IMO
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A DECREE TO IMPLEMENT THE INTERNATIONAL CONVENTION FOR THE CONTROL AND MANAGEMENT OF SHIPS' BALLAST WATER AND SEDIMENTS, 2004 INTO THE LAWS OF MADAGASCAR

A Legislation Drafting Project submitted in partial fulfillment of the requirements for the award of the Degree of Master of Laws (LL.M.) in International Maritime Law at the IMO International Maritime Law Institute

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EXPLANATORY NOTE

1. Introduction

Nowadays, over 90 percent of the world trade is carried by sea and it is, by far, the most effective way to move en masse goods and raw materials around the world.[1] However, despite its usefulness and its efficiency, the development of the shipping industry also brings some adverse effects. In fact, international shipping is becoming a pathway for the degradation of marine environment and of human health.

The use of ballast water is one of those essential developments in the shipping industry, used for the safety and the efficiency of modern shipping operations.[2] However, despite the importance of its use, ballast water may cause a harm to the marine environment, the economy and the public health of one or more States due to the fact that the operations concerning the management and exchange of ballast water are directly carried out at sea. For that reason, it is essential to control and manage efficiently the operations concerning the use of ballast water.

1.1. Purpose of ballast water

The material used for the addition of weight to a vessel in order to maintain its stability is called a ballast.[3] Historically, solid materials like stones where used as ballast but, with the introduction of steel hulls, ships can use water as ballast instead of solid materials.[4]

Nowadays, water is the primary material used as ballast, because it is easier for ships to have access to it and to perform the operation needed to maintain its stability directly at sea. Ballast water is used to balance ships and to ensure their stability. When the ship is not loaded of cargo, ballast water is used to add extra weight to the ship in order to create its

[1] UN-Business Action Hub, 'IMO (International Maritime Organization) profile' (2019). <https://business.un.org/en/entities/13> accessed 20 February 2019.
[2] International Maritime Organization (IMO), 'Ballast Water Management' (2019) <www.imo.org/en/OurWork/Environment/BallastWaterManagement/Pages/Default.aspx> accessed 25 December 2018.
[3] Matej David and Stephan Gollasch (eds), *Global Maritime Transport and Ballast Water Management: Issues and Solutions* (Invading Nature - Springer Series in Invasion Ecology 8, Springer Netherlands 2015), 14.
[4] Ibid.

stability. Ballast is also used even when the vessel is loaded to ensure a good distribution of weight within the vessel.[5]

1.2. Transfer of Harmful Aquatic Organisms and Pathogens through ballast water

Up to 10 billion tons of ballast water are globally carried by ships each year and the number of organisms contained within ballast tanks is estimated, globally, up to 7,000 species in transit each day.[6] It is not simple to predict the ecological damage that the introduction of new organisms can provoke to the ecosystem of the maritime zone in which they are brought. The uptake and discharge of ballast water between two different marine zones can provoke the migration of organisms called non-indigenous species, this term is used to qualify species that are not in their natural environment in the place they are introduced.[7]

The introduction of those non-indigenous species does not necessarily provoke damage to the ecosystem of the marine environment where they are transferred. However, on the other hand, certain species known as Harmful Aquatic Organisms and Pathogens (herein after, HAOP) may be contained in those ballast waters.[8] HAOP are aquatic organisms or pathogens which, if introduced into the sea including estuaries, or into fresh water courses, may create hazards to the environment, human health, property or resources, impair biological diversity or interfere with other legitimate uses of such areas.[9] Once they are introduced in a foreign marine area, they can grow faster than the "indigenous species" which make them "invasive alien species" (hereinafter, IAS); and provoke a degradation of the marine environment in which they are introduced[10].

The development of the shipping industry nowadays has provoked an increase in the introduction of HAOP into different marine environments because of the fact that ballast

[5] Ibid.
[6] Ibid.
[7] Petr Pyšek, Philip E Hulme, Wolfgang Nentwig, 'Glossary of the main technical terms used in the handbook' in DAISIE (Ed.), *Handbook of Alien Species in Europe*. Srpinger, Berlin' (2009), 36.
[8] Matej David and Stephan Gollasch (eds), *The Transfer of Harmful Aquatic Organisms and Pathogens with Ballast Water and Their Impact* (Invading Nature - Springer Series in Invasion Ecology 8, Global Maritime Transport and Ballast Water Management, Springer Netherlands 2015), 39.
[9] IMO, International Convention for the Control and Management of Ships' Ballast Water and Sediments, adopted on 13 February 2004, entered into force on 8 September 2017 (herein after, Ballast Water Management Convention or the Convention), article 1(8).
[10] David and Gollasch (n 8), 39.

water is carried almost everywhere in the globe with a high pace of introduction. In addition to that, the growing of the size of ships causes the increase of ballast water to be loaded and discharged.[11] It implies the raise of species to be transferred and the high number of species facilitate their invasion into the natural environment in which they are introduced.

Once the HAOP access a foreign marine environment, they can permanently affect the ecological balance of the area where they are introduced.[12] Unlike oil pollution and other types of pollution, it is almost impossible to eradicate the IAS once they have entered a marine environment which is viable for them to survive.[13]

The zones which are considered as "high risk" for the introduction of HAOP into foreign marine environment are the ports where ballast water exchange is almost daily carried out.[14] For that reason, it is important to control and regulate the ballast water uptake and discharge, including the ballast water tanks and all the equipment necessary to the use of ballast water.

2. International Background Ballast Water Management Convention

In the 1990's the world began to study the problem of ballast waters. Solutions began to be taken to tackle the side effects of those ballast waters.

2.1. The United Nations response to environmental issues

The United Nations (hereinafter, UN) started to be concerned about the problem in the 1970's and began to be involved in the promulgation of regulatory frameworks to minimize the risks associated with the increasingly huge volumes of ballast water transfer in the 1990's.[15] Today, article 196 of the UN Convention on the Law of the Sea (UNCLOS)[16] provides the global framework for the prevention of transfer of invasive species by

[11] Ibid, 39.
[12] Maria Helena Fonseca de Souza Rolim, *The International Law on Ballast Water: Preventing Bio Pollution* (Brill 2008), 17.
[13] Ibid.
[14] Ibid.
[15] David and Gollasch (n 3), 14.
[16] UN, United Convention on the Law of the Sea, UNCLOS, adopted in Montego Bay, 10 December 1982, entry into force 16 November 1994.

requiring States to work together to prevent, reduce and control pollution of the marine environment including the intentional or accidental introduction of species, alien or new, to a particular part of the marine environment, which may cause significant and harmful changes thereto.

In 1972, the United Nations Environment Programme (UNEP) was created to promote the coherent implementation of environmental programmes and to be an authoritative advocate for the global environment.[17] The UNEP assists developing countries to implement environmental policies and works for the implementation of a global sustainable development.[18]

In 1992, the Convention on Biological Diversity[19] was adopted and the requirements set out in this convention were taken into consideration during the discussion of the Ballast Water Management Convention. In addition to that, the UN Conference on Environment and Development made a request to the International Maritime Organization (hereinafter, the IMO) to consider the adoption of rules for ballast water discharge under its auspice.

2.2. The IMO Response

The IMO also started to be concerned about environmental issues in the 1970's.

The 1973 International Convention for the Prevention of Pollution from Ships (hereinafter, MARPOL)[20] and its protocols is the main international convention covering prevention of pollution of the marine environment by ships from operational or accidental causes.

[17] UNEP, 'Why does UN Environment matter?' <www.unenvironment.org/about-un-environment/why-does-un-environment-matter> accessed 27 December 2018.
[18] Ibid.
[19] UN, Convention on Biological Diversity, signed in Rio de Janeiro, 5 June 1992, entry into force 29 December 1993.
[20] IMO, International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978.

In 1991 the Marine Environment Protection Committee of the IMO adopted preliminary guidelines: the International Guidelines for preventing the introduction of unwanted aquatic organisms and pathogens from ships' ballast water and sediment discharges[21].

The IMO Assembly kept on working on the development of an international treaty on the prevention of transfer of invasive species from ships' ballast water and in November 1993 a resolution based on the 1991 Guidelines was adopted in order to keep the Guidelines under review while the work on legally-binding provisions were carried out.

In 1997, the IMO adopted the Guidelines for the control and management of ships' ballast water to minimize the transfer of harmful aquatic organisms and pathogens[22].

Before the adoption of the Ballast Water Management Convention, the IMO worked with the Global Environment Facility and the United Nations Development Programme under the GloBallast Partnerships and implemented the GloBallast Initiative in two steps, first 2000-2004, and 2007-2017. The 2000-2004 programme is a global technical cooperation programme which assisted the developing countries to reduce the transfer of HAOP from ships' ballast water, and to prepare for the implementation of the Ballast Water Management Convention.[23]

Then, from 2007 to 2017 the GloBallast Partnerships Programme focused on national policy, legal and institutional reforms-integrated management. This programme supported environmentally sensitive countries to replicate best-practices and technical activities and policy reforms at the national level. It worked towards integration of mechanisms, programmes and structures, promoted collaboration and ended in June 2017.[24]

As a product of years of elaboration, the Ballast Water Management Convention was adopted on 13 February 2004 and entered into force on 8 September 2017[25].

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[21] IMO, The International Guidelines for preventing the introduction of unwanted aquatic organisms and pathogens from ships' ballast water and sediment discharges, Resolution MEPC. 50(31), adopted on 4 July 1991.
[22] IMO, Guidelines for the Control and Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens, Resolution A.868(20), adopted on 27 November 1997.
[23] International Maritime Organization (IMO), 'The GloBallast Story: Reflections from a Global Family' (2017).
[24] Ibid.
[25] International Maritime Organization (IMO), 'International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM)' (2018).

3. The tenor of the Ballast Water Management Convention

The objective of the Convention is to "prevent, minimize and ultimately eliminate the risks to the environment, human health, property and resources arising from the transfer of HAOP through the control and management of ships' ballast water and sediments, as well as to avoid unwanted side-effects from such control and to encourage developments in related knowledge and technology."[26]

The Convention sets a certain standard to which all ships in international traffic shall comply to manage their ballast water and sediments. Regulation B-1 provide that it shall be performed according to a ship-specific Ballast Water Management Plan which is specific to each ship. The Ballast Water management plan includes a detailed description of the actions to be taken to implement the ballast water management requirements and supplemental ballast water management practices. Under regulation B-2 of the Convention, all ships are also required to carry a Ballast Water Record Book to record when ballast water is taken on board circulated or treated for ballast water management purposes; and discharged into the sea. The Ballast Water Record Book should also record when ballast water in discharged to a reception facility and accidental or exceptional discharges of ballast water.[27] The Convention requires ships to have an international Ballast Water Management Certificate for ships of 400 gross tons and above,[28] this is issued by or on behalf of the flag State and certifies that the ship carries out ballast water management in accordance with the Ballast Water Management Convention and specifies which standard the ship is complying with, as well as the date of expiry of the Certificate.[29]

The Convention is divided into 22 articles which impose obligations and provide rights to the State Parties regarding ballast water management and the manner in which the States Parties shall ensure the compliance with the Convention; and an annex which is acknowledged by article 2.2 of the Convention to be of equal importance as the articles

<www.imo.org/en/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Control-and-Management-of-Ships'-Ballast-Water-and-Sediments-(BWM).aspx> accessed 24 December 2018.

[26] International Convention for the Control and Management of Ships' Ballast Water and Sediments (n 9).

[27] www.imo.org/en/MediaCentre/HotTopics/Documents/FAQ%20-%20Implementing%20the%20Ballast%20Water%20Management%20Convention.pdf accessed March 2019.

[28] International Maritime Organization (IMO) (n 25).

[29] www.imo.org/en/MediaCentre/HotTopics/Documents/FAQ%20-%20Implementing%20the%20Ballast%20Water%20Management%20Convention.pdf (n 27).

themselves.[30] The annex comprises the regulations which discuss in greater detail the ballast water management for ships, the exceptions to these rules and other requirements set out for ships.

3.1. Provisions of the articles

The articles of the Convention provide:

3.1.1. General obligations

Under the Convention, Parties undertake to give full and complete effect to the provisions of the Convention and the annex in order to prevent, minimize and eliminate the transfer of HAOP through the control and management of ships' ballast water and sediments.[31]

The Convention sets standards for the control and management of ships' ballast water but parties are allowed to take measures which are more stringent than those provided by the Convention.[32]

Parties shall require the ships to which the Convention applies to comply with the requirements of the Convention and shall develop national policies, strategies or programmes with due regard to its particular conditions and capabilities.[33] They shall ensure that ballast water management practices do not cause greater harm than they prevent to environment, human health and property resources of those or other States.

The Convention applies to ships registered under contracting Parties which take up and use ballast water during international voyages. Nevertheless, the Convention, in order to achieve its goal of protecting the marine environment, the economy and the public health of the contracting States extends its application to ships registered under a non-contracting State. Indeed, port States which are Parties to the Convention shall apply the principle of non-favourable treatment to ships registered under a non-contracting State to ensure that those ships are compliant with the requirements of the Convention.[34]

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[30] International Convention for the Control and Management of Ships' Ballast Water and Sediments (n 9).
[31] International Maritime Organization (IMO) (n 2).
[32] International Convention for the Control and Management of Ships' Ballast Water and Sediments (n 9), art 2.
[33] International Maritime Organization (IMO) (n 25).
[34] Ibid.

3.1.2. Reception facilities

The Convention requires to State Parties to provide adequate reception facilities for the reception of sediments to the ports and terminals where cleaning or repair of ballast tanks are designated to occur. The ballast water reception facility should be capable of receiving ballast water from ships so as not to create a risk to the environment, human health, property and resources arising from the release to the environment of HAOP. The facility should provide adequate equipment to achieve that purpose.[35]

3.1.3. Research and Monitoring

Parties are required to individually or jointly promote and facilitate scientific and technical research on ballast water management; and monitor the effects of ballast water management in waters under their jurisdiction

3.1.4. Survey, certification and inspection

According to article 7 of the Convention, ships are subject to survey and certification. Additionally, they may be inspected by port State control officers who can verify that the ship has a valid certificate, inspect the Ballast Water Record Book, and/or sample the ballast water.

If these actions raise concerns, then a detailed inspection may be carried out ensuring that the ship does not discharge ballast water until it can do so without presenting a threat of harm to the environment, human health, property or resources.[36]

3.1.5. Technical Assistance

The Convention has a provision related to the cooperation between the State Parties. Support shall be provided to the Parties which request technical assistance regarding the training of personnel, to ensure the availability of the relevant technology, equipment and facilities; to initiate joint research and development programmes and to undertake other actions aimed at the effective implementation of the Convention.

[35] IMO, Guidelines (G5) for ballast water reception facilities.
[36] International Maritime Organization (IMO) (n 2).

3.2. Regulations set by the annex

The annex provides the following regulations:

3.2.1. Section A General Provisions

This includes definitions, application, exceptions and exemptions. The general provisions set that "Except where expressly provided otherwise, the discharge of ballast water shall only be conducted through ballast water management, in accordance with the provisions of this Annex."[37]

3.2.2. Section B Management and Control Requirement for Ships

This section concerns the Ballast Water Management Plan, the Ballast Water Record Book and the Ballast Water Exchange.

Ships are required to have on board and implement a Ballast Water Management Plan approved by the competent authority of the States Parties. The Ballast Water Management Plan is specific to each ship and includes a detailed description of the actions to be taken to implement the ballast water management requirements and supplemental ballast water management practices.[38]

Ships must have a Ballast Water Record Book to record when ballast water is taken on board; circulated or treated for ballast water management purposes and discharged into the sea. It should also record when ballast water is discharged to a reception facility and accidental or other exceptional discharges of ballast water. The Ballast Water Record Book shall be kept readily available for inspection at all reasonable times.[39]

Under regulation B-4 of the Convention, all ships using ballast water exchange should:

- whenever possible, conduct ballast water exchange at least 200 nautical miles from the nearest land and in water at least 200 metres in depth;

[37] International Convention for the Control and Management of Ships' Ballast Water and Sediments (n 9).
[38] International Maritime Organization (IMO), 'Implementing the Ballast Water Management Convention'.
[39] International Maritime Organization (IMO) (n 25).

- in cases where the ship is unable to conduct ballast water exchange as above, this should be as far from the nearest land as possible, and in all cases at least 50 nautical miles from the nearest land and in water at least 200 metres in depth.

When these requirements cannot be met, areas may be designated where ships can conduct ballast water exchange. All ships shall remove and dispose of sediments from spaces designated to carry ballast water in accordance with the provisions of the ships' Ballast Water Management Plan.[40]

3.2.3. Section C Additional measures

The Convention gives power to a State Party to, individually or jointly with other States Parties, impose on ships additional measures to prevent, reduce, or eliminate the transfer of HAOP through ships' ballast water.

In these cases, the Party or Parties should consult with adjoining or nearby States that may be affected by such standards or requirements and should communicate their intention to establish additional measures to the IMO at least six months, except in emergency or epidemic situations, prior to the projected date of implementation of the measures. When appropriate, Parties shall have to obtain the approval of the IMO for the adoption of additional measures.[41]

3.2.4. Section D Standard for Ballast Water Management

The Convention sets a standard for ballast water exchange as well as for ballast water performance. Ballast water exchange could be used to meet the performance standard.[42]

[40] ibid.
[41] ibid.
[42] International Maritime Organization (IMO) (n 36).

The regulation in respect of ballast water exchange provides that the ballast water exchange shall be done with an efficiency of 95 per cent volumetric exchange of ballast water.[43] It also contains provision for ships exchanging ballast water by the pumping-through method.

The ballast water performance standard provides regulations to limit the number of viable organisms transferred through ships' ballast water. It also sets regulations concerning the protection of human health regarding some pathogens which can be carried through ships' ballast water.

This regulation requires that the ballast water management systems must be approved by the administration of the Member States. These include systems which make use of chemicals or biocides; make use of organisms or biological mechanisms; or which alter the chemical or physical characteristics of the ballast water.

According to the Convention, ships participating in a programme approved by the administration of a State Party are allowed to test and evaluate promising ballast water treatment technologies to have a leeway of five years before having to comply with the requirements of the Convention.

The IMO is required to review the ballast water performance standard, taking into account a number of criteria including safety considerations and environmental acceptability.[44] The IMO should also take into consideration the practicability of the standard[45]; cost effectiveness; and biological effectiveness in terms of removing, or otherwise rendering inactive HAOP in ballast water. The review should include a determination of whether appropriate technologies are available to achieve the standard, an assessment of the above-mentioned criteria, and an assessment of the socio-economic effects specifically in relation to the developmental needs of developing countries.[46]

[43] International Convention for the Control and Management of Ships' Ballast Water and Sediments (n 9).
[44] It means that it should ensure that it does not cause more or greater environmental impacts than it solves.
[45] It implies the compatibility with ship design and operations.
[46] International Maritime Organization (IMO) (n 25).

3.2.5. Section E Survey and certification requirements for Ballast Water Management

The Convention establishes requirements for initial renewal, annual, intermediate and renewal surveys. It also sets requirements to which ships have to comply for certification.[47]

The appendices provide with the form of Ballast Water Management Certificate and the form of Ballast Water Record Book.

4. The Need for Madagascar to implement the Convention

Because of its geographical situation, Madagascar is exposed to risks of invasion by HAOP from ships' ballast waters. Indeed, Madagascar is located in an important maritime route for maritime transportation between ships from eastern and western sides of the Mozambique channel and Asia and Europe.

About 600 ships performing international voyages come to the ports of Madagascar each year. It is, therefore, important to implement measures regarding the control and the management of ships ballast waters for the purpose of protecting Madagascar's environment, economy and its population health safety.[48]

4.1. Environmental protection

HAOP carried by ballast water can survive lengthy voyages. A number of researches show that ballast water is the primary pathway through which invasive harmful species and pathogens are transferred from one region to another.[49] Once they are introduced to a foreign marine environment, they provoke adverse effects on the local ecological systems. They may compete with native species for space and nutrition resources and provoke a complete change in the marine biodiversity of the discharge area.

[47] Ibid.
[48] Agence Portuaire, Maritime et Fluviale.
<https://www.apmf.mg> accessed February 2019.
[49] Khambaty McCarthy, *International Dissemination of Epidemic Vibrio Cholerae by Cargo Ship Ballast and Other Nonpotable Water*, (1994).

The protection of its marine biodiversity is a crucial matter for Madagascar. The degradation of its biodiversity entails effects on its economy by affecting important sectors like tourism and fisheries; and it may also affect human health, by the transmission of disease, firstly, but also by the rarefaction of natural resources that people can use as food.

4.2. Effects on economy

To make the port and maritime sector a lever of the economic development of Madagascar is the main goal of the Agence Portuaire, Maritime et Fluviale.[50] Being an island with almost 5,000 kilometres of coastline, Madagascar has a big maritime zone under its jurisdiction which is three times bigger than its land territory. It is therefore normal that sea and maritime industries have a great importance in the economy of Madagascar. Indeed, Madagascar's maritime area is full of marine resources, biological and non-biological.

The migration of invasive species transported by ballast water represents a big threat for Madagascar. In fact, first of all it represents a threat to the fisheries of the country. The risk of "white spot" disease, which affects shellfishes, is one of the reasons why Madagascar adhered to the Ballast Water Management Convention since it represents a very serious threat to the fishing industry of Madagascar.[51]

In addition to that, another economic aspect of the country can also be changed by the degradation of its biodiversity. Indeed, Madagascar is known for its rich biodiversity, tourism, and Blue economy can also be used as a lever for the economic development of the country. For these reasons, it is also important to emphasize the importance of the preservation of the marine environment and the effective implementation of the Ballast Water Management Convention is one important step to achieve that goal.

4.3. Effects on human health

The spread of IAS has a negative impact on human health. Ballast waters can transport human pathogens from one region to another. The transfer of disease can be done first by affecting wildlife and later human health by contact or ingestion of those affected natural

[50] https://www.apmf.mg/node/98, accessed February 2019.
[51] Ibid.

species that human may use as food. In the case of Madagascar, being a big island, the communities living in the coast sides rely massively on fisheries resources for their livelihoods. The control and management of ships' ballast waters will surely protect those local communities. Besides, fishing resources are consumed everywhere on the island. The lack of control of the IAS in the maritime zones under the jurisdiction of Madagascar could provoke a negative impact on public human health.

For those reasons, Madagascar became a Member to the Ballast Water Management Convention.

However, despite the fact that Madagascar is already a State Party to the Convention, it still needs to take further steps to ensure the effective implementation of the standards and requirements of the Convention into the national laws of Madagascar. This draft law is done to provide the effective implementation of the Convention.

5. The process to implement the Convention into the laws of Madagascar

Article 137 of the Constitution of Madagascar provides that the President of the Republic is competent for the signature and ratification of international conventions. Such ratification is subject to the authorization of the Parliament and a law shall be voted to make the ratification effective.

Such law was already adopted on 27 July 2017 by the Law n°2016-051 and published in the official gazette. As Madagascar is a monist country, after the publication in the official gazette of the Law authorizing the ratification or accession to the international convention, the duly ratified convention is automatically binding on the State, the domestic courts and the citizens of Madagascar. It becomes part of Madagascar's domestic law without the need of new legislative instrument for its implementation. This first step was already done for the Ballast Water Management Convention.

However, in order to ensure the effective implementation of the standards and requirements of the Convention into the laws of Madagascar, and in order to ensure a proper control and management of ships' ballast water and sediments, the adoption of a decree of implementation of the Ballast Water Management Convention's provisions is required. The adoption of a decree is a faster process than the adoption of a Law. The decree will

enter into force after its signature by the authorities involved and after its publication into the official gazette. Besides, the Ballast Water Management Convention is a technical instrument, the decree can vest the Maritime Administration the prerogatives to apply and implement the standards and requirements of the Convention. The Ministry of Transport and Meteorology has the power to adopt the decree and he maritime administration (Agence Portuaire, Maritime et Fluviale) will deal with the survey, inspection and certification of ships.

The Legislative power shall adopt a Law to set the sanctions for the violation of the provisions of the following Decree.

A Decree to implement the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 into the Laws of Madagascar

REPOBLIKAN'I MADAGASIKARA
Fitiavana - Tanindrazana - Fandrosoana

MINISTRY OF TRANSPORT AND METEOROLOGY

DECREE N°_____

on the effective implementation of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 into the Laws of Madagascar

The PRIME MINISTER, HEAD OF GOVERNMENT

TITLE I

GENERAL PROVISIONS

Section I: Definition of Terms

Article 1: The following terms shall have the meaning assigned to them unless the context otherwise requires:

1. "Ballast Water" means water with its suspended matter taken on board a ship to control trim, list, draught, stability or stresses of the ship.

2. "Ballast Water Management" means mechanical, physical, chemical, and biological processes, either singularly or in combination, to remove, render harmless, or avoid the uptake or discharge of Harmful Aquatic Organisms and Pathogens within Ballast Water and Sediments.

3. “Certificate” means the International Ballast Water Management Certificate. A)

4. “Competent Authority” means the Agence Portuaire Maritime, et Fluviale.

5. “Convention” means the International Convention for the Control and Management of Ships’ Ballast Water and Sediments, 2004.

6. “Director General” means the Director General of the Competent Authority

7. “Gross tonnage” means the gross tonnage calculated in accordance with the tonnage measurement regulations contained in Annex I to the International Convention on Tonnage Measurement of Ships; 1969 or any successor Convention

8. “Harmful Aquatic Organisms and Pathogens” means aquatic organisms or pathogens which, if introduced into the sea including estuaries, or into fresh water courses, may create hazards to the environment, human health, property or resources, impair biological diversity or interfere with other legitimate uses of such areas.

9. “Organization” means the International Maritime Organization.

10. “Sediments” means matter settled out of Ballast Water within a ship.

11. “Ship” means a vessel of any type whatsoever, operating in the aquatic environment and includes, submersible, floating, crafting floating platforms, FSUs and FSPOs.

Section II: Scope of Application

Article 2:

1. Unless expressly otherwise provided, this Decree shall apply to:

a) Every ship designed or constructed to carry ballast water entitle to fly the Malagasy flag;
b) All other ships designed or constructed to carry ballast water while operating in waters under Malagasy jurisdiction.

2. This Decree shall not apply to:
   a) ships not designed or constructed to carry ballast water,
   b) Malagasy ships which only operate in waters under the jurisdiction of Madagascar;
   c) other ships which only operate in waters under the jurisdiction of Madagascar, unless the Director General determines that the discharge of ballast water form such ships would constitute a threat for the marine environment, human health and economic well-being of Madagascar;
   d) Malagasy ships which only operate in waters under the jurisdiction of another Party to the Convention, subject to the authorisation of the latter Party for such exclusion;
   e) any warship, naval auxiliary or other ship owned or operated by any State and used, for the time being, only on government non-commercial service;
   f) ships with permanent ballast water in sealed tanks that is not subject to discharge.

3. Ships flying flags of States which are not Parties to the Convention shall not be accorded more favourable treatment than ships belonging to Member States Parties.

TITLE II

BALLAST WATER AND SEDIMENTS CONTROL AND MANAGEMENT

Section I: Ballast Water Management

Article 3:

1. Ships shall only conduct ballast water management in accordance with the provisions of this Title.

2. Ships shall conduct ballast water management that at least meets the standard described in paragraph (a).
    a) Ships conducting ballast water management in accordance with this paragraph shall discharge less than 10 viable organisms per cubic metre greater than or equal to 50 micrometres in minimum dimension and less than 10 viable organisms per millilitre less than 50 micrometres in minimum dimension and greater than or equal to 10 micrometres in minimum dimension; and discharge of the indicator microbes shall not exceed the specified concentrations described in paragraph (b).
    b) Indicator microbes, as a human health standard, shall include: *Toxigenic Vibrio cholerae* (O1 and O139) with less than 1 colony forming unit (cfu) per 100 millilitres or less than 1 cfu per 1 gram (wet weight) zooplankton samples; *Escherichia coli* less than 250 cfu per 100 millilitres; *Intestinal Enterococci* less than 100 cfu per 100 millilitres.

3. Ships shall comply with paragraph 2 not later than the first intermediate or renewal survey, whichever occurs first.

4. Notwithstanding paragraphs 1 to 3, the Administration may approve other methods of ballast water management that are of equivalent standard, provided that such methods ensure at least the same level of protection prescribed under this section to the environment, human health, property or resources.

Section II: Exceptions

Article 4:

1. Article 3 shall not apply in circumstances where:
    a) the uptake or discharge of ballast water and sediments is necessary for the purpose of ensuring the safety of a ship in an emergency situation or for saving life at sea; or
    b) there is an accidental discharge or ingress of ballast water and sediments resulting from damage to the ship or to its equipment
        i. where all reasonable precautions have been taken before and after the occurrence of the damage or discovery of the damage or discharge, for the purpose of preventing or minimizing the discharge; and
        ii. unless the owner, company or officer in charge of the ship wilfully or recklessly caused the damage;
    c) the uptake and discharge of ballast water and sediments is necessary for the purpose of avoiding or minimizing pollution incidents from the ship;
    d) the uptake and subsequent discharge of the same ballast water and sediments is on the high seas; or
    e) the discharge of ballast water and sediments from a ship occur at the same location, where the whole of that ballast water and those sediments originated, and no mixing with unmanaged ballast water and sediments from other areas has occurred.
2. In the case of a ship where the mixing of the ballast water has occurred under paragraph e), the ballast water taken from other areas shall be subject to ballast water management, in accordance with this chapter.

Section III: Exemptions

Article 5:

1. Subject to paragraphs 2 and 3, the Competent Authority may grant an exemption in relation to Malagasy waters from any requirements under article 3 and 6.
    a) In relation to a ship on a voyage or voyages between ports or locations under Malagasy jurisdiction;

b) In relation to a ship, the operations of which do not allow for mixing ballast water and sediments, other than between the port or locations specified in paragraph a), for which an exemption is granted; and

c) Based on the guidelines or risk assessment developed by the Organization.

2. The Director General shall not grant an exemption under this article, where it is determined that granting such an exemption is likely to impair or damage the environment, human health, property or resources.
3. An exemption granted under this article, shall not take effect:
    a) before the Director General communicates the grant of the exemption to the Organization; and
    b) circulates the relevant information to the Parties.
4. An exemption granted under this section shall be recorded in the record book kept under article 8.

Section IV: Ballast Water Management Plan

Article 6:

1. Ships must have on board a Ballast Water Management Plan approved by the Competent Authority for the management of ballast water and sediments.
2. The Ballast Water Management Plan referred to in paragraph 1 shall be written in French or English and shall include:
    a) detailed safety procedures for the ship and crew associated with ballast water management;
    b) detailed description of the actions to be taken to implement the ballast water management requirements and supplemental ballast water management practices in accordance with this Law;
    c) the procedures for disposing of sediments at sea and to shore;
    d) the procedures for coordinating shipboard ballast water management; and
    e) information as to the designated officer on board the ship in charge of implementing the ballast water management plan.

Section V: Ballast Water Exchange

Article 7:

1. Ships shall conduct ballast water exchange in compliance with this article
2. Ships shall conduct ballast water exchange at least 200 nautical miles from the nearest land and, in water at least 200 meters in depth;
3. In cases where the ship is unable to conduct ballast water exchange in accordance with paragraph 2, such ballast water exchange shall be conducted as far from the nearest land as possible;
4. In all cases, having regard to paragraph3, ballast water exchange shall not be conducted in a distance less than 50 nautical miles from the nearest land, and in water at least 200 metres in depth
5. In the cases where the minimum distance and/or the depth required for the conduct of ballast water exchange cannot be achieved, the Competent Authority may designate areas within Malagasy waters where the ship may conduct such exchange.
6. Where a ship is undergoing ballast water exchange it shall not be a requirement for the owner or master to comply with the paragraphs 1 to 5, where the owner or master reasonably decides that it would threaten the safety or stability of the ship, its crew or its passengers du to:
    a) adverse weather;
    b) ship design or stress;
    c) equipment failure of the ship; or
    d) any extraordinary conditions as the case may determine
7. Where under paragraph 6, a ship is required to conduct Ballast Water Exchange and does not do so, the owner or master of the ship shall provide reasons, and such reasons shall be entered in the Record Book kept under article 8.

Section VI: Ballast Water Record Book

Article 8:

1. Ships must have on board a Ballast Water Record Book in the form set out in Form 1 of the Annex.
2. The Ballast Water Record Book shall be kept readily available for inspection at all reasonable times and, in the case of an unmanned ship under tow, may be kept on the towing ship.

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

4. In the event of the discharge of ballast water pursuant to articles 4 and 5, or in the event of other accidental or exceptional discharge of ballast water not otherwise exempted by this Law, an entry of such discharge shall be made in the Ballast Water Record Book describing the circumstances of, and the reason for the discharge.

5. The owner or master of the ship shall after each operation concerning the discharge of ballast water, cause an entry of the operation to be entered in the Record Book in the French language or the English language without delay:

    a) each entry so made shall be signed by the officer in charge of the operation;
    b) each completed page shall be signed by the Master

Section VII: Reception Facilities

Article 9:

1. The Competent Authority shall designate ports or terminals for the purpose of reception of sediments.
2. Where a designation is made under section 1, the competent authority shall request the operators of ports or terminals to provide adequate facilities for the reception of sediments from ships.

Section VIII: Additional Measures

Article 10:

1. The Director General may determine that in addition to those measures specified in articles 7,8,9; that a ship adopt additional measures to prevent, reduce or eliminate the transfer of Harmful Aquatic Organisms and Pathogens;

2. When intending to implement the additional measures referred to in section 1, the Director General shall take into consideration the appropriate Guidelines developed by the Organization;
3. The measures adopted by the Director General shall not compromise the safety and security of the ship.
4. The Director General may waive the measures for such period as the circumstances may determine.

TITLE III:

SURVEYS AND CERTIFICATION

Section I: Surveys of Ships

Article 11:

1. A Malagasy ship shall be subject to the following surveys.
    a) An initial survey before the ship is put in service or before the certificate under articles 12 and 13 is issued for the first time. This survey shall verify that the ballast water management plan under article 6 and any associated structure, equipment, systems, fitting, arrangements and material or processes comply fully with the requirements of this Law.
    b) A renewal survey at intervals specified by the Competent Authority, however such interval for a survey shall not exceed five years, except where article 13 (2) (3) (4) or (5) applies. This survey shall verify that the ballast water management plan under article 6 and any associated structure, equipment, systems, fitting, arrangements and material or processes comply fully with the requirements of this Law.
    c) An intermediate survey within three months before or after the second Anniversary date of the certificate, which shall take the place of one of the annual surveys specified in paragraph (d). This survey shall ensure that the

equipment, associated systems and processes for ballast water management is in good order as to achieve this Law.

d) An annual survey within three months before or after each anniversary date, including a general inspection of the structure, any equipment systems, fittings, arrangements and material or processes associated with the ballast water management plan required in article 6 to ensure that they have been maintained to conform with the provisions of this Law and remain satisfactory for the service for which the ship is intended. Such annual surveys shall be endorsed on the certificate issued under article 12.

e) An additional survey either general or partial, according to the circumstances, shall be made after a change, replacement, or significant repair of the structure, equipment, systems, fittings, arrangements and material necessary to achieve full compliance with this Law. The survey shall be such as to ensure that any such change, replacement, or significant repair has been effectively made, so that the ship complies with the requirements of this Law. Such surveys shall be endorsed on the certificate issued under article 12.

2. Surveys of ships shall be carried out by officers of the Competent Authority. The Competent Authority may, however, entrust surveys either to surveyors nominated for the purpose or to organizations recognized by it.
3. Officers of the Competent Authority, nominated surveyor or recognized organization shall immediately ensure that corrective action is taken to bring ship into compliance when they determine that:
    a) Ships' ballast water management does not conform to the particulars of the certificate required under …
    b) The ship is not fit to proceed to sea without presenting a threat of harm to the environment, human health, property or resources
4. If the ship is in the port of another Party, the appropriate authorities of the port State shall be notified immediately

Section II: Issuance of Certificate

Article 12:

The Competent Authority shall ensure that a ship, after successful completion of a survey conducted in accordance with article 11 is issued a Certificate set out as Form 2 Annex.

Article 13:

1. The Director General shall determine the validity period of an existing Certificate; however, the date of such validity shall not exceed five years.
2. Notwithstanding the requirements under paragraph 1, the validity period of a certificate issued on completion of a renewal survey shall be in accordance with the following:
    a) When the renewal survey is completed within three months before the expiry date of the existing Certificate, the new Certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing Certificate;
    b) When the renewal survey is completed after the expiry date of the existing Certificate, the new Certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing Certificate;
    c) When the renewal survey is completed more than three months before the expiry date of the existing Certificate, the new Certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of completion of the renewal survey.
3. When a Certificate is issued for a period of less than five years, the Director General may extend the validity of the Certificate beyond the expiry date to the maximum period specified in paragraph 1, provided that the surveys referred to in article 11(1)(c) applicable when a Certificate is issued for a period of five years are carried out as appropriate.
4. If a renewal survey has been completed and a new Certificate cannot be issued or placed on board the ship before the expiry date of the existing Certificate, the person or organization authorized by the Competent Authority may endorse the existing Certificate and such a Certificate shall be accepted as valid for a further period which shall not exceed five months from the expiry date.

5. A Certificate issued to a ship engaged on short voyages which has not been extended under the foregoing provisions of this article may be extended by the Director General for a period of grace of up to one month from the date of expiry stated on it.
6. In special circumstances, as determined by the Director General, a new Certificate need not be dated from the date of expiry of the existing Certificate.
7. When annual survey is completed before the period specified in article 11(1)(d), then:
    a) The anniversary date shown on the Certificate shall be amended by endorsement to a date which shall not be more than three months later than the date on which the survey was completed
    b) The subsequent annual or intermediate survey required by article 11 shall be completed at the intervals prescribed by that article using the new Anniversary date;
    c) The expiry date may remain unchanged provided one or more annual surveys, as appropriate, are carried out so that the maximum intervals between the surveys prescribed by article 11 are not exceeded.
8. A Certificate issued under article 12 or 13 shall cease to be valid in any of the following cases:
    a) If the structure, equipment, systems fittings, arrangements and material necessary to comply fully with this Law is changer, replaced or significantly repaired and the Certificate is not endorsed in accordance with this chapter;
    b) Upon transfer of a Malagasy ship to the flag of another State;
    c) If the relevant surveys are not completed within the periods specified under article 11(1); or
    d) If the Certificate is not endorsed in accordance with article 11(1).

TITLE IV:

INSPECTIONS OF SHIPS

Article 13:

1. A ship in a Malagasy port may be subject to an inspection, for the purpose of determining whether the ship is in compliance with the provisions of this Decree.
2. An inspector may inspect a ship in a Malagasy port for the purpose of
    a) verifying whether there is on board a valid certificate;
    b) inspecting the record book; or
    c) sampling the ships' ballast water
3. The sampling conducted under paragraph 2(c) shall not be used as a basis for unduly delaying the operation movement or departure of the ship
4. A foreign ship may be inspected where the Competent Authority receives a request from any Party.
5. An inspector shall warry out a more detail inspection of a ship where it is determined that
    a) There is no valid certificate on board
    b) There are clear grounds for believing that
        i. The condition of the ship and its equipment does not correspond with the particulars of the certificate; or
        ii. The master or the crew are not familiar with the ship's procedures as they relate to ballast water management
6. Where an inspection is being carried out under paragraph 5, the inspector shall take steps to prevent the owner or master of the ship discharging ballast water, until such discharge can take place in conditions where there is no threat or harm to the environment, human health, property or resources

TITLE V :

SANCTIONS

Article 14:

1. Where the inspector has determined that a ship is being operated contrary to this Decree, the inspector may take steps to warn, detain or exclude the ship from Malagasy waters.
2. The inspector may, where there is no threat of harm to the environment, health, property or resources of Madagascar, allow the ship to leave the port, for the purpose of discharging ballast water, at the nearest available repair yard or reception facility.
3. In the case of a ship in respect of which sampling has been conducted, the inspector shall prohibit the ship from discharging ballast water, if the results of such sampling reveal that the ship poses a threat

TITLE VI:

FINAL PROVISIONS

Article 16:

This Decree shall enter into force 30 days after its adoption.

FORM 1

BALLAST WATER RECORD BOOK

Issued under the provisions of the Decree n°…….

Under the authority of the Government of MADAGASCAR

By

The Maritime Authority of Madagascar

Period From: _____ to: _____

Name of Ship: _____

IMO number: _____

Gross tonnage: _____

Flag: _____

Total ballast water capacity (in cubic metres): _____

The ship is provided with a ballast water management plan ☐

Diagram of ship indicating ballast tanks:

Notes:

Entries in the ballast water record book shall be made on each of the following occasions:

1. When Ballast Water is taken on board:

a) Date, time and location port or facility of uptake (port or latitude/longitude), depth if outside port;
b) Estimated volume of uptake in cubic metres;
c) Signature of the officer in charge of the operation;
d) Signature of master.

2. Whenever Ballast Water is circulated or treated for Ballast Water Management purposes:

a) Date and time of operation;

b) Estimated volume circulated or treated (in cubic metres);

c) Whether conducted in accordance with the Ballast Water Management plan;

d) Signature of the officer in charge of the operation

3. When Ballast Water is discharged into the sea:

a) Date, time and location port or facility of discharge (port or lat/long);

b) Estimated volume discharged in cubic metres plus remaining volume in cubic metres;

c) Whether approved Ballast Water Management plan had been implemented prior to discharge;

d) Signature of the officer in charge of the operation.

4. When Ballast Water is discharged to a reception facility:

a) Date, time, and location of uptake;

b) Date, time, and location of discharge;

c) Port or facility;

d) Estimated volume discharged or taken up, in cubic metres;

e) Whether approved Ballast Water Management plan had been implemented prior to discharge; and

f) Signature of officer in charge of the operation

5. Accidental or other exceptional uptake or discharges of Ballast Water:

a) Date and time of occurrence;

b) Port or position of the ship at time of occurrence;

c) Estimated volume of Ballast Water discharged;

d) Circumstances of uptake, discharge, escape or loss, the reason therefore and general remarks;

e) Whether approved Ballast Water Management plan had been implemented prior to discharge;

f) Signature of officer in charge of the operation.

6. Additional operational procedure and general remarks.

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

Signature of master: _____

FORM 2

INTERNATIONAL BALLAST WATER MANAGEMENT CERTIFICATE

Issued under the provisions of the Decree n°……

Under the authority of the Government of MADAGASCAR

By

The Maritime Authority of Madagascar

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross Tonnage .....

IMO number2 .....

Date of Construction …… Ballast Water Capacity (in cubic metres) .....

Details of Ballast Water Management Method(s) Used

Method of Ballast Water Management used ……..

Date installed (if applicable) .....

Name of manufacturer (if applicable) .....

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

☐ in accordance with article 3(2)

(describe) .....

☐ the ship is subject to article 3(4)

THIS IS TO CERTIFY:

1. That the ship has been surveyed in accordance with regulation 11;

2. and that the survey shows that Ballast Water Management on the ship complies with Title II.

This certificate is valid until …… subject to surveys in accordance with article 11.

Completion date of the survey on which this certificate is based: (dd/mm/yyyy)…….....

Issued at …..... Issued date….....

Surveyor General: ……..

ANNUAL AND INTERMEDIATE SURVEY(S)

THIS IS TO CERTIFY that, at an annual/intermediate survey in accordance with article 11, the ship was found to comply with the relevant provisions of the Decree:

Annual survey:

Signed .....

Place .....

Date.....…...

Intermediate survey:

Signed .....

Place .....

Date.....…...

Annual/Intermediate survey:

Signed .....

Place .....

Date.....…...

ENDORSEMENT TO EXTEND THE CERTIFICATE IF VALID FOR LESS THAN 5 YEARS

The ship complies with the relevant provisions of the Decree, and this Certificate shall, in accordance with article13(3), be accepted as valid until……

Signed .....

Place .....

Date.....….

ENDORSEMENT TO EXTEND THE VALIDITY OF THE CERTIFICATE UNTIL REACHING THE PORT OF SURVEY OR FOR A PERIOD OF GRACE WHERE

This Certificate shall, in accordance with article 11(4), be accepted as valid until ……..

Signed .....

Place .....

Date .....…

ENDORSEMENT FOR ADVANCEMENT OF ANNIVERSARY DATE

In accordance with article 11(7) the new Anniversary date is …….

Signed .....

Place .....

Date.....…

In accordance with article 11(7) the new Anniversary date is …….

Signed .....

Place .....

Date.....…