *Failed test cycle* is a valid test cycle in which the performance of the BWMS resulted in treated water that is determined to be non-compliant with the standard set within regulation D-2. A failed test cycle interrupts the required consecutive test cycles and terminates the test.

3.7 *Invalid test cycle* is a test cycle in which, due to circumstances outside the control of the BWMS, the requirements for a valid test cycle are not met. When a test cycle is invalid, it does not count as one of the required consecutive test cycles in a test and the test can be continued.

3.8 *Land-based testing* means a test of the BWMS carried out in a laboratory, equipment factory or pilot plant including a moored test barge or test ship, according to Parts 2 and 3 of the annex to this Code, to confirm that the BWMS meets the ballast water performance standard described in regulation D-2 of the Convention.

3.9 *Major components* means those components that directly affect the ability of the system to meet the ballast water performance standard described in regulation D-2.

3.10 *Representative sampling* means sampling that reflects the relative concentrations (chemicals) and numbers and composition of the populations (organisms) in the volume of interest. Samples shall be taken in a time-integrated manner and the sampling facility shall be installed, taking into account guidelines developed by the Organization.¹

3.11 *Sampling facilities* refers to the means provided for sampling treated or untreated ballast water as needed in this Code and in the guidelines developed by the Organization.¹

3.12 *Shipboard testing* means a full-scale test of a complete BWMS carried out on board a ship according to part 2 of the annex to this Code, to confirm that the system meets the standards set by regulation D-2 of the Convention.

3.13 *Successful test cycle* means a valid test cycle where the BWMS functions to its specifications and treated water is determined to meet the ballast water performance standard described in regulation D-2.

3.14 *System Design Limitations (SDL)* of a BWMS means the water quality and operational parameters, determined in addition to the required type approval testing parameters, that are important to its operation, and, for each such parameter, a low and/or a high value for which the BWMS is designed to achieve the performance standard of regulation D-2. The SDL should be specific to the processes being employed by the BWMS and should not be limited to parameters otherwise assessed as part of the type approval process. The SDL should be identified by the manufacturer and validated under the supervision of the Administration, taking into account Guidance developed by the Organization, and in accordance with this Code.

3.15 *Test cycle* refers to one testing iteration (to include uptake, treatment, holding and discharge as appropriate) under a given set of requirements used to establish the ability of a BWMS to meet the set standards.

3.16 *Test* means the set of required test cycles.

3.17 *Treatment Rated Capacity (TRC)* means the maximum continuous capacity expressed in cubic metres per hour for which the BWMS is type-approved. It states the amount of ballast water that can be treated per unit time by the BWMS to meet the ballast water performance standard in regulation D-2. The TRC is measured at the inlet of the BWMS.

3.18 *Valid test cycle* means a test cycle in which all the required test conditions and arrangements, including challenge conditions, test control, and monitoring arrangements (including piping, mechanical and electrical provisions) and test analytical procedures were achieved by the test organization.

3.19 *Viable organisms* means organisms that have the ability to successfully generate new individuals in order to reproduce the species.

¹ Refer to the *Guidelines for ballast water sampling (G2)* (resolution MEPC.173(58)).

4 TECHNICAL SPECIFICATIONS

4.1 This section details the general technical requirements which a BWMS shall meet in order to obtain type approval.

General principles for operation

4.2 A BWMS shall be effective in meeting the D-2 standard on short voyages and long voyages (i.e. short and long intervals between treatment and discharge), regardless of temperature, unless the system is intentionally constructed for use in specific waters.

4.3 Ballast water discharged following treatment shall be safe for the environment on short voyages and long voyages (i.e. short and long intervals between treatment and discharge), regardless of temperature.

4.4 The design of the BWMS shall account for the fact that, regardless of the BWMS technology employed, viable organisms remaining after treatment may reproduce in the interval between treatment and discharge.

Ballast water management systems

4.5 The BWMS shall be designed and constructed:

- .1 for robust and suitable operation in the shipboard environment;
- .2 for the service for which it is intended;
- .3 to mitigate any danger to persons on board when installed. Equipment that could emit dangerous gases/liquids shall have at least two independent means of detection and shutdown of the BWMS (i.e. hazardous gas level reaching lower explosive limits (LEL) or level of toxic concentrations that can result in severe effects on human health); and
- .4 with materials compatible with: the substances used; the purpose for which it is intended; the working conditions to which it will be subjected; and the environmental conditions on board.

4.6 The BWMS shall not contain or use any substance of a dangerous nature, unless adequate risk mitigation measures are incorporated for storage, application, installation and safe handling, acceptable to the Administration.

4.7 In case of any failure compromising the proper operation of the BWMS, audible and visual alarm signals shall be given in all stations from which ballast water operations are controlled.

4.8 All working parts of the BWMS that are liable to wear or to be damaged shall be easily accessible for maintenance. The routine maintenance of the BWMS and troubleshooting procedures shall be clearly defined by the manufacturer in the operation, maintenance and safety manual. All maintenance and repairs shall be recorded.

4.9 To avoid interference with the BWMS, the following items shall be included:

- .1 every access of the BWMS beyond the essential requirements of paragraph 4.8 shall require the breaking of a seal;

- .2 if applicable, the BWMS shall be so constructed that a visual indication is always activated whenever the BWMS is in operation for purposes of cleaning, calibration or repair, and these events shall be recorded by the control and monitoring equipment; and
- .3 the BWMS shall be provided with the necessary connections to ensure that any bypass of the BWMS will activate an alarm, and that the bypass event is recorded by the control and monitoring equipment.

4.10 Facilities shall be provided for checking, at the renewal surveys and according to the manufacturer's instructions, the performance of the BWMS components that take measurements. 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.

4.11 The BWMS shall be provided with simple and effective means for its operation and control. It shall be provided with a control system that shall be such that the services needed for the proper operation of the BWMS are ensured through the necessary arrangements.

4.12 The BWMS shall, if intended to be fitted in hazardous area locations, comply with the relevant safety regulations for such spaces. Any electrical equipment that is part of the BWMS shall be based in a non-hazardous area, or shall be certified by the Administration as safe for use in a hazardous area. Any moving parts, which are fitted in hazardous areas, shall be arranged so as to avoid the formation of static electricity.

4.13 The BWMS shall be designed so as not to endanger the health and safety of the crew, interact negatively with the ship's systems and cargo or produce any adverse environmental effects. The BWMS shall not create long-term impacts on the safety of the ship and crew through corrosive effects in the ballast system and other spaces.

4.14 It shall be demonstrated, by using mathematical modelling and/or calculations, that any up or down scaling of the BWMS will not affect the functioning and effectiveness on board a ship of the type and size for which the equipment will be certified. In doing so, the manufacturer of the equipment shall take into account the relevant guidance developed by the Organization.

4.15 Scaling information shall allow the Administration to verify that any scaled model is at least as robust as the land-based-tested model. It is the responsibility of the Administration to verify that the scaling used is appropriate for the operational design of the BWMS.

4.16 At a minimum, the shipboard test unit shall be of a capacity that allows for further validation of the mathematical modelling and/or calculations for scaling, and preferably selected at the upper limit of the rated capacity of the BWMS, unless otherwise approved by the Administration.

Control and monitoring equipment

4.17 Administrations shall ensure that type-approved BWMS have a suitable control and monitoring system that will automatically monitor and record sufficient data to verify correct operation of the system. The control and monitoring equipment shall record the proper functioning or failure of the BWMS. Where practical, SDL parameters should be monitored and recorded by the BWMS to ensure proper operation.

4.18 The BWMS shall incorporate control equipment that automatically monitors and adjusts necessary treatment dosages or intensities or other aspects of the BWMS of the ship, which while not directly affecting treatment, are nonetheless required for proper administration of the necessary treatment.

4.19 The equipment shall be able to produce (e.g. display, print or export) a report of the applicable self-monitoring parameters in accordance with part 5 of the annex for official inspections or maintenance, as required.

4.20 To facilitate compliance with regulation B-2, the control and monitoring equipment shall also be able to store data for at least 24 months. In the event that the control and monitoring equipment is replaced, means shall be provided to ensure the data recorded prior to replacement remains available on board for 24 months.

4.21 For BWMS that could emit dangerous gases, a means of gas detection by redundant safety systems shall be fitted in the space of the BWMS, and an audible and visual alarm shall be activated at a local area and at a manned BWMS control station in case of leakage. The gas detection device shall be designed and tested in accordance with IEC 60079-29-1 or other recognized standards acceptable to the Administration. Monitoring measures for dangerous gases with independent shutdown shall be provided on the BWMS.

4.22 All software changes introduced to the system after the pre-test evaluation shall be done according to a change handling procedure ensuring traceability.

5 TYPE APPROVAL PROCESS

5.1 The type approval requirements for BWMS are as described below.

5.2 The manufacturer of the equipment shall submit information regarding the design, construction, operation and functioning of the BWMS in accordance with Part 1 of the annex, including information regarding the water quality and operational parameters that are important to the operation of the system. This information shall be the basis for a first evaluation of suitability by the Administration.

5.3 Following the Administration's pre-test evaluation, the BWMS shall undergo land-based, shipboard and other tests in accordance with the procedures described in Parts 2 and 3 of the annex. The BWMS tested for type approval shall be a final and complete product that meets the requirements of section 4 and it shall be constructed using the same materials and procedures that will be used to construct production units.

5.4 Successful fulfilment of the requirements and procedures outlined in Parts 2 and 3 of the annex, as well as all other requirements of this Code, shall lead to the issuance of a Type Approval Certificate by the Administration in accordance with section 6.

5.5 The limitations of the BWMS, in addition to the required type approval testing parameters identified in paragraphs 2.29 and 2.46 of the annex, as submitted by its manufacturer and validated by the Administration, shall be documented on the Type Approval Certificate. These design limitations do not determine if the equipment may be type-approved or not, but provide information on the conditions beyond the type approval testing parameters under which proper functioning of the equipment can be expected.

5.6 When a type-approved BWMS is installed on board, an installation survey according to section 8 shall be carried out.

5.7 The documentation submitted for approval shall include at least the following:

- .1 a description and diagrammatic drawings of the BWMS;
- .2 the operation, maintenance and safety manual;
- .3 hazard identification;
- .4 environmental and public health impacts; and
- .5 System Design Limitations.

6 APPROVAL AND CERTIFICATION PROCEDURES

6.1 A BWMS which in every respect fulfils the requirements of this Code may be approved by the Administration for fitting on board ships. The approval shall take the form of a Type Approval Certificate of BWMS, specifying the main particulars of the BWMS and validated SDL. Such certificates shall be issued in accordance with Part 7 of the annex in the format shown in the appendix.

6.2 A BWMS that in every respect fulfils the requirements of this Code except that it has not been tested at all the temperatures and salinities set out in Part 2 of the annex shall only be approved by the Administration if corresponding limiting operating conditions are clearly stated on the issued Type Approval Certificate with the description "Limiting Operating Conditions". For the limiting values, the SDL shall be consulted.

6.3 A Type Approval Certificate of a BWMS shall be issued for the specific application for which the BWMS is approved, e.g. for specific ballast water capacities, flow rates, salinity or temperature regimes, or other limiting operating conditions or circumstances as appropriate.

6.4 A Type Approval Certificate of a BWMS shall be issued by the Administration based on satisfactory compliance with all the requirements described in Parts 1, 2, 3 and 4 of the annex.

6.5 The SDL shall be specified on the Type Approval Certificate in a table that identifies each water quality and operational parameter together with the validated low and/or high parameter values for which the BWMS is designed to achieve the ballast water performance standard described in regulation D-2.

6.6 An Administration may issue a Type Approval Certificate of a BWMS based on testing already carried out under supervision by another Administration. In cases where the approval of a BWMS by an Administration for installation on a ship operating under its authority is to be granted on the basis of testing carried out by another Administration, the approval may be conveyed through the issuance of the International Ballast Water Management Certificate.

6.7 A Type Approval Certificate shall only be issued to a BWMS that has been determined by the Administration to make use of an Active Substance after it has been approved by the Organization in accordance with regulation D-3.2. In addition, the Administration shall ensure that any recommendations that accompanied the Organization's approval have been taken into account before issuing the Type Approval Certificate.

6.8 The Type Approval Certificate shall be issued taking into account guidance developed by the Organization.²

² Refer to *Validity of type approval certification for marine products* (MSC.1/Circ.1221).

6.9 An approved BWMS may be type approved by other Administrations for use on their ships. Should a BWMS approved by one country fail type approval in another country, then the two countries concerned shall consult one another with a view to reaching a mutually acceptable agreement.

6.10 An Administration approving a BWMS shall promptly provide a type-approval report to the Organization in accordance with part 6 of the annex. Upon receipt of a type-approval report, the Organization shall promptly make it available to the public and Member States by appropriate means.

6.11 In the case of a type approval based entirely on testing already carried out under supervision by another Administration, the type-approval report shall be prepared and kept on file and the Organization shall be informed of the approval.

6.12 In the case of a BWMS that was previously type-approved by an Administration taking into account the revised Guidelines (G8) adopted by resolution MEPC.174(58), the manufacturer, in seeking a new type approval under this Code, shall only be requested to submit to the Administration the additional test reports and documentation set out in this Code.

7 INSTALLATION REQUIREMENTS FOLLOWING TYPE APPROVAL

7.1 The BWMS shall be accompanied by sampling facilities installed taking into account guidelines developed by the Organization,³ so arranged in order to collect representative samples of the ship's ballast water discharge.

7.2 Suitable bypasses or overrides to protect the safety of the ship and personnel shall be installed and used in the event of an emergency and these shall be connected to the BWMS so that any bypass of the BWMS shall activate an alarm. The bypass event shall be recorded by the control and monitoring equipment and within the ballast water record book.

7.3 The requirement in paragraph 7.2 does not apply to internal transfer of ballast water within the ship (e.g. anti-heeling operations). For BWMS that transfer water internally which may affect compliance by the ship with the standard described in regulation D-2 (i.e. circulation or in-tank treatment) the recording in paragraph 7.2 shall identify such internal transfer operations.

8 INSTALLATION SURVEY AND COMMISSIONING PROCEDURES FOLLOWING TYPE APPROVAL

8.1 The additional information outlined in the paragraphs below is intended to facilitate ship operations and inspections and assist ships and Administrations in preparing for the procedures set out in the *Survey Guidelines for the purpose of the International Convention for the Control and Management of Ships' Ballast Water and Sediments under the Harmonized System of Survey and Certification*,⁴ developed by the Organization, which describe the examination of plans and designs and the various surveys required under regulation E-1.

³ Refer to the *Guidelines for ballast water sampling (G2)* (resolution MEPC.173(58)).

⁴ Refer to the *Survey Guidelines under the Harmonized System of Survey and Certification (HSSC), 2017* (resolution A.1120(30)).

8.2 The Administration issuing the International Ballast Water Management Certificate shall verify that the following documentation is on board in a suitable format:

- .1 for the purpose of information, a copy of the Type Approval Certificate of the BWMS;
- .2 the operation, maintenance and safety manual of the BWMS;
- .3 the ballast water management plan of the ship;
- .4 installation specifications, e.g. installation drawing, piping and instrumentation diagrams, etc.; and
- .5 installation commissioning procedures.

8.3 Prior to the issuance of the International Ballast Water Management Certificate, following the installation of a BWMS, the Administration should verify that:

- .1 the BWMS installation has been carried out in accordance with the technical installation specification referred to in paragraph 8.2.4;
- .2 the BWMS is in conformity with the relevant Type Approval Certificate BWMS;
- .3 the installation of the complete BWMS has been carried out in accordance with the manufacturer's equipment specification;
- .4 any operational inlets and outlets are located in the positions indicated on the drawing of the pumping and piping arrangements;
- .5 the workmanship of the installation is satisfactory and, in particular, that any bulkhead penetrations or penetrations of the ballast system piping are to the relevant approved standards; and
- .6 the installation commissioning procedures have been completed.

Annex

PART 1 – SPECIFICATIONS FOR PRE-TEST EVALUATION OF SYSTEM DOCUMENTATION

1.1 Adequate documentation shall be prepared and submitted to the Administration and be shared with the test organization as part of the approval process well in advance of the intended approval testing of a BWMS. Approval of the submitted documentation shall be a prerequisite for carrying out independent approval tests.

1.2 Documentation shall be provided by the manufacturer/developer for two primary purposes: evaluating the readiness of the BWMS for undergoing approval testing and evaluating the manufacturer's proposed SDL and validation procedures.

Documentation

1.3 The documentation to be submitted as a part of the readiness evaluation shall include at least the following:

- .1 a BWMS technical specification, including at least:
 - .1 a description of the BWMS, treatment processes it employs and details of any required permits;
 - .2 adequate information including descriptions and diagrammatic drawings of the pumping and piping arrangements, electrical/electronic wiring, monitoring system, waste streams and sampling points. Such information should enable fault finding;
 - .3 details of major components and materials used (including certificates where appropriate);
 - .4 an equipment list showing all components subject to testing including specifications, materials and serial numbers;
 - .5 an installation specification in accordance with manufacturers installation criteria requirements for the location and mounting of components, arrangements for maintaining the integrity of the boundary between safe and hazardous spaces and the arrangement of the sample piping;
 - .6 information regarding the characteristics and arrangements in which the system is to be installed, including scope of the ships (sizes, types and operation) for which the system is intended. This information may form the link between the system and the ship's ballast water management plan; and
 - .7 a description of BWMS side streams (e.g. filtered material, centrifugal concentrate, waste or residual chemicals) including a description of the actions planned to properly manage and dispose of such wastes;

- .2 the operation, maintenance and safety manual, including at least:
 - .1 instructions for the correct operation of the BWMS, including procedures for the discharge of untreated water in the event of malfunction of the ballast water treatment equipment;
 - .2 instructions for the correct arrangement of the BWMS;
 - .3 maintenance and safety instructions and the need to keep records;
 - .4 troubleshooting procedures;
 - .5 emergency procedures necessary for securing the ship;
 - .6 any supplementary information considered necessary for the safe and efficient operation of the BWMS, e.g. documentation provided for approval under the *Procedure for approval of ballast water management systems that make use of Active Substances (G9)* (resolution MEPC.169(57)); and
 - .7 calibration procedures;
- .3 information on any hazard identification conducted to identify potential hazards and define appropriate control measures, if the BWMS or the storage tanks for processing chemicals could emit dangerous gases or liquids;
- .4 information regarding environmental and public health impacts including:
 - .1 identification of potential hazards to the environment based on environmental studies performed to the extent necessary to assure that no harmful effects are to be expected;
 - .2 in the case of BWMS that make use of Active Substances or Preparations containing one or more Active Substances, the dosage of any Active Substances used and the maximum allowable discharge concentrations;
 - .3 in the case of BWMS that do not make use of Active Substances or preparations, but which could reasonably be expected to result in changes to the chemical composition of the treated water such that adverse impacts to receiving waters might occur upon discharge, the documentation shall include results of toxicity tests of treated water as described in paragraph 2.19 of this annex; and
 - .4 sufficient information to enable the test organization to identify any potential health or environmental safety problems, unusual operating requirements (labour or materials), and any issues related to the disposal of treatment by-products or waste streams;
- .5 information regarding SDL including:
 - .1 the identification of all known parameters to which the design of the BWMS is sensitive;

- .2 for each parameter the manufacturer shall claim a low and/or a high value for which the BWMS is capable of achieving the Performance Standard of regulation D-2; and
- .3 the proposed method for validating each claimed SDL shall be set out, together with information on the source, suitability and reliability of the method;
- .6 a software change handling and revision control document including all software changes introduced to the system after the pre-test evaluation. These shall be done according to a change handling procedure ensuring traceability. Therefore, the manufacturer shall present a procedure describing how changes are to be handled and how revision control is maintained. As a minimum for a modification request, the following types of information shall be produced and logged:
 - .1 reason for modification;
 - .2 specification of the proposed change;
 - .3 authorization of modification; and
 - .4 test record;
- .7 functional description including a textual description with necessary supporting drawings, diagrams and figures to cover:
 - .1 system configuration and arrangement;
 - .2 scope of supply;
 - .3 system functionality covering control, monitoring, alarm and safety functions;
 - .4 self-diagnostics and alarming functionalities; and
 - .5 safe states for each function implemented.

1.4 The documentation may include specific information relevant to the test set-up to be used for land-based testing according to this Code. Such information should include the sampling needed to ensure proper functioning and any other relevant information needed to ensure proper evaluation of the efficacy and effects of the equipment. The information provided should also address general compliance with applicable environment, health and safety standards during the type-approval procedure.

Readiness evaluation

1.5 During the readiness evaluation, the Administration shall ensure that each technical specification set out in section 4 of this Code has been met, other than those that will be assessed during later testing.

1.6 The readiness evaluation shall examine the design and construction of the BWMS to determine whether there are any fundamental problems that might constrain the ability of the BWMS to manage ballast water as proposed by the manufacturer, or to operate safely, on board ships.

1.7 Administrations shall ensure adequate risk assessments including the implementation of preventative actions have been undertaken relating to the safe operation of BWMS.

1.8 As a first step the manufacturer shall provide information regarding the requirements and procedures for installing, calibrating and operating (including maintenance requirements) the BWMS during a test. This evaluation should help the test organization to identify any potential health or environmental safety problems, unusual operating requirements (labour or materials), and any issues related to the disposal of treatment by-products or waste streams.

1.9 The test facility shall have a procedure to deal with deviations that occur prior to testing and an evaluation process which includes an assessment and validation process to address any unforeseen deviations that may occur during testing. Deviations from the testing procedure shall be fully reported.

1.10 During the readiness evaluation the major components of the BWMS shall be identified. Major components are considered to be those components that directly affect the ability of the system to meet the performance standard described in regulation D-2. Upgrades or changes to major components shall not take place during type approval testing. A change to a major component requires a new submission of the test proposal and shall involve a new evaluation and repeating of the land-based and shipboard tests.

1.11 The Administration may allow replacements of non-major components of equivalent specification (independently approved to a recognized and equal operational standard) during type approval. Replacements of non-major components during testing shall be reported.

1.12 Upgrades of the BWMS that relate to the safe operation of that system may be allowed during and after type approval and shall be reported. If such safety upgrades directly affect the ability of the system to meet the standard described in regulation D-2, it shall be treated as a change of a major component, as per paragraph 1.10 above.

1.13 The evaluation shall identify consumable components in the BWMS. The Administration may allow replacement of like-for-like consumable components during type approval testing and all replacements shall be reported.

System Design Limitation evaluation

1.14 The SDL evaluation shall be undertaken by the Administration. It shall assess the basis for the manufacturer's claim that the SDL include all known water quality and operational parameters to which the design of the BWMS is sensitive and that are important to its ability to achieve the performance standard described in regulation D-2.

1.15 The Administration shall also evaluate the suitability and reliability of the methods proposed for validating the claimed low and/or high values for each SDL. These methods may include tests to be undertaken during land-based, shipboard or bench-scale testing and/or the use of appropriate existing data and/or models.

PART 2 –TEST AND PERFORMANCE SPECIFICATIONS FOR APPROVAL OF BALLAST WATER MANAGEMENT SYSTEMS

2.1 The Administration decides the sequence of land-based and shipboard testing. The BWMS used for testing must be verified by the Administration to be the same as the BWMS described under Part 1 of the annex with major components as described in the documentation submitted in accordance with paragraphs 1.3.1.3 and 1.3.1.4 of this annex.

Quality assurance and quality control procedures

2.2 The test facility shall demonstrate its competency in conducting valid type approval tests in two ways:

- .1 by having implemented a rigorous quality control/quality assurance programme, approved, certified and audited by an independent accreditation body, or to the satisfaction of the Administration; and
- .2 by demonstrating its ability to conduct valid test cycles with appropriate challenge water, sample collection, sample analysis and method detection limits.

It is the responsibility of the Administration, or its authorized delegate, to determine the acceptability of the test facility.

2.3 The test facility's quality control/quality assurance programme shall consist of:

- .1 a Quality Management Plan (QMP), which addresses the quality control management structure and policies of the testing body (including subcontractors and outside laboratories);
- .2 a Quality Assurance Project Plan (QAPP), which defines the methods, procedures, and quality assurance and quality control (QA/QC) protocols used by the test facility for testing BWMS in general. It identifies the test team members, and it includes all relevant standard operating procedures (SOPs), typically as appendices; and
- .3 a Test/Quality Assurance Plan (TQAP), that provides specific details for conducting a test of a given BWMS at a given site and time. The TQAP includes detailed plans for commissioning the BWMS, the experimental plan, decommissioning, and reporting the results. The TQAP identifies all organizations involved in the test and includes the BWMS manufacturer's documentation and performance claims. The TQAP also identifies the data to be recorded, operational and challenge parameters that define a valid test cycle, data analyses to be presented in the verification report and a schedule for testing. Appropriate statistical distributions shall be considered and used to analyse data.

2.4 The test facility performing the BWMS tests shall be independent. It shall not be owned by or affiliated with the manufacturer or vendor of any BWMS, or by the manufacturer or supplier of the major components of that equipment.

Avoiding sampling bias

2.5 The sampling protocol must ensure organism mortality is minimized, e.g. by using appropriate valves and flow rates for flow control in the sampling facility, submerging nets during sampling collection, using appropriate sampling duration and handling times, and appropriate concentrating methodology. All methods to avoid sampling bias shall be validated to the satisfaction of the Administration.

Shipboard tests

2.6 A shipboard test cycle includes:

- .1 the uptake of ballast water of the ship;
- .2 treatment of the ballast water in accordance with paragraph 2.8.4 of this annex by the BWMS;
- .3 the storage of ballast water on the ship during a voyage; and
- .4 the discharge of ballast water from the ship.

2.7 Shipboard testing of BWMS shall be conducted by the test facility, independent of the BWMS manufacturer, with the system being operated and maintained by the ships' crew as per the operation, maintenance and safety manual.

Success criteria for shipboard testing

2.8 In evaluating the performance of BWMS installation(s) on a ship or ships, the following information and results shall be supplied to the satisfaction of the Administration:

- .1 test plan to be provided prior to testing;
- .2 documentation that an in-line BWMS is of a capacity to reflect the flow rate of the ballast water pump for the TRC of the BWMS;
- .3 documentation that an in-tank BWMS is of a capacity to reflect the ballast water volume that it is intended to treat within a specified period of time;
- .4 the amount of ballast water tested in the test cycle on board shall be consistent with the normal ballast operations of the ship and the BWMS shall be operated at the TRC for which it is intended to be approved;
- .5 documentation showing that the discharge of each valid test cycle was in compliance with regulation D-2. For a test to be valid, the uptake water for the ballast water to be treated shall contain a density of viable organisms exceeding 10 times the maximum permitted values in regulation D-2.1;
- .6 sampling regime and volumes for analysis:
 - .1 for the enumeration of viable organisms greater than or equal to 50 µm or more in minimum dimension:
 - .1 influent water shall be collected over the duration of uptake as one time-integrated sample. The sample shall be collected as a single, continuous sample or a composite of

- sequential samples, e.g. collected at intervals during the beginning, middle and end of the operation. The total sample volume shall be at least 1 m³. If a smaller volume is validated to ensure representative sampling of organisms, it may be used;
- .2 treated discharged water shall be collected as one time-integrated sample over the duration of discharge from the tank(s). The sample may be collected as a single, continuous sample or a composite of sequential samples, e.g. collected throughout the beginning, middle and end of the operation. The total sample volume shall be at least 3 m³;
 - .3 if samples are concentrated for enumeration, the organisms shall be concentrated using a mesh with holes no greater than 50 µm in the diagonal dimension. Only organisms greater than 50 µm in minimum dimension shall be enumerated; and
 - .4 the full volume of the sample shall be analysed unless the total number of organisms is high, e.g. 100. In this case, the average density may be extrapolated based on a well-mixed subsample using a validated method;
- .2 for the enumeration of viable organisms greater than or equal to 10 µm and less than 50 µm in minimum dimension:
- .1 influent water shall be collected over the duration of uptake as one, time-integrated sample. The sample shall be collected as a single, continuous sample or a composite of sequential samples, e.g. collected at intervals during the beginning, middle and end of the operation. A sample of at least 10 L shall be collected, and a fraction may be subsampled for transport to the laboratory, provided it is representative of the sample and is a minimum of 1 L. A minimum of three 1 mL subsamples shall be analysed in full to enumerate organisms;
 - .2 treated discharged water shall be collected as one time-integrated sample over the duration of discharge from the tank(s). The sample may be collected as a single, continuous sample or a composite of sequential samples, e.g. collected throughout the beginning, middle and end of the operation. A sample of at least 10 L shall be collected, and a fraction may be subsampled for transport to the laboratory, provided it is representative of the sample and is a minimum of 1 L. A minimum of six 1 mL subsamples shall be analysed in full to enumerate organisms;
 - .3 the sample may not be concentrated for analysis unless the procedure is validated. Only organisms greater than 10 µm and less than 50 µm in minimum dimension shall be enumerated; and

- .4 the full volume of the sample shall be analysed unless the total number of organisms is high, e.g. 100. In this case, the average density may be extrapolated based on a well-mixed subsample using a validated method;
- .3 for the evaluation of bacteria:
 - .1 for the influent and discharge samples, the minimum 10 L sample referred to in paragraphs 2.8.6.2.1 and 2.8.6.2.2, or another sample at least 10 L in volume and collected in a similar manner should be used, a subsample of minimum 1 L may be transferred to a sterile container for analysis;
 - .2 a minimum of three subsamples of appropriate volume taken from the 1 L subsample described above shall be analysed for colony forming units of bacteria listed in regulation D-2; and
 - .3 the toxicogenic test requirements shall be conducted in an appropriately approved laboratory. If no approved laboratory is available, the analysis method may be validated to the satisfaction of the Administration.
- .7 the test cycles including invalid test cycles shall span a period of not less than six months;
- .8 three consecutive test cycles in compliance with regulation D-2 are to be performed. Any invalid test cycle does not affect the consecutive sequence;
- .9 the six-month shipboard test period starts and ends with the completion of a successful test cycle or invalid test cycle that meets the D-2 standard. The three consecutive and valid test cycles that are required in paragraph 2.8.8 above must be suitably separated across the six-month period;
- .10 the source water for test cycles shall be characterized by measurement of salinity, temperature, particulate organic carbon, total suspended solids and dissolved organic carbon; and
- .11 for system operation throughout the test period, the following information shall also be provided:
 - .1 documentation of all ballast water operations including volumes and locations of uptake and discharge, and if heavy weather was encountered and where;
 - .2 documentation that the BWMS was operated continuously throughout the test period for all ballasting and deballasting of the ship;
 - .3 documentation detailing water quality parameters identified by the test organization that should be provided as appropriate and practicable;

- .4 the possible reasons for an invalid test cycle, or a test cycle discharge failing the D-2 standard, which shall be investigated and reported to the Administration;
- .5 documentation of scheduled maintenance performed on the system during the test period;
- .6 documentation of unscheduled maintenance and repair performed on the system during the test period;
- .7 documentation of engineering parameters, monitored as appropriate to the specific system; and
- .8 a report detailing the functioning of the control and monitoring equipment.

Land-based testing

2.9 The land-based testing provides data to determine the biological efficacy and environmental acceptability of the BWMS under consideration for type approval. The approval testing aims to ensure replicability and comparability to other treatment equipment.

2.10 Any limitations imposed by the BWMS on the testing procedure described here shall be duly noted and evaluated by the Administration.

2.11 The test set-up including the BWMS shall operate as described in the provided operation, maintenance and safety manual during at least five consecutive successful test cycles in each salinity.

2.12 A land-based test cycle shall include the uptake of ballast water by pumping, the storage of ballast water, treatment of ballast water within the BWMS (except in control tanks), and the discharge of ballast water by pumping. The order will be dependent on the BWMS.

2.13 At least two test cycles in each salinity tested shall be conducted in order to evaluate compliance with the D-2 standard at the minimum holding time specified by the BWMS manufacturer.

2.14 Test facilities carrying out identification of Relevant Chemicals and toxicity testing of the treated ballast water from test cycles with a storage time which is shorter or longer than five days shall ensure that sufficient volumes of treated water are collected after five days or are reserved after the efficacy testing to permit the requirements of guidelines⁵ developed by the Organization, for approval of BWMS making use of Active Substances, to be assessed for at least one test cycle per salinity.

2.15 Land-based testing of BWMS shall be independent of the system manufacturer.

2.16 Testing shall occur using different water conditions sequentially as provided for in paragraphs 2.29 and 2.31 of this annex.

2.17 The BWMS shall be tested at its TRC or as given in paragraphs 2.25 to 2.28 of this annex for each test cycle. The equipment shall function to specifications during this test.

⁵ Refer to the *Procedure for approval of ballast water management systems that make use of Active Substances (G9)* (resolution MEPC.169(57)).

2.18 The analysis of treated water discharge from each test cycle shall determine if the treated discharge meets regulation D-2.

2.19 The analysis of treated water discharge from the relevant test cycle(s) shall also be used to evaluate the formation of Relevant Chemicals as well as the toxicity of the discharged water for BWMS that make use of Active Substances. The same evaluation shall be conducted for those BWMS that do not make use of Active Substances or Preparations but which could reasonably be expected to result in changes to the chemical composition of the treated water such that adverse impacts to receiving waters might occur upon discharge. Toxicity tests of the treated water discharge shall be conducted, taking into account guidelines developed by the Organization.⁶

Land-based testing set-up

2.20 The test set-up for approval tests shall be representative of the characteristics and arrangements of the types of ships in which the equipment is intended to be installed. The test set-up shall therefore include at least the following:

- .1 the complete BWMS to be tested;
- .2 piping and pumping arrangements; and
- .3 the storage tank that simulates a ballast tank, constructed such that the water in the tank shall be completely shielded from light.

2.21 The control and treated simulated ballast tanks shall each include:

- .1 a minimum capacity of 200 m³;
- .2 the use of standard industry practices for design and construction for ships; surface coatings shall be in accordance with the *Performance standard for protective coatings of dedicated seawater ballast tanks on all new ships and of double-sided skin spaces of bulk carriers (PSPC)* (resolution MSC.215(82)); and
- .3 the minimum modifications required for structural integrity on land.

2.22 The control and treated simulated ballast tanks should include normal internal structures, including lightening and drainage holes.

2.23 The test set-up shall be pressure-washed with tap water, dried and swept to remove loose debris, organisms and other matter before starting testing procedures, and between test cycles.

2.24 The test set-up shall include facilities to allow sampling as described in paragraphs 2.40 and 2.41 of this annex and provisions to supply influents to the system, as specified in paragraphs 2.29, 2.30, 2.33 and 2.34 of this annex. The installation arrangements shall conform in each case with those specified and approved under the procedure outlined in section 7 of this Code.

⁶ Refer to paragraphs 5.2.3 to 5.2.7 of the *Procedure for approval of ballast water management systems that make use of Active Substances (G9)* (resolution MEPC.169(57)).

Ballast water management system scaling

2.25 Scaling of the BWMS should take into account guidance developed by the Organization.⁷ The Administration shall verify that the scaling used is appropriate for the operational design of the BWMS.

2.26 BWMS with at least one model with a TRC equal to or smaller than 200 m³/h shall not be downscaled.

2.27 For BWMS with at least one model that has a TRC higher than 200 m³/h or 1000 m³/h the following must be observed for land-based testing. In-line treatment equipment may be downsized for land-based testing, but only when the following criteria are taken into account:

- .1 BWMS with at least one model with a TRC higher than 200 m³/h but lower than 1,000 m³/h may be downscaled to a maximum of 1:5 scale, but may not be lower than 200 m³/h; and
- .2 BWMS with at least one model with a TRC equal to, or higher than, 1,000 m³/h may be downscaled to a maximum of 1:100 scale, but may not be lower than 200 m³/h.

2.28 In-tank treatment equipment shall be tested on a scale that allows verification of full-scale effectiveness. The suitability of the test set-up shall be evaluated by the manufacturer and approved by the Administration.

Land-based test design – inlet and outlet criteria

2.29 For any given set of test cycles (five are considered a set) a salinity range shall be chosen for each cycle. Given the salinity of the test set-up for a test cycle in fresh, brackish and marine water, each shall have dissolved and particulate content in one of the combinations set out in the table below. Deviations from the marine and brackish salinity ranges of the table shall be reported and justified and the resulting tests shall not be less challenging for the BWMS than would be the circumstance if the deviations had not occurred:

	Salinity		
	Marine 28 – 36 PSU	Brackish 10 – 20 PSU	Fresh < 1 PSU
Dissolved organic carbon (DOC)	> 1 mg/L	> 5 mg/L	> 5 mg/L
Particulate organic carbon (POC)	> 1 mg/L	> 5 mg/L	> 5 mg/L
Total suspended solids (TSS)	> 1 mg/L	> 50 mg/L	> 50 mg/L

2.30 The source of the test water shall be natural water. Any augmentation of test water with dissolved organic carbon (DOC), particulate organic carbon (POC) or total suspended solids (TSS) to achieve the minimum required content shall be validated and approved by the Administration. As natural DOC constituents are complex and primarily of aromatic character, the type of added DOC is particularly critical to the evaluation of BWMS performance. The validation shall ensure that relevant properties of the augmented water (such as the oxidant demand/TRO decay and UV absorption in the range of 200 to 280 nm, the production of disinfectant by-products and the particle size distribution of suspended solids) are

⁷ Refer to the *Guidance on scaling of ballast water management systems* (BWM.2/Circ.33/Rev.1).

equivalent, on a mg/L basis, to that of natural water that would quantitatively meet the challenge conditions. In addition, the validation shall ensure that augmentation does not bias a test for or against any specific treatment process. The test report shall include the basis for the selection, use and validation of augmentation.

2.31 The BWMS must be tested in conditions for which it will be approved. For a BWMS to achieve an unlimited Type Approval Certificate with respect to salinity, one set of test cycles shall be conducted within each of the three salinity ranges with the associated dissolved and particulate content as prescribed in paragraph 2.29 above. Tests under adjacent salinity ranges in the above table shall be separated by at least 10 PSU.

2.32 Use of standard test organisms (STO):

- .1 the use of standard test organisms (STO) is permissible if the challenge levels in naturally occurring water at the test facility require supplementation. The use of STO shall not be considered standard practice and the Administration shall in every case review that the selection, number and use of supplementary STOs ensures that the challenge posed to the BWMS provides an adequately robust test. The use of STOs shall not bias a test for or against any specific treatment process. They shall be locally isolated to ensure that the risk to the local environment is minimized; non-indigenous organisms which have the potential to cause harm to the environment shall not be used;
- .2 procedures, processes and guidance for the use of STO shall be based on the most relevant and up-to-date available scientific data. Such procedures, processes and guidance shall form a part of the testing facilities quality assurance regimes; and
- .3 the use of STO, including concentrations and species, shall be recorded within the test report. The test report shall include information pertaining to the evaluation and justification for the use of STO, an assessment of the impact of their use on other test parameters and potential impacts on the test being undertaken. The information contained within the report shall reflect both the positive and negative impacts of the use of STO.

2.33 The influent water shall include:

- .1 test organisms of greater than or equal to 50 μm or more in minimum dimension that shall be present in a total density of preferably 10^6 but not less than 10^5 individuals per cubic metre, and shall consist of at least five species from at least three different phyla/divisions;
- .2 test organisms greater than or equal to 10 μm and less than 50 μm in minimum dimension that shall be present in a total density of preferably 10^4 but not less than 10^3 individuals per mL, and shall consist of at least five species from at least three different phyla/divisions;
- .3 heterotrophic bacteria that shall be present in a density of at least 10^4 living bacteria per mL; and
- .4 a variety of organisms which shall be documented according to the size classes mentioned above regardless of whether natural organism assemblages or cultured organisms were used to meet the density and organism variety requirements.

2.34 The following bacteria do not need to be added to the influent water, but shall be measured at the influent and at the time of discharge:

- .1 coliform;
- .2 Enterococcus group;
- .3 *Vibrio cholerae*; and
- .4 heterotrophic bacteria.

2.35 If cultured test organisms are used, local applicable quarantine regulations shall be taken into account during culturing and discharge.

Land-based monitoring and sampling

2.36 Change of numbers of test organisms by treatment and during storage in the simulated ballast tank shall be measured using methods described in Part 4 of this annex (paragraphs 4.5 to 4.7).

2.37 It shall be verified that the treatment equipment performs within its specified parameters, such as power consumption and flow rate, during the test cycle.

2.38 The range of operational flow rates that a BWMS is expected to achieve in service, at the maximum and minimum operational flow rates (where it is appropriate for that technology), shall be verified after the filter on the discharge side of the pump. The range of flow rate may be derived from empirical testing or from computational modelling. Where appropriate for the technology, demonstration of system efficacy at low flow rates shall reflect the need for flow reduction during the final stages of ballast operations.

2.39 Environmental parameters such as pH, temperature, salinity, dissolved oxygen, TSS, DOC, POC and turbidity (Nominal Turbidity Unit, NTU) shall be measured at the same time that the samples described are taken.

2.40 Samples during the test for the purposes of determining biological efficacy shall be taken at the following times and locations: immediately before the treatment equipment, immediately after the treatment equipment and upon discharge after the appropriate holding time.

2.41 The control and treatment cycles may be run simultaneously or sequentially. Control samples are to be taken in the same manner as the equipment test as prescribed in paragraph 2.40 above and upon influent and discharge.

2.42 Facilities or arrangements for sampling shall be provided to ensure representative samples of treated and control water can be taken that introduce as little adverse effects as possible on the organisms.

2.43 Samples described in paragraphs 2.40 and 2.41 above shall be collected with the following sampling regime and volumes for analysis:

- .1 for the enumeration of viable organisms greater than or equal to 50 µm or more in minimum dimension:
 - .1 influent water shall be collected over the duration of uptake as one time-integrated sample. The sample shall be collected as a single, continuous sample or a composite of sequential samples, e.g. collected at intervals during the beginning, middle and end of the operation. The total sample volume shall be at least one cubic metre. If smaller volume is validated to ensure representative sampling of organisms, it may be used;
 - .2 control and treated discharged water shall be collected as one time-integrated sample over the duration of discharge from the tank(s). The sample may be collected as a single, continuous sample or a composite of sequential samples, e.g. collected throughout the beginning, middle and end of the operation. The total sample volume shall be at least 3 m³;
 - .3 if samples are concentrated for enumeration, the organisms shall be concentrated using a mesh with holes no greater than 50 µm in the diagonal dimension. Only organisms greater than 50 µm in minimum dimension shall be enumerated; and
 - .4 the full volume of the sample shall be analysed unless the total number of organisms is high, e.g. 100. In this case, the average density may be extrapolated based on a well-mixed subsample using a validated method;
- .2 for the enumeration of viable organisms greater than or equal to 10 µm and less than 50 µm in minimum dimension:
 - .1 influent water shall be collected over the duration of uptake as one, time-integrated sample. The sample shall be collected as a single, continuous sample or a composite of sequential samples, e.g. collected at intervals during the beginning, middle and end of the operation. A sample of at least 10 L shall be collected, and a fraction may be subsampled for transport to the laboratory, provided it is representative of the sample and is a minimum of 1 L. A minimum of three 1 mL subsamples shall be analysed in full to enumerate organisms;
 - .2 control and treated discharged water shall be collected as one time-integrated sample over the duration of discharge from the tank(s). The sample may be collected as a single, continuous sample or a composite of sequential samples, e.g. collected throughout the beginning, middle and end of the operation. A sample of at least 10 L shall be collected, and a fraction may be subsampled for transport to the laboratory, provided it is representative of the sample and is a minimum of 1 L. A minimum of six 1 mL subsamples shall be analysed in full to enumerate organisms;

- .3 the sample may not be concentrated for analysis unless the procedure is validated. Only organisms greater than 10 µm and less than 50 µm in minimum dimension shall be enumerated; and
 - .4 the full volume of the sample shall be analysed unless the total number of organisms is high, e.g. 100. In this case, the average density may be extrapolated based on a well-mixed subsample using a validated method; and
- .3 for the evaluation of bacteria:
- .1 for the influent and discharge samples, a minimum 10 L sample referred to in paragraphs 2.8.6.2.1 and 2.8.6.2.2 above, respectively, or another sample at least 10 L in volume and collected in a similar manner, should be used; a subsample of minimum 1 L may be transferred to a sterile container for analysis;
 - .2 a minimum of three subsamples of appropriate volume taken from the 1 L subsample described above shall be analysed for colony forming units of bacteria listed in regulation D-2; and
 - .3 the toxicogenic test requirements shall be conducted in an appropriately approved laboratory. If no approved laboratory is available, the analysis method may be validated to the satisfaction of the Administration.

2.44 The samples shall be analysed as soon as possible after sampling, and analysed live within six hours or treated in such a way so as to ensure that proper analysis can be performed.

2.45 If in any test cycle the discharge results from the control water is of a concentration less than or equal to 10 times the values in regulation D-2.1, the test cycle is invalid.

Temperature

2.46 The effective performance of BWMS through a ballast water temperature range of 0°C to 40°C (2°C to 40°C for fresh water) and a mid-range temperature of 10°C to 20°C shall be the subject of an assessment verified by the Administration.

2.47 This assessment may include:

- .1 testing during land-based, shipboard, laboratory or bench-scale testing; and/or
- .2 the use of existing data and/or models, provided that their source, suitability and reliability is reported.

2.48 The report submitted to the Administration shall contain all documentation (including procedures, methods, data, models, results, explanations and remarks) associated with the temperature assessment. The report shall include at least the information identified in paragraph 2.57 of this annex.

Evaluation of regrowth

2.49 The evaluation of the regrowth of organisms shall be undertaken to the satisfaction of the Administration in land-based and/or shipboard testing in at least two test cycles in each salinity.

2.50 In the case of land-based testing being performed with a holding time of less than five days, a sufficient volume of treated uptake water shall be held under conditions similar to conditions in the relevant holding tank. In the case of shipboard testing, water shall be retained on board for the evaluation of regrowth during a shipboard test cycle. Additional bench-scale testing may be used to supplement the land-based and/or shipboard testing.

2.51 In the case of a BWMS that includes mechanical, physical, chemical and/or biological processes intended to kill, render harmless or remove organisms within ballast water at the time of discharge or continuously between the time of uptake and discharge, regrowth shall be assessed in accordance with sections "Shipboard tests" and "Land-based testing" of this annex with a holding time of at least five days.

2.52 Otherwise, the enumeration of organisms to assess regrowth shall be undertaken at least five days after the completion of all of the mechanical, physical, chemical and/or biological processes intended to kill, render harmless or remove organisms within ballast water.

2.53 Any neutralization of ballast water required by the BWMS shall occur at the end of the holding time and immediately before the enumeration of organisms.

2.54 The evaluation of regrowth is not intended to evaluate contamination in ballast tanks or piping, such as may arise from the presence of untreated water or residual sediments.

2.55 A report shall be submitted to the Administration containing all documentation (including procedures, methods, data, models, results, explanations and remarks) associated with the evaluation of regrowth. The report shall include at least the information identified in paragraph 2.57 of this annex.

Reporting of test results

2.56 After approval tests have been completed, a report shall be submitted to the Administration. This report shall include information regarding the test design, methods of analysis and the results of these analyses for each test cycle (including invalid test cycles), BWMS maintenance logs and any observed effects of the BWMS on the ballast system of the ship (e.g. pumps, pipes, tanks, valves). Shipboard test reports shall include information on the total and continuous operating time of the BWMS.

2.57 The reports submitted in accordance with paragraph 2.56 above shall contain at least the following information:

- .1 the name and address of the laboratory performing or supervising the inspections, tests or evaluations, and its national accreditation or quality management certification, if appropriate;
- .2 the name of the manufacturer;
- .3 the trade name, product designation (such as model numbers), and a detailed description of the equipment or material inspected, tested or evaluated;

- .4 the time, date, and place of each approval inspection, test or evaluation;
- .5 the name and title of each person performing, supervising, and witnessing the tests and evaluations;
- .6 executive summary;
- .7 introduction and background;
- .8 for each test cycle, inspection or evaluation conducted, summary descriptions of:
 - .1 experimental design;
 - .2 methods and procedures;
 - .3 results and discussion, including a description of any invalid test cycle (in the case of a report referred to in Part 2 of this annex) and a comparison to the expected performance; and
 - .4 in the case of land-based testing, test conditions including details on challenge water preparation in line with paragraph 2.30 of this annex;
- .9 a description or photographs of the procedures and apparatus used in the inspections, tests or evaluation, or a reference to another document that contains an appropriate description or photographs;
- .10 at least one photograph that shows an overall view of the equipment or material tested, inspected or evaluated and other photographs that show:
 - .1 design details; and
 - .2 each occurrence of damage or deformation to the equipment or material that occurred during the approval tests or evaluations;
- .11 the operational safety requirements of the BWMS and all safety-related findings that have been made during the inspections, tests or evaluations;
- .12 an attestation that the inspections, tests or evaluations were conducted as required and that the report contains no known errors, omissions or false statements. The attestation must be signed by the chief officer of the laboratory, or the chief officer's representative;
- .13 appendices, including:
 - .1 the complete test plan and the data generated during tests and evaluations reported under paragraph 2.57.8 above, including at least:
 - .1 for land-based tests, whether ambient, cultured or a mixture of test organisms have been used (including a species-level identification for cultured organisms, and an identification to the lowest possible taxonomic level for ambient organisms);

- .2 for shipboard tests, the operating parameters of the system during successful treatment operations (e.g. dosage rates, ultraviolet intensity and the energy consumption of the BWMS under normal or tested TRC, if available);
 - .3 for SDL, details of all procedures, methods, data, models, results, explanations and remarks, leading to validation; and
 - .4 invalid test information.
- .2 the QMP, the QAPP and quality assurance and quality control records;
 - .3 maintenance logs including a record of any consumable components that were replaced; and
 - .4 relevant records and test results maintained or created during testing.

2.58 The results of biological efficacy testing of the BWMS shall be accepted if during the land-based and shipboard testing conducted as specified in sections "Shipboard tests" and "Land-based testing" of this annex it is shown that the system has met the standard in regulation D-2 and that the uptake water quality requirements were met in all individual test cycles as provided in paragraph 4.7 below.

2.59 The test report shall include all test cycles during land-based and shipboard tests, including failed test cycles and invalid test cycles with the explanation required in paragraph 2.8.11.4 for both shipboard and land-based tests.

2.60 The Administration shall identify and redact commercially sensitive information (information that is proprietary and not related to the BWMS performance) and make all other information available to interested parties and the Organization. The information shall include all of the test reports, including failed tests from both land-based and shipboard testing.

PART 3 – SPECIFICATION FOR ENVIRONMENTAL TESTING FOR APPROVAL OF BALLAST WATER MANAGEMENT SYSTEMS

3.1 The electrical and electronic sections of the BWMS in the standard production configuration shall be subject to the relevant tests specified in paragraph 3.3 below at a laboratory approved for the purpose by the Administration or by the accreditation body of the laboratory, with relevant accreditation⁸ covering the relevant test standards.

3.2 Evidence of successful compliance with the environmental tests below shall be submitted to the Administration by the manufacturer together with the application for type approval.

3.3 Equipment is to be tested taking into account international test specifications for type approval.⁹

⁸ Refer to *General requirements for the competence of testing and calibration laboratories* (ISO/IEC 17025:2017).

⁹ Refer to IACS UR E10, Rev.6, October 2014 – *Test Specification for Type Approval*.

3.4 A report on environmental tests shall be submitted to the Administration and include at least the information identified in paragraph 2.57 of this Annex.

PART 4 – SAMPLE ANALYSIS METHODS FOR THE DETERMINATION OF BIOLOGICAL CONSTITUENTS IN BALLAST WATER

Sample processing and analysis

4.1 Samples taken during testing of BWMS are likely to contain a wide taxonomic diversity of organisms, varying greatly in size and susceptibilities to damage from sampling and analysis.

4.2 When available, widely accepted standard methods for the collection, handling (including concentration), storage, and analysis of samples should be used. These methods shall be clearly cited and described in test plans and reports. This includes methods for detecting, enumerating, and determining minimum dimension of and identifying organisms and for determining viability (as defined in this Code).

4.3 When standard methods are not available for particular organisms or taxonomic groups, methods that are developed for use shall be described in detail in test plans and reports. The descriptive documentation shall include any experiments needed to validate the use of the methods.

4.4 Given the complexity in samples of natural and treated water, the required rarity of organisms in treated samples under regulation D-2, and the expense and time requirements of current standard methods, it is likely that several new approaches will be developed for the analyses of the composition, concentration and viability of organisms in samples of ballast water. Administrations/Parties are encouraged to share information concerning methods for the analysis of ballast water samples, using existing scientific venues, and documents distributed through the Organization.

Sample analysis for determining efficacy in meeting the discharge standard

4.5 Sample analysis is meant to determine the species composition and the number of viable organisms in the sample. Different samples may be taken for determination of viability and for species composition.

4.6 The viability of organisms shall be determined taking into account guidance developed by the Organization¹⁰ using methodologies appropriate to the ballast water treatment technology being tested. Such methodologies shall provide assurance that organisms not removed from ballast water have been killed or rendered harmless to the environment, human health, property and resources. Viability may be established by assessing the presence of one or more essential characteristics of life, such as structural integrity, metabolism, reproduction, motility or response to stimuli.

4.7 A treatment test cycle shall be deemed successful if:

- .1 it is valid in accordance with paragraph 2.8.5 (shipboard) or 2.29, 2.30, 2.33 and 2.47 (land-based testing) of this annex as appropriate;

¹⁰ Refer to the *Guidance on methodologies that may be used for enumerating viable organisms* (BWM.2/Circ.61).

- .2 the density of organisms greater than or equal to 50 µm in minimum diameter in the replicate samples is less than 10 viable organisms per cubic metre;
- .3 the density of organisms less than 50 µm and greater than or equal to 10 µm in minimum diameter in the replicate samples is less than 10 viable organisms per mL;
- .4 the density of *Vibrio cholerae* (serotypes O1 and O139) is less than 1 cfu per 100 ml, or less than 1 cfu per 1 g (wet weight) zooplankton samples;
- .5 the density of *E. coli* in the replicate samples is less than 250 cfu per 100 mL;
- .6 the density of Intestinal Enterococci in the replicate samples is less than 100 cfu per 100 mL; and
- .7 no averaging of test cycles, or the discounting of failed test cycles, has occurred.

4.8 It is recommended that a non-exhaustive list of standard methods and innovative research techniques be considered.¹¹

Sample analysis for determining eco-toxicological acceptability of discharge

4.9 Toxicity tests of the treated water discharge shall be conducted taking into account guidelines developed by the Organization.¹²

PART 5 – SELF-MONITORING

Introduction

5.1 BWMS shall monitor and store a minimum number of parameters for detailed evaluation. In addition, all system indications and alerts shall be stored and available for inspection. Data storage and retrieval shall follow common standards. This part gives an overview of the minimum required self-monitoring parameters.

Monitoring of parameters

5.2 The applicable self-monitoring parameters listed below shall be recorded for every BWMS.¹³ Any additional parameters that are necessary to ascertain system performance and safety shall be determined by the Administration and stored in the system. If a parameter is not applicable due to the particulars of the system, the Administration may waive the requirement to record that parameter. Limiting operating conditions on the operation of the BWMS shall be determined by the manufacturer and approved by the Administration.

¹¹ Suggested sources may include but are not limited to:

- .1 The Handbook of Standard Methods for the Analysis of Water and Waste Water
- .2 ISO standard methods
- .3 UNESCO standard methods
- .4 World Health Organization
- .5 American Society of Testing and Materials (ASTM) standard methods
- .6 United States EPA standard methods
- .7 Research papers published in peer-reviewed scientific journals
- .8 MEPC documents

¹² Refer to paragraphs 5.2.3 to 5.2.7 of the *Procedure for approval of ballast water management systems that make use of Active Substances (G9)* (resolution MEPC.169(57)).

¹³ Associated guidance for a template on technical details of the monitoring parameters and record intervals to be developed by the Organization.

General information for all systems

5.3 The information and applicable self-monitoring parameters to be recorded for all systems shall include, inter alia:

- .1 general information: ship name, IMO number, BWMS manufacturer and type designation, BWMS serial number, date of BWMS installation on ship, BWMS TRC and principle of treatment (in-line/in-tank);
- .2 operational parameters: all recorded parameters should be time tagged if applicable: BWMS operational modes and any transition modes, including bypass operations (e.g. uptake, discharge, warming-up, cleaning and start up), ballast water pump in operation (yes/no – if information is available from ship), flow-rate at system outlet, and indication of the ballast water tank that is involved in the ballast water operation when practicable;
- .3 it is recommended that positional information on ballast water operations and on the holding time should be recorded automatically. Otherwise it shall be entered manually in the ballast water record book as appropriate. Administrations are encouraged to apply automatic position information recording to ships which install BWMS during a ship's building to the greatest extent possible;
- .4 system alerts and indications: all systems shall have an alert regime. Every alert shall be logged and time stamped. To assist the inspections it would be helpful to record an alert summary after each ballast water operation automatically, if possible;
- .5 general alerts include: shutdown of system while in operation, when maintenance is required, BWMS bypass valve status and status of BWMS valves representing system operational mode as appropriate;
- .6 operational alerts: whenever a relevant parameter exceeds the acceptable range approved by the Administration, the system shall give an alert. In addition, an alert shall be logged and time stamped also when a combination of relevant parameters exceeds system specifications, even if each single parameter does not exceed its approved range. If a safety relevant parameter (safety for crew, cargo and/or the ship) related to the BWMS exceeds approved limits, an alert/alarm shall be mandatory (e.g. hydrogen level at appropriate measurement point(s));
- .7 the Administration may require additional alerts depending on the design of the system and for future developments; and
- .8 the SDL parameters and their corresponding data such as range, alarm limit, alert delay, etc., be password protected on a level above what is required for normal operation and maintenance, i.e. on a system administrator level. Change of any data or parameters which are password protected and interruption of the measurement (wire break, signal out of range) shall be automatically logged and retrievable on a maintenance access level.

Data storage and retrieval

5.4 Storage of data shall follow the requirements in paragraphs 4.17 to 4.22 of this Code. The equipment shall be able to store a minimum number of self-monitoring parameters following common standards determined by the Organization.

5.5 The control and monitoring equipment shall automatically record the proper functioning or failure of a BWMS without user interaction and add a time stamp to every entry. Additionally, the system shall have a tool to produce summary text files for each ballast water operation on demand to support inspections work.

5.6 The system shall store the required data in an acceptable format to be able to display, print or export the data for official inspections. An acceptable format could be:

- .1 an internationally standardized readable format (e.g. text format, pdf, MS Excel); or
- .2 the extensible mark-up language (xml).

5.7 The equipment shall be so designed that, as far as is practical, it will not be possible to manipulate either the data being stored by the system or the data which has already been recorded. Any attempt to interfere with the integrity of the data shall be recorded.

5.8 Permanent deletion of recordings shall not be possible. The system shall be capable of storing recorded data for at least 24 months to facilitate compliance with regulation B-2 of the Convention. Where navigation equipment is connected to the monitoring system to provide data for recording, the interfaces shall be developed taking into account applicable parts of relevant international standards.¹⁴

PART 6 – VALIDATION OF SYSTEM DESIGN LIMITATIONS

6.1 The objective of the SDL approach is twofold. Firstly, it ensures that the performance of the BWMS has been transparently assessed with respect to the known water quality and operational parameters that are important to its operation, including those that may not be specifically provided for in this Code. Secondly, it provides transparent oversight of BWMS performance claims by the manufacturer that may go beyond specific criteria in this Code. Although the validation of SDL yields information that is reported on the Type Approval Certificate, this information does not affect the eligibility of a BWMS to receive type approval.

6.2 The low and/or high parameter values for each SDL shall be validated to the satisfaction of the Administration as follows:

- .1 the validation shall be overseen by the Administration and shall consist of a rigorous evidence-based assessment of a specific claim by the BWMS manufacturer that the equipment will operate as intended between pre-stated parameter values;
- .2 tests to validate SDL shall be undertaken in accordance with paragraphs 2.2 to 2.4 of this annex. Such tests may be combined with land-based and/or shipboard testing if the QAPP establishes that the validation tests will not interfere with the specific procedures in Part 2 of this annex. Laboratory or bench-scale testing may also be used in the validation of SDL;

¹⁴ Refer to *Digital interfaces for navigational equipment within a ship* (IEC 61162).

- .3 methods other than testing, such as the use of existing data and/or models, may be used in the validation of SDL. The source, suitability and reliability of such methods shall be reported; and
- .4 validation is not intended as a stress-test of the BWMS or as a procedure for identifying equipment failure points. Validation shall be undertaken independently of the BWMS manufacturer and shall be separate from BWMS research and development activities. Data and models may be supplied by the manufacturer when appropriate but shall be independently assessed.

6.3 Claims of open-ended performance (expressed as the lack of either a low or a high parameter value for a System Design Limitation) shall also be validated.

6.4 BWMS manufacturers may include a margin of error in claiming SDL. For this reason, SDL should not necessarily be interpreted as the exact parameter values beyond which the BWMS is incapable of operation. The Administration shall take this into account in considering whether to include any additional restrictions on the Type Approval Certificate in connection with the validation of SDL.

6.5 SDL shall be established for all known parameters to which the design of the BWMS is sensitive that are important to the operation of the BWMS. In the case of SDL parameters that are also subject to specific criteria in Part 2 of this annex, the procedure set out in Part 2 shall be followed. For such parameters, the approach in paragraph 6.2 above may be used only to the extent that the performance claim goes beyond the specific criteria in Part 2.

6.6 A report shall be submitted to the Administration containing all documentation (including procedures, methods, data, models, results, explanations and remarks) associated with the validation of SDL. The report shall include at least the information identified in paragraph 2.57 of this annex.

PART 7 – TYPE APPROVAL CERTIFICATE AND TYPE APPROVAL REPORT

Type Approval Certificate

7.1 The Type Approval Certificate of a BWMS shall:

- .1 identify the type and model of the BWMS to which it applies and identify equipment assembly drawings, duly dated;
- .2 identify pertinent drawings bearing model specification numbers or equivalent identification details;
- .3 include a reference to the full performance test protocol on which it is based;
- .4 identify if it was issued by an Administration based on a Type Approval Certificate previously issued by another Administration. Such a certificate shall identify the Administration that supervised conduction of the tests on the BWMS and a copy of the original test results shall be attached to the Type Approval Certificate of the BWMS;
- .5 identify all conditions and limitations for the installation of BWMS on board the ship;
- .6 include the SDL, which shall be listed under the heading "This equipment has been designed for operation in the following conditions";

- .7 include any restrictions imposed by the Administration due to the minimum holding time or in accordance with paragraph 6.4 of this annex; such restrictions shall include any applicable environmental conditions (e.g. UV transmittance, etc.) and/or system operational parameters (e.g. min/max pressure, pressure differentials, min/max Total Residual Oxidants (TRO) if applicable, etc.); and
- .8 include an appendix containing test results of each land-based and shipboard test cycle. Such test results shall include at least the numerical salinity, temperature, flow rates, and where appropriate UV transmittance. In addition, these test results shall include all other relevant variables. The Type Approval Certificate shall list any identified SDL parameters.

Type approval report

7.2 The type approval report shall be submitted to the Organization and made available to the public and Member States by appropriate means. It shall contain at least:

- .1 information on the type approval of the BWMS, including:
 - .1 the approval date;
 - .2 the name of the Administration;
 - .3 the name of the manufacturer;
 - .4 the trade name and product designation (such as model numbers) of the BWMS; and
 - .5 a copy of the Type Approval Certificate including its appendices, annexes or other attachments;
- .2 an executive summary;
- .3 a description of the BWMS, including, in the case of BWMS using Active Substances, the following information:
 - .1 the name of the Active Substance(s) or Preparation(s) employed; and
 - .2 identification of the specific Marine Environment Protection Committee (MEPC) report and paragraph number granting Final Approval, taking into account guidelines developed by the Organization;¹⁵
- .4 an overview of the process undertaken by the Administration to evaluate the BWMS, including the name and role of each test facility, subcontractor and test organization involved in testing and approving the BWMS, the role of each report in the type approval decision, and a summary of the Administration's approach to overall quality assurance and quality control;
- .5 the executive summary of each test report prepared in accordance with paragraphs 2.48, 2.55 to 2.57, 3.4 and 6.6 of this Annex;

¹⁵ Refer to the *Procedure for approval of ballast water management systems that make use of Active Substances (G9)* (resolution MEPC.169(57)).

- .6 the operational safety requirements of the BWMS and all safety-related findings that have been made during the type approval process;
- .7 a discussion section explaining the Administration's assessment that the BWMS:
 - .1 in every respect fulfilled the requirements of this Code, including demonstrating under the procedures and conditions specified for both land-based and shipboard testing that it met the ballast water performance standard described in regulation D-2;
 - .2 is designed and manufactured according to requirements and standards;
 - .3 is in compliance with all applicable requirements;
 - .4 has been approved taking into account the recommendations provided by the MEPC in the Final Approval of the BWMS, if any;
 - .5 operates within the SDL at the TRC, performance, and reliability as specified by the manufacturer;
 - .6 contains control and monitoring equipment that operates correctly;
 - .7 was installed in accordance with the technical installation specification of the manufacturer for all tests; and
 - .8 was used to treat volumes and flow rates of ballast water during the shipboard tests consistent with the normal ballast operations of the ship; and
- .8 the following annexes:
 - .1 appropriate information on quality control and assurance; and
 - .2 each complete test report prepared in accordance with paragraphs 2.48, 2.55 to 2.57, 3.4 and 6.6 of this annex.

7.3 The Administration may redact proprietary information of the manufacturer from the type approval report before submitting it to the Organization.

7.4 The Type Approval Certificate and the type approval report (including their entire contents and all annexes, appendices or other attachments) shall be accompanied by a translation into English, French or Spanish if not written in one of those languages.

7.5 Documents shall not be incorporated by reference into the Type Approval Certificate. The Administration may incorporate an annex by reference into the type approval report if the reference (e.g. internet URL) is expected to remain permanently valid. Upon any reference becoming invalid, the Administration shall promptly re-submit the type approval report to the Organization and include the referenced document or an updated reference to it; and the Organization shall promptly make the revised report available to the public and Member States through appropriate means.

APPENDIX

BADGE OR CIPHER (Limiting Operating Conditions apply)*

NAME OF ADMINISTRATION

TYPE APPROVAL CERTIFICATE OF BALLAST WATER MANAGEMENT SYSTEM

This is to certify that the ballast water management system listed below has been examined and tested in accordance with the requirements of the specifications contained in the *Code for Approval of Ballast Water Management Systems* (resolution MEPC.300(72)). This certificate is valid only for the ballast water management system referred to below.

Name of ballast water management system:

Ballast water management system manufactured by:.....

Under type and model designation(s)
and incorporating:

To equipment/assembly drawing No.: date:

Other equipment manufactured by:

To equipment/assembly drawing No.: date:

Treatment Rated Capacity (m³/h):

A copy of this Type Approval Certificate shall be carried on board a ship fitted with this ballast water management system, for inspection on board the ship. If the Type Approval Certificate is issued based on approval by another Administration, reference to that Type Approval Certificate shall be made.

Limiting Operating Conditions imposed are described in this document.

(Temperature / Salinity)

Other restrictions imposed include the following:

This equipment has been designed for operation in the following conditions:**

Official stamp Signed

 Administration of

 Issued this day of 20

 Valid until this day of20

* Delete as appropriate.
** Insert System Design Limitations.

ANNEX 6

**RESOLUTION MEPC.301(72)
(adopted on 13 April 2018)**

**AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE
INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS,
1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO**

Amendments to MARPOL Annex VI

(ECAs and required EEDI for ro-ro cargo ships and ro-ro passenger ships)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocols of 1978 and 1997 relating thereto (MARPOL), which specifies the amendment procedure and confers upon the appropriate body of the Organization the function of considering amendments thereto for adoption by the Parties,

HAVING CONSIDERED, at its seventy-second session, proposed amendments to MARPOL Annex VI concerning ECAs and the required EEDI for ro-ro cargo ships and ro-ro passenger ships,

1 ADOPTS, in accordance with article 16(2)(d) of MARPOL, amendments to MARPOL Annex VI, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 16(2)(f)(iii) of MARPOL, that the amendments shall be deemed to have been accepted on 1 March 2019 unless prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3 INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of MARPOL, the said amendments shall enter into force on 1 September 2019 upon their acceptance in accordance with paragraph 2 above;

4 INVITES FURTHER the Parties to consider the application of the aforesaid amendments to regulation 21 of Annex VI of MARPOL concerning new parameters for determination of reference values of the EEDI to ships entitled to fly their flag as soon as possible, prior to entry into force;

5 REQUESTS the Secretary-General, for the purposes of article 16(2)(e) of MARPOL, to transmit certified copies of the present resolution and the text of the amendments contained in the annex to all Parties to MARPOL;

6 REQUESTS FURTHER the Secretary-General to transmit copies of the present resolution and its annex to Members of the Organization which are not Parties to MARPOL.

ANNEX

AMENDMENTS TO MARPOL ANNEX VI

(ECAs and the required EEDI for ro-ro cargo ships and ro-ro passenger ships)

Regulation 13 – Nitrogen oxides (NO_x)

1 In paragraph 5.3, the words "an emission control area designated under paragraph 6 of this regulation" are replaced with the words "a NO_x Tier III emission control area".

Regulation 21 - Required EEDI

2 In table 2 (Parameters for determination of reference values for the different ship types) of paragraph 3, rows 2.34 and 2.35 for ro-ro cargo ships and ro-ro passenger ships are replaced by the following:

2.34 Ro-ro cargo ship	1405.15	DWT of the ship	0.498
	1686.17*	DWT of the ship where DWT ≤ 17,000* 17,000 where DWT > 17,000*	
2.35 Ro-ro passenger ship	752.16	DWT of the ship	0.381
	902.59*	DWT of the ship where DWT ≤ 10,000* 10,000 where DWT > 10,000*	

* to be used from phase 2 and thereafter.

ANNEX 7

**RESOLUTION MEPC.302(72)
(adopted on 13 April 2018)**

**AMENDMENTS TO THE INTERNATIONAL CODE FOR THE CONSTRUCTION AND
EQUIPMENT OF SHIPS CARRYING DANGEROUS
CHEMICALS IN BULK (IBC CODE)**

**(Model form of International Certificate of Fitness for the
Carriage of Dangerous Chemicals in Bulk)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO resolution MEPC.19(22) by which it adopted the *International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)*, and resolution MEPC.16(22) by which the IBC Code has become mandatory under Annex II of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL),

NOTING article 16 of MARPOL and regulation 1.4 of MARPOL Annex II concerning the procedure for amending the IBC Code,

HAVING CONSIDERED, at its seventy-second session, proposed amendments to the IBC Code concerning the Model form of the International Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk,

1 ADOPTS, in accordance with article 16(2)(d) of MARPOL, amendments to the IBC Code, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 16(2)(f)(iii) of MARPOL, that the amendments to the IBC Code shall be deemed to have been accepted on 1 July 2019 unless, prior to that date, not less than one third of the Parties or Parties, the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3 INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of MARPOL, the amendments to the IBC Code shall enter into force on 1 January 2020 upon their acceptance in accordance with paragraph 2 above;

4 REQUESTS the Secretary-General, in conformity with article 16(2)(e) of MARPOL, to transmit certified copies of the present resolution and the text of the amendments to the IBC Code contained in the annex to all parties to MARPOL;

5 REQUESTS FURTHER the Secretary-General to transmit copies of the present resolution and its annex to the Members of the Organization which are not Parties to MARPOL.

ANNEX

**AMENDMENTS TO THE INTERNATIONAL CODE FOR THE CONSTRUCTION AND
EQUIPMENT OF SHIPS CARRYING DANGEROUS
CHEMICALS IN BULK (IBC CODE)**

**(Model form of International Certificate of Fitness for the
Carriage of Dangerous Chemicals in Bulk)**

APPENDIX

**MODEL FORM OF INTERNATIONAL CERTIFICATE OF FITNESS FOR THE CARRIAGE
OF DANGEROUS CHEMICALS IN BULK**

- 1 The existing paragraph 6 is replaced by the following:
 - "6 That the loading and stability information booklet required by paragraph 2.2.5 of the Code has been supplied to the ship in an approved form."

- 2 A new paragraph 7 is added as follows:
 - "7 That the ship must be loaded:
 - .1* only in accordance with loading conditions verified compliant with intact and damage stability requirements using the approved stability instrument fitted in accordance with paragraph 2.2.6 of the Code;
 - .2* where a waiver permitted by paragraph 2.2.7 of the Code is granted and the approved stability instrument required by paragraph 2.2.6 of the Code is not fitted, loading shall be made in accordance with one or more of the following approved methods:
 - (i)* in accordance with the loading conditions provided in the approved loading and stability information booklet referred to in 6 above; or
 - (ii)* in accordance with loading conditions verified remotely using an approved means; or
 - (iii)* in accordance with a loading condition which lies within an approved range of conditions defined in the approved loading and stability information booklet referred to in 6 above; or
 - (iv)* in accordance with a loading condition verified using approved critical KG/GM data defined in the approved loading and stability information booklet referred to in 6 above; and

.3* in accordance with the loading limitations appended to this Certificate.

Where it is required to load the ship other than in accordance with the above instruction, then the necessary calculations to justify the proposed loading conditions shall be communicated to the certifying Administration who may authorize in writing the adoption of the proposed loading condition.**

* Delete as appropriate.

** Instead of being incorporated in the Certificate, this text may be appended to the Certificate, if duly signed and stamped."

ANNEX 8

**RESOLUTION MEPC.303(72)
(adopted on 13 April 2018)**

**AMENDMENTS TO THE CODE FOR THE CONSTRUCTION AND EQUIPMENT OF
SHIPS CARRYING DANGEROUS CHEMICALS IN BULK (BCH CODE)**

(Model form of Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (Committee) conferred upon it by international conventions for the prevention and control of marine pollution from ships,

RECALLING ALSO resolution MEPC.20 (22) by which it adopted the *Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code)*, and resolution MEPC.16(22) by which the BCH Code has become mandatory under Annex II of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL),

NOTING article 16 of MARPOL and regulation 1.4 of MARPOL Annex II concerning the procedure for amending the BCH Code,

HAVING CONSIDERED, at its seventy-second session, proposed amendments to the BCH Code concerning the Model form of the Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk,

1 ADOPTS, in accordance with article 16(2)(d) of MARPOL, amendments to the BCH Code, the text of which is set out in the annex to the present resolution;

2 DETERMINES, in accordance with article 16(2)(f)(iii) of MARPOL, that the amendments to the BCH Code shall be deemed to have been accepted on 1 July 2019 unless, prior to that date, not less than one third of the Parties or Parties, the combined merchant fleets of which constitute not less than 50% of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3 INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of MARPOL, the amendments to the BCH Code shall enter into force on 1 January 2020 upon their acceptance in accordance with paragraph 2 above;

4 INVITES ALSO the Maritime Safety Committee to note this resolution and take action as appropriate;

5 REQUESTS the Secretary-General, in conformity with article 16(2)(e) of MARPOL, to transmit certified copies of the present resolution and the text of the amendments to the BCH Code contained in the annex to all parties to MARPOL;

6 REQUESTS FURTHER the Secretary-General to transmit copies of the present resolution and its annex to the Members of the Organization which are not Parties to MARPOL.

ANNEX

**AMENDMENTS TO THE CODE FOR THE CONSTRUCTION AND EQUIPMENT OF
SHIPS CARRYING DANGEROUS CHEMICALS IN BULK (BCH CODE)**

(Model form of Certificate of Fitness for the Carriage of Dangerous Chemicals in Bulk)

APPENDIX

**MODEL FORM OF CERTIFICATE OF FITNESS FOR THE CARRIAGE OF
DANGEROUS CHEMICALS IN BULK**

- 1 The existing paragraph 6 is replaced by the following:
- "6 That the loading and stability manuals required by paragraph 2.2.1.1 of the Code have been supplied to the ship in an approved form."
- 2 A new paragraph 7 is added as follows:
- "7 That the ship must be loaded:
- .1* only in accordance with loading conditions verified compliant with intact and damage stability requirements using the approved stability instrument fitted in accordance with paragraph 2.2.1.2 of the Code;
 - .2* where a waiver permitted by paragraph 2.2.1.3 of the Code is granted and the approved stability instrument required by paragraph 2.2.1.2 of the Code is not fitted, loading should be made in accordance with one or more of the following approved methods:
 - (i)* in accordance with the loading conditions provided in the approved loading and stability manuals referred to in 6 above; or
 - (ii)* in accordance with loading conditions verified remotely using an approved means; or
 - (iii)* in accordance with a loading condition which lies within an approved range of conditions defined in the approved loading and stability manuals referred to in 6 above; or
 - (iv)* in accordance with a loading condition verified using approved critical KG/GM data defined in the approved loading and stability manuals referred to in 6 above; and
 - .3* in accordance with the loading limitations appended to this Certificate.

Where it is required to load the ship other than in accordance with the above instruction, then the necessary calculations to justify the proposed loading conditions should be communicated to the certifying Administration who may authorize in writing the adoption of the proposed loading condition.**

* Delete as appropriate

** Instead of being incorporated in the Certificate, this text may be appended to the Certificate, if duly signed and stamped."

ANNEX 9

UNIFIED INTERPRETATION OF APPENDIX I (FORM OF THE INTERNATIONAL BALLAST WATER MANAGEMENT CERTIFICATE) OF THE BWM CONVENTION

Appendix I – Form of the International Ballast Water Management Certificate

"Date installed" in relation to "Method of ballast water management used"

1 For the purpose of completing the International Ballast Water Management Certificate, the date when commissioning has been completed in accordance with section 8 of the Guidelines (G8) (MEPC.174(58) or MEPC.279(70), as applicable) should be used.

2 Notwithstanding the above, it should be noted that, with regard to the deadline for installing a ballast water management system, operative paragraph 6 of resolution MEPC.279(70) (*2016 Guidelines for approval of ballast water management systems (G8)*) is as follows:

"6 AGREES that, for the purpose of operative paragraphs 4 and 5 of this resolution, 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;"

3 Consequently, two dates, i.e. the contractual date of delivery or the actual date of delivery, and the date following commissioning and operation, may exist in relation to installing a ballast water management system.

ANNEX 10

DRAFT AMENDMENTS TO MARPOL ANNEX VI

(Prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship)

Regulation 14

Sulphur oxides (SO_x) and particulate matter

General requirements

1 Paragraph 1 is replaced by the following:

"1 The sulphur content of fuel oil used or carried for use on board a ship shall not exceed 0.50% m/m."

Requirements within emission control areas

2 Paragraph 4 is replaced by the following:

"4 While a ship is operating within an emission control area, the sulphur content of fuel oil used on board that ship shall not exceed 0.10% m/m."

3 Paragraphs 8, 9 and 10 are deleted.

Appendix I

Form of International Air Pollution Prevention (IAPP) Certificate (Regulation 8)

Supplement to the International Air Pollution Prevention Certificate (IAPP Certificate)

4 Paragraphs 2.3.1 and 2.3.2 are replaced by the following and a new paragraph 2.3.3 is added as follows:

"2.3.1 When the ship operates outside of an emission control area specified in regulation 14.3, the ship uses:

.1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.50% m/m, and/or
.....

.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6 that is at least as effective in terms of SO_x emission reductions as compared to using a fuel oil with a sulphur content limit value of 0.50% m/m

2.3.2 When the ship operates inside an emission control area specified in regulation 14.3, the ship uses:

- .1 fuel oil with a sulphur content as documented by bunker delivery notes that does not exceed the limit value of 0.10% m/m, and/or

- .2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6 that is at least as effective in terms of SO_x emission reductions as compared to using a fuel oil with a sulphur content limit value of 0.10% m/m

2.3.3 For a ship without an equivalent arrangement approved in accordance with regulation 4.1 as listed in paragraph 2.6, the sulphur content of fuel oil carried for use on board the ship shall not exceed 0.50% m/m as documented by bunker delivery notes.....

ANNEX 11

**RESOLUTION MEPC.304(72)
(adopted on 13 April 2018)**

INITIAL IMO STRATEGY ON REDUCTION OF GHG EMISSIONS FROM SHIPS

THE MARINE ENVIRONMENT PROTECTION COMMITTEE

RECALLING Article 38(e) of the Convention on the International Maritime Organization (the Organization) concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution from ships,

ACKNOWLEDGING that work to address greenhouse gas (GHG) emissions from ships has been undertaken by the Organization continuously since 1997, in particular, through adopting global mandatory technical and operational energy efficiency measures for ships under MARPOL Annex VI,

ACKNOWLEDGING ALSO the decision of the thirtieth session of the Assembly in December 2017 that adopted for the Organization a strategic direction entitled "Respond to Climate Change",

RECALLING the United Nations 2030 Agenda for Sustainable Development,

1 ADOPTS the Initial IMO Strategy on Reduction of GHG Emissions from Ships (hereinafter the Initial Strategy) as set out in the annex to the present resolution;

2 INVITES the Secretary-General of the Organization to make adequate provisions in the Integrated Technical Cooperation Programme (ITCP) to support relevant follow-up actions of the Initial Strategy that may be further decided by the Committee and undertaken by developing countries, particularly least developed countries (LDCs) and small island developing States (SIDS);

3 AGREES to keep the Initial Strategy under review, with a view to adoption of a Revised IMO Strategy on reduction of GHG emissions from ships in 2023.

ANNEX

INITIAL IMO STRATEGY ON REDUCTION OF GHG EMISSIONS FROM SHIPS

Contents

- 1 INTRODUCTION
- 2 VISION
- 3 LEVELS OF AMBITION AND GUIDING PRINCIPLES
- 4 LIST OF CANDIDATE SHORT-, MID- AND LONG-TERM FURTHER MEASURES WITH POSSIBLE TIMELINES AND THEIR IMPACTS ON STATES
- 5 BARRIERS AND SUPPORTIVE MEASURES; CAPACITY BUILDING AND TECHNICAL COOPERATION; R&D
- 6 FOLLOW-UP ACTIONS TOWARDS THE DEVELOPMENT OF THE REVISED STRATEGY
- 7 PERIODIC REVIEW OF THE STRATEGY

1 INTRODUCTION

1.1 The International Maritime Organization (IMO) is the United Nations specialized agency responsible for safe, secure and efficient shipping and the prevention of pollution from ships.

1.2 The Strategy represents the continuation of work of IMO as the appropriate international body to address greenhouse gas (GHG) emissions from international shipping. This work includes Assembly resolution A.963(23) on *IMO policies and practices related to the reduction of greenhouse gas emissions from ships*, adopted on 5 December 2003, urging the Marine Environment Protection Committee (MEPC) to identify and develop the mechanisms needed to achieve the limitation or reduction of GHG emissions from international shipping.

1.3 In response to the Assembly's request, work to address GHG emissions from ships has been undertaken, including inter alia:

- .1 MEPC 62 (July 2011) adopted resolution MEPC.203(62) on *Inclusion of regulations on energy efficiency for ships in MARPOL Annex VI* introducing mandatory technical (EEDI) and operational (SEEMP) measures for the energy efficiency of ships. To date more than 2,700 new ships have been certified to the energy efficiency design requirement;
- .2 MEPC 65 (May 2013) adopted resolution MEPC.229(65) on *Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships*, which, among other things, requests IMO, through its various programmes (ITCP,¹ GloMEEP project,² MTCC network,³ etc.), to provide technical assistance to Member States to enable cooperation in the transfer of energy efficient technologies, in particular to developing countries; and
- .3 MEPC 70 (October 2016) adopted, by resolution MEPC.278(70), amendments to MARPOL Annex VI to introduce the *data collection system for fuel oil consumption of ships*, containing mandatory requirements for ships to record and report their fuel oil consumption. Ships of 5,000 gross tonnage and above (representing approximately 85% of the total CO₂ emissions from international shipping) are required to collect consumption data for each type of fuel oil they use, as well as other, additional, specified data including proxies for "transport work".

1.4 This Initial Strategy is the first milestone set out in the *Roadmap for developing a comprehensive IMO Strategy on reduction of GHG emissions from ships* (the Roadmap) approved at MEPC 70. The Roadmap identifies that a revised Strategy is to be adopted in 2023.

¹ Integrated Technical Cooperation Programme <http://www.imo.org>

² Global Maritime Energy Efficiency Partnerships <http://glomeep.imo.org>

³ Global Maritime Technology Cooperation Centres Network <http://gmn.imo.org>

Context

- 1.5 The Initial Strategy falls within a broader context including:
- .1 other existing instruments related to the law of the sea, including UNCLOS, and to climate change, including the UNFCCC and its related legal instruments, including the Paris Agreement;
 - .2 the leading role of the Organization for the development, adoption and assistance in implementation of environmental regulations applicable to international shipping;
 - .3 the decision of the thirtieth session of the Assembly in December 2017 that adopted for the Organization a Strategic Direction entitled "Respond to climate change"; and
 - .4 the United Nations 2030 Agenda for Sustainable Development.

Emissions and emission scenarios

1.6 The *Third IMO GHG Study 2014* has estimated that GHG emissions from international shipping in 2012 accounted for some 2.2% of anthropogenic CO₂ emissions and that such emissions could grow by between 50% and 250% by 2050. Future IMO GHG studies would help reduce the uncertainties associated with these emission estimates and scenarios.

Objectives of the Initial Strategy

- 1.7 The Initial Strategy is aimed at:
- .1 enhancing IMO's contribution to global efforts by addressing GHG emissions from international shipping. International efforts in addressing GHG emissions include the Paris Agreement and its goals and the United Nations 2030 Agenda for Sustainable Development and its SDG 13: "*Take urgent action to combat climate change and its impacts*";
 - .2 identifying actions to be implemented by the international shipping sector, as appropriate, while addressing impacts on States and recognizing the critical role of international shipping in supporting the continued development of global trade and maritime transport services; and
 - .3 identifying actions and measures, as appropriate, to help achieve the above objectives, including incentives for research and development and monitoring of GHG emissions from international shipping.

2 VISION

IMO remains committed to reducing GHG emissions from international shipping and, as a matter of urgency, aims to phase them out as soon as possible in this century.

3 LEVELS OF AMBITION AND GUIDING PRINCIPLES

Levels of ambition

3.1 Subject to amendment depending on reviews to be conducted by the Organization, the Initial Strategy identifies levels of ambition for the international shipping sector noting that technological innovation and the global introduction of alternative fuels and/or energy sources for international shipping will be integral to achieve the overall ambition. The reviews should take into account updated emission estimates, emissions reduction options for international shipping, and the reports of the Intergovernmental Panel on Climate Change (IPCC), as relevant. Levels of ambition directing the Initial Strategy are as follows:

.1 *carbon intensity of the ship to decline through implementation of further phases of the energy efficiency design index (EEDI) for new ships*

to review with the aim to strengthen the energy efficiency design requirements for ships with the percentage improvement for each phase to be determined for each ship type, as appropriate;

.2 *carbon intensity of international shipping to decline*

to reduce CO₂ emissions per transport work, as an average across international shipping, by at least 40% by 2030, pursuing efforts towards 70% by 2050, compared to 2008; and

.3 *GHG emissions from international shipping to peak and decline*

to peak GHG emissions from international shipping as soon as possible and to reduce the total annual GHG emissions by at least 50% by 2050 compared to 2008 whilst pursuing efforts towards phasing them out as called for in the Vision as a point on a pathway of CO₂ emissions reduction consistent with the Paris Agreement temperature goals.

Guiding principles

3.2 The principles guiding the Initial Strategy include:

.1 the need to be cognizant of the principles enshrined in instruments already developed, such as:

.1 the principle of non-discrimination and the principle of no more favourable treatment, enshrined in MARPOL and other IMO conventions; and

.2 the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances, enshrined in UNFCCC, its Kyoto Protocol and the Paris Agreement;

.2 the requirement for all ships to give full and complete effect, regardless of flag, to implementing mandatory measures to ensure the effective implementation of this strategy;

- .3 the need to consider the impacts of measures on States, including developing countries, in particular, on LDCs and SIDS as noted by MEPC 68 (MEPC 68/21, paragraphs 4.18 to 4.19) and their specific emerging needs, as recognized in the Organization's Strategic Plan (resolution A.1110(30)); and
- .4 the need for evidence-based decision-making balanced with the precautionary approach as set out in resolution MEPC.67(37).

4 LIST OF CANDIDATE SHORT-, MID- AND LONG-TERM FURTHER MEASURES WITH POSSIBLE TIMELINES AND THEIR IMPACTS ON STATES

Timelines

4.1 Candidate measures set out in this Initial Strategy should be consistent with the following timelines:

- .1 possible short-term measures could be measures finalized and agreed by the Committee between 2018 and 2023. Dates of entry into force and when the measure can effectively start to reduce GHG emissions would be defined for each measure individually;
- .2 possible mid-term measures could be measures finalized and agreed by the Committee between 2023 and 2030. Dates of entry into force and when the measure can effectively start to reduce GHG emissions would be defined for each measure individually; and
- .3 possible long-term measures could be measures finalized and agreed by the Committee beyond 2030. Dates of entry into force and when the measure can effectively start to reduce GHG emissions would be defined for each measure individually.

4.2 In aiming for early action, the timeline for short-term measures should prioritize potential early measures that the Organization could develop, while recognizing those already adopted, including MARPOL Annex VI requirements relevant for climate change, with a view to achieve further reduction of GHG emissions from international shipping before 2023.

4.3 Certain mid- and long-term measures will require work to commence prior to 2023.

4.4 These timelines should be revised as appropriate as additional information becomes available.

4.5 Short-, mid- and long-term further measures to be included in the Revised IMO GHG Strategy should be accompanied by implementation schedules.

4.6 The list of candidate measures is non-exhaustive and is without prejudice to measures the Organization may further consider and adopt.

Candidate short-term measures

4.7 Measures can be categorized as those the effect of which is to directly reduce GHG emissions from ships and those which support action to reduce GHG emissions from ships. All the following candidate measures⁴ represent possible short-term further action of the Organization on matters related to the reduction of GHG emissions from ships:

- .1 further improvement of the existing energy efficiency framework with a focus on EEDI and SEEMP, taking into account the outcome of the review of EEDI regulations;
- .2 develop technical and operational energy efficiency measures for both new and existing ships, including consideration of indicators in line with the three-step approach that can be utilized to indicate and enhance the energy efficiency performance of shipping, e.g. Annual Efficiency Ratio (AER), Energy Efficiency per Service Hour (EESH), Individual Ship Performance Indicator (ISPI) and Fuel Oil Reduction Strategy (FORS);
- .3 establishment of an Existing Fleet Improvement Programme;
- .4 consider and analyse the use of speed optimization and speed reduction as a measure, taking into account safety issues, distance travelled, distortion of the market or trade and that such measure does not impact on shipping's capability to serve remote geographic areas;
- .5 consider and analyse measures to address emissions of methane and further enhance measures to address emissions of Volatile Organic Compounds;
- .6 encourage the development and update of national action plans to develop policies and strategies to address GHG emissions from international shipping in accordance with guidelines to be developed by the Organization, taking into account the need to avoid regional or unilateral measures;
- .7 continue and enhance technical cooperation and capacity-building activities under the ITCP;
- .8 consider and analyse measures to encourage port developments and activities globally to facilitate reduction of GHG emissions from shipping, including provision of ship and shoreside/onshore power supply from renewable sources, infrastructure to support supply of alternative low-carbon and zero-carbon fuels, and to further optimize the logistic chain and its planning, including ports;
- .9 initiate research and development activities addressing marine propulsion, alternative low-carbon and zero-carbon fuels, and innovative technologies to further enhance the energy efficiency of ships and establish an International Maritime Research Board to coordinate and oversee these R&D efforts;
- .10 incentives for first movers to develop and take up new technologies;

⁴ The Initial Strategy is subject to revision based on fuel oil consumption data collected during 2019-2021 and does not prejudice any specific further measures that may be implemented in Phase 3 of the three-step approach.

- .11 develop robust lifecycle GHG/carbon intensity guidelines for all types of fuels, in order to prepare for an implementation programme for effective uptake of alternative low-carbon and zero-carbon fuels;
- .12 actively promote the work of the Organization to the international community, in particular, to highlight that the Organization, since the 1990s, has developed and adopted technical and operational measures that have consistently provided a reduction of air emissions from ships, and that measures could support the Sustainable Development Goals, including SDG 13 on Climate Change; and
- .13 undertake additional GHG emission studies and consider other studies to inform policy decisions, including the updating of Marginal Abatement Cost Curves and alternative low-carbon and zero-carbon fuels.

Candidate mid-term measures

4.8 Measures can be categorized as those the effect of which is to directly reduce GHG emissions from ships and those which support action to reduce GHG emissions from ships. All the following candidate measures represent possible mid-term further action of the Organization on matters related to the reduction of GHG emissions from ships:

- .1 implementation programme for the effective uptake of alternative low-carbon and zero-carbon fuels, including update of national actions plans to specifically consider such fuels;
- .2 operational energy efficiency measures for both new and existing ships including indicators in line with three-step approach that can be utilized to indicate and enhance the energy efficiency performance of ships;
- .3 new/innovative emission reduction mechanism(s), possibly including Market-based Measures (MBMs), to incentivize GHG emission reduction;
- .4 further continue and enhance technical cooperation and capacity-building activities such as under the ITCP; and
- .5 development of a feedback mechanism to enable lessons learned on implementation of measures to be collated and shared through a possible information exchange on best practice.

Candidate long-term measures

4.9 All the following candidate measures represent possible long-term further action of the Organization on matters related to the reduction of GHG emissions from ships:

- .1 pursue the development and provision of zero-carbon or fossil-free fuels to enable the shipping sector to assess and consider decarbonization in the second half of the century; and
- .2 encourage and facilitate the general adoption of other possible new/innovative emission reduction mechanism(s).

Impacts on States

4.10 The impacts on States of a measure should be assessed and taken into account as appropriate before adoption of the measure. Particular attention should be paid to the needs of developing countries, especially small island developing States (SIDS) and least developed countries (LDCs).

4.11 When assessing impacts on States the impact of a measure should be considered, as appropriate, inter alia, in the following terms:

- .1 geographic remoteness of and connectivity to main markets;
- .2 cargo value and type;
- .3 transport dependency;
- .4 transport costs;
- .5 food security;
- .6 disaster response;
- .7 cost-effectiveness; and
- .8 socio-economic progress and development.

4.12 The specification for and agreement on the procedure for assessing and taking into account the impacts of measures related to international shipping on States should be undertaken as a matter of urgency as part of the follow-up actions.

4.13 Disproportionately negative impacts should be assessed and addressed, as appropriate.

5 BARRIERS AND SUPPORTIVE MEASURES; CAPACITY-BUILDING AND TECHNICAL COOPERATION; R&D

5.1 The Committee recognizes that developing countries, in particular LDCs and SIDS, have special needs with regard to capacity-building and technical cooperation.

5.2 The Committee acknowledges that development and making globally available new energy sources that are safe for ships could be a specific barrier to the implementation of possible measures.

5.3 The Committee could assist the efforts to promote low-carbon technologies by facilitating public-private partnerships and information exchange.

5.4 The Committee should continue to provide mechanisms for facilitating information sharing, technology transfer, capacity-building and technical cooperation, taking into account resolution MEPC.229(65) on *Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships*.

5.5 The Organization is requested to assess periodically the provision of financial and technological resources and capacity-building to implement the Strategy through the ITCP and other initiatives including the GloMEEP project and the MTCC network.

6 FOLLOW-UP ACTIONS TOWARDS THE DEVELOPMENT OF THE REVISED STRATEGY

6.1 A programme of follow-up actions of the Initial Strategy should be developed.

6.2 The key stages for the adoption of a Revised IMO GHG Strategy in 2023 as set out in the Roadmap, are as follows:

Spring 2018 (MEPC 72)	Adoption of the Initial Strategy ⁵ including, inter alia, a list of candidate short-, mid- and long-term further measures with possible timelines, to be revised as appropriate as additional information becomes available
January 2019	Start of Phase 1: Data collection (Ships to collect data)
Spring 2019 (MEPC 74)	Initiation of Fourth IMO GHG Study using data from 2012-2018
Summer 2020	Data from 2019 to be reported to IMO
Autumn 2020 (MEPC 76)	Start of Phase 2: data analysis (no later than autumn 2020) Publication of Fourth IMO GHG Study for consideration by MEPC 76
Spring 2021 (MEPC 77)	Secretariat report summarizing the 2019 data pursuant to regulation 22A.10 Initiation of work on adjustments on Initial IMO Strategy, based on Data Collection System (DCS) data
Summer 2021	Data for 2020 to be reported to IMO
Spring 2022 (MEPC 78)	Phase 3: Decision step Secretariat report summarizing the 2020 data pursuant to regulation 22A.10
Summer 2022	Data for 2021 to be reported to IMO
Spring 2023 (MEPC 80)	Secretariat report summarizing the 2021 data pursuant to regulation 22A.10 Adoption of Revised IMO Strategy, including short-, mid- and long-term further measure(s), as required, with implementation schedules

6.3 The Marginal Abatement Cost Curve (MACC) for each measure, as appropriate, should be ascertained and updated, and then evaluated on a regular basis.

⁵ Initial IMO Strategy is subject to revision based on DCS data during 2019-2021 and does not prejudice any specific further measures that may be implemented in Phase 3 of the three-step approach.

7 PERIODIC REVIEW OF THE STRATEGY

7.1 The Revised Strategy is to be adopted in spring 2023.

7.2 The Revised Strategy should be subject to a review five years after its final adoption.

7.3 The Committee should undertake the review including defining the scope of the review and its terms of reference.

ANNEX 12

**BIENNIAL STATUS REPORT OF THE PPR SUB-COMMITTEE FOR THE 2018-2019 BIENNIUM AND
PROVISIONAL AGENDA FOR PPR 6**

SUB-COMMITTEE ON POLLUTION PREVENTION AND RESPONSE (PPR)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
1. Improve implementation	1.11	Revised guidelines for the application of MARPOL Annex I requirements to FPSOs and FSUs	2019	MEPC	PPR		Completed		MEPC 70/18, par. 15.5; and PPR 5/24, section 14
1. Improve implementation	1.12	Review of the 2015 Guidelines for exhaust gas cleaning systems (resolution MEPC.259(68))	2019	MEPC	PPR		In progress		MEPC 69/21, pars. 19.4 and 19.5; and PPR 5/24, section 11
1. Improve implementation	1.13	Guide on practical methods for the implementation of the OPRC Convention and the OPRC-HNS Protocol	2019	MEPC	PPR		In progress		MEPC 70/18, par. 15.7; and PPR 5/24, section 17
1. Improve implementation	1.14	Revised guidance on ballast water sampling and analysis	2019	MEPC	PPR	III	In progress		MEPC 68/21, pars. 7.14 and 17.26; MEPC 70/18, par. 4.47; MEPC 71/17, par. 4.45; and PPR 5/24, section 5

SUB-COMMITTEE ON POLLUTION PREVENTION AND RESPONSE (PPR)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
1. Improve implementation	1.15	Revised guidance on methodologies that may be used for enumerating viable organisms	2019	MEPC	PPR		In progress		MEPC 71/17, par. 4.54; and PPR 5/24, section 6
1. Improve implementation	1.16	Updated IMO Dispersant Guidelines (part IV)	2019	MEPC	PPR		Completed		PPR 4/21, section 13; and PPR 5/24, section 16
1. Improve implementation	1.17	Consistent implementation of regulation 14.1.3 of MARPOL Annex VI	2019	MEPC	PPR		In progress		MEPC 71/17, par. 14.27; and PPR 5/24, section 13
1. Improve implementation	1.24	Revision of certification requirements for SCR systems under the NO _x Technical Code 2008	2018	MEPC	PPR		Completed		MEPC 70/18, par. 15.15; MEPC 71/17, pars. 5.8 and 14.31 and resolution MEPC.291(71) ; and PPR 5/24, section 10
1. Improve implementation	1.25	Guidelines for the discharge of exhaust gas recirculation bleed-off water	2018	MEPC	PPR		Completed		MEPC 71/17, pars. 5.4 to 5.7; and PPR 5/24, section 9

SUB-COMMITTEE ON POLLUTION PREVENTION AND RESPONSE (PPR)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
1. Improve implementation	1.26	Amendments to the 2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.227(64)) to address inconsistencies in their application	2020	MEPC	PPR		No work requested		MEPC 71/17, pars.14.8 and 14.9; and MEPC 72/17, par. 15.10
Notes: The output has been placed on the provisional agenda for PPR 6 to start the work.									
2. Integrate new and advancing technologies in the regulatory framework	2.3	Amendments to the IGF Code and development of guidelines for low-flashpoint fuels	2019	MSC	HTW / PPR / SDC / SSE	CCC	No work requested		MSC 94/21, pars 18.5 and 18.6; MSC 96/25, pars. 10.1 to 10.3
2. Integrate new and advancing technologies in the regulatory framework	2.13	Review of the IBTS Guidelines and amendments to the IOPP Certificate and Oil Record Book	2019	MEPC	PPR		In progress		MEPC 70/18, par. 15.12; and PPR 5/24, section 15
2. Integrate new and advancing technologies in the regulatory framework	2.14	Amendments to regulation 14 of MARPOL Annex VI to require a dedicated sampling point for fuel oil	2019	MEPC	SSE	PPR	In progress		MEPC 70/18, par. 15.10; and PPR 5/24, section 12

SUB-COMMITTEE ON POLLUTION PREVENTION AND RESPONSE (PPR)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
2. Integrate new and advancing technologies in the regulatory framework	2.18	Standards for shipboard gasification of waste systems and associated amendments to regulation 16 of MARPOL Annex VI	2019	MEPC	PPR		In progress		MEPC 70/17, par. 15.17; PPR 5/24, section 8; and MEPC 72/17, par. 15.10
Notes: MEPC 72 approved TCY extension from 2018 to 2019.									
2. Integrate new and advancing technologies in the regulatory framework	2.19	Consideration of an initial proposal to amend annex 1 to the AFS Convention to include controls on cybutryne	2018	MEPC	PPR		In progress		MEPC 71/17, par. 14.3; and PPR 5/24, section 19
Notes: PPR 5 recommended that MEPC 73 rename Output 2.19 to read "Amendment of annex 1 to the AFS Convention to include controls on cybutryne, and consequential revision of relevant guidelines" and extend the TCY of the output to 2020.									
3. Respond to climate change	3.3	Impact on the Arctic of emissions of black carbon from international shipping	2019	MEPC	PPR		In progress		MEPC 71/17, par. 5.3; and PPR 5/24, section 7
6. Ensure regulatory effectiveness	6.1	Unified interpretation of provisions of IMO safety, security, and environment-related conventions	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR		Ongoing		MEPC 71/17, pars. 4.80, 5.22, 9.10, 10.7 and annexes 8 and 20; and PPR 5/24, section 20
6. Ensure regulatory effectiveness	6.3	Safety and pollution hazards of chemicals and preparation of consequential amendments to the IBC Code	Continuous	MEPC	PPR		Ongoing		MEPC 71/17, pars. 9.3 to 9.5; and PPR 5/24, section 3

SUB-COMMITTEE ON POLLUTION PREVENTION AND RESPONSE (PPR)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
6. Ensure regulatory effectiveness	6.10	Review of MARPOL Annex II requirements that have an impact on cargo residues and tank washings of high viscosity, solidifying and persistent floating products and associated definitions, and preparation of amendments	2019	MEPC	PPR		Completed		PPR 4/21, section 4; and PPR 5/24, section 4
6. Ensure regulatory effectiveness	6.11	Development of measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters	2019	MEPC	PPR		No work requested		MEPC 71/17, par. 14.13
6. Ensure regulatory effectiveness	6.13	Use of electronic record books	2018	MEPC	PPR		Completed		FAL.5/Circ.39/Rev.2; FAL 40/19, pars. 6.18 to 6.21; MEPC 70/18, par. 2.2; and PPR 5/24, section 18
OW. Other work	OW.10	Measures to harmonize port State control (PSC) activities and procedures worldwide	Continuous	MSC / MEPC	HTW / PPR / NCSR	III	Ongoing		MEPC 70/18, pars. 2.2, 5.18 to 5.20 and 15.20; MSC 97/22, par. 19.8; and PPR 5/24, pars. 11.5, 13.18, 13.21, 18.15 and 18.16

PROVISIONAL AGENDA FOR PPR 6

- Opening of the session
- 1 Adoption of the agenda
 - 2 Decisions of other IMO bodies
 - 3 Safety and pollution hazards of chemicals and preparation of consequential amendments to the IBC Code
 - 4 Revised guidance on ballast water sampling and analysis
 - 5 Revised guidance on methodologies that may be used for enumerating viable organisms
 - 6 Amendment of annex 1 to the AFS Convention to include controls on cybutryne, and consequential revision of relevant guidelines
 - 7 Consideration of the impact on the Arctic of emissions of Black Carbon from international shipping
 - 8 Consistent implementation of regulation 14.1.3 of MARPOL Annex VI
 - 9 Amendments to regulation 14 of MARPOL Annex VI to require a dedicated sampling point for fuel oil
 - 10 Standards for shipboard gasification of waste systems and associated amendments to regulation 16 of MARPOL Annex VI
 - 11 Review of the 2015 Guidelines for Exhaust Gas Cleaning Systems (resolution MEPC.259(68))
 - 12 Development of measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters
 - 13 Review of the IBTS Guidelines and amendments to the IOPP Certificate and Oil Record Book
 - 14 Amendments to the 2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.227(64)) to address inconsistencies in their application
 - 15 Guide on practical methods for the implementation of the OPRC Convention and the OPRC-HNS Protocol
 - 16 Unified interpretation to provisions of IMO environment-related conventions
 - 17 Biennial agenda and provisional agenda for PPR 7
 - 18 Election of Chair and Vice-Chair for 2020
 - 19 Any other business
 - 20 Report to the Marine Environment Protection Committee

ANNEX 13

STATUS REPORT OF THE OUTPUTS OF MEPC FOR THE 2018-2019 BIENNIUM

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
1. Improve implementation	1.2	Input on identifying emerging needs of developing countries, in particular SIDS and LDCs to be included in the ITCP	Continuous	TCC	MSC / MEPC / FAL / LEG		Ongoing		MEPC 72/17, section 12
1. Improve implementation	1.4	Analysis of consolidated audit summary reports	Annual	Assembly	MSC / MEPC / LEG / TCC / III	Council	Completed		MEPC 72/17, par. 2.8.2
1. Improve implementation	1.5	Non-exhaustive list of obligations under instruments relevant to the IMO Instruments Implementation Code (III Code)	Annual	MSC / MEPC	III		Completed		MEPC 72/17, par. 2.7.5
1. Improve implementation	1.7	Identify thematic priorities within the area of maritime safety and security, marine environmental protection, facilitation of maritime traffic and maritime legislation	Annual	TCC	MSC / MEPC / FAL / LEG		Completed		MEPC 72/17, section 12
1. Improve implementation	1.9	Report on activities within the ITCP related to the OPRC Convention and the OPRC-HNS Protocol	Annual	TCC	MEPC		Completed		MEPC 72/17, section 12

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
1. Improve implementation	1.11	Revised guidelines for the application of MARPOL Annex I requirements to FPSOs and FSUs	2019	MEPC	PPR		In progress		MEPC 70/18, par. 15.5; and PPR 5/24, section 14, par. 24.2.15 and annex 11
1. Improve implementation	1.12	Review of the 2015 Guidelines for exhaust gas cleaning systems (resolution MEPC.259(68))	2019	MEPC	PPR		In progress		MEPC 69/21, pars. 19.4 and 19.5 ; and PPR 5/24, section 11
1. Improve implementation	1.13	Guide on practical methods for the implementation of the OPRC Convention and the OPRC-HNS Protocol	2019	MEPC	PPR		In progress		MEPC 70/18, par. 15.7; and PPR 5/24, section 17
1. Improve implementation	1.14	Revised guidance on ballast water sampling and analysis	2019	MEPC	PPR	III	In progress		MEPC 68/21, pars. 7.14 and 17.26; MEPC 70/18, paragraph 4.47; MEPC 71/17, paragraph 4.45; and PPR 5/24, section 5
1. Improve implementation	1.15	Revised guidance on methodologies that may be used for enumerating viable organisms	2019	MEPC	PPR		In progress		MEPC 71/17, paragraph 4.54; and PPR 5/24, section 6

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
1. Improve implementation	1.16	Updated IMO Dispersant Guidelines (part IV)	2019	MEPC	PPR		In progress		PPR 4/21, section 13; and PPR 5/24, section 16, pars. 24.2.16 to 24.2.17 and annex 12
1. Improve implementation	1.17	Consistent implementation of regulation 14.1.3 of MARPOL Annex VI	2019	MEPC	PPR		In progress		MEPC 71/17, par. 14.27; PPR 5/24, section 13; MEPC 72/17, pars. 5.2 to 5.11, 5.41 to 5.43, and annex 10
1. Improve implementation	1.18	Measures to ensure quality of fuel oil for use on board ships	2019	MEPC			In progress		MEPC 72/17, pars. 5.12-5.18 and 5.44-5.45
1. Improve implementation	1.24	Revision of certification requirements for SCR systems under the NO _x Technical Code 2008	2018	MEPC	PPR		In progress		MEPC 70/18, par. 15.15; MEPC 71/17, pars. 5.8 and 14.31, and resolution MEPC.291(71); and PPR 5/24, section 10, pars. 24.2.10/11 and annexes 8 and 9

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
1. Improve implementation	1.25	Guidelines for the discharge of exhaust gas recirculation bleed-off water	2018	MEPC	PPR		In progress		MEPC 71/17, pars 5.4 to 5.7; and PPR 5/24, section 9, pars. 24.2.8 to 24.2.9 and annex 7
1. Improve implementation	1.26	Amendments to the 2012 Guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.227(64)) to address inconsistencies in their application	2020	MEPC	PPR				MEPC 71/17, pars.14.8 and 14.9; and MEPC 72/17, par.15.10
Notes: The output has been placed on the provisional agenda for PPR 6 to start the work.									
2. Integrate new and advancing technologies in the regulatory framework	2.2	Approved ballast water management systems which make use of Active Substances, taking into account recommendations of the GESAMP-BWWG	Annual	MEPC			Completed		MEPC 72/17, section 4
2. Integrate new and advancing technologies in the regulatory framework	2.13	Review of the IBTS Guidelines and amendments to the IOPP Certificate and Oil Record Book	2019	MEPC	PPR		In progress		MEPC 70/18, par. 15.12; and PPR 5/24, section 15

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
2. Integrate new and advancing technologies in the regulatory framework	2.14	Amendments to regulation 14 of MARPOL Annex VI to require a dedicated sampling point for fuel oil	2019	MEPC	SSE	PPR	In progress		MEPC 70/18, par. 15.10; and PPR 5/24, section 12
2. Integrate new and advancing technologies in the regulatory framework	2.17	Consideration of development of goal-based ship construction standards for all ship types	2018	MSC / MEPC			No work requested by MSC		
2. Integrate new and advancing technologies in the regulatory framework	2.18	Standards for shipboard gasification of waste systems and associated amendments to regulation 16 of MARPOL Annex VI	2019	MEPC	PPR		In progress		MEPC 70/17, paragraph 15.17; PPR 5/24, section 8; and MEPC 72/17, par. 15
2. Integrate new and advancing technologies in the regulatory framework	2.19	Consideration of an initial proposal to amend annex 1 to the AFS Convention to include controls on cybutryne	2018	MEPC	PPR		In progress		MEPC 71/17, paragraph 14.3; and PPR 5/24, section 19 and par. 24.2.25
Notes: PPR 5 recommended that MEPC 73 rename Output 2.19 to read "Amendment of annex 1 to the AFS Convention to include controls on cybutryne, and consequential revision of relevant guidelines" and extend the TCY of the output to 2020.									
3. Respond to climate change	3.1	Treatment of ozone-depleting substances used by ships	Annual	MEPC			Completed		MEPC 72/17, pars. 5.19 and 5.20

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
3. Respond to climate change	3.2	Further development of mechanisms needed to achieve the limitation or reduction of CO2 emissions from international shipping	Annual	MEPC			Completed		MEPC 72/14, sections 6 and 7, and annex 11
3. Respond to climate change	3.3	Impact on the Arctic of emissions of black carbon from international shipping	2019	MEPC	PPR		In progress		MEPC 71/17, paragraph 5.3; and PPR 5/24, section 7 and par. 24.2.7
3. Respond to climate change	3.4	Promotion of technical cooperation and transfer of technology relating to the improvement of energy efficiency of ships	2019	MEPC			In progress		MEPC 72/17, section 12
3. Respond to climate change	3.5	Revision of guidelines concerning EEDI and SEEMP	2019	MEPC			In progress		MEPC 72/17, sections 5 and 6
3. Respond to climate change	3.6	EEDI reviews required under regulation 21.6 of MARPOL Annex VI	2019	MEPC			In progress		MEPC 72/17, pars. 5.24 to 5.33, 3.50 to 3.51, and annex 6
3. Respond to climate change	3.7	Further technical and operational measures for enhancing the energy efficiency of international shipping	2019	MEPC			In progress		MEPC 72/17, section 6
4. Engage in ocean governance	4.1	Identification and protection of Special Areas, ECAs and PSSAs	Continuous	MEPC	NCSR		Ongoing		MEPC 72/17, section 8

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
4. Engage in ocean governance	4.2	Input to the ITCP on emerging issues relating to sustainable development and achievement of the SDGs	2019	TCC	MSC / FAL / LEG / MEPC		In progress		MEPC 72/17, section 12
4. Engage in ocean governance	4.3	Development of an action plan to address marine plastic litter from ships	2020	MEPC	PPR		In progress		MEPC 72/17, pars. 15.2 to 15.6
6. Ensure regulatory effectiveness	6.1	Unified interpretation of provisions of IMO safety, security and environment-related conventions	Continuous	MSC / MEPC	III / PPR / CCC / SDC / SSE / NCSR		Ongoing		MEPC 71/17, paragraphs 4.80, 5.22, 9.10, 10.7 and annexes 8 and 20; and PPR 5/24, section 20; and MEPC 72/17, pars 3.10 to 3.13, 3.56 to 3.57 and annex 9
6. Ensure regulatory effectiveness	6.3	Safety and pollution hazards of chemicals and preparation of consequential amendments to the IBC Code	Continuous	MEPC	PPR		Ongoing		MEPC 71/17, paragraphs 9.3 to 9.5; PPR 5/24, section 3; and MEPC 72/17, par. 9.4
6. Ensure regulatory effectiveness	6.4	Lessons learned and safety issues identified from the analysis of marine safety investigation reports	Annual	MSC / MEPC	III				III 4/15, section 4

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
6. Ensure regulatory effectiveness	6.5	Identified issues relating to the implementation of IMO instruments from the analysis of PSC data	Annual	MSC / MEPC	III				III 4/15, section 6
6. Ensure regulatory effectiveness	6.7	Consideration and analysis of reports on alleged inadequacy of port reception facilities	Annual	MEPC	III				III 4/15, section 3.
6. Ensure regulatory effectiveness	6.8	Monitoring the worldwide average sulphur content of fuel oils supplied for use on board ships	Annual	MEPC			Completed		MEPC 72/17, pars. 5.21 to 5.23
6. Ensure regulatory effectiveness	6.10	Review of MARPOL Annex II requirements that have an impact on cargo residues and tank washings of high viscosity, solidifying and persistent floating products and associated definitions, and preparation of amendments	2019	MEPC	PPR		In progress		PPR 4/21, section 4; and PPR 5/24, section 4
6. Ensure regulatory effectiveness	6.11	Development of measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters	2019	MEPC	PPR		In progress		MEPC 71/17, paragraph 14.13; and MEPC 72/17, section 11

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
6. Ensure regulatory effectiveness	6.13	Use of electronic record books	2018	MEPC	PPR		In progress		FAL.5/Circ.39/Rev.2; FAL 40/19, pars. 6.18 to 6.21; MEPC 70/18, par. 2.2; and PPR 5/24, section 18 and pars. 24.2.18 to 24.2.23
7. Ensure organizational effectiveness	7.1	Endorsed proposals for the development, maintenance and enhancement of information systems and related guidance (GISIS, websites, etc.)	Continuous	Council	MSC / MEPC / FAL / LEG / TCC		Ongoing		MEPC 72/17, par. 16.22
7. Ensure organizational effectiveness	7.3	Analysis and consideration of reports on partnership arrangements for, and implementation of, environmental programmes	Annual	TCC	MEPC		Completed		MEPC 72/17, section 12
7. Ensure organizational effectiveness	7.9	Revised documents on organization and method of work, as appropriate	2019	Council	MSC / FAL / LEG / TCC / MEPC		Completed		MEPC 72/17, section 14

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
OW. Other work	OW.10	Measures to harmonize port State control (PSC) activities and procedures worldwide	Continuous	MSC / MEPC	HTW / PPR / NCSR	III	Ongoing		MEPC 70/18, pars. 2.2, 5.18 to 5.20 and 15.20; MSC 97/22, paragraph 19.8; and PPR 5/24, paragraphs 11.5, 13.18, 13.21, 18.15 and 18.16.
OW. Other work	OW.13	Endorsed proposals for new outputs for the 2018-2019 biennium as accepted by the Committees	Annual	Council	MSC / MEPC / FAL / LEG / TCC		Completed		MEPC 72/17, section 15
OW. Other work	OW.16	Updated Survey Guidelines under the Harmonized System of Survey and Certification (HSSC)	Annual	MSC / MEPC	III		Completed		MEPC 72/17, pars. 7.4, 4.24 to 4.33
OW. Other work	OW.19	Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas	Annual	MSC / MEPC	III	CCC			CCC 4/12, section 8
OW. Other work	OW.23	Cooperate with the United Nations on matters of mutual interest, as well as provide relevant input/guidance	2019	Assembly	MSC / MEPC / FAL / LEG / TCC	Council	In progress		MEPC 72/17, sections 5 and 7

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)									
Reference to SD, if applicable	Output number	Description	Target completion year	Parent organ(s)	Associated organ(s)	Coordinating organ	Status of output for Year 1	Status of output for Year 2	References
OW. Other work	OW.24	Cooperate with other international bodies on matters of mutual interest, as well as provide relevant input/guidance	2019	Assembly	MSC / MEPC / FAL / LEG / TCC	Council	In progress		MEPC 72/17, sections 5 and 7
OW. Other work	OW.49	Review the Model Agreement for the authorization of recognized organizations acting on behalf of the Administration	2018	MSC / MEPC	III				III 4/15, section 11

POST-BIENNIAL AGENDA OF MEPC

MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC)							
ACCEPTED POST-BIENNIAL OUTPUTS			Parent organ(s)	Associated organ(s)	Coordinating organ	Timescale	Reference
No.	Reference to strategic direction, if applicable	Description					
1	1. Improve implementation	Review of the 2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (resolution MEPC.207(62))	MEPC	PPR		2 sessions	MEPC 72/17, par.15.8
2	2. Ensure regulatory effectiveness	Development of amendments to regulation 19 of MARPOL Annex VI and development of an associated Exemption Certificate for the exemption of ships not normally engaged on international voyages	MEPC	III		2 sessions	MEPC 71/17, par.14.15
3	Other work	Recommendations related to navigational sonar on crude oil tankers	MSC / MEPC	SDC		1 session	MSC 91/22, Par. 19.23

ANNEX 14

ITEMS TO BE INCLUDED IN THE AGENDAS OF MEPC 73 AND MEPC 74

No.¹	Item	MEPC 73 October 2018	MEPC 74 May 2019
1	Adoption of the agenda	X	X
2	Decisions of other bodies	X	X
3	Consideration and adoption of amendments to mandatory instruments	X [DG]	X [DG]
4	Harmful aquatic organisms in ballast water	X [RG]	X [RG]
5	Air pollution and energy efficiency	X [WG] ²	X [WG] ²
6	Further technical and operation measures for enhancing the energy efficiency of international shipping	X [WG] ²	X [WG] ²
7	Reduction of GHG emissions from ships	X [WG]	X [WG]
8	Development of an action plan to address marine plastic litter from ships	X[WG]	
9	Development of measures to reduce risks of use and carriage of heavy fuel oil as fuel by ships in Arctic waters	X	
10	Identification and protection of Special Areas, ECAs and PSSAs	X	X
11	Pollution prevention and response	X ³	X ⁴
12	Reports of other sub-committees	X	X
13	Technical cooperation activities for the protection of the marine environment	X	X
14	Capacity-building for the implementation of new measures	X	X
15	Work programme of the Committee and subsidiary bodies	X	X
16	Application of the Committees' Method of Work	X	X
17	Election of the Chair and Vice-Chair	X	X
18	Any other business	X	X
19	Consideration of the report of the Committee	X	X

¹ The numbering does not necessarily imply that this will be the number of the agenda item in the forthcoming sessions.

² The working group, if established under agenda item 5, may also cover agenda item 6.

³ Report of PPR 5.

⁴ Report of PPR 6.

ANNEX 15

STATEMENT BY THE SECRETARY-GENERAL ON THE ADOPTION OF THE INITIAL IMO STRATEGY ON REDUCTION OF GHG EMISSIONS FROM SHIPS

As I have been following the discussions on agenda item 7 since the beginning of the week, I deem it appropriate to address you at this critical juncture of the Committee meeting *before* you take the report of the Working Group as we move to adopt the initial IMO Strategy on Reduction of GHG emissions from ships.

Let me first welcome the significant progress made by the working group. Under the able leadership of its Chair, Mr. Sveinung Oftedal of Norway, the group has been able to overcome major challenges in finalizing the text of the Strategy. I am extremely grateful to all participants for their significant efforts to engage constructively in achieving its objectives.

Allow me to remind you of the words I used in my opening remarks on Monday morning. I urged you then to break new ground and to demonstrate the best cooperative spirit, in the interest of the Organization and above all, in the interest of maritime communities and future generations.

Right now, as the Committee moves towards the completion of its work by adopting the strategy, it is the moment to show the best of IMO's cooperative spirit.

This text presented to you may not be completely satisfactory to everyone, however, it is the result of fruitful negotiations involving many Member States with a variety of shared and different interests to find a compromise solution that represents a strong middle ground. In this context I believe that this compromise text is a solution that should be able to keep everyone on board.

I am aware of the difficult compromises and herculean efforts that Member Governments are having to make to reach the ultimate goal. However, let me recall that failing to adopt an initial Strategy at this session is not an option and I implore you to redouble your efforts to achieve our collective goal.

As a member of the United Nations family, IMO must listen carefully to the encouragement of the UN Secretary-General António Guterres, who stated on Monday: "I call on nations to adopt an ambitious Initial Strategy at the IMO that would support the modernization of the shipping sector in a manner consistent with the ambitions of the Paris Agreement". The same passionate message is in the anonymous words we have all read on the far bank of the river this week: "IMO, don't sink Paris." I urge you, do not disappoint either of them.

I cannot emphasize more highly the importance of adopting this initial strategy today. This strategy should be a strong statement to the outside world and, as a platform, will pave the way forward for future work related to reducing GHG emissions from ships. Please remember, this initial strategy is not a final statement but rather a key starting point.

I reiterate my trust in each of you, individually and collectively, as an IMO family, to accept this as a positive compromise solution. If you adopt it today, you send a strong signal to the world – and to the shipping industry - that you, the IMO Member States, are tackling this issue with the same commitment you have already given to the Paris Agreement, and that IMO remains the proper forum for Governments to give international shipping the global regulatory framework it needs.

ANNEX 16

STATEMENTS BY DELEGATIONS AND OBSERVERS*

ITEM 1.

Statement by the delegation of the Marshall Islands

"Ministers, Ambassadors, Colleagues - *Jakwe*, and greetings. I am here to deliver this message from the President of the Republic of Marshall Islands.

In the next days in IMO will determine whether Marshallese children born today will have the chance of a secure and prosperous life or will have to leave the land of their ancestors and set sail across the oceans to an uncertain future.

This is scientific fact. If the shipping sector were a country, it would already be the world's sixth largest climate polluter. By the estimates of this body, shipping emissions are set to grow by as much as 250% when, instead, global emissions must peak by 2020 and rapidly decline if we are to have any hope of staying within the Paris Agreement temperature limits.

To fellow developing countries who are worried about what impact climate action will have on shipping I say this: I doubt that there are many – if any – countries in this room which have a greater economic interest in the outcome of this MEPC than the Marshall Islands, if you consider the importance of the shipping sector as a percentage of our GDP and our almost total reliance on shipping for trade.

So, I speak with considerable credibility when I say that the argument being presented by some that climate action means a negative impact on shipping and trade is completely and utterly false.

The technologies exist now to allow shipping to transition to clean and sustainable growth. Industry has clearly stated it wants to act. And so do shipping customers. It needs a clear policy signal from this body to do so. This is an opportunity to be grasped. One way or another the shipping sector – like all other global sectors – will have to decarbonize. The question is whether to embrace the opportunities or be forced to decarbonize at a later date, more rapidly and in a more expensive and disruptive way.

The text of the draft Initial Strategy on reducing greenhouse gas emissions presented to the MEPC already represents significant compromises on our part. And compromises on the part of all countries in this room. Like others, there are very many things in it we do not like. And things missing from it that we could not even discuss last week.

At the same time, we must all recognize that unless we work with the current text as a package, we risk having no outcome at all. We have all travelled far together. We need to take the final steps. It is time for all those countries who label themselves elsewhere as climate leaders to step up and do what is right.

Economic gains from protecting one sector – or even one industry – in any national economy will be far outweighed by the costs of failing to achieve the Paris Agreement temperature goals.

* Statements have been included in this annex as provided by delegations/observers, in the order in which they were given, sorted by agenda item, and in the language of submission (including translation into any other language if such translation was provided). Statements are accessible in all official languages on audio file at: <http://docs.imo.org/Meetings/Media.aspx>

There will be nothing more devastating to global trade than the cost of having to try to adapt to a world that is on average two, three or four degrees warmer. The costs will dwarf any perceived savings. We do not even know if we can adapt to any scenarios over two degrees. No country will be immune.

I say again – any assumption of a trade-off between climate action and sustainable economic growth of shipping is false. And the draft Initial Strategy before us clearly states that disproportionate negative impacts must be identified and addressed before implementing measures are adopted. There is simply no credible reason to hesitate any longer.

We are willing to work with all countries in this room to improve the text. At the same I have to be clear that the Marshall Islands, home to the second largest flag registry in the world, will very publicly dissociate from an outcome from the MEPC that does not contain an explicit quantified level of ambition consistent with a possibility of achieving the Paris Agreement temperature goals. I will not go home to my children, and my country's children, endorsing an outcome from the IMO that fails to face up to the greatest threat of the century.

Excellencies, colleagues. You in the IMO have previously argued that you should regulate your own greenhouse gas emissions. You must now live up to that responsibility. The moment of truth has come for the IMO. The issue cannot be deferred. Let's take this chance before us to embrace the greatest economic opportunity of the century. Let's work to get this deal done.

Kommol tata, and thank you very much."

Statement by the delegation of the Solomon Islands

"Mr Chairman, Honourable Ministers, Excellencies, fellow IMO members, good morning.

As my delegation has said in previous meetings, the Solomon Islands, along with our neighbours and others, is at the forefront of climate change and I won't take up time detailing the impacts we are already experiencing and face as you are all well aware of the challenges climate change brings.

That we all face, let me be clear on this. Whilst we may be affected more than others right now, climate change, if not tackled urgently, will cause major challenges to all of us, all countries will suffer.

Today, I focus my comments on some of the concerns raised by other delegations to try to allay their fears of taking decisive and ambitious action. In particular, the science and the evidence.

We have heard that some believe that there is not yet sufficient evidence to enable us to set concrete ambitious quantifiable targets for decarbonisation now and that we should delay. We are certain that this is not the case.

The IPCC 5th assessment report notes with high confidence that without additional mitigation efforts warming by 2100 will lead to severe, widespread and irreversible impacts globally. Whilst mitigation may involve some risks, these risks do not have the severe, widespread and irreversible impacts of climate change. Delays limit our options and increase the long-term costs.

Whilst the IPCC report on 1.5 degrees is not due until later this year, the background data and analysis is already in the public arena and is clear. We MUST decarbonise all sectors and we MUST start international shipping on that pathway to zero greenhouse gas emissions urgently and before 2023.

There is sufficient publically available science and data that shows that, if we are to keep open the possibility of pursuing efforts to limiting global average temperature increases to 1.5 degrees that we all committed to in Paris, then international shipping must reach zero greenhouse gas emissions by 2050.

We leave ourselves open to criticism if we claim to develop an evidence-based strategy, but when faced with the evidence we have now, we do not set appropriate targets and put in place the necessary short-term actions.

The consequences of us failing to begin decarbonisation and not take action in the next five to ten years will have major consequences for us all.

We must include levels of ambition that keep open the possibility of achieving the 1.5 degree temperature goal, and that means an absolute target of 100% reduction by 2050 and decisive action in the short term that starts the industry on the trajectory necessary. Our delegation will be forced to disassociate itself from any strategy that does not provide this.

I thank you in advance for the right decisions that I know we will make this week – we cannot afford to do otherwise."

Statement by the delegation of Kiribati

"Mr Chairman, Fellow Delegates, Ladies and Gentlemen

Mr Chair, the year 2050, between 50-80% of Tarawa, our capital, is predicted to be under water and our whole nation will be fully submerged by 2100. Within decades, my country will be uninhabitable and you would acknowledge, why tackling climate change is very important and of utmost importance to us and my people, as a nation and as a country with its own culture.

I am sure if you were in my position or one that live in a country that is in the brink of its survival, you would totally agree with me that you would want an initial strategy that does clearly include levels of ambition that align with the 1.5 degree temperature goal and very essential that we pursue efforts towards.

Mr Chairman, for our existence and for the sake of our survival, Kiribati would like to request to all our distinguished delegates; a 100% reduction in greenhouse gas emissions before 2050 across all sectors and by all countries, which we strongly believe that every Country in this room can commit significantly to reduce emissions in the next five years.

Kiribati is confident that we can achieve this if we work together. We can tackle the challenges of reducing emissions to zero by 2050 and make sure that the impacts on States are addressed. We can take the opportunities that also come from decarbonisation of international shipping.

There are solutions already available and we already have an example of a retrofitted wind-assist vessel which has been serving our Line Islands, running from Honolulu to the Cook Islands saving more than 60% of fuel, running as a profitable business for over 10 years on

what has to be one of the most challenging routes for international shipping in the world. It is because of the financial savings resulting from reduced fuel use that makes this possible. As the IPCC's 2014 climate change synthesis report notes "limiting the effects of climate change is necessary to achieve sustainable development and equity, including poverty eradication".

Mr Chair and distinguished colleagues, on behalf of the Government and the people of the Republic of Kiribati, we look forward to adopting an initial strategy this week that meets all respective our needs, for if we cannot agree to include a long-term quantified target of zero emissions by 2050, my delegation will be forced to disassociate from the outcome.

Thank you"

Statement by the delegation of Tuvalu

"Mr Chair, fellow IMO members, good morning.

I know that you have much to get through in this Committee so I will be brief.

Tuvalu, may well be the first nation to suffer from complete land loss due to climate change, and be uninhabitable by 2050. I feel sure that you can sympathize with our situation and would ask that we all remember this in our discussions and deliberations this week.

We need to particularly consider and agree the short-term follow up actions that are needed in the next few years, before the adoption of the Revised Strategy in 2023, that will start us on the downwards trajectory we all need.

We cannot adopt a Strategy that will result in increasing emissions from the sector when all other sectors are decreasing. That will simply be politically unacceptable to the rest of the world and will be difficult to defend, particularly as we know all sectors are going to have to increase their commitments to emissions reduction.

The costs of climate change to all of us are only going to increase if we do not collectively, all nations and all sectors, decarbonize.

We have all agreed to the temperature goal of pursuing efforts to limit global warming to 1.5 degrees. For this house not to do the same is not acceptable to Tuvalu.

We need to be positive and focus on maximizing the opportunities we each have, whether that is building new more efficient ships, developing technologies that reduce emissions from the existing fleet, biofuels or further developing alternative fuels such as ammonia and hydrogen.

As the late Stephen Hawking said "intelligence is the ability to adapt to change". Let us be intelligent.

Thank you"

Statement by the delegation of Peru

"Gracias señor Presidente y buenos días a todos,
(Thank you Mr. Chair and good morning to all)

He venido hoy a participar en el 72 Periodo de Sesiones del Comité de Protección del Medio Marino con grandes expectativas de que la Organización Marítima Internacional decida este viernes dar un paso histórico y noble como ha dicho el Secretario General. UN PASO MAS en el ESFUERZO GLOBAL de hacer frente a los ineludibles impactos del Cambio Climático.

El Peru, como Estado Parte del ACUERDO DE PARIS, esta dirigiendo sus esfuerzos a la consecución de los objetivos de mitigación y adaptación presentados ante la Conferencia Mundial de las Naciones Unidas sobre Medio Ambiente a través de sus Contribuciones Nacionales Determinadas.

Tal como el Acuerdo de Paris lo establece es necesario alcanzar un EQUILIBRIO entre las emisiones antropogénicas y su absorción en la segunda mitad de este siglo para poder mantener el aumento de la temperatura media mundial por debajo de los 2 grados centígrados con respecto a los niveles pre-industriales y proseguir los esfuerzos para limitar esa temperatura a 1.5 grados centígrados.

PERO SIEMPRE SOBRE LA BASE DE LA EQUIDAD, EN EL CONTEXTO DEL DESARROLLO SOSTENIBLE Y DE LOS ESFUERZOS PARA ERRADICAR LA POBREZA.

Es por ello, que el Peru se adhirió a la Declaración Tony de Brum, en febrero pasado - que UNE HOY a 45 países - porque considera que SI ES POSIBLE AVANZAR DE MANERA DECIDIDA Y COMPROMETIDA EN LA REDUCCION DE LOS GASES DE EFECTO INVERNADERO PROVENIENTES DEL SECTOR MARITIMO INTERNACIONAL si así los países que formamos parte de esta gran organización nos lo proponemos.

Señor Presidente,

Cuando el Grupo de Trabajo Inter-sesiones empezó sus discusiones para la elaboración de una Estrategia Inicial de la OMI para la reducción de gases de efecto invernadero provenientes de los buques- hace mas o menos un año y medio atrás - muchos Estados NO reconocían al Acuerdo de Paris como marco para estas negociaciones. Sin embargo, el PERU, consciente DE LOS AVANCES REALIZADOS POR LA OMI en la adopción de medidas para prevenir la contaminación marina proveniente de buques y para proteger el medio marino, subrayó desde ese entonces que si la Conferencia de Rio de 1992 hubiese sido suficiente no hubiese existido el Protocolo de Kyoto de 1997 y si Kyoto hubiese sido suficiente no tendríamos el Acuerdo de Paris.

Por eso QUIERO DESTACAR CON MUCHA COMPLACENCIA que hoy el Acuerdo de Paris esta presente en EL BORRADOR DE ESTRATEGIA INICIAL QUE SERA SOMETIDA A CONSIDERACION DE ESTE COMITE.

Se que el Grupo de Trabajo Inter-sesiones ha tenido una ardua labor la semana pasada. Deseo felicitar al señor Sveinung OFTEDAL por su buena y eficiente conducción y a cada uno de los delegados que se han entregado con dedicación y compromiso en defender sus posiciones nacionales sobre la base de buscar EL BENEFICIO GLOBAL, SIEMPRE TENIENDO EN CUENTA LA VULNERABILIDAD DE TODOS LOS ESTADOS, DESARROLLADOS, EN DESARROLLO Y PARTICULARMENTE DE LOS MENOS DESARROLLADOS Y de los pequeños Estados Insulares ante la amenaza del CAMBIO CLIMATICO.

Señor Presidente, Queridos delegados,

Ya falta poco para poder culminar esta Estrategia Inicial y aprobarla esta semana, por eso los aliento a que continúen con ese ESPIRITU CONSTRUCTIVO DE COOPERACION en las discusiones que continuaran el día de hoy y los INVOCO a SIEMPRE RECORDAR que no se trata de ganar un argumento de negociación sino de hacer lo que es CORRECTO. Y ESO TODOS LO SABEMOS. LO CORRECTO es avanzar en contribuir a los esfuerzos globales para avanzar en la reducción de los gases de efecto invernadero para un MUNDO MEJOR para LAS GENERACIONES DE HOY Y LAS GENERACIONES FUTURAS.

THANK YOU VERY MUCH TO ALL OF YOU. WE HAVE WORKED HARD AS A TEAM AND WE HAVE CERTAINLY COME A LONG WAY IN THIS ORGANIZATION. NOW LET'S TAKE THIS FURTHER IMPORTANT STEP. IT'S OUR DUTY AND OUR LEGAY TO FUTURE GENERATIONS.

GRACIAS. "

Statement by the delegation of Germany

"Germany would like to fully align itself with the comments made by the Marshall Islands, Solomon Islands, Kiribati, Tuvalu and Peru on the importance of an ambitious IMO GHG Strategy.

Member States have worked hard last week under the able leadership of Norway towards a solution by providing us with a Draft for an Initial IMO Strategy.

While Germany is equally unhappy with some parts of the Draft as other Member States might be too, we are offering our strong support and our willingness for further cooperation towards reaching a solution.

In doing so we need to remind ourselves why we are here: This is not just about paragraphs on paper, this is not just about IMO's image and reliability or credibility. This is about the mere survival of some of our IMO Member States too, Member States that will cease to exist if we fail to achieve an ambitious Initial GHG Strategy despite OECD reports and ICS clearly demonstrating its feasibility.

Let us send a strong signal to the outside world that IMO is willing and able to solve this in the spirit of cooperation.

Thank you"

Statement by the delegation of the Philippines

"Good morning fellow delegates.

Thank you Chair and in response to your request, this statement would be brief.

We welcome the opening statement of the Secretary General on the GHG strategy saying, in particular, that the draft IMO GHG Strategy is not a final document but a key starting point.

Many of us here participated in the ISWG-GHG 3 last week and came up with the draft strategy in MEPC 72 WP5. Thus, many of our concerns were addressed in the ISWG3 although not fully but we worked in the spirit of cooperation and achieve a compromise.

The IMO is an organization of sovereign States where national interests are presented and where work is done to achieve a balance of interests.

We look forward to the discussions here in the Plenary or in the WG on how to resolve the key issues. We hope that the spirit of cooperation and compromise will continue to prevail in MEPC 72 and in the working group.

This delegation is pleased that the draft included references to the CBDR-RC, UNFCCC, the Kyoto Protocol and the Paris Agreement as stated in paragraph 3.2.2 in the Guiding Principles, which are fundamental treaties with their accompany principles that are our basic conditions.

This delegation welcomes the possibility of an agreement or compromise on the highly sensitive issue on the Levels of Ambition in paragraph 3.1.

As we look forward to the discussions on this key issue, we appeal to delegations to consider a sensible balance between the commitments of the IMO on the reduction of the GHG emissions from ships and the cost on domestic economies specially their international and domestic fleets and the related support industries.

Lives, livelihood and the environment are the key sectors in the inter-play of interests in the reduction of GHG emission from ships. As previous delegations have stated and we join them on this point, we do what is right.

Thank you Chair"

Statement by the delegation of Mexico

"Muchas gracias Sr Presidente

Buenos días distinguidos Delegados

La semana pasada, en el grupo de trabajo intersesiones, fuimos partícipes de un ejercicio que denotó voluntad y compromiso de todos los Estados Miembros para finalizar el proyecto de la Estrategia inicial de la OMI sobre la Reducción de las Emisiones de Gases de Efecto Invernadero procedentes de los Buques, encontrando amplio margen de coincidencia para que ésta sea aspiracional, ambiciosa, realista y coherente con el objetivo que nos hemos fijado en el Acuerdo de París, de mantener el aumento de la temperatura media mundial muy por debajo de 2°C con respecto a los niveles preindustriales, y proseguir los esfuerzos para limitarlo a 1.5°C.

Si bien no logramos concretar el ejercicio, concluimos con la certeza de que prevalece una apertura y actitud constructiva de todas las Partes, para continuar con los trabajos mediante un mayor diálogo e intercambio que nos permita entender y conciliar las inquietudes manifestadas.

Esta semana tenemos la oportunidad de refrendar, en este Comité, ese espíritu constructivo y de colaboración. México está convencido de que, sobre una base firme de voluntad, confianza, transparencia y flexibilidad, podremos llegar a acuerdos que conlleven a adoptar las decisiones que respondan, de manera progresiva y efectiva, a la amenaza de los impactos del cambio climático que yergue sobre todas las naciones, en particular sobre las más vulnerables, a saber, los países en vías de desarrollo, los Pequeños Estados Insulares en desarrollo y los menos desarrollados.

Para México, es imperante que en el marco de la OMI fijemos un nivel de ambición alto para el sector y actuemos de inmediato, con base en la información y la mejor ciencia disponible hoy, y no sin antes examinar con antelación el impacto sobre los Estados que cualquier medida de corto, mediano y largo plazo pueda tener.

Reconocemos que cualquier objetivo de temperatura a largo plazo requerirá que las emisiones globales alcancen su punto máximo tan pronto como sea posible y, a partir de ello, se establezcan medidas de reducción rápidas. En la práctica, avanzar hacia una trayectoria más ambiciosa implica fijar metas específicas y medidas necesarias para lograrlo.

Es un hecho que, si retrasamos este pico de emisión, el costo de reducción y abatimiento será mayor y, en algunos casos, inaccesible para la mayoría de los países. Por ello es necesario ver las oportunidades que se pueden generar al actuar contra el cambio climático: nos permite ser innovadores y competitivos, sin comprometer el crecimiento del sector ni los objetivos climáticos.

México confía en que, si todos logramos acordar un compromiso concreto y ambicioso en esta Estrategia inicial, mandaremos una señal clara y contundente hacia el sector. La industria, la sociedad, la comunidad internacional en general, están atentos a las contribuciones de la OMI al régimen climático y a lo que decidamos todos en esta sala en los próximos días.

México está en la mejor disposición de escuchar, dialogar y convenir en un texto integral, que recoja las inquietudes de todos los Estados, y que nos permita seguir avanzando en la hoja de ruta fijada, iniciando los trabajos de este 72 MEPC con el mejor espíritu de colaboración e instando a todos a trabajar de igual manera, con el fin de que adoptemos la Estrategia inicial esta semana.

El cambio climático es económicamente viable, debido al avance tecnológico que se tiene; es socialmente inclusivo, pues requiere de la suma de esfuerzos de todos los actores; y es moralmente necesario, dado que se lo debemos a nuestras generaciones futuras.

Muchas gracias"

Statement by the delegation of Chile

"Primero quisiéramos notar los progresos realizados la semana pasada y que ese mismo espíritu constructivo, nos permita acordar una estrategia en base al consenso durante este periodo de sesiones. Sin duda, creemos firmemente que la estrategia contribuirá a alcanzar las metas de temperatura establecidas en el Acuerdo de París.

Chile considera que la estrategia de la OMI debe ser robusta y debe tener un nivel de ambición compatible con el Acuerdo de París, que consiste en alcanzar un peak de las emisiones lo antes posible y luego reducir las emisiones para alcanzar la neutralidad de ellas, hacia la segunda mitad del siglo.

Con la información que se tiene actualmente, Chile está abierto a establecer una meta basada en la intensidad del carbono y que sea cuantificable. Distinto es el caso de una meta absoluta ya que es fundamental contar con mayor información para poder acordar un valor de la misma. Esto significa que el establecimiento de dicha meta debe acordarse una vez que tengamos los resultados del sistema de recopilación de datos de consumo de combustible (MRV) y el Cuarto inventario de OMI sobre emisiones GEI de y que estará finalizado en el año 2020.

Chile entiende la urgencia de tomar medidas y acciones para que éstas se adopten lo antes posible. En este sentido, nuestro país está abierto a la priorización de las medidas a corto plazo para implementarlas antes del 2023, como es el caso de las mejoras en el EEDI y el Plan SEEMP, y otros tipos de medidas, a la espera de la disponibilidad masiva de combustibles alternativos en el sector.

Chile considera que es fundamental ser cauteloso con medidas que buscan por ejemplo reducir de velocidad de los buques, ya que podría penalizar a países que están geográficamente distantes, afectando la competitividad y al mismo tiempo, distorsionando al comercio, particularmente para nuestras exportaciones de productos perecederos. Por tales razones, Chile en conjunto con Perú, presentó una "submission" (ISWG-GHG 3/2/10) donde propone el uso de velocidad óptima en lugar de reducción de velocidad. En este contexto, es esencial que se minimice los impactos en los Estados en el diseño de las medidas que se contemplan en la Estrategia y que al mismo tiempo sean costo-efectivas.

Finalmente quisiéramos indicar que dadas las características del sector, el principio de responsabilidades comunes pero diferenciadas y respectiva capacidades (CBDR-RC) no debe vincularse a las banderas dadas las distorsiones que ello puede generar. No obstante a lo anterior, Chile considera que si es posible conciliar el principio de no discriminación y el principio de CBDR-RC en el desarrollo de la Estrategia y espera trabajar para avanzar hacia un instrumento que incorpore ambos principios."

Statement by the delegation of Estonia

"Mr Secretary General, distinguished delegates,

We would like to stress once again the urgent need for further climate action by international shipping.

In our view, the IMO needs to deliver its appropriate contribution to the climate action efforts.

Sir, we believe that this organisation is well placed and able to successfully address this issue.

The report we have in front of us from last week demonstrates the ability for this organisation to deliver. Furthermore, it demonstrates our joint spirit of cooperation and compromise. Let the spirit of compromise and cooperation guide our work in the coming days. So as to arrive at a successful result! This delegation remains committed to work toward that end.

Thank you Sir!"

Statement by the delegation of Argentina

"Muchas gracias sr. Presidente:

Nuestra delegación se congratula de verlo en el ejercicio de esta función y compromete todo su esfuerzo para alcanzar los fines que nos hemos propuesto en este periodo de sesiones.

Agradecemos también las palabras de aliento del Secretario General para concluir las negociaciones que marcan los esfuerzos que hemos estado haciendo hasta el momento en el ámbito del grupo de trabajo intersesional sobre GHG para alcanzar un texto de consenso, repito de consenso, para la Estrategia Inicial de la OMI en esta materia.

Estos esfuerzos no sólo han tenido por escenario a esta Organización señor presidente, sino que también han tenido como escenario a los foros globales dedicados a esta materia, bajo cuyo mandato trabajamos en la OMI.

Los resultados que aquí alcancemos deben ser coherentes y compatibles con los principios y metas que se han acordado y establecido a nivel global a través de la Convención Marco de las Naciones Unidas sobre Cambio Climático, el Protocolo de Kyoto y el Acuerdo de París, tal como lo acaban de señalar las delegaciones de Chile, Filipinas y decenas de otras que se han pronunciado en tal sentido en el ámbito del Grupo de Trabajo.

Una meta en materia de emisiones de carácter cuantitativo y absoluto, a juicio de esta delegación, no presenta esa compatibilidad con los instrumentos que acabo de mencionar.

Por otra parte, tampoco podemos establecer una meta que no permita garantizar que se alcancen los objetivos de temperatura fijados en el Acuerdo de París.

Tal como lo han señalado otras delegaciones que me precedieron en el uso de la palabra, se trata de una solución que debe ser alcanzada por Estados soberanos y entre Estados soberanos en el marco de esta Organización Internacional. Estados soberanos cuyos intereses esenciales, tal como lo acaban de señalar las islas del Pacífico, están en juego en esta negociación. Nuestra delegación apoya lo expresado por Chile y otras delegaciones en cuanto a la necesidad de tutelar los intereses de los Estados distantes de los grandes centros de producción y consumo, como así también de velar por los intereses de los Países en Desarrollo, a través de un pleno reconocimiento de los principios ya consagrados en el marco de la Convención de las Naciones Unidas sobre Cambio Climático, en particular, el principio de las responsabilidades comunes pero diferenciadas y respectivas capacidades, como así también el principio según el cual las medidas que se adopten para combatir el cambio climático no deben afectar el comercio internacional en el sentido dispuesto por el artículo 3.5 de la CMNUCC.

Sr presidente, nuestra delegación ha comprometido desde el primer día sus esfuerzos para alcanzar un resultado por consenso, en esta materia, en esta organización. Ha redoblado esos esfuerzos y está dispuesta a seguir haciéndolo y en tal sentido compromete todo su apoyo a sus esfuerzos para alcanzarlos.

Muchas gracias sr. Presidente."

Statement by the delegation of New Zealand

"Thank you chair and good morning colleagues

I have asked for the floor to speak in solidarity with our Pacific family.

With rising greenhouse gas emissions from international shipping, the International Maritime Organization (IMO) has a responsibility to take meaningful and effective action.

New Zealand expects the IMO Greenhouse Gas reduction strategy, being negotiated, to contribute to achieving the goals of the Paris Agreement, particularly holding the increase in global average temperature to well below 2 degrees Celsius above preindustrial levels and pursuing efforts to limit the temperature increase to 1.5 degrees. That is why we were proud to sign the Tony de Brum declaration at the One Planet Summit held in Paris last December.

To be effective, the strategy must not distort competition. It must apply equally to all ships irrespective of their flag and to all IMO member states.

We urge the IMO not to miss the opportunity to adopt a workable strategy that:

- is ambitious and with appropriate measures implemented as soon as possible;
- applicable to all ships and applied equally, regardless of which state a ship is registered, and
- recognizes and protects the interests of Pacific Island countries and territories.

Unfortunately, there is little time remaining to conclude these negotiations. We commend the leadership of Pacific Island states in encouraging ambitious outcomes from the ongoing IMO negotiations and join with them in encouraging all countries to redouble their efforts to ensure the IMO achieves a credible result."

Statement by the delegation of Vanuatu

"CBDR principle acknowledges all States have shared obligation to address environmental destruction but denies equal responsibility of all States with regard to environmental protection. But aren't we facing the same consequences? After listening statements from our friends and colleagues from the Pacific with whom we associate ourselves of course, shouldn't the IMO set a strong Vision with high level of ambitions to take an active role in saving lives? Because, it is what we are talking about, some of our neighbour in the Pacific are threaten to such an extent that Tuvalu could be the first Nation to be lost due to climate change.

Sir, Ambitions targets serve the purpose of the Vision. High Level of Ambitions will promote development of innovative technologies that are so much required to achieve our Vision. Sending the right signal to the Industry and the world is crucial at this point to set the trend for the next decades to create a momentum in view of reducing GHG emissions from international shipping and phase them out as soon as possible. We understand there are means to achieve high level of ambitions and while we admit, there might be some grey areas along the road we prefer to move ahead with high ambitions which we hope will help safeguarding our Region which is only responsible of 0.03% of anthropogenic emissions – and yet we are ready to commit!"

Statement by the delegation of Fiji

"Mr Chairman, Excellencies, distinguished delegates good morning and *bula vinaka* to you all.

Fiji as an archipelagic state with more than 320 islands of which more than one hundred is inhabited. We are mainly dependent on shipping for survival both in terms of foreign and domestic shipping.

Fiji is equally affected by rise in sea level and in certain areas have relocated villages to higher ground and like our fellow neighboring island states is equally concerned by global warming. In our current role as COP 23 President, Co-chairmanship with Sweden in the UN Ocean Conference and Fiji's Presidency of the UN General assembly, we strongly urge that the spirit of the Paris Agreement is fully embraced by IMO and more specifically, that the IMO Strategy for reducing GHG emissions from ships is fully aligned with the Paris agreement temperature goal, namely to keep global warming well below 2 degrees Celsius and – of particular importance to Fiji as a small island developing State – to aim for 1.5 degrees or lower.

Mr, Chair the Fiji Group was hit by severe flooding in most areas last week bringing about wide spread devastation as a result of category 1 Tropical Cyclone Josie. This TC claimed 5 lives and as we speak, a Category 2 Tropical Cyclone Keni is affecting the Fiji group and similarly

will bring about devastation in terms of flooding and destructive winds whilst we are still recovering from TC Josie. Fiji as well as the other Pacific island states are vulnerable to the frequency of these natural disasters and its strength reaching category 5. This is the result of global warming.

It is imperative that this forum seriously consider an ambitious initial IMO Strategy to address GHG emissions from ships that is aligned to the 1.5 temperature goal threshold. We must pursue efforts towards 100% reduction in greenhouse gas emissions before 2050 across all sectors and by all countries, and that significant action is taken to reduce emissions in the next five years. As we do not have the luxury of time. **THE TIME TO TAKE ACTION IS NOW, NOT TOMORROW OR IN THE NEXT FIVE YEARS IF WE ARE SERIOUSLY THINKING OF OUR FUTURE GENERATIONS.**

I am confident that we can collectively work together in the spirit of compromise to deliver an ambitious IMO GHG Strategy that will of course require zero emissions by 2050. We can take the opportunities that also come from decarbonisation of international shipping. Fiji is encouraged by the views of the Industry during the 3rd intercessional, especially the representative of the International Chamber of Shipping (ICS) and Clean Shipping Coalition (CSC) who has confirmed that the industry is ready to move forward and meet an ambitious IMO strategy which sets the highest level of ambition target to meet the goals of the Paris Agreement. If the industry is ready to move forward then we must do so.

Fiji understands that solutions are already available to make this happen for the shipping sector and as our colleagues from IMarEST in particular noted last week, there is sufficient publically available science and data of pursuing efforts to limiting global average temperature increases to 1.5 degrees that we all committed to in Paris. However there is still a call for complete scientific data in order to take an ambitious action. We wish to remind this august body that the precautionary principle must take precedence because the consequences for not acting today can be devastating for Pacific island nations, SIDs and LDCs. (We are already feeling the consequences of not acting).

Mr Chair, and distinguished delegates, thank you for the opportunity to speak and we look forward to adopting an ambitious IMO Strategy that will send a clear signal to the industry and certainly demonstrate the leadership role and commitment of IMO and the shipping sector to the rest of the world.

Thank you and vinaka vakalevu"

Statement by the delegation of the Cook Islands

"Secretary General, Chair, Excellencies, Colleagues,

Kia Orana,

The Cook Islands, being at the forefront of the impacts of climate change - which, we should remember, is largely due to past and current actions of the industrialised world - does of course fully share the concerns of our Pacific brothers and sisters at the impact of climate related change. We would however caution those who might subscribe to the notion that no deal is better than an imperfect deal; we would not advocate nor accept that red lines can somehow resolve our concerns and the predicament of our region, remote as it is from the main trading routes.

Whilst we eagerly await the release of the 5 IPCC report in October when we will receive a more robust update of the science, in the meantime we consider that it is important that we finalise the initial strategy in a timely manner, that is - at this session of the MEPC. The Cook Islands remains fully committed to working constructively with others towards achieving this outcome.

Chair, we may not get what we want but we would be confident that with the usual IMO spirit of compromise leading to consensus that we will get what we need and enable us to yet again reflect the significant and ongoing contribution that this organisation has, will and must continue to have on its mandate for maritime safety, security, and importantly the protection of the maritime environment, not the least that of greenhouse gas pollution.

My delegation would therefore suggest we go forward with the text in MEPC 72/WP.5 confident that under the able chairmanship of Mr. Oftedal, we will be successful in the pursuit of our noble aims.

Kia Manuia."

Statement by the delegation of Panama

"El Gobierno de Panamá como suscriptor del Acuerdo de Paris reitera su compromiso continuo con este instrumento internacional. Panamá inició reportando la estimación de sus emisiones, las que son 0.02% de las emisiones globales al Convenio Marco de naciones unidas sobre cambio climático. Panamá no ha demorado en realizar todas las acciones necesarias, dentro de su capacidad, para mitigar el cambio climático que nos afecta a todos, siempre siendo consecuente con el compromiso adquirido mediante el Acuerdo de París y sobre todo con nuestra convicción, de que somos parte de la solución. Es por ello que Panamá en ese mismo espíritu de colaboración y Como miembro de la Organización Marítima Internacional participamos de este foro para lograr la reducción de los gases de efecto invernadero proveniente de los buques.

La Delegación Panameña espera que del esfuerzo resultante de este Comité produzca la estrategia inicial de OMI, y aunque en la última semana no hemos avanzado tanto como nuestras expectativas, confiamos en que la estrategia de la Organización sea balanceada, creíble, realista, y a la vez, capaz de lograr los niveles de reducción propuestos.

Es por ello que Panamá es de la opinión que como Organización, como industria y como Estados podemos hacer más y es nuestro deber hacer lo mejor, producir una estrategia que efectivamente logre la reducción de los gases de efecto invernadero que provienen de los buques, y es por ello que, a pesar de que "Business as usual" nos llevará eventualmente a las cero emisiones, somos de los que queremos impulsar la milla extra, pero sin poner en riesgo el fin último del transporte marítimo y la credibilidad que, en materia de reducción de emisiones, la OMI ha logrado."

Statement by the delegation of South Africa

"Thank you Chair.

South Africa is of the view that all nations are affected by the GHG emission. On that note, it is in the best interest of all nations to ensure that emission from international shipping is reduced as soon as possible and in a sustainable manner. This delegation is committed to have a fruitful and robust engagement to address some of the sticking points emanating from last week's the Inter-Sessional Working Group especially on the Guiding Principles and the Level of Ambitions.

South Africa is also being mindful that this is very sensitive matter to all Member States and on that note, we encourage all Member States to engage on this matter openly with an intent to reach a constructive and the balanced Strategy which is ambitious and achievable.

Thank you Chair."

Statement by the delegation of Brazil

"Thank you, Mr. Chair.

Brazil is fully confident that under your able guidance this MEPC will deliver results by the end of the week.

Let me also congratulate my good friend Mr. Oftedal Sveinung of Norway for his excellent work in steering the three meetings of the Intersessional Working Group on the development of a GHG reduction strategy. Under his firm, constructive and inclusive guidance, we have made progress in identifying key areas of convergence, and more importantly, in understanding the priorities of member states under this complex agenda item. We also thank the Secretariat for its hard work.

Brazil is fully committed to multilateral solutions to address climate change. Brazil hosted the Rio Conference that adopted the UNFCCC in 1992 and was amongst the first nations to sign and ratify the Paris Agreement in 2016.

Chair, my Government is taking ambitious steps to put in place a strategy to fully implement our nationally determined contribution under the Agreement, which pledges a 37% reduction of GHG emissions by 2025 and a 43% reduction by 2030. For a developing nation, this is indeed a very high level of ambition.

The adoption of an initial strategy on the reduction of GHG emissions is therefore a key priority for my country at this session of the MEPC, which will signal IMO's steadfast commitment to contribute to global efforts to address climate change.

Mr Chair, Brazil will strive for a consensus-based initial strategy to be adopted as the result of our work at this session of the MEPC.

Brazil is working towards an initial strategy, which the IMO is able to implement and be accountable for in the decades to come. This is what the road map approved in 2016 provides for. As the IMO Secretary-General rightly pointed, the initial strategy is not the conclusion, but a key starting point of the 5 years of the roadmap that will result in further measures to reduce GHG emissions.

The key to a successful conclusion of this negotiation will therefore be finding the right balance between the very ambitious aspirations that we all have for the shipping sector and the effectiveness required of our actions, bearing in mind the importance of international shipping to global development.

Having reflected upon the very productive exchange of views of last week during the Intersessional Working Group, we see that one of the main challenges we have before us is related to the section on guiding principles and levels of ambition of the strategy. Brazil is willing to work on a level of ambition that is both ambitious and realistic. We hope that member states respond with the same level of interests to the proposals that my delegation has put forward, including on guiding principles.

Brazil looks forward to engaging in discussions in the working group created under this agenda item.

Thank you very much"

Statement by the delegation of Saudi Arabia

"Your Excellency IMO Secretary General, Distinguished delegates, good morning to all, Saudi Arabia would like to join all those in attendance today to express our appreciation to all member states and associations in contributing to our constructive discussion during the 3 intersessional working group meetings and efforts made to assist our Chairman to arrive at a practical and effective IMO Initial GHG Strategy, and we look forward to MEPC 72, to arrive at an initial strategy.

Saudi Arabia would like to thank the leadership of the Intersessional Working Group Chairman, Mr. Sveinung Ofstedal, for his great efforts throughout our 3 intersessional meetings to develop an initial strategy that would address the challenges that IMO needs to fulfil. The efforts that have been made, and will be made during inter sessionals, ensures that we will arrive at a clear and practical strategy that takes into consideration the sustainable development pillars; economic, social and environment.

Distinguished delegates, the IMO has come a long way in fulfilling its ongoing obligations towards making shipping an even more environmentally sound and efficient mode of transportation and continues to work towards the important issues of both air pollution and GHG regulations.

The IMO history is one that we all can be proud of, and in this regards we would like to make mention of some of the main achievements of the IMO, which include:

- .1 In 1997 IMO adopted Annex 6 – at the same year of Kyoto Protocol. Annex 6 subsequently became mandatory in 2005
- .2 In 2000 IMO launched the first ever comprehensive GHG study, which was followed by a 2nd GHG Study then a 3rd GHG Study in 2008 and 2014 respectively, and IMO is in the process to conduct an even more comprehensive 4th GHG study that has started in 2018
- .3 In 2011 and during MEPC 62 IMO adopted a landmark resolution on CO2 reduction which included the introduction and mandatory implementation of the Energy Efficiency Design Index or EEDI.
- .4 In 2013 a new Chapter 4 was added to Marpol Annex 6 which governs Ship Energy Efficiency Management Plan or SEEMP and included the technical parameters of EEDI
- .5 In 2015 and during MEPC 68, IMO developed the all important 3 step approach which was adopted in 2016 under Resolution MEPC.282(70) which includes a comprehensive data collection and data analysis needed to scientifically reach to further steps to reduce GHG emissions.

Mr. Chairman, distinguished delegates, and on point 5, relating to the adopted resolution on the 3-step approach, Saudi Arabia views that data collected and analyzed will provide member states an ability to reach a comprehensive strategy towards GHG emission reduction, that is evidence based.

Mr. Chairman, distinguished delegates, Saudi Arabia recognizes that much has been done, and that much more is being done. We would also like to state that IMO's decisions regarding GHG emissions should be cognizant and in line with global efforts, which include the established UNFCCC and its provisions and principles, and the adopted Paris Agreement, which by the way, Saudi Arabia has ratified, and aims to fulfill its responsibilities to make the Paris Agreement successful.

Mr. Chairman, Saudi Arabia would also like to emphasize that our efforts here in IMO are to take into consideration the global agreement on Sustainable Development Goals or SDGs that have been adopted by over 191 nations, and that these SDGs have been included in IMO's strategic plan and adopted in Assembly Resolution A.1110.

Mr. Chairman, distinguished delegates, to conclude our statement, Saudi Arabia looks forward to a successful outcome to arrive at an agreeable emission based strategy that takes into consideration the approach taken by the Paris Agreement in respecting national capacity and circumstances through state action plans that includes a transparency framework that takes fully into account economic, social, and environmental impacts on all IMO member states that rely on shipping to maintain its trade and development.

Finally, Mr. Chair, we would like to have our statement reflected in the final report."

ITEM 5

Statement by the delegation of the Islamic Republic of Iran

"Under MARPOL Annex VI, ships shall use fuels with 0.5 percent sulfur content, which requires the existence of advanced refineries capable of producing such clean fuel, and will naturally lead to a significant impact on the bunkering industry and the elimination of a large number of present fuel producers. Ship owners can adopt different methods to implement the new requirements, such as using biofuels, LNG or distillate products with a sulfur content lower than the heavy fuel oil, installing scrubber systems, and the like, while producing compliant fuels will be the most lucrative method for the member States. However, hasty changes in the fuel consumption status of the ships, absence of legal force and obligation to guide refineries toward producing compliant fuels, absence of a competent international organization or forum (similar to IMO) within the oil refining industry in order to make decisions and reach consensus for acting on this matter, extensive costs of adapting the current structures of refineries for the production of compliant fuels, possible unfair competition among fuel producers, monopoly of fuel production for a number of refineries, and uncontrolled increase of fuel prices can adversely impact maritime activities and jeopardize the economic status of shipping in comparison to other modes of transport.

It is also a major concern that the feasibility of production and supply of marine fuels conforming to the provisions of MARPOL Annex VI by the Year 2020 has not been studied in the Persian Gulf and Gulf of Oman (or ROPME Sea Area). The heavy maritime traffic in the Region, huge volumes of oil and gas being supplied and transported through the Strait of Hormuz, inadequate information about the capability of regional refineries for producing compliant fuels, and insufficient transparency about the possible impacts of the new requirements on refineries and bunkering companies thus call for further research.

Having said that, the Delegation of the Islamic Republic of Iran would therefore suggest that the carriage ban be set as such to give ample time and provide sufficient time to all stakeholders and to allow for an experience -building phase."

Statement by the delegation of the Russian Federation

"At the latest PPR session the delegation of the Russian Federation expressed concerns about the proposal to prohibit carriage as fuel of those fuels that after 1 January 2020 will become non-compliant with the new standard of sulphur content. We stick to the opinion that the existing proposal, in the way it is phrased and with the existing application date, is not satisfactory or well-grounded.

First, we would like to draw your attention to the fact that the work on the PPR outcome on Consistent implementation of regulation 14.1.3 is planned for the intersessional period in 2018 to be completed by the next PPR in 2019. While the approval and adoption of the relevant amendments concerning the prohibition of carriage is envisaged for MEPC 72 and 73, respectively, in 2018. Which means that, at the stage of reaching the decision on the prohibition, it will not be possible to have given full consideration to the results of work on the above outcome. We cannot give our consent to this approach; it is our opinion that, should the decision on the ban and its application date be reached without due consideration of the outcome on Consistent implementation of regulation 14.1.3, such a decision will be incompetent and unjustified.

Dear colleagues, we know from document MEPC72/5/2 that ISO will not be able to complete the new version of the 8217 standard by 2020, which causes questions concerning safety of the ship and its crew when using the virtually sub-standard low-sulphur blend heavy fuel after 2020.

Bearing in mind the two factors mentioned above, the Russian Federation proposes the ban application date should be brought back to a later date and this should be formulated with due consideration of all the available data.

Under the new IMO Strategic Plan the work to reach goals specified in Article 1 of the IMO Convention should be, *inter alia*, carried out in such a way as to ensure a balance for international shipping between the need for economic development, facilitation of international trade and environmental protection.

We are of the opinion, in this particular matter, that there is a threat of breaking this balance, as here we are not talking so much about compliance with the requirement on the allowed sulphur content, but rather about safety of ship and its crew when using, even low-sulphur, but still sub-standard fuel with no reasonable alternatives available.

This delegation is of the opinion that such signals from the industry should not be ignored, and IMO should consider this matter very seriously.

Here at IMO, in recent years, we have witnessed, not once, the situation when a decision was reached by the Organization on adopting requirements while no proper foundation had been provided; when, however, the time comes for the requirements in question to enter into force, the Organization encourages Member States to apply the so-called "practical and pragmatic approach" when implementing the requirements and checking compliance therewith. The most recent example concerns, as you will remember, inspections of ECDIS updates which resulted in issuing III.2/Circ.2. In that instance, too, the Russian Federation said the approach adopted was not correct. It is such inconsistency of half-baked decisions that gives rise to the criticism of the Organization by the industry.

This delegation would be very unhappy if in 2019, just before the new requirements application date, we were to hear and discuss proposals about the practical and pragmatic approach concerning their implementation and entry into force."

"На прошедшем PPR делегация Российской Федерации высказывала определенные опасения относительно предложения ввести запрет на перевозку в качестве топлива сортов топлива, которые после 1 января 2020 года не будут соответствовать новому стандарту по содержанию серы. Мы по-прежнему полагаем, что это предложение в том виде, в котором оно сформулировано и с указанными сроками запрета является недостаточно обоснованным.

Во-первых, хотели бы обратить внимание на то, что работа по результату PPR «Последовательное применение правила 14.1.3» предполагается далее в 2018 году в межсессийный период, с завершением к следующему PPR в 2019 году. При этом одобрение и принятие поправок по запрету на перевозку предполагается на КЗМС72 и КЗМС73 соответственно, что произойдет в 2018 году. Таким образом, результаты работы по вышеуказанному результату не могут быть должным образом учтены при принятии решения о введении запрета. Мы не можем согласиться с таким подходом и полагаем, что без учета результатов работы по результату «Последовательное применение правила 14.1.3» решение о введении запрета и разумных сроках его введения будет неполноценным и необоснованным.

Уважаемые коллеги, из документа MEPC72/5/2 мы знаем, что к 2020 году ИСО не сможет завершить работу над новой версией стандарта 8217, таким образом возникают определенные вопросы относительно безопасности для судна и экипажа при использовании фактически субстандартного низкосернистого тяжелого топлива на основе смесей (blend) после 2020 года.

Учитывая два этих фактора, Российская Федерация выступает за перенос срока введения запрета на более поздний срок, который необходимо определить с учетом имеющихся данных.

В соответствии с новым стратегическим планом ИМО поручается продолжить работу, направленную на выполнение целей, установленных в статье 1 Конвенции об ИМО, в том числе, через обеспечение баланса между экономическим развитием отрасли и облегчением международной торговли, с одной стороны, и охраной окружающей среды – с другой.

В данном случае, мы полагаем, что существует определенная угроза нарушения этого баланса, ведь речь уже идет не только и не столько о выполнении требования по предельному содержанию серы, сколько о безопасности судна и экипажа при использовании пусть и низкосернистого, но отчасти субстандартного топлива при отсутствии других разумных альтернатив.

Наша делегация полагает, что нельзя игнорировать подобные сигналы от индустрии, и ИМО должна уделить должное внимание этому вопросу.

За последние годы мы неоднократно сталкиваемся здесь в ИМО с ситуацией, когда Организация принимает какие-то требования без достаточного обоснования, а к моменту их вступления в силу призывает государства применять т.н. прагматичный и практический подход («practical and pragmatic approach») при внедрении этих требований и проверках соответствия. Последняя аналогичная ситуация произошла совсем недавно, как Вы помните, в отношении проверок ЭКНИС с обновленным программным обеспечением, что вылилось в циркуляр III.2/Circ.2. И делегация Российской Федерации тогда говорила именно о том, что это не правильный подход. Именно за такую непоследовательность и недостаточную продуманность решений Организация подвергается критике со стороны индустрии.

Наша делегация очень не хотела бы в 2019 году, накануне вступления в силу новых требований, услышать и обсуждать предложения о применении прагматичного и практического подхода в отношении введения и применения этих требований."

Statement by the delegation of Saudi Arabia

"With regard to the draft amendments to MARPOL Annex VI for a prohibition on the carriage of non-compliant fuel oil for combustion purposes for propulsion or operation on board a ship, Saudi Arabia is of the view that the work on the output on "Consistent implementation of regulation 14.1.3 of MARPOL Annex VI" must be taken into account when considering the entry-into-force date of the amendments introducing the carriage ban of non-compliant fuel. The Guidelines being developed under the aforementioned output, as well as the potential amendments to the PSC (Port State Control) guidelines and the monitoring and sampling guidelines, are directly addressing serious safety concerns and are related to the decision on the timing that a carriage ban should come into effect.

These concerns stem from safety issues which are mainly related with the future worldwide production of very low sulphur (<0,5%) fuel blends: instability, incompatibility, flashpoint lower than the minimum required by SOLAS, inadequate safety margin for cat fines, to name but a few. It is worrisome that such fuels are currently off spec. The relevant ISO fuel specification is under review and as ISO declared recently at IMO, it will not be able to finalize it before 1.1.2020. ISO's work is made more difficult by the fact that most of the world's refiners have yet to clearly declare the fuel grades that they will offer in order to comply with the sulphur cap.

Given that PPR 6 will report the outcome of the output to MEPC 74 in 2019, it would be difficult for MEPC 73 in 2018 to make a fully informed decision on the most appropriate entry-into-force date of the MARPOL Annex VI amendments concerning the carriage ban of non-compliant fuel. Saudi Arabia would not go to the extent of proposing that the draft amendments should not be considered for adoption at MEPC 73. However, it would be prudent if the entry-force-date of the amendments concerning the carriage ban are set to an appropriate time into the future (for example 1 January 2022) to allow for an experience-building phase that would provide sufficient time to all stakeholders to iron out all the issues that may arise after 1 January 2020, be they commercial, operational or safety-related.

It would be disconcerting, if MEPC 73 were to agree to an entry-into-force date of 1 March 2020 (i.e. following the minimum ten months for acceptance and six months after acceptance for entry-into-force) and we find ourselves in the second half of 2019, at MEPC 76, potentially discussing calls for a "practical and pragmatic approach" to the enforcement of the carriage ban.

Since the relevant Resolution will most probably be approved at MEPC 72 and adopted at MEPC 73, Saudi Arabia intends to have a more detailed submission will be made to MEPC 73 to this effect.

Thank you Chair."

Statement by the observer from INTERCARGO

"Thank you Chairman and good day distinguished delegates,

With the introduction of the Sulphur Cap a welcome but also far reaching step-change in the shipping industry may be expected from 2020. This step-change requires careful and measured reflection and so we invite the Committee to consider the following points:

- the potential safety implications associated with compliant fuels / blends of fuels to be made available in the market in view of the still ongoing work on the needed ISO standards; relevant concerns necessitate due consideration at the Maritime Safety Committee
- the regional availability is also of concern especially in smaller and non-popular ports; a mechanism for sharing and publishing availability information in this respect would be crucial
- the role and preparedness of all stakeholders in the supply chain such as refineries, bunker suppliers and charterers as far as charter party clauses are also to be considered.

Overall, the WORLDWIDE AND REGIONAL AVAILABILITY OF SAFE COMPLIANT FUELS is an issue that requires due investigation.

In view of the uncertainty of whether there will be worldwide availability of safe compliant fuel, before the timing of the prohibition on the carriage of non-compliant fuel oil is decided, we invite the Committee to consider the above.

While compliance is of course our primary objective, the uncertainty surrounding the implementation of the Sulphur Cap from 2020 necessitates a reasonable and measured enforcement of the Regulation during a period of experience building to keep it aligned with the industry reality and, and to ensure as we also wish, its successful implementation. Otherwise, there may be significant impacts on vessel safety and on international trade, and thus on the economic sustainability of the countries represented here at IMO.

We invite the Committee to give due consideration to these real challenges.

Thank you."

Statement by the observer from IBIA

"We are very grateful to China for their proposal and it is clear to us that we are seeking the same outcome: namely for authorities in all jurisdictions to use the same methods when testing bunker fuel in order to verify compliance with the relevant MARPOL sulphur limits. This would help achieve uniformity in enforcement across the board when verifying the sulphur content of different kinds of fuel oil samples.

As noted by China, the test range of ISO 8754 covers sulphur content ranging from 0.030% to 5.00%. In fact, this test method can record lower values but the test reporting protocol nevertheless stipulates that results must be reported within the defined range. It is indeed the case, as China has noted, that some fuels supplied to ships may have sulphur content below 0.030% and that the ISO 14596 test method, which covers the range 0.001% to 2.50% sulphur would be needed to more accurately report the sulphur content of such fuels.

We do not dispute these observations. In fact, we support the use of all suitable sulphur test methods to obtain indicative test results, whether that is handheld sulphur analyser instruments, using so-called sniffers to detect excessive sulphur emissions, or when checking sulphur content in fuel oils supplied to ships for operational purposes. However, the key phrase here is indicative test results.

We believe the needs are materially different when you consider another key phrase, which is verification of compliance. The outcome we are looking for is to have a uniform approach to verification of compliance with MARPOL Annex VI sulphur limits for all types of fuel oil samples. For this purpose, the test range of ISO 8754 meets all the regulatory requirements as 0.03% is well below 0.10%, which is the lowest sulphur limit covered by MARPOL. For this reason, we believe only ISO 8754 is needed when testing various fuel oil samples for compliance with MARPOL sulphur limits."

Statement by the delegation of the Russian Federation

"First of all, allow me to thank the Secretariat for the report prepared that, in our opinion, in the context of the similar previous reports in the past years, gives a clear enough picture of the trends in the world shipping pertinent to the use of fuels with various sulphur content.

We would like to stress a number of points we find important, in light of the forthcoming 0.5% sulphur content limit coming into force.

First.

It is clear from the report that nowadays, the industry uses residual fuel oil significantly (up to 10 times) more than distillate fuel oil. We are aware that the report does not cover more than 40% of the total fuel consumed within a year, however, the figures demonstrate clearly that, overall, residual fuel oil is used much more than distillate fuel oil.

Second.

Presently, not more than 1.6% of the residual fuel oil used worldwide complies with the sulphur content requirements in ship fuel (under 0.5%), the said requirements are envisaged to become effective on 1 January 2020. Over 98% is taken up by residual fuel oil with higher sulphur content, over 66% is taken up by the fuel oil with sulphur content in the range between 2.5 and 3.5%.

Finally, third.

We would like to draw your attention to the similar report of 2011 as set out in document MEPC64/4. I think it is clear enough why 2011 has been chosen: it is the year before the 3.5% sulphur content limit became effective.

At that time, only about 13% of residual fuel oils had sulphur content exceeding 3.5%. Which means that before the new limit became effective, the industry had to alter the pattern of use of residual fuel oil only for the said 13%. The remaining fuel was already compliant with the new requirements.

If we choose to be guided by the 2017 data – and we do have doubts whether the pattern of fuel use will be changed dramatically before the end of 2019 – then by 2020 the industry will have to either substitute more than 98% of the existing residual fuel oil with the distillate or low-sulphur residual fuel oil, which, as I said, only takes up 1.6% of the total, or apply alternative ways embedded in MARPOL.

In the course of the recent MEPC session we got back to the question whether the low-sulphur fuel oil will be available by 2020, and, in spite of the outcome of the availability study commissioned by IMO, some delegations including the Russian Federation expressed concerns in this connection.

The industry also expressed concern on the matter, and we all remember the detailed and comprehensive alternative study submitted to MEPC 70.

This delegation thinks that the figures provided in the monitoring report for 2017 prepared by the Secretariat (MEPC 72/5/3) can only augment the said concerns.

In this connection the Russian Federation thinks it desirable for the Committee to come back to considering the matter of fuel availability, so that IMO could focus the necessary attention on this paramount matter, in the really short time remaining before the new requirement comes into force."

"В первую очередь позвольте поблагодарить Секретариат за подготовленный отчет, который, как нам кажется, в привязке к аналогичным отчетам за предыдущие годы, дает достаточно наглядную картину тенденций использования топлива с различным содержанием серы в мировом судоходстве.

Мы бы хотели отметить несколько, по мнению нашей делегации, важных моментов, в свете грядущего вступления в силу лимита по сере в 0.5%.
Первое.

Из отчета следует, что в настоящее время тяжелого топлива в отрасли используется существенно (до 10 раз) больше, чем дистиллятного. Мы понимаем, что отчет покрывает не более 40% от общего количества потребленного за год топлива, но цифры дают все основания полагать, что для совокупного потребления доля тяжелого топлива по сравнению с дистиллятным существенно выше.

Второе.

На сегодня только 1.6% потребляемого в мире тяжелого топлива соответствует требованиям по содержанию серы в судовом топливе (менее 0,5%), которые должны начать действовать с 01.01.2020. Более 98 % составляет тяжелое топливо с более высоким содержанием серы, и более 66% - топливо с содержанием серы от 2.5 до 3.5%.

И, наконец, третье.

Мы хотели бы обратить ваше внимание на аналогичный отчет за 2011 год, представленный в документе MEPC64/4. Почему именно этот год, думаю всем понятно – это год накануне введения в действие порога по содержанию серы в 3.5%.

Так вот на тот момент только около 13% тяжелых сортов топлива были с большим, чем 3.5% содержанием серы. Т.е. накануне введения нового требования отрасли пришлось менять структуру потребления тяжелого топлива в объеме всего лишь 13%. Остальное топливо уже соответствовало новым требованиям.

Если руководствоваться данными за 2017 год, а мы выражаем сомнения, что до конца 2019 года структура потребления топлива претерпит серьезные изменения, то к 2020 году отрасли будет необходимо отказаться от более чем 98% нынешнего тяжелого топлива в пользу дистиллятных сортов или низкосернистого тяжелого топлива, доля которого на сегодня, как я уже говорил, всего лишь 1.6%, либо использовать альтернативные возможности, заложенные в МАРПОЛ.

На прошлой сессии КЗМС мы возвращались к вопросу достаточности низкосернистого топлива к 2020 году, и, несмотря на результаты исследования по достаточности топлива (availability study), выполненного по заказу ИМО, ряд делегаций, в том числе делегация Российской Федерации, высказывали обоснованные опасения на этот счет.

Индустрия также выражала озабоченность по этому поводу, и мы помним подробное и комплексное альтернативное исследование, представленное на 70ю сессию КЗМС.

Наша делегация полагает, что цифры, представленные в отчете по мониторингу за 2017 год, подготовленном Секретариатом (MEPC 72/5/3), только усиливают все эти опасения.

В этой связи Российская Федерация считает целесообразным вновь обратить внимание Комитета на вопрос достаточности топлива с тем, чтобы в оставшееся до введения нового требования время, которого на самом деле совсем немного, ИМО уделило этому важнейшему вопросу повышенное внимание."

ITEM 7

Statement by the UNFCCC Secretariat

"Thank you, Mr. Chairman. I would like to take this opportunity to inform the Committee on behalf of the UNFCCC secretariat on: (i) the outcomes of COP 23, which took place in November last year; (ii) its relevance to the work of IMO on addressing greenhouse gas emissions from international shipping; and (iii) our expectations for this MEPC session.

Distinguished delegates, let me start by emphasizing the importance of fully operationalizing the Paris Agreement by the end of this year, which makes it urgent for Parties to reach agreements on many politically sensitive and technically complex implementation and operational issues.

The urgency of action on climate change was last underlined by the United Nations Secretary-General, António Guterres, two weeks ago when he called climate change "the most systemic threat to humankind" and urged world leaders to take stronger action on curbing their countries' greenhouse gas emissions.

Outcomes of COP 23

COP 23, which was held in Bonn last year and was the first COP session presided over by a small island developing State – Fiji, was an important milestone on the road to stronger climate action. At COP 23 progress was achieved in the development of the guidelines for the implementation of the Paris Agreement. Parties reached an agreement on the overall structure of the outcome and formulated a plan for delivering it in December this year, at COP 24 in Poland.

Agreement was also reached to place strong focus on the delivery of the pre-2020 commitments under the Convention, including as related to the mobilization of climate finance and the entry into force of the Doha Amendment to the Kyoto Protocol. As pre-2020 implementation and ambition are deemed essential for enhancing post-2020 ambition, Parties decided to convene a stocktake on pre-2020 implementation and ambition at COP 24 and 25.

Parties also established a platform, the so-called Talanoa Dialogue, to inspire higher ambition on climate action. The inclusive and transparent dialogue will be conducted in the spirit of the Pacific tradition of talanoa, which aims to build empathy and trust among participants. The dialogue will focus on three questions related to the progress towards the long-term goals of the Paris Agreement: "Where are we?", "Where do we want to go?" and "How do we get there?"

Further, I am pleased to inform you of a very successful special event held during COP 23, organized for the first time jointly by IMO and ICAO with the support of the UNFCCC secretariat and leadership of the SBSTA Chair. The purpose of the event, which was attended by more than 150 participants, was to showcase recent efforts, specific climate actions and progress made by both organizations in addressing greenhouse gas emissions in order to enhance the awareness of Parties and non-Party stakeholders of these important developments.

The feedback we received from many participants as well as from IMO and ICAO was overwhelmingly positive and encouraging; the expectations of what the two organizations can deliver on climate change this year are high.

On behalf of the secretariat I would like once again to extend my sincere thanks to the IMO secretariat, particularly its representatives at the event Mr. Stefan Micallef, Mr. Edmund Hughes and Mr. Camille Bourgeon, for the excellent presentations, expertise shared and engagement in the discussion.

What this means for the work of the IMO

Distinguished delegates, allow me to briefly address how these developments under the Convention relate to the ongoing work by the IMO on addressing greenhouse gas emissions from international shipping.

We are all familiar with the main goals of the Paris Agreement of holding the increase in the global average temperature to well below 2 °C and pursuing efforts to limit the increase to 1.5 °C. These temperature goals guide efforts across all elements of the Agreement.

The main mechanism for reaching these goals is nationally determined contributions (NDCs). An NDCs should reflect the highest possible level of ambition of a Party to contribute to the achievement of those goals.

Current NDCs cover only one third of the emission reductions needed by 2030 to remain on the least-cost pathway to staying well below 2 °C. Staying on that pathway is only possible if the next round of NDCs shows more ambition in all sectors, including international maritime transport.

The need to urgently enhance the ambition of climate action is highlighted by the findings of the World Meteorological Organization, according to which 2017 was one of the three warmest years on record and the warmest one that was not influenced by an El Niño event. Global mean temperatures in 2017 were already 1.1 °C above pre-industrial levels. The 2013–2017 average global temperature was the highest on record for a five-year period. The world's nine warmest years on record have all occurred since 2005, and the five warmest years since 2010. During the special event at COP 23 we were impressed by the broad portfolio of implemented, planned and possible new measures for limiting and reducing greenhouse gas emissions presented by IMO. They range from technical, operational, administrative and infrastructural measures to those that can be identified as market-based, supported by capacity-building activities, technical cooperation or research and development.

Looking ahead, the Talanoa Dialogue launched at COP 23 and started in January of this year provides a great opportunity for IMO to increase the global visibility of this broad portfolio of emission reduction measures including the initial strategy, and to put these efforts in the global context. The relevant COP 23 decision encourages all stakeholders to engage in the Dialogue, which will take stock of the collective efforts of Parties in relation to progress towards the long-term mitigation goal of the Paris Agreement and inform the preparation of NDCs.

Expectations from the MEPC 72

It is without any doubt that the 72nd MEPC session will shape the future response and contribution of the international maritime transport sector to climate change.

On behalf of the UNFCCC secretariat I would like to encourage the MEPC to aim to achieve tangible progress at this session, in particular by adopting a comprehensive and ambitious initial IMO strategy on the reduction of greenhouse gas emissions from ships.

Taking into account the following could further strengthen the global response to the threat of climate change in the area of maritime transport:

- Vision and level of ambition of the initial IMO strategy could be made compatible with the long-term temperature goals of the Paris Agreement;
- In raising the ambition to the highest possible level, all potential further measures, including market-based measures and alternative fuels, could be considered;
- Urgency of climate action should be fully taken into account as any delay in emission reduction efforts would mean that achieving the long-term goals of the Paris Agreement would require more costly and rapid emission reductions as well as more costly adaptation to the adverse impacts of climate change;
- Lastly, the timing of the periodic review of the initial IMO strategy could take into account the timing of the global stocktake under the Paris Agreement so as to enhance synergy between IMO and UNFCCC processes.

I look forward to working with you this week and in the future to jointly accelerate action and increase climate ambition in line with the goals of the Paris Agreement.

As always, I hope to further strengthen the excellent cooperation between our secretariats on climate-related matters.

Thank you for your attention."

Statement by the delegation of Turkey

"Dear Secretary General,

First of all, I have the pleasure to announce that Turkey, as a consistent contributor to the marine environment protection, has completed the ratification process regarding the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships.

We are planning to present our instrument of ratification to the IMO within this week. We hope that this convention will enter into force, and become effective soon.

Mr Chair,

We did not take the floor in the mooring session keeping our intervention for this agenda item. Please excuse me it takes a bit longer.

We are facing a global challenge which requires a global solution. Likewise, the global solution necessitates a global effort. Otherwise, any economic interest will be insignificant when the earth becomes a place of uninhabitable and it is too late, although nevertheless it is a matter of fact that economic interests of countries are important.

The international community is on the verge of a new era in combating climate change and a strong regime is needed after 2020 to keep global warming below 2 degrees. IMO should not remain unresponsive to combating greenhouse gas emission from shipping sector, and firstly, should maintain a rigid stance against climate change threats.

We should keep working on reducing GHG for our future generations but especially recognizing the fact of Small Island Developing States endeavour of surviving as they are extremely vulnerable to climate change.

I would like to draw the Committee's attention back to COP 15 meeting where International community gave a responsibility to IMO and ICAO in order to take actions against greenhouse gas emissions, taking into account their professional field. Also they are awaiting from maritime sector to focus on its responsibilities in the light of UN decisions.

Let me thank to the Chair and all participants of the third intersessional working group on GHG, and the secretariat for their extraordinary effort. To achieve our common objective, an inclusive, equitable and transparent process is needed.

I would like to draw the Committee's attention following common approach in an effort to reduce global ghg emissions.

Parties to the UNFCCC are obliged to reduce greenhouse gases (GHG) emissions, to cooperate on research and technology and to encourage protection of sinks. The Convention lays "common but differentiated responsibilities" to countries, taking into account their respective development priorities, goals and special circumstances, in order to reduce greenhouse gases emissions.

Climate change is a common concern of humankind and sustainability plays an important role in addressing climate change, with developed countries taking the lead.

In order to take effective climate change action, there is need to enhance the capacity and ability of developing countries.

Mr Chair

It is important to bear in mind that reducing GHG emissions is a global responsibility for all of us and IMO has been attempting to assist us to fulfil this responsibility for a long time. I believe that we are not far away to find a clear ground to build a consensus between all Member States.

I would like to highlight two points as to facilitate the discussion.

- .1 All elements of the initial strategy document, from vision to guiding principles, levels of ambitions and possible measures, have to be considered aggregately. Ambition Levels and guiding principles can be jointly set, taking into consideration that there will always be differences in our interests; and
- .2 We believe that intersessional working group discussed parameters in draft initial strategy dissociating ourselves last week, which takes us away from a compromise solution. As a matter of fact, we need to find out how we can pinpoint the cause of our arguments rather than bringing forward them to support our ideas, and then we can remove barriers.

Mr. Chair,

Regarding the challenges and solutions on GHG emissions from ships,

We have been following up the discussions on the principles of "common but differentiated responsibilities and respective capabilities (CBDR)" of the UNFCCC and IMO's "non-discriminatory no more favourable treatment NMFT at various meetings. It is obvious that, the discussions on entity of the phrases until today can not lead us into a conclusion.

It should be recognized that the maritime sector has special circumstances that differ from many other sectors. Therefore, the concept of "nationality" is not so relevant for maritime sector, and the main problem that needs to be addressed is how a fair system will be set up solely based on the maritime circumstances.

The harmonization of the principles of CBDR and NMFT can only be the result of negotiations and the trust built among all countries represented at IMO. Turkey is in favour of the idea that both principles should be integrated into the initial strategy document in a harmonized way. In this regard, we propose the NMFT to be used for technical measures while the CBRD for economic measures only.

There are some values in the strategy document that are determined on the basis of the fact that a strategy document needs target values. We believe that trying to designate some numbers for dates and reduction ratios within the strategy document is not the real problem. The real problem is the lack of persuasive justification to get majority under these targets. The figures can be nevertheless readjusted in the future.

There is a discussion on absolute cap within the strategy document. We believe that ambitious levels can be reconciled if concerns raised by developing countries are satisfactorily resolved. There are two options of unanimously setting absolute target.

Use of indicative figures: Many delegations believe that the actual figures will not be determined until results of data collection system are received. Indicative figures can be determined in the initial strategy, with the caveat that it may be updated at revised strategy.

Use of adjusted figures: Some other factors which are not under the control of IMO may affect targets which is the main concern. Adjusted figures have been changed according to influences of particular times, so that they can be compared with figures from time to times. From this point of view, determining adjusted figures may resolve concerns about external factors.

It should not be forgotten that maritime transport has the lowest emission per unit among transport modes and that the shifts in maritime transport from other modes of transport will not hinder to combat emissions, on the contrary.

In this context, the question may arise is that, how the increase of GHG due to demand in world trade will be prevented? We believe that the strategy has a whole structure with all elements including vision. As the demand is not under the control of IMO, any increase in demand will be preceded by the target in the vision where the ultimate goal is to take the actions towards zero emission in maritime transportation.

Finally, I would like to draw the Committee's attention to the following points in order to stimulate the working group to be convened after this discussion.

- .1 The terminology and approaches adopted under the umbrella of IMO and other UN specialised agencies have been adopted by member states. Instead of discussing the entity of them again, discussion on how to harmonize this principles within strategy will enable us to reach a comprehensive consensus.
- .2 We should attempt to put forward a common text on the draft strategy, focusing on lifting the causes of the concerns.
- .3 The instrument that the committee is going to approve is merely the initial strategy. That is to say, we will have a 5 year period so as to discuss, evaluate and finally approve the revised strategy.
- .4 The intersessional working group noted that the framework submitted by Turkey could be further proposed to the attention of the Committee. We would like to invite the Committee forward the document to working group.
- .5 In this sense, measures should be implemented after assessing financial implications of policies, in particular for developing countries, as well as the capacities of these countries to implement such measures.

Mr. Chair,

If we will not manage to approve the initial strategy this week here, it will be perceived that not only developing countries did not accept specific target but also developed countries avoided to take their responsibility.

Distinguished delegations, last but not east, we urge developing countries to set out a target and we urge developed countries to take responsibility.

Thank you."

Statement by the delegation of France

"En décembre 2015, l'accord de Paris était conclu, représentant une avancée majeure en matière de lutte contre le changement climatique. Moins de deux ans et demi après, la conviction que le transport maritime international doit contribuer aux efforts mondiaux est partagée par tous, et que c'est à l'OMI que revient la tâche d'y veiller.

Le monde a donc les yeux fixés sur nous, aujourd'hui. Notre travail sera mesuré à l'aune des objectifs de l'Accord de Paris, à savoir « Contenir l'élévation de la température moyenne de la planète nettement en dessous de 2°C par rapport aux niveaux préindustriels et poursuivre l'action menée pour limiter l'élévation de la température à 1,5°C » : serons-nous capable de les respecter ?

La France entend bien que cette organisation se montre à la hauteur des enjeux, comme elle sait si bien le faire. Il en va de la survie pure et simple de certains des Etats-Membres, comme nous l'avons entendu des Ministres qui sont intervenus ce matin et de l'avenir de tous. Nous le devons à nos concitoyens, nous le devons aux générations futures.

Nous savons que la technologie pour une décarbonisation du secteur sera au rendez-vous et que l'industrie est prête, comme ses représentants l'ont clairement indiqué la semaine dernière. Cette dernière attend juste un signal clair, indispensable pour engager les investissements nécessaires.

Le groupe de travail intersessionnel a travaillé d'arrache-pied. Le projet de stratégie qu'il a produit en annexe à son rapport ne correspond certes pas entièrement à ce que nous en attendions. Mais il est le résultat de maints compromis des divers participants, nous y compris. Nous souhaitons donc que le groupe de travail le finalise rapidement, dans un esprit de coopération, afin que le Comité puisse l'adopter.

Par ailleurs, sur les mesures : le groupe de travail n'a pas eu le temps de discuter du plan d'action. Nous considérons qu'il nous faudra un groupe intersessionnel et qu'il faudra qu'il élabore ce plan d'action, indispensable pour que la stratégie ne reste pas lettre morte, comme la Norvège et le Canada l'ont très bien expliqué.

Merci M Le Président."

Statement by the delegation of Saudi Arabia

"I take the floor to reserve the position of the Kingdom of Saudi Arabia with regard to the adoption of the Initial Strategy; more specifically, on paragraph 3.1 of the Strategy titled 'Levels of Ambition'.

Mr. Chair, we support IMO's efforts to address GHG emissions from international shipping, however, we cannot join consensus, if any, on the adoption of the Initial Strategy, especially its paragraph 3.1., for the following reasons:

- .1 It is premature to set targets before conducting the necessary review. Agreeing on ambitious targets without the backup of appropriate and sufficient review risk yielding the ambitions unrealistic and potentially harmful to the shipping industry;
- .2 Any strategy or ambition must be in line with the spirit of the Paris Agreement in that it should focus on net emission reductions and not limited to sources or specific fuels; and
- .3 Any ambition must not place disproportional burden on the marine transport sector compared to other sectors in a manner that negatively affects international trade, sustainable development and eradication of poverty; particularly in developing countries.

Mr. Chair, for the aforesaid reasons, we cannot join any such consensus; and we would like the record to reflect that. We also request that this statement be appended as an Annex in the final report."

Statement by the delegation of United States

"I take the floor to reserve the position of the United States with regard to the adoption of the Initial Strategy. The United States is a leader in technological innovation and is supportive of IMO efforts to improve energy efficiency and address greenhouse gas emissions in international shipping. It was in a spirit of cooperation that the United States approached the Working Group and its work.

Unfortunately, there are elements of the Initial Strategy that are unacceptable to the United States.

First and foremost, we object to the reference to the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances. This Organization has always operated under the principles of non-discrimination and no more favorable treatment. This Initial Strategy must similarly follow those principles. As Paragraph 3.2.2 makes clear, any measures adopted in furtherance of this Initial Strategy must apply equally to all ships operating internationally, regardless of flag. Paragraph 3.2.1.2 includes the existence of a principle that does not apply in this Organization; it cannot override or diminish the principles of this Organization. Neither that paragraph, nor paragraphs 4.9 to 4.12 in the section on impacts on states, can be used to suggest this Organization take action that would be discriminatory. We will work tirelessly to ensure any future actions taken by this Organization are non-discriminatory.

Regarding section 3.1.3, we do not support the establishment of an absolute reduction target at this time. In 2016, MEPC adopted a data collection system for energy efficiency and GHG emissions from international shipping, starting a three-step approach towards the adoption of further measures to enhance efficiency and address emissions. Since MEPC has not yet completed the three-step approach, we see the establishment of an absolute reduction target as premature. In addition, we note that achieving significant emissions reductions in the international shipping sector will depend on technological innovation and further improvement of energy efficiency.

With respect to references to the Paris Agreement, we note that the United States announced that it intends to withdraw from the Paris Agreement as soon as it is eligible to do so, consistent with the terms of the Agreement, unless it identifies suitable terms for re-engagement. Therefore, the references to the Paris Agreement in this document are without prejudice to U.S. positions.

Finally, we express serious concern about how this document was developed and finalized. States were not allowed to lead the process and were not provided space to engage in textual negotiations to resolve differences. This is unacceptable and not befitting this esteemed organization.

The United States will continue to constructively engage in future work related to this strategy, and in doing so, looks forward to working with our colleagues around this room in a country-driven process that ensures the views of all countries are fully considered."

Statement by the delegation of Turkey

"We are very grateful that we have come to a solution with common approach at end of the working group. Thanks to quality of contributions, the group has been put forward a compromise text which embraces aspects of developed states, aspects of developing states and aspects of LDCs and SIDS. The strategy provides for influences to be made more effective through a stronger working partnership in combating greenhouse gases emission. Bearing in mind this strategy document is the initial text and it is obvious that this document is going to steer maritime sector for a common solution for the next steps beyond us.

We fully support all IMO initiatives to address shipping's contribution to climate change and impacts on the environment. We believe that the draft initial IMO strategy on GHG emissions is a significant step forward in this regard.

Mr Chair,

We must take the necessary measures without further delay. This delegation believes that we will derive great benefit from the strategy. The vision in the strategy document provides us a strong desire with a view to reaching the objective of reducing GHG, inasmuch as it says as soon as possible. It is clear that there is no barrier to phase the GHG emissions out without delay thanks to our vision.

It is also very clear that the risks that climate change poses cannot be met by any single state. We are faced with a common challenge and we must tackle it within a spirit of shared responsibility. This means that effective long-term cooperation and sustained international solidarity will be of paramount importance. It is clearly seen that the draft initial strategy addresses shared responsibilities taking into account circumstances of shipping.

We are also aware that every states has their special circumstances in terms of geographical locations, economical situation and political position. This delegation believes that the strategy encompasses a language eliminating many widely differing forms of concerns, including LDCs and SIDS none of which are the reason for global climate change but all of which have been affected in the worst way by its outcomes.

Mr Chair,

We attach great importance to the upcoming talks on revised strategy for post-2023 as part of the IMO Road Map. We will continue our constructive stance that we have agreed so far in the process to determine the terms of the initial strategy that is expected to be revised in 2023."

Finally, only through global solidarity and cooperation can we overcome the challenges we are faced with in the transition process to the low carbon shipping and zero emission. Therefore we would like to urge all member states to approve the draft initial IMO strategy on GHG emissions set out in Annex of the working paper 7.

Thank you Mr Secretary General for guiding us,
Thank you to the Secretariat for enormous effort,
Thank you Mr Oftedal for your passion and leadership,
Thank you Mr Chair for your clear instruction to facilitate the working group,
Thank you all distinguish delegates for hard working beyond normal working hours till last week, your kind contribution and understanding."

Statement by the delegation of the Marshall Islands

"Ministers, Excellencies, colleagues, friends – lakwe

The President of the Marshall Islands gave me and my team three very clear instructions:

- .1 to get a deal that keeps alive the possibility of limiting global temperature increase to no more than 1.5 degrees Celsius;
- .2 to get a deal that is good for the shipping sector; and
- .3 to get a deal that is good for our economy, and the economies of all countries.

We have travelled far, together, to adopt this deal. To get here has been hard. Very hard. And it has involved compromises by all countries – not least by vulnerable island nations like my own who wanted something far, far more ambitious than this.

Nevertheless, we acknowledge that:

- .1 this deal keeps alive the ability for us to keep global temperature increases within the limits set by the Paris Agreement. And it provides for the level of ambition to be reviewed in light of the latest science of the IPCC;
- .2 this deal sends a very clear policy signal that the international shipping sector has been waiting for in order to begin to play its full part in trying to achieve the goals of the Paris Agreement; and
- .3 this deal guarantees that any significant negative impacts are identified and addressed before implementing measures are adopted. This gives crucial assurance for countries – particularly developing countries that are dependent on the shipping sector for trade and their economies.

Countries who have the least responsibility for causing climate change but all too often suffer its worst impacts.

Ministers, Excellencies, colleagues,

We must leave here in no doubt. History has been made in the IMO today. By adopting this Initial Strategy, which contains a vision to phase out greenhouse gas emissions and sets an absolute – and landmark – cap on emissions, the international shipping sector will now embark on the transition to a low emissions future. And a future where the shipping sector can continue to grow sustainably and maintain its role as the backbone of global trade.

I would be remiss not to thank the Secretary General, his team, the Chair of the MEPC, the Chair of the Working Group and all IMO colleagues for their efforts over not just days and weeks, but years. Success would not have been possible without a spirit of compromise.

I have to give particular thanks to the support and unity of our sisters and brothers from the Pacific Islands, our Pacific cousins from New Zealand, as well as Australia, and of course the High Ambition Coalition. And I thank all those nations that set the stage for this historic moment by signing the Tony de Brum Declaration.

Our job is far from over. This is a step – an important step – on our journey to a safe and sustainable future. There are many steps to come – and the world will be watching very closely to make sure that the promises made today are fulfilled. Tomorrow we must start on the road to implementation.

But today we should allow ourselves a moment to smile. I have no doubt that Tony de Brum will be smiling down on us today.

On behalf of a proud and hopeful nation, I say kómmol tata."

Statement by the delegation of Brazil

"Mr Chair,

Today the International Maritime Organization makes further progress in advancing multilateral efforts to address climate change. The initial strategy we are about to adopt represents an important step in the continued engagement of the shipping sector in reducing GHG emissions, in line with the roadmap established in 2016. It is an important starting point for further enhancing policies and measures by this Organization to deal with this complex issue that affects us all.

Climate change is a global problem that requires global answers. As an active Party to the UNFCCC, its Kyoto Protocol and its Paris Agreement, Brazil remains committed to international coordinated action to fight climate change and its negative effects, while promoting sustainable development. As I indicated in my opening statement, Brazil's nationally determined contribution under the UNFCCC is a clear sign of the nation's commitment and high level of ambition, when it comes to reducing GHG emissions globally. We therefore congratulate IMO and its Member States for today's achievement, which will enable the international shipping sector to enhance its current efforts to reduce GHG emissions.

Mr Chair,

Brazil firmly believes that the needs and circumstances of developing countries can and must be addressed in any multilateral solution to address climate change. The inclusion in the strategy of the principle of common but differentiated responsibilities and respective capabilities of the UNFCCC, along with the non-discrimination and no more favourable treatment principles of the IMO, represents an important accomplishment. It will inform a balanced approach as we move forward towards our revised strategy in 2023, helping to ensure that the crucial role of shipping in serving the world economy and promoting sustainable development is not challenged.

Brazil also welcomes the recognition of the need to consider impacts on States, particularly on developing ones, before adopting any further measures to reduce GHG emissions in 2023. Evidence-based decision-making in this regard is essential to uphold IMO's tradition of relying on data analysis for developing policies and rules, an approach that has yielded historic achievements.

Chair,

Since the beginning of the roadmap negotiations, Brazil has made a point of contributing constructively to this debate, consistently aiming for outcomes that were consensual – the most effective manner to adopt decisions that actually promote international cooperation against climate change. This delegation worked hard to explore compromise solutions throughout the three meetings of the ISWG-GHG, the two sessions of MEPC and bilateral

informal conversations. As we continue in the next five years, Member States must redouble efforts to ensure that we reach negotiated compromises that will sustain IMO's continued role in addressing climate change.

However, as the IMO and its Member States move forward in the implementation of the roadmap, some concerns remain.

Firstly, as we aim for a revised strategy in 2023, we must strive to further develop, through negotiations among Member States, levels of ambition that are ambitious, realistic and - equally important - shared unequivocally by all Member States, with solid backing from industry and other economic actors.

Secondly, and with that in mind, the Brazilian Government agrees to move forward in this process, but reserves its position with respect to the indicative levels of ambition contained in paragraph 3 of the initial strategy, particularly under 3.1.3. It is the understanding of the Brazilian Government that the content of that paragraph does not imply any attribution of specific obligations to individual States nor individual ships.

We remain convinced that different approaches to deal with levels of ambition, such as through carbon intensity reduction, can generate equally if not even more ambitious action to phase out emissions from the sector.

Lastly, Brazil will continue to work to avoid that further action by the IMO to reduce GHG emissions create trade distortions. While this delegation acknowledges the compromise reached under the impacts on States section of the initial strategy, much remains to be done. This important element must progress beyond what we have agreed up to now, in coherence with commitments made by all Members of the IMO in relevant UN frameworks. In this sense, the IMO must ensure that measures taken to combat climate change do not become arbitrary. They must not lead to unjustifiable discrimination or disguised restrictions on international trade, challenging articles 3.15 of the UNFCCC, 2.3 of the Kyoto Protocol and 4.15 of the Paris Agreement.

Mr Chair,

We cannot conclude without commending my friend Mr. Sveinung Ofdetal from Norway on his leadership and tireless efforts in achieving this result we are about to achieve. We hope to continue to count on his skills as we move forward. Through our Secretary-General Mr. Kitack Lim, we also thank all Members of the IMO secretariat and interpreters for their untiring efforts in this endeavour.

We also commend you, Chair, for your steadfast leadership in driving the plethora of decisions we are making in this historic meeting.

Thank you very much."

Statement by the delegation of Argentina

"Sr. Presidente, hoy esta Organización está dando uno de los pasos más importantes estipulados en la Hoja de Ruta acordada en 2016, y es un hito en nuestro camino de la OMI para mantener su protagonismo en materia de control de emisiones de gases de efecto invernadero.

En el marco de los grandes esfuerzos que hemos hecho durante el proceso negociador, el Gobierno argentino desea manifestar lo siguiente, y solicita que esta intervención se registre en el informe de esta reunión.

En primer lugar, la Argentina reconoce y agradece que, con excepción de una delegación -cuya reserva comprendemos y respetamos-, el resto de los participantes en las negociaciones han aceptado la plena aplicabilidad del principio de responsabilidades comunes pero diferenciadas a las medidas que se adopten en materia de emisiones de GEI desde el transporte marítimo. En efecto, cualquier medida que se adopte deberá ser previamente evaluada para asegurarnos que no impacte negativamente en los países en desarrollo, incluidos los PMD y los SIDS.

Asimismo, la Argentina reafirma su compromiso inamovible con el Acuerdo de París en su integridad, así como con la reducción de emisiones y con el cuidado del ambiente.

En ese marco, advertimos que los objetivos y niveles de ambición mencionados en el proyecto adjunto al informe del Grupo de Trabajo carecen por completo de valor normativo y se limitan a ser estimaciones con los conocimientos disponibles a esta fecha sobre los esfuerzos que podrían ser necesarios para alcanzar las metas fijadas en el Acuerdo de París (*). No hemos escuchado ninguna interpretación diferente de ésta a este respecto.

Señor Presidente, permítame referirme a los aspectos de procedimiento.

El consenso es una base fundamental para llegar a acuerdos duraderos y significativos. Así, un adecuado mecanismo consensuado, y basado en evidencia al momento de adoptar las medidas en esta materia, será la mejor manera de asegurar el logro y la eficacia de las mismas, y de evitar medidas unilaterales.

Ese mecanismo y las medidas que se adopten en consecuencia deberán tener en cuenta la circunstancia especial de los países geográficamente distantes de sus principales mercados de exportación y su vulnerabilidad ante el posible impacto en sus economías por el aumento en el costo del flete.

El procedimiento seguido en la negociación de la Estrategia no deberá servir como precedente, y que a futuro se espera que las negociaciones se realicen de manera transparente. Las medidas a considerarse en el marco de este proyecto de Estrategia requieren necesariamente del consenso para ser adoptadas.

Sr. Presidente, la Argentina seguirá comprometiendo su mayor esfuerzo para procurar que la OMI mantenga su liderazgo en la adopción de medidas eficaces en materia de emisiones de gases de efecto invernadero desde el transporte marítimo, proceso con el cual está y continuará estando firmemente comprometida.

Muchas gracias Sr. Presidente."

Statement by the delegation of Malaysia

"We wish to further express our gratitude to Mr Oftedal for his work and that of the Secretariat for their tireless effort during the past few days. The GHG issue is both a crucial and vital one; having considered the need to ensure the survivability of nations and its dependent economies. Chair, we believe that of UNFCCC and the Paris Agreement is undoubtedly a milestone in the preservation of the environment. Our delegation appreciates that IMO and its members States is not only fully conversant with the key issue of GHG but it is also competent to have the resolve to move this work forward with a clear and definitive message.

Chair, appreciating that the work which is put to this committee is a compromise text and not all that may be desired, as usual in the spirit of IMO Family, we always find an amicable solution to sometimes complex issues. It is imperative in the view of this delegation to ensure that appropriate concerns on the process is adequately addressed in the future working of the working group. In conclusion sir, please accept our support to accept and adopt the Initial Draft Strategy."

Statement by the delegation of the Philippines

"Mr. Chair, at the outset, allow me to express the sincere appreciation of my Delegation for your efforts, to the Secretary-General, Mr. Oftedal and those of the MEPC Secretariat's, in guiding us towards this historic occasion.

As an archipelagic nation with some 7,200 islands vulnerable to sea level rise and the socio-economic impacts of calamities brought about by climate change, we too have a keen interest in achieving the temperature goals of the 2015 Paris Agreement. As a responsible party to the Paris Agreement, and the wider framework convention of the UNFCCC and the Kyoto Protocol, we confirm our commitment to develop national strategies aimed at undertaking our obligation to the reach its temperature goals.

But as a developing nation, we also need to balance our commitments in the Paris Agreement with our needs to sustainably develop and ensure that in implementing our obligations we support our national development objectives and priorities such as sustainable industrial development, the eradication of poverty and the provision of basic needs and securing social and climate justice and energy security for all our people. For those too are the goals of the Paris Agreement: to strengthen the ability of countries to deal with the impacts of climate change.

Which is why it is important for us, Mr. Chair – in affirming our commitment to develop an IMO strategy to reduce GHG emissions from ships, complementing the goals of the Paris Agreement – that the strategy be a balanced one.

We congratulate the MEPC 72 and all the IMO member states for undertaking the task of drafting the IMO initial strategy and for attempting to deliver an ambitious target for reducing GHG emissions from ships. We further congratulate them for ensuring that, in doing so, the principle of common but differentiated responsibilities and respective capabilities is respected which is the hallmark of international climate change mitigation and adaptation treaties and strategies.

Mr. Chair, this initial strategy brings all IMO member states into the new territory of energy efficient shipping technology. We recognize that though not all member states are privy to this technology, we all should benefit from it, in all aspects and levels of application. And in keeping with the theme of balance, its effects and impacts on developing states, including LDCs and SIDs should also be considered and addressed.

The Philippines believes that new energy efficient and eventually non-carbon emitting ships would have a significant effect on traditional shipping requirements and port services and, most importantly for my country, on the skills to be required of seafarers. It would be useful that, in helping developing economies cope with the transition into a non-carbon emitting shipping sector, appropriate financial flows, a new technology framework and an enhanced capacity-building framework, called for under the Paris Agreement, should be put in place.

In pursuing a balanced strategy, this Delegation sees merit that this Organization study the possibility or consider the establishment of its own fund, a climate change fund, separate from or a new component in the current capacity building and training funds and programmes, that could assist developing countries' shipping sector, including those of the LDCs and SIDs, in transitioning to become more energy efficient.

Mr. Chair, this Delegation would have been pleased to join the consensus in adopting this IMO Strategy had there been one in this meeting. But, this Delegation would not stand in the way of adopting this strategy. However, the process of drafting this initial strategy sailed through rough waters. We believe that a lot more, a whole lot more could have been done in making the process more inclusive and in enhancing transparency and trust. The IMO has long been burdened with a number of treaties, which, for lack of widespread or broad consensus, have not achieved universal acceptance. We strongly believe that as a UN treaty organization, the IMO's membership of sovereign nations should, and are mandated to carry out its work through consensus. We call on the Organization and its membership to affirm and abide by this principle in all our meetings including in the ISWG-GHG 4, which this delegation will actively participate in a constructive manner.

In closing, Mr. Chair, allow me once again to offer my Delegation's sincere appreciation to you, the Chair of the GHG emissions Working Group, Mr. Oftedal, the MEPC Secretariat, the Secretary General, and the MEPC delegates for finalizing the initial IMO strategy for the reduction of GHG emissions from ships.

Thank you Mr. Chair."

Statement by the delegation of Indonesia

"First of all, please allow me, on behalf of the delegation of Indonesia, to commend you, Chair, Secretary General, and the Secretariat for putting considerable efforts to ensure our MEPC meeting and its parallel working group meetings run well, including drafting a comprehensive report which reflects dynamics of the meeting. We thank Mr. Oftedal of Norway and members of the Working Group for preparing the document MEPC 72/WP 7.

On the reduction of the Green House Gas emissions, my delegation wishes to use this opportunity to reiterate its fervent commitment to implement the Paris Agreement. Indonesia, which consists of more than 17.000 islands, large and small, will surely be affected by the impact of Climate Change. Therefore, in its Nationally Determined Contribution (NDC), Indonesia has voluntarily committed to reduce unconditionally 29 % of its greenhouse gases against the business as usual scenario by 2030. It could increase its contribution up to 41% reduction of emissions by 2030, subject to availability of international support for finance, technology transfer and development and capacity building.

Indonesia also recognizes the IMO's role and contribution in mitigating the impact of GHG emissions from international shipping. The drafting process of the Initial Strategy on the Reduction of Green House Gas Emissions from Ships will surely a concrete step toward this objective.

As climate change has impact to us all, the Strategy will also have impact on us and be carried out by us all. Therefore, it is our ardent hope that the Strategy will accommodate member states' interests. It is also our high expectation that the Initial IMO Strategy will be consistent with the purposes and provisions of the Paris Agreement, which was agreed and legally binding to us.

In retrospect, my delegation recognizes the negotiations have been long and arduous process. Ideally, the Initial Strategy should accommodate all member states interests and concerns. Yet we are mindful that this would not be possible, or even impossible. What is required, therefore, concession to be made by all parties – give and take through transparent process of negotiation.

We are aware of the uniqueness of the IMO as the UN specialized agency. We always respect, appreciate, and have a faith in the process of deliberation and consensus-based decision making at the IMO. The process itself is highly important as it reflects to what extend the product of deliberation is inclusive, democratic, and member states-driven. Failure to respect this process, we afraid it would only compromise the effective implementation of the Initial Strategy.

Chair, our concern is reflected in the Paragraph 15 of the Document MEPC 72/WP.7. Having said that, we are ready to move forward the negotiations because we have a high hope that IMO will always be an inclusive organization that represents the voice and interests of its member states and international community as a whole. It is our responsibility, Chair, the consensus-based decision making remains the air and spirit of IMO's meetings.

I thank you."

Statement by the delegation of Fiji

"Secretary General, Mr Chairman, Honourable Ministers, Excellencies, Distinguished Delegates bula vinaka and good afternoon to you all.

We acknowledge that we had a hard task given to us to deliver an initial Strategy for this Committee to adopt today. We have all been required to compromise. What gives us hope is that delegations have entered into honest and open exchange, and have explored every opportunity to come to a solution.

As a country that champions Climate Change and the reduction of GHG emissions through the Cop 23, UN Oceans Conference and the UN General Assembly, we are thankful that we can start with an initial strategy with an ambition.

We need to build on this, and to work collaboratively together to continue to improve the Strategy, and to develop and implement the follow up actions and the action plan needed to ensure that emissions are reduced in the short term.

We are reassured that the initial Strategy explicitly states a review of emission estimates and emissions reduction taking into account the reports of the IPCC and the reference to the Paris Agreement temperature goals keeping open the possibility of achieving the 1.5 degrees threshold gives us comfort.

As we have in the UNFCCC introduced the world to the Talanoa dialogue, we look forward to also taking this approach to listening to one other and to working together to improve on this initial Strategy.

To all distinguished delegates thank you for your understanding and listening to the plea of Pacific islands nations, our survival depends on this. To the chair and the secretariat of the working group our sincere appreciation to the hard work undertaken by you and the secretariat. We should all congratulate ourselves for what we have achieved together today.

This delegations gives its full support to this initial strategy.

Thank you and vinaka vakalevu."

Statement by the delegation of the Islamic Republic of Iran

"This delegation would like to thank the chair of the working group, secretariat and all members who worked with zeal during the past two weeks.

This delegation would like also to repeat it stands that cannot agree with any absolute cap or target year and that the measures we anticipate to adopt, should not cause any trade distortion.

As many others, we are concerned with the level of ambitions as set out in objective 3.1.2 and 3.1.3 understanding the fact that as secretary general referred to , it is a starting point to show our intention to work toward less GHG polluted world.

However we think the strategy should give the chance to every State to be a part of, hence further adjustment and consideration is needed before its final adoption.

Having said that this delegation is looking forward to participate 4th intersessional working group in order to come to a full consensus on this draft strategy.

Islamic Republic of Iran continues to fulfil its commitment toward the goals of Paris agreement and the regulations already set by IMO."

Statement by the delegation of the Russian Federation

"We would like to thank the Chair of the Working group for the report provided. First of all, we see this document as the fruit of complex negotiations.

This delegation still has some concerns about a number of provisions of this document. First: we are not quite satisfied to have the the principle of common but differentiated responsibilities and respective capabilities included under the "Guiding Principles" section, as for this Organization, the main fundamental principle has always been and remains the principle of non-discrimination and no more favourable treatment.

We also understand that paragraph 3.2.2 is very clear on the matter of full and complete effect of the requirement for all ships regardless of their flag to ensure the effective implementation of the strategy in question.

Second and the main: in the course of the discussion on this document, we stated that it was premature, at this stage, to specify any precise figures in the "Levels of ambition" section, in particular in paragraph 3.1.3, before we are in the possession of the relevant outcome from the data collection system. No one was able to answer our question how these figures are justified and what forms their basis at the current stage. In this connection we share the relevant concerns expressed first of all by the delegations of Saudi Arabia and Brazil.

We adopt this resolution in the understanding that in 2023, when we will have to adopt the revised strategy based on the outcome of the data collection, the absolute figures specified in the "Levels of ambition" section may be revised either to increase or decrease them."

"Мы благодарим председателя рабочей группы за предоставленный отчет. Прежде всего, мы рассматриваем этот документ как результат непростых переговоров.

При этом у нашей делегации остается определенная озабоченность касательно ряда положений этого документа.

Первое – нас не вполне устраивает, что принцип общей, но дифференцированной ответственности и соответствующих возможностей включен в раздел «Руководящие принципы», поскольку основным принципом данной организации всегда был и остается принцип недискриминации и непредоставления более благоприятных условий.

При этом мы видим, что параграф 3.2.2 четко говорит, что требования ко всем судам применяются в полном объеме независимо от флага при выполнении данной стратегии.

Второе и главное – мы заявляли в процессе обсуждения документа, что включение любых точных цифр на данном этапе в раздел «Уровни амбиции», и, в частности, в п. 3.1.3, до получения результатов в рамках системы сбора данных является преждевременным. Никто не смог нам ответить на вопрос, чем обусловлены и на чем основаны эти цифры сегодня. В этой связи мы разделяем озабоченность, высказанную по данному аспекту, прежде всего делегациями Саудовской Аравии и Бразилии.

Принимая эту резолюцию, исходим из того, что в 2023 году, когда мы должны будем принять пересмотренную стратегию, имея на руках результаты сбора данных, абсолютные цифры, указанные в разделе «Уровни амбиции», могут быть пересмотрены как в сторону повышения, так и в сторону понижения".

Statement by the delegation of Antigua and Barbuda

"Distinguished Delegates,

Antigua and Barbuda recognizes and appreciates the statements and comments of the secretary general and fellow Small Island Developing States and a large number of other Nations. Also we would like to thank all participants involved in the development of this initial GHG Strategy.

Although not all (high) expectations - particularly from nations that are most vulnerable to the adverse effects of accelerated climate change and the associated cost - might have been met, indeed the proposed strategy provides a balanced and future oriented approach, not as a definite solution, but as an effective starting point and workable way forward, in the established IMO spirit of compromise and conciliation.

It also sends a strong signal to the International Community, that IMO takes its responsibility. With respect to IMO's reputation and leading international role regarding shipping and the maritime environment, we cannot afford to fail.

Being yet struck hard by the effects of last year's most devastating north-Atlantic hurricane season, with relief efforts still on-going whilst already preparing for the next one, our country, along with our Caribbean fellow Nations is experiencing the effect of global average temperature rise and other effects of climate change most directly.

Therefore, Antigua and Barbuda supports the adoption of the proposed initial IMO Strategy on reduction of GHG emissions from ships.

Thank you, Chair, and distinguished delegates, in the name of the people of Antigua and Barbuda."

Statement by the delegation of Bulgaria

"The Bulgarian delegation would like to thank the Secretary General, the Secretariat and the working group for developing a document that we believe reflects the optimal realistic compromise between member states and is in tune with the objectives of the Paris Agreement. Furthermore, as a country that has stated its support for a transition to a circular economy, which is resource-efficient and has a reduced environmental footprint, Bulgaria supports the adoption of the Initial Strategy."

Statement by the observer from the European Commission

"Distinguished delegates, we would like to join in expressing our appreciation for the adoption of the IMO GHG reduction strategy today. This is a very important signal to the shipping industry on where it needs to go and to the world on how shipping will contribute to realizing the temperature goals of the Paris Agreement. We also would like to join in our thanks for the determined and committed work of the Chair of the working group as well as that of the Secretary General and his team in all of their efforts to help the parties arrive at this point. We would also like to thank all the parties, who have worked very constructively to bring this agreement to fruition.

This spirit of compromise and constructive cooperation will be essential also for the next stage. We are encouraged by this IMO spirit, because it will allow the IMO to embark on a process to ensure that the objectives in the initial strategy will be realized.

We have recognised the need to build capacity, to assist developing states, in particular LDCs and SIDS, through technical cooperation and to this end congratulate the IMO Secretariat team for their work in establishing and promoting the MTCC project and appreciate the opportunity to take part in the presentation of the MTCC project during MEPC 72. We will certainly consider how to take this initiative forward in the future.

We intend to work closely with all parties concerned to make the IMO strategy a success."
