

## LEGISLATIVE COUNCIL BRIEF

Merchant Shipping (Prevention and Control of Pollution) Ordinance  
(Cap. 413)

### Merchant Shipping (Prevention of Pollution by Garbage) Regulation

#### INTRODUCTION

A  
B

The Secretary for Transport and Housing (“STH”) will make the Merchant Shipping (Prevention of Pollution by Garbage) Regulation (Repeal) Regulation (“the Repeal Regulation”), at **Annex A**, and the Merchant Shipping (Prevention of Pollution by Garbage) Regulation (“the New Regulation”), at **Annex B**, under section 3 of the Merchant Shipping (Prevention and Control of Pollution) Ordinance (Cap.413) (“the Ordinance”) to enact the latest international requirements governing discharge of garbage from ships as prescribed by the International Maritime Organization (“IMO”) through repeal of the Merchant Shipping (Prevention of Pollution by Garbage) Regulation (Cap.413J) enacted in 1995 (“the existing Regulation”) and enactment of the New Regulation.

#### JUSTIFICATIONS

##### IMO Requirements

2. In 1973, the IMO adopted the “International Convention for the Prevention of Pollution from Ships” (now universally known as MARPOL), which has been amended by the Protocols of 1978 and 1997, to stipulate regulations aimed at preventing and minimising pollution from ships. MARPOL contains six technical Annexes to address different forms of pollution from ships. The MAPROL Annexes have been implemented in Hong Kong by way of subsidiary legislation enacted under the Ordinance.

3. MARPOL Annex V – “Regulations for the Prevention of Pollution by Garbage From Ships” which entered into force in 1988, was implemented in Hong Kong through the existing Regulation.

### **Existing Regulation to Implement MARPOL Annex V**

4. The existing Regulation governs the discharge of garbage from ships within Hong Kong waters as well as Hong Kong ships wherever they are. “Garbage” is defined to mean “all kinds of victual, domestic or operational waste excluding fresh fish and parts thereof, generated during the normal operation of the ship and liable to be disposed of continuously or periodically, except sewage originating from ships”. More stringent discharge requirements are imposed on waters within the Special Areas, which are areas designated by the IMO for higher level of protection due to their oceanographic and ecological importance<sup>1</sup>. Discharge of garbage from a ship into the sea within a Special Area is prohibited except for food wastes, which are to be discharged at not less than 12 nautical miles from the nearest land<sup>2</sup>. Discharge of garbage other than plastics is permitted for waters outside the Special Areas subject to distance requirements from the nearest land. Since the “nearest land” of China is already beyond Hong Kong waters, practically the discharge of all garbage from ships into Hong Kong waters is prohibited under the existing Regulation.

### **Legislative Proposals**

5. The IMO has introduced substantial amendments to MARPOL Annex V by virtue of Resolution MEPC.201(62) which came into effect on 1 January 2013. In view of the significant changes made to both its structure and requirements, we propose to repeal the existing Regulation and enact the New Regulation for the implementation of the latest version of MARPOL Annex V in Hong Kong. The key changes made are set out in the ensuing paragraphs.

---

<sup>1</sup> Special Areas designated under MARPOL Annex V include the Mediterranean Sea, Baltic Sea, Black Sea, Red Sea, “Gulfs” Area, North Sea, the Antarctic Area, and the Wider Caribbean Region including the Gulf of Mexico and the Caribbean Sea.

<sup>2</sup> “Nearest land” means, in general, the baseline from which the territorial sea of the territory in question is established in accordance with international law. On this basis, for China, the “nearest land” is beyond Hong Kong waters.

(i) **To enhance control by expanding the definition of “Garbage” to include new categories / substances**

6. Under the New Regulation, the definition of “Garbage” will be revised to include nine categories of substances generated during the normal operation of ships, including *food wastes, domestic wastes, operational wastes, all plastics, cargo residues, incinerator ashes, cooking oil, fishing gear and animal carcasses*<sup>3</sup>. As compared to the existing Regulation, the scope of “Garbage” will be expanded to include control of the following categories / substances which are currently not regulated –

- (a) cooking oil;
- (b) fishing gear made of materials other than plastics;
- (c) animal carcasses; and
- (d) cleaning agents and additives contained in cargo hold wash water, deck wash water or external surfaces wash water (as part of operational wastes).

(ii) **To tighten discharge requirements of garbage**

7. The New Regulation will tighten control by prohibiting discharge of additional categories of garbage from ships into waters as follows –

***Outside Special Areas***

- (a) domestic wastes;
- (b) operational wastes (including cleaning agents and additives classified as Harmful to the Marine Environment (“HME”) substances and contained in cargo hold wash water, deck wash water or external surfaces wash water);
- (c) cargo residues classified as HME substances;
- (d) incinerator ashes not containing ashes from plastic products;
- (e) cooking oil; and
- (f) fishing gear made of materials other than plastics.

---

<sup>3</sup> The New Regulation will provide for separate definitions for each of the nine categories.

### ***Within Special Areas***

- (a) food wastes not comminuted;
- (b) cleaning agents and additives classified as HME substances and contained in cargo hold wash water, deck wash water or external surfaces wash water;
- (c) cooking oil;
- (d) fishing gear made of materials other than plastics; and
- (e) animal carcasses.

### **(iii) New requirements for placard, Garbage Management Plan and Garbage Record Book**

8. The New Regulation will require –

- (a) every ship of 12 metres or more in length overall to display a placard to notify the crew and passengers of the applicable discharge requirements;
- (b) every ship of 100 gross tonnage (“GT”) or above, and every ship certified to carry 15 or more persons, to carry a Garbage Management Plan which sets out procedures for minimising, collecting, storing, processing and discharge of garbage; and
- (c) every ship of 400 GT or above, and every ship certified to carry 15 or more persons engaged in international voyage, to keep a Garbage Record Book. In line with MARPOL Annex V, this requirement does not apply to a ship certified to carry 15 or more persons where the voyage is of one hour or less in duration. Each discharge into the sea or to a reception facility, and each completed incineration shall be recorded in the Garbage Record Book. Entry for each discharge / incineration shall include date and time, position of the ship, category of the garbage and the estimated amount discharged / incinerated.

(iv) **Application of direct reference approach**

9. Section 3A of the Ordinance allows for the application of “direct reference approach” (“DRA”) in its regulations for the purpose of giving effect to provisions of international agreements applicable to Hong Kong. DRA means making direct reference to provisions under international agreements in local legislation so as to apply those provisions locally. DRA enables timely implementation of international requirements that are technical in nature and are commonly applied in other jurisdictions across the world. If Hong Kong ships cannot comply with those requirements, they may be denied entry to other ports. However, DRA may not be appropriate for implementing all requirements under international agreements. When adopting this approach, various factors must be taken into account, including:

- (a) whether the requirements in provisions of the international agreement are clear and specific enough to be capable of being given direct effect;
- (b) whether the international agreement provisions are easily accessible and read to facilitate understanding of relevant requirements by those required to comply with these provisions;
- (c) whether the international agreement topics mainly concern a specific group of people, and whether such group of people are familiar with the requirements of the international agreement concerned;
- (d) whether relevant international requirements are applicable to all party states to the agreement and whether adoption of DRA is conducive to achieving uniformity in the implementation of the relevant requirements; and
- (e) whether the terminology of the international agreement provisions is compatible with local legislation.

10. DRA was adopted in certain provisions of the existing Regulation. After a careful review of the provisions of the New Regulation against the above factors, we have identified a number of legislative provisions that are suitable for the application of DRA. These provisions are set out at **Annex C**.

### **The New Regulation**

11. The New Regulation seeks to implement the latest requirements of MAPROL Annex V. The main provisions are set out below –

- (a) Part 2 sets out the prohibitions on discharge of garbage from ships, and the exceptions to the prohibitions. It also sets out special requirements on ships operating in the Antarctic area.
- (b) Part 3 sets out requirements imposed on ships, in particular, the requirements to display placards, and maintain a Garbage Management Plan and a Garbage Record Book.
- (c) Part 4 contains provisions to —
  - (i) empower the Director of Marine to grant exemption;
  - (ii) deal with the appointment and powers of Government surveyors.
- (d) Part 5 provides for offences, penalties and defences.

### **LEGISLATIVE TIMETABLE**

12. The Repeal Regulation and the New Regulation will be published in the Gazette on 10 April 2015 and introduced into the Legislative Council (“LegCo”) on 15 April 2015. They will come into operation on 1 July 2015, after expiry of the negative vetting period.

## **IMPLICATIONS OF THE PROPOSAL**

13. The implementation of the latest requirements of MARPOL Annex V in Hong Kong will contribute to environmental protection and sustainability of the marine environment. The legislative proposal is in conformity with the Basic Law, including provisions concerning human rights. It will not affect the current binding effect of the Ordinance. The proposal has no financial, economic, productivity, civil service or family implications.

## **PUBLIC CONSULTATION**

14. On 16 December 2014, we consulted the LegCo Panel on Economic Development on the legislative proposal. Members endorsed the proposal. The Shipping Consultative Committee, the Local Vessel Advisory Committee and the High Speed Craft Consultative Committee, which comprise various stakeholders in the shipping industry, were also consulted and they raised no objection to the proposal.

## **PUBLICITY**

15. A press release will be issued on 10 April 2015. A spokesperson will be available to handle enquires.

## **ENQUIRIES**

16. Any enquiries on this brief can be addressed to Mr. Y.K. Lai, Chief, Maritime Policy of Marine Department (Tel: 2852 4603) or Miss Joyce Chan, Assistant Secretary for Transport and Housing (Transport) (Tel: 3509 8257).

***Transport and Housing Bureau***  
***8 April 2015***

Merchant Shipping (Prevention of Pollution by Garbage) Regulation (Repeal)  
Regulation

Section 1

1

**Merchant Shipping (Prevention of Pollution by  
Garbage) Regulation (Repeal) Regulation**


(Made by the Secretary for Transport and Housing under section 3 of the  
Merchant Shipping (Prevention and Control of Pollution) Ordinance (Cap.  
413))

**1. Commencement**

This Regulation comes into operation on 1 July 2015.

**2. Repeal**

The Merchant Shipping (Prevention of Pollution by Garbage)  
Regulation (Cap. 413 sub. leg. J) is repealed.

  
Secretary for Transport and Housing

1st April, 2015

Merchant Shipping (Prevention of Pollution by Garbage) Regulation (Repeal)  
Regulation

Explanatory Note

Paragraph 1

2

**Explanatory Note**

This Regulation repeals the Merchant Shipping (Prevention of  
Pollution by Garbage) Regulation (Cap. 413 sub. leg. J) in view of  
the making of the new Merchant Shipping (Prevention of Pollution  
by Garbage) Regulation.



## Merchant Shipping (Prevention of Pollution by Garbage) Regulation

### Contents

Section	Page
<b>Part 1</b>	
<b>Preliminary</b>	
1. Commencement .....	1
2. Interpretation.....	1
3. Application to ships.....	7
<b>Part 2</b>	
<b>Prohibitions on Discharge of Garbage from Ships and Fixed or Floating Platforms</b>	
4. Prohibition on discharge of garbage from ships.....	9
5. Discharge of garbage from ships outside special areas permitted in certain circumstances .....	9
6. Discharge of garbage from ships within special areas permitted in certain circumstances .....	10
7. Ships operating in Antarctic area .....	13
8. Prohibition on discharge of garbage from platforms .....	13
<b>Part 3</b>	
<b>Duty to Display Placards and Maintain Garbage Management Plans and</b>	

Section	Page
<b>Garbage Record Books etc.</b>	
9. Placards .....	14
10. Garbage Management Plans .....	15
11. Garbage Record Books .....	16
12. Entries on special discharges be made .....	17
13. Duty to report discharge or loss of fishing gear .....	18
<b>Part 4</b>	
<b>Powers of Director and Government Surveyors</b>	
14. Exemption .....	19
15. Appointment of Government surveyors.....	19
16. Power of Government surveyors to inspect, examine etc. ships and platforms.....	19
17. Power to require production of Garbage Record Books and official log books .....	21
<b>Part 5</b>	
<b>Offences and Penalties</b>	
18. Obstruction and non-compliance with requirements .....	23
19. Offences and penalties .....	23
20. Defences .....	24

## Merchant Shipping (Prevention of Pollution by Garbage) Regulation

(Made by the Secretary for Transport and Housing under section 3 of the Merchant Shipping (Prevention and Control of Pollution) Ordinance (Cap. 413))

### Part 1

#### Preliminary

##### 1. Commencement

This Regulation comes into operation on 1 July 2015.

##### 2. Interpretation

(1) In this Regulation—

*all plastics* (全塑料), in relation to garbage, means garbage that consists of or includes plastic in any form, including synthetic ropes, synthetic fishing nets, plastic garbage bags and ashes from the incineration of plastic products;

*animal carcasses* (動物屍體) means the bodies of any animals that are carried on board as cargo and that die or are euthanized during the voyage;

*Annex V* (《附則 V》) means Annex V to the Convention, entitled “Regulations for the Prevention of Pollution by Garbage from Ships”, as from time to time revised or amended by any revision or amendment that applies to Hong Kong;

*cargo remnants* (貨物剩餘物), in relation to a ship, means the remnants of any cargo other than those which are regulated under any other subsidiary legislation made under the Ordinance;

*cargo residues* (貨物殘餘物), in relation to a ship, means cargo remnants which remain on the deck or in holds following loading or unloading (including loading and unloading excess or spillage), whether in wet or dry condition or entrained in wash water, but does not include cargo dust remaining on the deck after sweeping or dust on the external surfaces of the ship;

*Convention* (《公約》) means the International Convention for the Prevention of Pollution from Ships, 1973, including its protocols and appendices, and Annex V (but no other Annex), as from time to time revised or amended by any revision or amendment to any provision of such Convention that applies to Hong Kong;

*cooking oil* (食油) means any type of edible oil or animal fat used or intended to be used for the preparation or cooking of food;

*domestic wastes* (起居廢棄物), in relation to a ship or a fixed or floating platform, means all types of wastes which are generated in the accommodation spaces on board the ship or the platform (other than those which are regulated under any other subsidiary legislation made under the Ordinance), but does not include grey water;

*en route* (在航), in relation to a ship, means the ship is underway at sea on a course which, as far as practicable for navigational purposes, will cause any discharge from the ship to be spread over as great an area of the sea as is reasonable and practicable;

*fishing gear* (漁具) means any physical device or part of the device, or any combination of items, that may be placed on or in the water or on the sea-bed with the intended purpose of capturing, or controlling for subsequent capture or harvesting, marine or fresh water organisms;



**fishing or aquaculture activities** (捕魚或水產養殖活動), in relation to a ship, means—

- (a) fishing activities undertaken during the voyage of the ship; or
- (b) aquaculture activities which involve—
  - (i) the transport of fish (including shellfish) for placement in an aquaculture facility; and
  - (ii) the transport of harvested fish (including shellfish) from the facility to shore for processing;

**fixed or floating platform** (固定式或浮式海洋平台) means a fixed or floating structure located at sea which is engaged in the exploration, exploitation or associated offshore processing of sea-bed mineral resources;

**food wastes** (食物廢棄物), in relation to a ship or a fixed or floating platform, means any spoiled or unspoiled food substances and includes fruits, vegetables, dairy products, poultry, meat products and food scraps generated aboard the ship or the platform;

**garbage** (廢物)—

- (a) in relation to a ship, means all kinds of food wastes, domestic wastes and operational wastes, all plastics, cargo residues, incinerator ashes, cooking oil, fishing gear and animal carcasses which are generated during the normal operation of the ship and liable to be disposed of continuously or periodically, but does not include—
  - (i) any substance which is regulated under any other subsidiary legislation made under the Ordinance; and
  - (ii) fresh fish or any part of fresh fish generated as a result of fishing or aquaculture activities; and

- (b) in relation to a fixed or floating platform, means all kinds of food wastes, domestic wastes and operational wastes, all plastics, incinerator ashes and cooking oil which are generated during the normal operation of the platform and liable to be disposed of continuously or periodically, but does not include any substance which is regulated under any other subsidiary legislation made under the Ordinance;

**Government surveyor** (政府驗船師) means a person appointed under section 15 to be a Government surveyor;

**IMO** means the International Maritime Organization;

**incinerator ashes** (焚化爐灰燼) means ashes and clinkers resulting from the incineration of garbage on board a ship or a fixed or floating platform;

**nearest land** (最近陸地), when used in “from the nearest land”, means—

- (a) in relation to all land (other than the land referred to in paragraph (b)), the baseline from which the territorial sea of the territory in question is established in accordance with international law; and
- (b) in relation to the north-eastern coast of Australia which lies between the points 11°00'S, 142°08'E and 24°42'S, 153°15'E, straight lines joining consecutively the following points—
  - (i) 11°00'S, 142°08'E;
  - (ii) 10°35'S, 141°55'E;
  - (iii) 10°00'S, 142°00'E;
  - (iv) 9°10'S, 143°52'E;
  - (v) 9°00'S, 144°30'E;
  - (vi) 10°41'S, 145°00'E;

- (vii) 13°00'S, 145°00'E;
- (viii) 15°00'S, 146°00'E;
- (ix) 17°30'S, 147°00'E;
- (x) 21°00'S, 152°55'E;
- (xi) 24°30'S, 154°00'E; and
- (xii) 24°42'S, 153°15'E;

**operational wastes** (操作所致廢棄物)—

- (a) in relation to a ship, means solid wastes which are collected on board during the normal maintenance or operation of the ship, or used for cargo stowage or handling, and includes cleaning agents and additives contained in cargo hold wash water, deck wash water or external surfaces wash water, but does not include grey water, bilge water, or other similar discharges essential to the operation of the ship as specified in the guidelines developed by IMO for the implementation of Annex V; and
- (b) in relation to a fixed or floating platform, means solid wastes which are collected on board during the normal maintenance or operation of the platform, and includes cleaning agents and additives contained in deck wash water or external surfaces wash water, but does not include grey water, bilge water, or other similar discharges essential to the operation of the platform as specified in the guidelines developed by IMO for the implementation of Annex V;

**plastic** (塑料) means a solid material—

- (a) which contains as an essential ingredient one or more high molecular mass polymers;

- (b) which is formed or shaped during either the manufacture of the polymer or the fabrication of the polymer into a finished product by heat or pressure; and
- (c) which has material properties ranging from hard and brittle to soft and elastic;

**ship** (船、船舶) means a vessel operating in the marine environment and includes a hydrofoil, hovercraft, submersible or floating craft, but does not include a fixed or floating platform;

**solid wastes** (固體廢棄物) means all solid wastes (including slurries) other than those which are regulated under any other subsidiary legislation made under the Ordinance;

**special area** (特殊區域) has the meaning given by Regulation 1 of Annex V;

**special cargo residues** (特殊貨物殘餘物) means cargo residues which cannot be recovered using commonly available methods for unloading;

**special discharge from a platform** (平台特殊排放), in relation to a fixed or floating platform, means a discharge—

- (a) that is necessary for the purpose of securing the safety of the platform and the persons on board the platform or of saving life at sea; or
- (b) that is an accidental loss resulting from damage to the platform or its equipment;

**special discharge from a ship** (船舶特殊排放), in relation to a ship, means a discharge—

- (a) that is necessary for the purpose of securing the safety of the ship and the persons on board the ship or of saving life at sea;



- (b) that is an accidental loss resulting from damage to the ship or its equipment;
- (c) that is a discharge of fishing gear from the ship for the protection of the marine environment or for the safety of the ship or its crew; or
- (d) that is an accidental loss of fishing gear from the ship;

***treated food wastes*** (經處理食物廢棄物) means food wastes—

- (a) which have passed through a comminuter or grinder; and
- (b) which are capable of passing through a screen with openings no greater than 25 mm;

***treated introduced avian products*** (經處理引進鳥類產品) means introduced avian products—

- (a) which have passed through a comminuter or grinder; and
- (b) which are capable of passing through a screen with openings no greater than 25 mm.

(2) In this Regulation—

- (a) a reference to the master of a fixed or floating platform is a reference to the person in charge of the operation of the platform; and
- (b) a reference to the owner of a fixed or floating platform is a reference to the person who owns the platform.

### 3. Application to ships

(1) This Regulation applies to—

- (a) a Hong Kong ship wherever it may be; and
- (b) a non-Hong Kong ship within the waters of Hong Kong.

(2) This Regulation does not apply to—

- (a) a warship;
- (b) a naval auxiliary; or

- (c) any other ship owned or operated by a government and used only on government non-commercial service.

**Part 2****Prohibitions on Discharge of Garbage from Ships and Fixed or Floating Platforms****4. Prohibition on discharge of garbage from ships**

- (1) Subject to subsection (2) and sections 5 and 6, the discharge of garbage from a ship into the sea is prohibited.
- (2) The discharge (whether outside or within a special area) of treated food wastes from a ship is permitted if—
  - (a) the ship is alongside or within 500 m of a fixed or floating platform; and
  - (b) the platform is located more than 12 nautical miles from the nearest land.

**5. Discharge of garbage from ships outside special areas permitted in certain circumstances**

- (1) A ship (but not a ship that is alongside or within 500 m of a fixed or floating platform) may discharge the garbage referred to in subsection (4), (5), (6) or (7) into the sea outside a special area if—
  - (a) the ship is en route; and
  - (b) the discharge is made as set out in that subsection.
- (2) A ship (but not a ship that is alongside or within 500 m of a fixed or floating platform) may discharge the garbage referred to in subsection (8) into the sea outside a special area.
- (3) The requirement in subsection (1)(a) does not apply if—
  - (a) the garbage is food wastes; and

- (b) it is clear that the retention of the food wastes on board presents an imminent health risk to the persons on board.
- (4) The garbage is treated food wastes and the discharge is made as far as practicable from the nearest land and in any case not less than 3 nautical miles from the nearest land.
- (5) The garbage is food wastes (other than treated food wastes) and the discharge is made as far as practicable from the nearest land and in any case not less than 12 nautical miles from the nearest land.
- (6) The garbage is special cargo residues which do not contain any substance classified as harmful to the marine environment as specified in the guidelines developed by IMO for the implementation of Annex V, and the discharge is made as far as practicable from the nearest land and in any case not less than 12 nautical miles from the nearest land.
- (7) The garbage is animal carcasses and the discharge is made as far as practicable from the nearest land and after taking into account the guidelines developed by IMO for the implementation of Annex V.
- (8) The garbage is cleaning agents and additives—
  - (a) which are contained in cargo hold wash water, deck wash water or external surfaces wash water; and
  - (b) which only contain substances classified as not harmful to the marine environment as specified in the guidelines developed by IMO for the implementation of Annex V.

**6. Discharge of garbage from ships within special areas permitted in certain circumstances**

- (1) A ship (but not a ship that is alongside or within 500 m of a fixed or floating platform) may discharge the garbage referred



- to in subsection (4), (5) or (6) into the sea within a special area if—
- (a) the ship is en route; and
  - (b) the discharge is made as set out in that subsection.
- (2) A ship (but not a ship that is alongside or within 500 m of a fixed or floating platform) may discharge the garbage referred to in subsection (8) into the sea within a special area.
- (3) The requirement in subsection (1)(a) does not apply if—
- (a) the garbage is food wastes; and
  - (b) it is clear that the retention of the food wastes on board presents an imminent health risk to the persons on board.
- (4) The garbage is treated food wastes (other than treated introduced avian products) which have not been contaminated by any other type of garbage, and the discharge is made as far as practicable from the nearest land (or the nearest ice shelf) and in any case not less than 12 nautical miles from the nearest land (or the nearest ice shelf).
- (5) The garbage is treated introduced avian products (including poultry and poultry parts) which have not been contaminated by any other type of garbage, and—
- (a) the discharge is made as far as practicable from the nearest land (or the nearest ice shelf) and in any case not less than 12 nautical miles from the nearest land (or the nearest ice shelf); and
  - (b) the discharge is not made in the Antarctic area unless the products are sterilized.
- (6) The garbage is harmless special cargo residues or harmless cleaning agents and additives, and the conditions set out in subsection (7) are satisfied.
- (7) The conditions are—

- (a) that both the port of departure and the next port of destination are within the same special area and the ship does not transit outside the special area between those ports;
  - (b) that those ports do not have adequate reception facilities; and
  - (c) that the discharge is made as far as practicable from the nearest land (or the nearest ice shelf) and in any case not less than 12 nautical miles from the nearest land (or the nearest ice shelf).
- (8) The garbage is cleaning agents and additives—
- (a) which are contained in deck wash water or external surfaces wash water; and
  - (b) which only contain substances classified as not harmful to the marine environment as specified in the guidelines developed by IMO for the implementation of Annex V.
- (9) In this section—
- harmless cleaning agents and additives*** (無害清潔劑及添加劑) means cleaning agents and additives—
- (a) which are contained in cargo hold wash water; and
  - (b) which only contain substances classified as not harmful to the marine environment as specified in the guidelines developed by IMO for the implementation of Annex V;
- harmless special cargo residues*** (無害特殊貨物殘餘物) means special cargo residues—
- (a) which are contained in cargo hold wash water; and
  - (b) which do not contain any substance classified as harmful to the marine environment as specified in the guidelines developed by IMO for the implementation of Annex V.

**7. Ships operating in Antarctic area**

Before entering the Antarctic area, the owner and the master of a ship must ensure that—

- (a) the ship has sufficient capacity for the retention of all the garbage on board while the ship is in the area; and
- (b) arrangements have been made to discharge the garbage at a reception facility after leaving the area.

**8. Prohibition on discharge of garbage from platforms**

- (1) Subject to subsection (2), the discharge of garbage from a fixed or floating platform into the sea is prohibited.
- (2) The discharge of treated food wastes from a fixed or floating platform is permitted if the platform is located more than 12 nautical miles from the nearest land.

**Part 3****Duty to Display Placards and Maintain Garbage Management Plans and Garbage Record Books etc.****9. Placards**

- (1) A ship of 12 m or more in length overall must display a placard that complies with the requirements set out in subsection (3).
- (2) A fixed or floating platform must display a placard that complies with the requirements set out in subsection (4).
- (3) For subsection (1), the placard—
  - (a) must notify the crew and passengers of the ship of the requirements set out in sections 4, 5 and 6; and
  - (b) must be written—
    - (i) in the working language of the crew; and
    - (ii) (if the ship is engaged in a voyage to a port or an offshore terminal under the jurisdiction of a country other than the People's Republic of China) unless the working language is English, French or Spanish, also in English, French or Spanish.
- (4) For subsection (2), the placard—
  - (a) must notify the persons on board the platform of the requirements set out in section 8; and
  - (b) must be written—
    - (i) in the working language of the persons on board the platform; and
    - (ii) unless the working language is English, French or Spanish, also in English, French or Spanish.



(5) In this section—

*length overall* (總長度), in relation to a ship, means the distance between the foreside of the foremost fixed permanent structure and the aftside of the aftermost fixed permanent structure of the ship.

#### 10. Garbage Management Plans

- (1) A ship referred to in subsection (2) must have on board a Garbage Management Plan that complies with the requirements set out in subsection (4) and the crew of the ship must implement the Plan.
- (2) Subsection (1) applies to a ship—
  - (a) which is of 100 gross tonnage or above; or
  - (b) which is certified to carry 15 or more persons.
- (3) A fixed or floating platform must have on board a Garbage Management Plan that complies with the requirements set out in subsection (4) and the persons on board the platform must implement the Plan.
- (4) The Plan referred to in subsection (1) or (3)—
  - (a) must provide for the procedures for minimizing the volume of, collecting, storing, processing and the discharge of, garbage, and the use of equipment on board;
  - (b) must designate the person in charge for carrying out the Plan;
  - (c) must be written in the working language of the crew of the ship or the persons on board the platform; and
  - (d) must be prepared in accordance with such guidelines as may be adopted by IMO for the development of a Garbage Management Plan.

#### 11. Garbage Record Books

- (1) A ship referred to in subsection (2), and a fixed or floating platform, must have on board a Garbage Record Book that complies with the requirements set out in subsection (3).
- (2) Subsection (1) applies to any of the following ships—
  - (a) a ship which is of 400 gross tonnage or above and is certified to carry less than 15 persons;
  - (b) a ship which is of 400 gross tonnage or above and is—
    - (i) certified to carry 15 or more persons; and
    - (ii) engaged in a voyage of more than one hour in duration;
  - (c) a ship which is—
    - (i) certified to carry 15 or more persons; and
    - (ii) engaged in a voyage of more than one hour in duration to a port or an offshore terminal under the jurisdiction of a country other than the People's Republic of China.
- (3) The requirements are as follows—
  - (a) the Book must be in the form specified in Annex V;
  - (b) every discharge of garbage (whether into the sea or at a reception facility) and every completed incineration must be recorded in the Book promptly;
  - (c) every special discharge from a ship and every special discharge from a platform must be recorded in the Book and an entry must be made of the following—
    - (i) the location and circumstances of, and the reasons for, the discharge;
    - (ii) the details of the items discharged; and

- (iii) the precautions taken to prevent or minimize the discharge;
  - (d) the Book must be signed—
    - (i) by the person in charge of a discharge on the date of the discharge; and
    - (ii) by the person in charge of an incineration on the date of the incineration;
  - (e) each completed page of the Book must be signed by the master of the ship or the platform; and
  - (f) the entries in the Book must be made in English, French or Spanish.
- (4) If the entries in the Book are also made in an official language of the state whose flag the ship or the platform is entitled to fly, and there is an inconsistency between the entries made in that language and those made in one of the languages referred to in subsection (3), the entries made in that language are to prevail.
- (5) The Book must be kept on board the ship or the platform in a place so as to be readily available for inspection at all reasonable times for a period of 2 years from the date of the last entry made in it.

## 12. Entries on special discharges be made

- (1) This section applies to a ship of less than 400 gross tonnage that is not required to keep a Garbage Record Book.
- (2) If there is a special discharge from a ship, an entry must be made in the official log book of the ship of the following—
  - (a) the location and circumstances of, and the reasons for, the discharge;
  - (b) the details of the items discharged; and

- (c) the precautions taken to prevent or minimize the discharge.

## 13. Duty to report discharge or loss of fishing gear

- (1) If there is a discharge of fishing gear from a ship for the protection of the marine environment or for the safety of the ship or its crew, or an accidental loss of fishing gear from a ship, and the discharge or loss poses a significant threat to the marine environment or navigation, the master of the ship must report the discharge or loss to the Authority.
- (2) In this section—

**Authority** (有關當局), in relation to a ship, means—

- (a) if the discharge or loss occurs within the waters subject to the jurisdiction of a coastal state, the state; and
- (b) the state whose flag the ship is entitled to fly.



## Part 4

### Powers of Director and Government Surveyors

#### 14. Exemption

The Director may exempt any ship or class or description of ships, or any fixed or floating platform or class or description of fixed or floating platforms, from any of the requirements of this Regulation on such conditions as the Director may specify, and the Director may alter or cancel any such exemption.

#### 15. Appointment of Government surveyors

The Director may appoint a person to be a Government surveyor for the purposes of this Regulation.

#### 16. Power of Government surveyors to inspect, examine etc. ships and platforms

- (1) Any of the powers conferred by this section may be exercised for the purpose of ascertaining whether this Regulation has been or is being complied with.
- (2) A Government surveyor may, at any reasonable time—
  - (a) board a ship or a fixed or floating platform that is within the waters of Hong Kong; and
  - (b) take with the surveyor any other person and any equipment or materials required to assist the surveyor.
- (3) After boarding the ship or the platform, the Government surveyor may—
  - (a) inspect the ship or the platform;
  - (b) make any examination and investigation as the surveyor considers necessary;

- (c) take samples of any article or substance found on the ship or the platform that the surveyor may reasonably require for the inspection, examination or investigation;
- (d) inspect, seize and remove from the ship or the platform any article or substance in respect of which the surveyor suspects on reasonable grounds that an offence under this Regulation has been committed;
- (e) detain the article or substance for so long as is necessary—
  - (i) for the inspection, examination or investigation; and
  - (ii) to ensure that it is available for use as evidence in any proceedings for an offence under this Regulation;
- (f) take any measurements and photographs and make any recordings that the surveyor may reasonably require for the inspection, examination or investigation;
- (g) require that the ship or the platform, or any part of the ship or the platform, or anything on the ship or the platform, is to be left undisturbed (whether generally or in particular respects) for so long as is necessary for the inspection, examination or investigation;
- (h) require any person who the surveyor reasonably believes is able to give any information relevant to the inspection, examination or investigation—
  - (i) to attend at a place and time specified by the surveyor;
  - (ii) to answer the questions that the surveyor thinks fit to ask; and
  - (iii) to sign a declaration of the truth of the person's answers;

- (i) require the production of, and inspect and take copies of or of any entry in—
    - (i) any books or documents that are required to be kept under this Regulation; and
    - (ii) any other books or documents that the surveyor considers necessary for the inspection, examination or investigation; and
  - (j) require any person to afford the surveyor such facilities and assistance with respect to any matters or things within that person's control or in relation to which that person has responsibilities as the surveyor considers necessary to enable the surveyor to exercise any power conferred by this section.
- (4) If an inspection of a ship or a fixed or floating platform under subsection (3) reveals a deficiency, the Director may give a direction to the master of the ship or the platform requiring the master to cause the ship or the platform not to proceed to sea until the deficiency is rectified.
- (5) A master to whom a direction is given under subsection (4) must—
  - (a) comply with the direction;
  - (b) take steps to rectify the deficiency; and
  - (c) inform the Director once the deficiency is rectified.

**17. Power to require production of Garbage Record Books and official log books**

- (1) Without limiting section 16, a Government surveyor may do one or more of the following—
  - (a) require the master of a ship to which section 11 applies or the master of a fixed or floating platform to produce

- the Garbage Record Book of the ship or the platform for inspection;
  - (b) require the master of a ship to which section 12 applies to produce the official log book of the ship for inspection;
  - (c) make a copy of any entry in the Book or the log book;
  - (d) require the master of the ship or the platform to certify that the copy made is a true copy of the entry.
- (2) A copy certified by the master under subsection (1) is admissible in evidence on its production in any proceedings without further proof and is evidence of the facts stated in the copy.



**Part 5****Offences and Penalties****18. Obstruction and non-compliance with requirements**

- (1) A person must not—
  - (a) wilfully obstruct a Government surveyor in the exercise of any power conferred by section 16 or 17; or
  - (b) make a statement or sign a declaration that the person knows is false, or recklessly make a statement or sign a declaration that is false, in purported compliance with a requirement under section 16(3)(h).
- (2) A person must comply with a requirement imposed on the person under section 16(3).

**19. Offences and penalties**

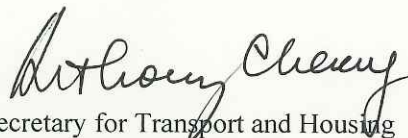
- (1) If any of the requirements in section 4(1), 9(1), 10(1), 11(1) or (5), 12(2) or 13(1) is contravened in respect of a ship, the owner and the master of the ship each commits an offence and is liable to a fine at level 6.
- (2) If section 7 is not complied with, the owner and the master of the ship concerned each commits an offence and is liable to a fine at level 6.
- (3) If any of the requirements in section 8(1), 9(2), 10(3) or 11(1) or (5) is contravened in respect of a fixed or floating platform, the owner and the master of the platform each commits an offence and is liable to a fine at level 6.
- (4) A master of a ship or a fixed or floating platform who fails to comply with a direction given under section 16(4) commits an offence and is liable to a fine at level 6.

- (5) A person who contravenes section 18(1) commits an offence and is liable to a fine at level 6.
- (6) A person who without reasonable excuse fails to comply with section 18(2) commits an offence and is liable to a fine at level 6.
- (7) If an offence under this section is committed, or would, save for the operation of section 20, have been committed by the owner or the master of a ship or a fixed or floating platform due to the act or omission of some other person, that other person also commits the offence and may be charged with and convicted of the offence whether or not proceedings are taken against the owner or the master.

**20. Defences**

- (1) If a person is charged with an offence under section 19(1) for contravening section 4(1), it is a defence for the person charged to prove that the discharge—
  - (a) is necessary for the purpose of securing the safety of the ship and the persons on board the ship or of saving life at sea;
  - (b) is an accidental loss resulting from damage to the ship or its equipment and all reasonable precautions have been taken, before and after the occurrence of the damage, to prevent or minimize such loss;
  - (c) is a discharge of fishing gear from the ship for the protection of the marine environment or for the safety of the ship or its crew; or
  - (d) is an accidental loss of fishing gear from the ship and all reasonable precautions have been taken to prevent such loss.

- (2) If a person is charged with an offence under section 19(3) for contravening section 8(1), it is a defence for the person charged to prove that the discharge—
- (a) is necessary for the purpose of securing the safety of the platform and the persons on board the platform or of saving life at sea; or
  - (b) is an accidental loss resulting from damage to the platform or its equipment and all reasonable precautions have been taken, before and after the occurrence of the damage, to prevent or minimize such loss.

  
Secretary for Transport and Housing

18<sup>th</sup> April, 2015

### Explanatory Note

The object of this Regulation is to implement Annex V to the International Convention for the Prevention of Pollution from Ships, 1973.

- 2. Part 1 contains provisions that provide for the commencement and application of the Regulation, and the definitions of words and expressions used in the Regulation.
- 3. Part 2 sets out the prohibitions on discharge of garbage from ships and fixed or floating platforms, and the exceptions to the prohibitions. Section 7 imposes certain requirements on ships operating in the Antarctic area.
- 4. Part 3 sets out certain requirements imposed on ships and fixed or floating platforms. Sections 9, 10 and 11 set out the requirements to display placards and maintain a Garbage Management Plan and a Garbage Record Book. Sections 12 and 13 demand for certain discharges and losses to be recorded or reported.
- 5. Part 4 contains provisions—
  - (a) to empower the Director of Marine to grant exemption;
  - (b) to deal with the appointment and power of Government surveyors.
- 6. Part 5 provides for offences, penalties and defences.

**Proposed Application of “Direct Reference Approach” in Provisions of the New Regulation**

<b>Item</b>	<b>Subject Matters Involved</b>	<b>Relevant Provisions of the New Regulation</b>
1	Definition of “operational wastes”	<p><b>Section 2 –</b> <b>“operational wastes –</b></p> <p>(a) in relation to a ship, means solid wastes which are collected on board during the normal maintenance or operation of the ship, or used for cargo stowage or handling, and includes cleaning agents and additives contained in cargo hold wash water, deck wash water or external surfaces wash water, but does not include grey water, bilge water, or other similar discharges essential to the operation of the ship as specified in the <b>guidelines developed by IMO for the implementation of Annex V</b>; and</p> <p>(b) in relation to a fixed or floating platform, means solid wastes which are collected on board during the normal maintenance or operation of the platform, and includes cleaning agents and additives contained in deck wash water or external surfaces wash water, but does not include grey water, bilge water, or other similar discharges essential to the operation of the platform as specified in the <b>guidelines developed by IMO for the implementation of Annex V</b>.”</p>

		<i>[Note: A copy of the latest guidelines developed by IMO for the implementation of Annex V, adopted by the IMO on 2 March 2012, is at <u>Annex D.</u>]</i>
2	Definition of “special area”	<b>Section 2 –</b> “ <b>special area</b> has the meaning given by <b>Regulation 1 of Annex V.</b> ” <sup>1</sup>
3	Discharge of garbage from ships outside special areas permitted in certain circumstances	<b>Sections 5(6), 5(7) and 5(8)-</b> “(6) The garbage is special cargo residues which do not contain any substance classified as harmful to the marine environment as specified in the <b>guidelines developed by IMO for the implementation of Annex V</b> , and the discharge is made as far as practicable from the nearest land and in any case not less than 12 nautical miles from the nearest land.  (7) The garbage is animal carcasses and the discharge is made as far as practicable from the nearest land and after taking into account the <b>guidelines developed by IMO for the implementation of Annex V</b> .  (8) The garbage is cleaning agents and additives— (a) which are contained in cargo hold wash water, deck wash water or external surfaces wash water; and (b) which only contain substances classified as not harmful to the



		marine environment as specified in the <b>guidelines developed by IMO for the implementation of Annex V.</b> ”
4	Discharge of garbage from ships within special areas permitted in certain circumstances	<p><b>Sections 6(8) and 6(9) -</b></p> <p>“(8) The garbage is cleaning agents and additives—</p> <ul style="list-style-type: none"> <li>(a) which are contained in deck wash water or external surfaces wash water; and</li> <li>(b) which only contain substances classified as not harmful to the marine environment as specified in the <b>guidelines developed by IMO for the implementation of Annex V.</b></li> </ul> <p>(9) In this section—</p> <p><b><i>harmless cleaning agents and additives</i></b> means cleaning agents and additives—</p> <ul style="list-style-type: none"> <li>(a) which are contained in cargo hold wash water; and</li> <li>(b) which only contain substances classified as not harmful to the marine environment as specified in the <b>guidelines developed by IMO for the implementation of Annex V;</b></li> </ul> <p><b><i>harmless special cargo residues</i></b> means special cargo residues—</p> <ul style="list-style-type: none"> <li>(a) which are contained in cargo hold wash water; and</li> <li>(b) which do not contain any substance classified as harmful to the marine environment as specified in the <b>guidelines developed by IMO for the implementation of Annex V.</b>” </li></ul>

5	Garbage Management Plan	<p><b>Section 10(4)(d)-</b>          “The Plan referred to in subsection (1) or (3) -          (d) must be prepared in accordance with such <b>guidelines as may be adopted by IMO for the development of a Garbage Management Plan.</b>”</p> <p><i>[Note: A copy of the latest guidelines developed by IMO for the development of a Garbage Management Plan, adopted by the IMO on 2 March 2012, is at <b><u>Annex E.</u></b>]</i></p>
---	-------------------------	---

---

<sup>1</sup> According to Regulation 1 of MARPOL Annex V, “Special Area” means a sea area where for recognised technical reasons in relation to its oceanographic and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by garbage is required.

For the purposes of this Annex the Special Areas are the Mediterranean Sea area, the Baltic Sea area, the Black Sea area, the Red Sea area, the Gulfs area, the North Sea area, the Antarctic area and the Wider Caribbean Region, which are defined as follows:

1. The Mediterranean Sea area means the Mediterranean Sea proper including the gulfs and seas therein with the boundary between the Mediterranean and the Black Sea constituted by the 41° N parallel and bounded to the west by the Straits of Gibraltar at the meridian 5°36' W.

2. The Baltic Sea area means the Baltic Sea proper with the Gulf of Bothnia and the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57° 44.8' N.
3. The Black Sea area means the Black Sea proper with the boundary between the Mediterranean and the Black Sea constituted by the parallel 41° N.
4. The Red Sea area means the Red Sea proper including the Gulfs of Suez and Aqaba bounded at the south by the rhumb line between Ras si Ane (12° 28.5' N, 43° 19.6' E) and Husn Murad (12° 40.4' N, 43° 30.2' E).
5. The Gulfs area means the sea area located north-west of the rhumb line between Ras al Hadd (22° 30' N, 59° 48' E) and Ras al Fasteh (25° 04' N, 61° 25' E).
6. The North Sea area means the North Sea proper including seas therein with the boundary between:
  - .1. the North Sea southwards of latitude 62° N and eastwards of longitude 4° W;
  - .2. the Skagerrak, the southern limit of which is determined east of the Skaw by latitude 57° 44.8' N; and
  - .3. the English Channel and its approaches eastwards of longitude 5° W and northwards of latitude 48° 30' N.
7. The Antarctic area means the sea area south of latitude 60° S.
8. The Wider Caribbean Region means the Gulf of Mexico and Caribbean Sea proper including the bays and seas therein and that portion of the Atlantic Ocean within the boundary constituted by the 30° N parallel from Florida eastward to 77°30' W meridian, thence a rhumb line to the intersection of 20° N parallel and 59° W meridian, thence a rhumb line to the intersection of 7°20' N parallel and 50° W meridian, thence a rhumb line drawn southwesterly to the eastern boundary of French Guiana.

---

**ANNEX 24****RESOLUTION MEPC.219(63)****Adopted on 2 March 2012****2012 GUIDELINES FOR THE IMPLEMENTATION OF MARPOL ANNEX V**

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 the international conventions for the prevention and control of marine pollution,

RECALLING ALSO that Annex V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78) relating thereto provides regulations for the prevention of pollution by garbage from ships,

NOTING that the Committee, at its twenty-sixth session, approved the Guidelines for the Implementation of Annex V of MARPOL 73/78,

NOTING ALSO that the Committee, at its thirty-third session, adopted the Revised Guidelines for the Implementation of Annex V of MARPOL 73/78 (the Revised Guidelines) by resolution MEPC.59(33), which were further amended by resolution MEPC.92(45), adopted at its forty-fifth session,

NOTING FURTHER that the Committee, at its sixty-second session, adopted the revised MARPOL Annex V by resolution MEPC.201(62), which is expected to enter into force on 1 January 2013,

RECOGNIZING the need to review the Revised Guidelines in light of the revised MARPOL Annex V,

HAVING CONSIDERED, at its sixty-third session, the draft 2012 Guidelines for the Implementation of MARPOL Annex V,

1. ADOPTS the 2012 Guidelines for the Implementation of MARPOL Annex V, the text of which is set out in the annex to this resolution;
2. INVITES Governments, in implementation of the provisions of the revised MARPOL Annex V, to take into account the 2012 Guidelines for the Implementation of MARPOL Annex V, upon the entry into force of the revised MARPOL Annex V; and
3. REVOKES the Revised Guidelines for the Implementation of Annex V of MARPOL 73/78 (resolution MEPC.59(33), as amended by resolution MEPC.92(45)), upon the entry into force of the revised MARPOL Annex V.

## ANNEX

### 2012 GUIDELINES FOR THE IMPLEMENTATION OF MARPOL ANNEX V

#### PREFACE

The main objectives of these guidelines are to assist:

- .1 governments in developing and enacting domestic laws which implement Annex V;
- .2 shipowners, ship operators, ships' crews, cargo owners and equipment manufacturers in complying with requirements set forth in Annex V and relevant domestic laws; and
- .3 port and terminal operators in assessing the need for, and providing, adequate reception facilities for garbage generated on all types of ships. In the interest of uniformity, governments are requested to refer to these guidelines and related International Maritime Organization guidance<sup>1</sup> when developing and enforcing appropriate national regulations.

#### 1 INTRODUCTION

1.1 The revised MARPOL Annex V with an entry into force date of 1 January 2013, prohibits the discharge of all types of garbage into the sea unless explicitly permitted under the Annex. These guidelines have been developed taking into account the regulations set forth in Annex V, as amended, of the International Convention for the Prevention of Pollution from Ships, (MARPOL) (hereinafter referred to as the "Convention"). The purpose of these guidelines is to provide guidance to governments, shipowners, ship operators, ships' crews, cargo owners, port reception facility operators and equipment manufacturers. The guidelines are divided into the following six sections that provide a general framework upon which governments can formulate programmes:

- Introduction;
- Garbage management;
- Management of cargo residues of solid bulk cargoes;
- Training, education and information;
- Port reception facilities for garbage; and
- Enhancement of compliance with MARPOL Annex V.

---

<sup>1</sup> Comprehensive Manual on Port Reception Facilities, 1999 Edition; MEPC.83(44), Guidelines for ensuring the Adequacy of Port Waste Reception Facilities; and MEPC.1/Circ.671, 20 July 2009, Guide to Good Practice for Port Reception Facility Providers and Users Guidelines.

1.2 Under the revised MARPOL Annex V, discharge of all garbage is now prohibited, except as specifically permitted in regulations 3, 4, 5 and 6 of MARPOL Annex V. MARPOL Annex V reverses the historical presumption that garbage may be discharged into the sea based on the nature of the garbage and defined distances from shore. Regulation 7 provides limited exceptions to these regulations in emergency and non-routine situations. Generally, discharge is restricted to food wastes, identified cargo residues, animal carcasses, and identified cleaning agents and additives and cargo residues entrained in washwater which are not harmful to the marine environment. It is recommended that ships use port reception facilities as the primary means of discharge for all garbage.

1.3 Recognizing that the Annex V regulations continue to restrict the discharge of garbage into the sea, require garbage management for ships, and that garbage management technology continues to evolve, it is recommended that governments and the Organization continue to gather information and review these guidelines periodically.

1.4 Regulation 8 of MARPOL Annex V provides that Governments must ensure the provision of adequate port reception facilities for garbage from ships and should facilitate and promote their use. Section 5 provides guidelines for these facilities.

1.5 The Convention provides definitions for terms used throughout these guidelines. Section 1.6 includes relevant aspects of these definitions, followed by other definitions which are useful for these guidelines.

## 1.6 Definitions

1.6.1 **Dishwater** means the residue from the manual or automatic washing of dishes and cooking utensils which have been pre-cleaned to the extent that any food particles adhering to them would not normally interfere with the operation of automatic dishwashers.

1.6.2 **Grey water** means drainage from dishwater, shower, laundry, bath and washbasin drains. It does not include drainage from toilets, urinals, hospitals, and animal spaces, as defined in regulation 1.3 of MARPOL Annex IV (sewage), and it does not include drainage from cargo spaces. Grey water is not considered garbage in the context of Annex V.

1.6.3 **Recycling** means the activity of segregating and recovering components and materials for reprocessing.

1.6.4 **Reuse** means the activity of recovering components and materials for further use without reprocessing.

## 1.7 Application

1.7.1 This section provides clarification as to what should and should not be considered garbage under MARPOL Annex V.

1.7.2 Ash and clinkers from shipboard incinerators and coal-burning boilers should be considered as operational wastes within the meaning of regulation 1.12 of MARPOL Annex V, and therefore are included in the term garbage, within the meaning of regulation 1.9 of MARPOL Annex V.

1.7.3 The definition of "operational wastes" (regulation 1.12 of MARPOL Annex V) excludes grey water, bilge water, or other similar discharges essential to the operation of a ship. "Other similar discharges" essential to the operation of a ship include, but are not limited to the following:

- boiler/economizer blowdown;
- boat engine wet exhaust;
- chain locker effluent;
- controllable pitch propeller and thruster hydraulic fluid and other oil to sea interfaces (e.g. thruster bearings, stabilizers, rudder bearings, etc.);
- distillation/reverse osmosis brine;
- elevator pit effluent;
- firemain systems water;
- freshwater lay-up;
- gas turbine washwater;
- motor gasoline and compensating discharge;
- machinery wastewater;
- pool, spa water and recreational waters;
- sonar dome discharge; and
- welldeck discharges.

1.7.4 While cleaning agents and additives contained in hold washwater, and deck and external surface washwater are considered "operational wastes" and thus "garbage" under Annex V, these cleaning agents and additives may be discharged into the sea so long as they are not harmful to the marine environment.

1.7.5 A cleaning agent or additive is considered not harmful to the marine environment if it:

- .1 is not a "harmful substance" in accordance with the criteria in MARPOL Annex III; and
- .2 does not contain any components which are known to be carcinogenic, mutagenic or reprotoxic (CMR).

1.7.6 The ship's record should contain evidence provided by the producer of the cleaning agent or additive that the product meets the criteria for not being harmful to the marine environment. To provide an assurance of compliance, a dated and signed statement to this effect from the product supplier would be adequate for the purposes of a ship's record. This might form part of a Safety Data Sheet or be a stand-alone document but this should be left to the discretion of the producer concerned.

1.7.7 Releasing small quantities of food into the sea for the specific purpose of fish feeding in connection with fishing or tourist operations should not be considered a discharge of garbage in the context of Annex V.

1.7.8 Fishing gear that is released into the water with the intention for later retrieval, such as fish aggregating devices (FADs), traps and static nets, should not be considered garbage or accidental loss in the context of Annex V.

## **2 GARBAGE MANAGEMENT**

### **2.1 Waste Minimization**

2.1.1 All shipowners and operators should minimize taking onboard material that could become garbage. Ship-specific garbage minimization procedures should be included in the Garbage Management Plan. It is recommended that manufacturers, cargo owners, ports and terminals, shipowners and operators and governments consider the management of garbage associated with ships' supplies, provisions, and cargoes as needed to minimize the generation of garbage in all forms.

2.1.2 When making supply and provisioning arrangements, shipowners and operators, where possible, with the ships suppliers should consider the products being procured in terms of the garbage they will generate. Options that should be considered to decrease the amount of such garbage include the following:

- .1 using supplies that come in bulk packaging, taking into account factors such as adequate shelf-life (once a container is open) to avoid increasing garbage associated with such products;
- .2 using supplies that come in reusable or recyclable packaging and containers; avoiding the use of disposable cups, utensils, dishes, towels and rags and other convenience items whenever possible; and
- .3 avoiding supplies that are packaged in plastic, unless a reusable or recyclable plastic is used.

2.1.3 When considering selection of materials for stowage and securing of cargo or protection of cargo from the weather, shipowners and operators should consider how much garbage such materials will generate. Options that should be considered to decrease the amount of such garbage include the following:

- .1 using permanent reusable coverings for cargo protection instead of disposable or recyclable plastic sheeting;
- .2 using stowage systems and methods that reuse dunnage, shoring, lining and packing materials; and



- .3 discharging to port reception facilities the dunnage, lining and packaging materials generated in port during cargo activities as its discharge into the sea is not permitted.

2.1.4 Governments are encouraged to undertake research and technology development to minimize potential garbage and its impacts on the marine environment. Suggested areas for such study are listed below:

- .1 development of recycling technology and systems for all types of materials that may be returned to shore as garbage; and
- .2 development of technology for use of biodegradable materials to replace current plastic products as appropriate. In connection with this, governments should also study the impacts on the environment of the products from degradation of such new materials.

## **2.2 Fishing gear**

2.2.1 Lost fishing gear may harm the marine environment or create a navigation hazard. Fishing vessel operators are required to record the discharge or loss of fishing gear in the Garbage Record Book or Ship's log as specified within regulations 7.1 and 10.3.4 of MARPOL Annex V.

2.2.2 Fishing vessel operators are further required to report the accidental loss or discharge of fishing gear which poses a significant threat to the marine environment and navigation. Reports should be made to the flag State, and where appropriate, the coastal State in whose jurisdiction the loss of the fishing gear occurred, as specified in regulation 10.6 of MARPOL Annex V:

- .1 the accidental loss or discharge of fishing gear which is required to be reported by regulation 10.6 of MARPOL Annex V should be determined specifically by the government. For such determination, the government is encouraged to consider various factors including: (1) the amount of the gear lost or discharged and (2) the conditions of the marine environment where it was lost or discharged. Comprehensive consideration is needed on the characteristics of the gear that was lost, including types, size (weight and/or length), quantity, material (especially, synthetic/plastic or not), buoyancy. In addition, governments should consider the impact of the fishing gear in different locations in order to assess whether the lost gear represents a significant threat to the marine environment or navigation, taking into account the vulnerability of habitat and protected species to gear interactions. Governments are encouraged to report to IMO their measures taken for this issue with a view to promoting information sharing and opinion exchange among governments and relevant International Organizations. Further, governments are encouraged to report to IMO, progress made in implementing these measures, including summaries of where gear was lost and, if applicable, actions taken to address the gear loss;
- .2 examples of lost or abandoned fishing gear which could be considered to pose a significant threat to the marine environment include whole or nearly whole large fishing gear or other large portions of gear. In determining the threat to the marine environment, governments should give careful consideration to the impact of gear in sensitive areas, such as coral reefs, and in areas where interactions would have higher risks of detrimental impacts, such as foraging or breeding areas for protected species;

- .3 governments are encouraged to develop communication frameworks to enable the recording and sharing of information on fishing gear loss where necessary in order to reduce loss and facilitate recovery of fishing gear. Governments are further encouraged to develop frameworks to assist fishing vessels in reporting the loss of gear to the flag State and to a coastal State. Such frameworks should take into consideration implementation challenges in small scale and artisanal fisheries and recreational operations;
- .4 fishing industry, relevant international organizations and governments are encouraged to undertake such research, technology development, information sharing and management measures as may be needed to minimize the probability of loss, and maximize the probability of retrieval of fishing gear from the sea; and
- .5 governments should encourage vessel operators to implement appropriate onboard storage and handling of fishing gear, and should also consider relevant guidance from FAO and IMO.

## 2.3 Shipboard garbage handling (collection, processing, storage, discharge)

2.3.1 Regulation 3 of MARPOL Annex V provides that the discharge of garbage into the sea is prohibited, with limited exceptions, as summarized in table 1. Under certain conditions discharge into the sea of food wastes, animal carcasses, cleaning agents and additives contained in hold washwater, deck and external surface washwater and cargo residues which are not considered to be harmful to the marine environment is permitted.

**TABLE 1 – SUMMARY OF RESTRICTIONS TO THE DISCHARGE OF GARBAGE INTO THE SEA UNDER REGULATIONS 4, 5 AND 6 OF MARPOL ANNEX V**

(Note: Table 1 is intended as a summary reference. The provisions in MARPOL Annex V, not table 1, prevail.)

Garbage type <sup>1</sup>	All ships except platforms <sup>4</sup>		Offshore platforms located more than 12 nm from nearest land and ships when alongside or within 500 metres of such platforms <sup>4</sup> Regulation 5
	Outside special areas Regulation 4 (Distances are from the nearest land)	Within special areas Regulation 6 (Distances are from nearest land or nearest ice-shelf)	
Food waste comminuted or ground <sup>2</sup>	≥3 nm, en route and as far as practicable	≥12 nm, en route and as far as practicable <sup>3</sup>	Discharge permitted
Food waste not comminuted or ground	≥12 nm, en route and as far as practicable	Discharge prohibited	Discharge prohibited
Cargo residues <sup>5, 6</sup> not contained in washwater	≥ 12 nm, en route and as far as practicable	Discharge prohibited	Discharge prohibited
Cargo residues <sup>5, 6</sup> contained in washwater		≥ 12 nm, en route and as far as practicable (subject to conditions in regulation 6.1.2)	
Cleaning agents and additives <sup>6</sup> contained in cargo hold washwater	Discharge permitted	≥ 12 nm, en route and as far as practicable (subject to conditions in regulation 6.1.2)	Discharge prohibited

Garbage type <sup>1</sup>	All ships except platforms <sup>4</sup>		Offshore platforms located more than 12 nm from nearest land and ships when alongside or within 500 metres of such platforms <sup>4</sup> Regulation 5
	Outside special areas Regulation 4 (Distances are from the nearest land)	Within special areas Regulation 6 (Distances are from nearest land or nearest ice-shelf)	
Cleaning agents and additives <sup>5</sup> in deck and external surfaces washwater		Discharge permitted	
Animal Carcasses (should be split or otherwise treated to ensure the carcasses will sink immediately)	Must be en route and as far from the nearest land as possible. Should be >100 nm and maximum water depth	Discharge prohibited	Discharge prohibited
All other garbage including plastics, synthetic ropes, fishing gear, plastic garbage bags, incinerator ashes, clinkers, cooking oil, floating dunnage, lining and packing materials, paper, rags, glass, metal, bottles, crockery and similar refuse	Discharge prohibited	Discharge prohibited	Discharge prohibited

- <sup>1</sup> When garbage is mixed with or contaminated by other harmful substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.
- <sup>2</sup> Comminuted or ground food wastes must be able to pass through a screen with mesh no larger than 25 mm.
- <sup>3</sup> The discharge of introduced avian products in the Antarctic area is not permitted unless incinerated, autoclaved or otherwise treated to be made sterile.
- <sup>4</sup> Offshore platforms located 12 nm from nearest land and associated ships include all fixed or floating platforms engaged in exploration or exploitation or associated processing of seabed mineral resources, and all ships alongside or within 500 m of such platforms.
- <sup>5</sup> Cargo residues means only those cargo residues that cannot be recovered using commonly available methods for unloading.
- <sup>6</sup> These substances must not be harmful to the marine environment.

2.3.2 Compliance with Annex V involves personnel, equipment and procedures for collecting, sorting, processing, storing, recycling, reusing and discharging garbage. Economic and procedural considerations associated with these activities include storage space requirements, sanitation, equipment and personnel costs and in port garbage service charges.

2.3.3 Compliance with the provisions of Annex V involves careful planning by the ship's owner and operator and proper execution by crew members as well as other seafarers. The most appropriate procedures for handling and storing garbage on board ships may vary depending on factors such as the type and size of the ship, the area of operation (e.g. special area, distance from nearest land or ice-shelf), shipboard garbage processing equipment and storage space, number of crew or passengers, duration of voyage, and regulations and reception facilities at ports of call. However, in view of the cost involved with the different garbage handling options, it is economically advantageous to first, limit the

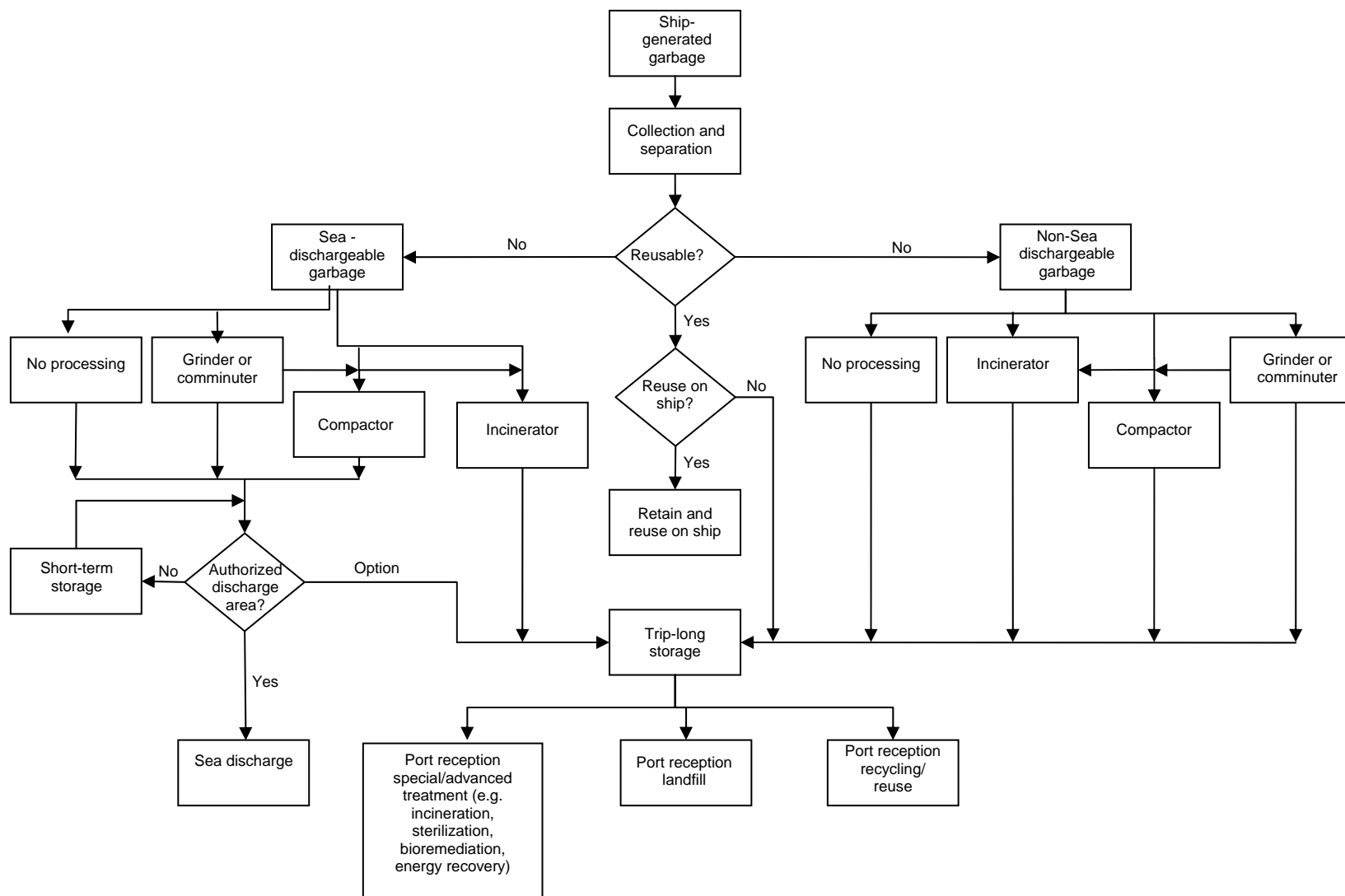
amount of material that may become garbage from being brought on board the ship and second, separate garbage eligible for discharge into the sea from other garbage that may not be discharged into the sea. Proper management of containers and packaging coming on board and proper handling and storage can minimize shipboard storage space requirements and enable efficient transfer of retained garbage to port reception facilities for proper handling (i.e. recycling, reuse) or land-based disposal.

2.3.4 Every ship of 100 gross tonnage and above, and every ship certified to carry 15 or more persons, and fixed and floating platforms are required to carry and implement a garbage management plan that specifies procedures to be followed to ensure proper and efficient handling and storage of garbage. A garbage management plan<sup>2</sup> should be developed that can be incorporated into crew and ship operating manuals. Such manuals should identify crew responsibilities (including an Environmental Control Officer) and procedures for all aspects of handling and storing garbage on board the ship. Procedures for handling ship-generated garbage are divided into four phases: collection, processing, storage, and discharge. A generalized garbage management plan for handling and storing ship-generated garbage is presented in table 2. Specific procedures for each phase are discussed below.

---

<sup>2</sup> Garbage management plans are mandatory on certain ships in accordance with regulation 10 of Annex V of MARPOL 73/78.

**Table 2: Options for shipboard handling and discharge of garbage**



## 2.4 Collection

2.4.1 Procedures for collecting garbage generated on board should be based on the consideration of what is permitted and what is not permitted to be discharged into the sea while en route, and whether a particular garbage type can be discharged to port facilities for recycling or reuse. The details of these procedures should be written in the garbage management plan.

2.4.2 To reduce or avoid the need for sorting after collection and to facilitate recycling, it is recommended that distinctively marked garbage receptacles be provided on board the ship to receive garbage as it is generated. Receptacles on board can be in the form of drums, metal bins, cans, container bags, or wheelie bins. Any receptacles on deck areas, poop decks or areas exposed to the weather should be secured on the ship and have lids that are tight and securely fixed. All garbage receptacles should be secured to prevent loss, spillage, or loss of any garbage that is deposited in the receptacles. Receptacles should be clearly marked and distinguishable by graphics shape, size, or location. Receptacles should be placed in appropriate spaces throughout the ship (e.g. the engine-room, mess deck, wardroom, galley, and other living or working spaces) and all crew members and passengers should be advised of what garbage should and should not be placed in them.

2.4.3 The recommended garbage types that should be separated are:

- non-recyclable plastics and plastics mixed with non-plastic garbage;
- rags;
- recyclable material:
  - cooking oil;
  - glass;
  - aluminium cans;
  - paper, cardboard, corrugated board;
  - wood;
  - metal;
  - plastics; (including styrofoam or other similar plastic material); and
- garbage that might present a hazard to the ship or crew (e.g. oily rags, light bulbs, acids, chemical, batteries, etc.).

2.4.4 Crew responsibilities should be assigned for collecting or emptying these receptacles and taking the garbage to the appropriate processing or storage location. Use of such a system facilitates subsequent shipboard processing and minimizes the amount of garbage which must be stored on board ship for return to port.

### *Plastics and plastics mixed with non-plastic garbage*

2.4.5 Plastics are used for a variety of marine purposes including, but not limited to, packaging (vapour-proof barriers, bottles, containers, liners, bags, cargo wrapping material, foam cushioning material, etc.); ship construction (fibreglass and laminated structures, siding, piping, insulation, flooring, carpets, fabrics, paints and finishes, adhesives, electrical and electronic components, etc.); disposable eating utensils (styrofoam plates, bowls, food containers, cups, etc.); bags; sheeting; floats; fishing nets; fishing lines; strapping bands; wire rope with synthetic fibre sheaths; combination wire rope; rope; line; sails; and many other manufactured plastic items.

2.4.6 Regulation 3.2 of Annex V prohibits the discharge of all plastics into the sea. When plastic is mixed with other garbage, the mixture must be treated as if it were all plastic. The most stringent procedures for the handling and discharge should be followed taking into account the applicable provisions of the garbage management plan.

#### *Food wastes*

2.4.7 Some governments have regulations for controlling human, plant, and animal diseases that may be carried by foreign food wastes and materials that have been associated with them (e.g. food packing and disposable eating utensils, etc.). These regulations may require incinerating, sterilizing, double bagging or other special treatment of garbage to destroy possible pest and disease organisms. This type of garbage should be kept separate from other garbage and preferably retained for discharge at port reception facilities in accordance with the laws of the receiving country. Governments are reminded of their obligation to ensure the provision of adequate reception facilities. Precautions must be taken to ensure that plastics contaminated by food wastes (e.g. plastic food wrappers) are not discharged into the sea with other food wastes.

#### *Synthetic fishing net and line scraps*

2.4.8 As regulation 3.2 of MARPOL Annex V prohibits the discharge into the sea of synthetic fishing net and line scraps generated by the repair or operation of fishing gear, these items should be collected in a manner that avoids their loss overboard. Such material may be incinerated, compacted, or stored along with other plastics or it may be preferable to keep it separate from other types of garbage if it has strong odour or is present in great volume. Unless such garbage is appropriately incinerated, the atmospheric incineration products could be toxic. Onboard incineration should follow regulation 16 of MARPOL Annex VI.

#### *Recovery of garbage at sea*

2.4.9 Seafarers are encouraged to recover persistent garbage from the sea during routine operations as opportunities arise and prudent practice permits, and they are encouraged to retain the material for discharge to port reception facilities.

## **2.5 Processing**

2.5.1 Depending on factors such as the type of ship, area of operation, number of crew or passengers, etc., ships may be equipped with incinerators<sup>3</sup>, compactors, comminuters, or other devices for shipboard garbage processing (see sections 2.8 to 2.11). Appropriate members of the crew should be trained and assigned responsibility for operating this equipment on a schedule commensurate with ship needs. In selecting appropriate processing procedures, the following should be considered.

2.5.2 Use of compactors, incinerators, comminuters, and other such devices has a number of advantages, such as, reducing shipboard space requirements for storing garbage, and making it easier to discharge garbage at port reception facilities.

2.5.3 It should be noted that special rules on incineration under domestic law may apply in some ports and may exist in some special areas. Incineration of hazardous materials (e.g. scraped paint, impregnated wood) and certain types of plastics (e.g. PVC-based plastics or other plastics containing hazardous chemicals) calls for special precaution due to

---

<sup>3</sup> Refer to resolution MEPC.76(40), "Standard specification for shipboard incinerators". Amended by resolution MEPC.93(45).

the potential environmental and health effects from combustion of by-products. The problems of combustion of by-products are discussed in 2.11.3.

2.5.4 Ships operating primarily in special areas or within three nautical miles from the nearest land or ice-shelf are greatly restricted in what they can discharge. These ships should choose between storage of either compacted or uncompacted material for discharging at port reception facilities or incineration with retention of ash and clinkers. The type of ship and the expected volume and type of garbage generated determine the suitability of compaction, incineration or storage options.

## **2.6 Storage**

2.6.1 Garbage collected from throughout the ship should be delivered to designated processing or storage locations. Garbage that must be returned to port for discharge at port reception facilities may require storage until arrangements can be made to discharge it ashore for appropriate processing. In all cases, garbage should be stored in a manner which avoids health and safety hazards. The following points should be considered when selecting procedures for storing garbage:

- .1 sufficient storage space and equipment (e.g. cans, drums, bags or other containers) should be provided. Where storage space is limited, ship operators are encouraged to consider the installation of compactors or incinerators. To the extent possible, all processed and unprocessed garbage stored for any length of time should be in tight, securely covered containers in order to prevent the unintentional discharge of stored garbage;
- .2 food wastes and other garbage to be returned to port and which may carry diseases or pests should be stored in tightly covered containers and be kept separate from garbage which does not contain such food wastes. Quarantine arrangements in some countries may require double bagging of this type of waste. Both types of garbage should be stored in separate clearly marked containers to avoid incorrect discharge and facilitate proper handling and treatment on land; and
- .3 cleaning and disinfecting are both preventative and remedial pest control methods that should be applied regularly in garbage storage areas.

## **2.7 Discharge**

2.7.1 Although discharge into the sea of limited types of garbage is permitted under Annex V, discharge of garbage to port reception facilities should be given primary consideration. When discharging garbage, the following points should be considered:

- .1 regulations 4, 5, and 6 of MARPOL Annex V, summarized in table 1, set forth the requirements for garbage permitted to be discharged into the sea. In general the discharge shall take place when the ship is en route and as far as practicable from the nearest land. Attempts should be made to spread the discharge over as wide an area as possible and in deep water (50 metres or more). Prevailing currents and tidal movements should be taken into consideration when discharging into the sea is permitted; and



- .2 to ensure timely transfer of large quantities of ship-generated garbage to port reception facilities, it is essential for shipowners, operators or their agents to make arrangements well in advance for garbage reception. At the same time, discharge needs should be identified in order to make arrangements for garbage requiring special handling or other necessary arrangements. Advice should be provided to the port of the type of garbage to be discharged and whether it is separated and the estimated amounts. The port may have special discharge requirements for food wastes and related garbage which may carry certain disease or pest organisms, dunnage, batteries, medicines, outdated pyrotechnics or unusually large, heavy, or odorous derelict fishing gear, etc.

## **2.8 Shipboard equipment for processing garbage**

2.8.1 The choice of options<sup>4</sup> for garbage processing depends largely upon personnel limitations, generation rate, capacity, vessel configuration, voyage route and availability of port reception facilities. The type of equipment available for shipboard garbage handling includes incinerators, compactors, comminuters and their associated hardware.

## **2.9 Grinding or comminution**

2.9.1 The discharge of comminuted food wastes may be permitted under regulations 4.1.1 and 6.1.1 of MARPOL Annex V whilst the ship is en route. Such comminuted or ground food waste must be capable of passing through a screen with openings no greater than 25 mm.

2.9.2 A wide variety of food waste grinders is available on the market and most modern ships' galleys have the equipment needed to produce a slurry of food particles and water that washes easily through the required 25 mm screen. Output ranges from 10 to 250 litres per minute. The discharge from shipboard comminuters should be directed into an appropriately constructed holding tank when the vessel is operating within an area where discharge is prohibited.

2.9.3 Size reduction of certain other garbage items can be achieved by shredding or crushing and machines for carrying out this process are available for use on board ships.

2.9.4 Information on the development, advantages and use of comminuters for processing food waste aboard ships should be forwarded to the Organization for sharing between interested parties.

2.9.5 Outside special areas, ships operating primarily beyond three nautical miles from the nearest land are encouraged to install and use comminuters to grind food wastes to a particle size capable of passing through a screen with openings no larger than 25 mm. Regulation 4 requires comminuting or grinding food wastes if the food wastes are to be discharged between three and 12 nautical miles from the nearest land. Although unprocessed food wastes may be discharged beyond 12 nautical miles, it is recommended that comminuters be used as they hasten assimilation into the marine environment. Because food wastes comminuted with plastics cannot be discharged into the sea, all plastic materials need to be removed before food wastes are placed into a comminuter or grinder.

---

<sup>4</sup> Reference may also be made to other technical guidance such as, ISO/CD21070 Ships and marine technology – Marine environment protection – Management and handling of shipboard garbage.

2.9.6 When operating *inside* a special area, regulation 6 of MARPOL Annex V requires all food wastes to be comminuted or ground prior to discharge in to the sea. All discharges are to be as far as practicable and not less than 12 nautical miles from the nearest land or ice-shelf.

## 2.10 Compaction

Table 3 shows compaction options for various types of garbage.

**Table 3 – Compaction options for shipboard-generated garbage**

Examples of garbage	Special handling by vessel personnel before compaction	Compaction characteristics			Onboard storage space
		Rate of alteration	Retainment of compacted form	Density of compacted form	
Metal, food and beverage containers, glass, small wood pieces	None	Very rapid	Almost 100%	High	Minimum
Comminuted plastics, fibre and paper board	Minor – reduce material to size for feed, minimal manual labour	Rapid	Approximately 80%	Medium	Minimum
Small metal drums <sup>5</sup> , uncomminuted cargo packing, large pieces of wood	Moderate – longer manual labour time required to size material for feed	Slow	Approximately 50%	Relatively low	Moderate
Uncomminuted plastics	Major – very long manual labour time to size material for feed; usually impractical	Very slow	Less than 10%	Very low	Maximum
Bulky metal cargo containers, thick metal items	Impractical for shipboard compaction; not feasible	Not applicable	Not applicable	Not applicable	Maximum

<sup>5</sup> Small and large drums can be compacted very easily with the proper device – a large number of these devices have been designed for remote locations, and therefore they are small and easy to operate with excellent results. It should be noted, that the compaction of drums is probably restricted to larger vessels, due to lack of space on smaller (fishing) vessels.

2.10.1 Most garbage can be compacted to some degree; the exceptions include unground plastics, fibre and paper board, bulky cargo containers and thick metal items. Pressurized containers should not be compacted or shredded without the use of specialized equipment designed for this purpose because they present an explosion hazard in standard compactors.

2.10.2 Compaction reduces the volume of garbage. In most cases, the output from a compactor is a block of material which facilitates the shipboard storage of garbage and its discharging of the material in a port facility. It should be taken into account that the output from a compactor might be subject to quarantine, sanitary or health requirements or other requirements from the port reception facilities and advice from local authorities should be sought on any standards or requirements which are additional to those set by the Organization.

2.10.3 Compactors have options including sanitizing, deodorizing, adjustable compaction ratios, bagging in plastic or paper, boxing in cardboard (with or without plastic or wax paper lining), baling, etc. Compacted materials should be stored appropriately. While metal and plastic bales can get wet, paper and cardboard bales should be kept dry.

2.10.4 If grinding machines are used prior to compaction, the compaction ratio can be increased and the storage space decreased. Careful investigation of the appropriate compaction machine should be undertaken, based on the type and volume of material that will be compacted, as not all compactors require grinding. Compaction is just one step in the solid waste management scheme and the shipowner/operator should ensure all phases of garbage management are described in their Garbage Management Plan. Proper care should be taken when handling and storing binder wrap to prevent it from accidentally entering the marine environment.

2.10.5 A compactor should be installed in a compartment with adequate room for operating and maintaining the unit and storing garbage to be processed. The compartment should be located adjacent to the areas of food processing and commissary store-rooms. If not already required by regulation, it is recommended that the space should have freshwater wash down service, coamings, deck drains, adequate ventilation and hand or automatic fixed fire-fighting equipment.

2.10.6 Information on the development and use of shipboard compactors should be forwarded to the Organization for sharing between interested parties.

## **2.11 Incineration**

2.11.1 Ash and clinkers from shipboard incinerators should be considered as operational waste and, therefore, as garbage that is not eligible for discharge into the sea.

2.11.2 Incineration conducted in a shipboard incinerator can significantly reduce the need to store garbage on board the ship. Shipboard incinerators should be designed, constructed, operated and maintained in accordance with the IMO Standard Specification for Shipboard Incinerators (footnote 3). MARPOL Annex VI requires shipboard incinerators installed after 1 January 2000 to be type approved and meet specific air pollution criteria. Incinerators should only be used to incinerate materials that are specified by the incinerator manufacturer.

2.11.3 In general, shipboard incineration should not be undertaken when the ship is in port or at offshore terminal. Some ports may have domestic laws that specify additional air emission restrictions, particularly those near high population areas. The use of a shipboard incinerator may require permission from the port authority concerned.

2.11.4 Table 4 presents options for incineration of garbage, and includes considerations for special handling by vessel personnel, combustibility, reduction in volume, residual materials, exhaust, and onboard storage space. Most garbage is amenable to incineration with the exception of metal and glass.

**Table 4 – Incineration options for shipboard-generated garbage**

Examples of garbage	Special handling by vessel personnel <sup>6</sup> before incineration	Incineration characteristics				Onboard storage space
		Combustibility	Reduction of volume	Residual	Exhaust	
Paper Packing, food and beverage containers	Minor – easy to feed into hopper	High	Over 95%	Powder ash	Possibly smoky and not hazardous	Minimum
Fibre and paper board	Minor – reduce material to size for feed, minimum manual labour	High	Over 95%	Powder ash	Possibly smoky and not hazardous	Minimum
Plastics packaging, food and beverage containers, etc.	Minor – easy to feed into hopper	High	Over 95%	Powder ash	Possibly smoky and not hazardous based on incinerator design	Minimum
Plastics sheeting, netting, rope and bulk material.	Moderate – manual labour time to size reduction	High	Over 95%	Powder ash	Possibly smoky and not hazardous based on incinerator design	Minimum
Rubber hoses and bulk pieces	Major – manual labour time to size reduction	High	Over 95%	Powder ash	Possibly smoky and not hazardous based on incinerator design	Minimum
Metal food and beverage containers, etc.	Minor – easy to feed into hopper	Low	Less 10%	Slag	Possibly smoky and not hazardous	Moderate

<sup>6</sup> Each operator of the onboard garbage incinerator should be trained and familiar in the use of the equipment and the types of garbage that can be destroyed in the incinerator.

Examples of garbage	Special handling by vessel personnel <sup>6</sup> before incineration	Incineration characteristics				Onboard storage space
		Combustibility	Reduction of volume	Residual	Exhaust	
Metal cargo, bulky containers, thick metal items	Major – manual labour time to size reduction(not easily incinerated)	Very low	Less 5%	Large metal Fragments and slag	Possibly smoky and not hazardous	Maximum
Glass food and beverage containers, etc.	Minor – easy to feed into hopper	Low	Less 10%	Slag	Possibly smoky and not hazardous	Moderate
Wood, cargo containers and large wood scrapes	Moderate – manual labour time to size reduction	High	Over 95%	Powder ash	Possibly smoky and not hazardous	Minimum

2.11.5 Some of the disadvantages of incinerators may include the possible hazardous nature of the ash or vapour, dirty operation, excessive labour required for charging, stoking and ash removal. Some incinerators may not be able to meet air pollution regulations imposed in some ports and harbours or by flag and coastal States when such matters are subject to their jurisdiction. Some of these disadvantages can be remedied by automatic equipment for charging and stoking, however, the additional equipment to perform automatic functions will require more installation space.

2.11.6 The incineration of garbage that contains a large amount of plastic involves very specific incinerator settings such as higher oxygen injection and higher temperatures (850 to 1,200°C). If these special conditions are not met, depending on the type of plastic and conditions of combustion, some toxic gases can be generated in the exhaust stream, including vaporized hydrochloric (HCl) and hydrocyanic (HCN) acids. These and other intermediary products of combustion of waste containing plastics are toxic to humans and marine life.

2.11.7 Onboard incineration of garbage may reduce the volume of garbage subject to quarantine requirements in some countries. However, incinerator ash may still be subject to local quarantine, sanitary or health requirements. Advice should be sought from local authorities regarding requirements that are in addition to MARPOL. For example, higher temperatures and more complete combustion may be required to effectively destroy organisms that present a risk.

2.11.8 Information on the development and advantages on the use of shipboard incinerator systems should be forwarded to the Organization for sharing between interested parties.

## **2.12 Treatment of animal carcasses**

2.12.1 Only fit and healthy animals should be presented for loading as cargo and managed in accordance with international standards for the transport of animals at sea<sup>7</sup>. The master of the ship is expected to have responsibility for shipboard livestock operational issues, animal health and welfare, and conditions for the control and reporting of animal mortality on board.

2.12.2 Ships carrying live animal cargo consignments are expected to have animals that die during a voyage. These mortalities accrue gradually over the voyage and are dependent on various factors including age and type of animal species, facilities on board the ship and local climatic conditions. The most common mortality causes stem from enteritis, refusal to feed, injury, exhaustion, or illness not evident prior to loading. The mortality numbers are generally low and are operational issues to be controlled as part of cargo management practice. These mortalities are considered to be generated during the normal operation of the ship and liable to be discharged of continually or periodically and therefore subject to Annex V regulations.

2.12.3 As part of normal livestock ship management procedures, regular inspections (day and night) are recommended to ensure the health and welfare of the animals. It is recommended that these inspections include shipboard recording, on a daily basis, of the number of animals that have died or have been euthanized.

2.12.4 When mortalities occur on board, the carcasses should be removed from the pen areas and assessed for appropriate disposition. The options for appropriate discharge of the carcasses under Annex V will typically be discharge into the sea or discharge to a reception facility. Where the ship has an appropriate storage area on board, limited quantities of treated carcasses may be stored for short periods for subsequent discharge into the sea or to reception facilities. Any storage on board should take into account occupational health and safety requirements.

2.12.5 Regulation 4.1.4 of MARPOL Annex V permits the discharge into the sea of animal carcasses generated during the normal operation of a ship, but only if the ship is en route, outside a special area, as far as possible from the nearest land and taking into account the guidelines developed by the Organization. To comply with regulation 4.1.4 of MARPOL Annex V, it is recommended that the discharge into the sea should take place greater than 100 nautical miles (nm) from the nearest land and in the maximum water depth possible.

2.12.6 When a ship is on a voyage that is not often greater than 100 nm from nearest land, the retention of carcasses on board during conditions of high temperatures and high humidity may constitute a threat to human health and safety or to the remaining live animals. In these circumstances it may not be possible to discharge animal carcasses in accordance with these guidelines. In such circumstances where the master of the ship determines that such health and safety threats exist, it is recommended the discharge into the sea should take place greater than 12 nm from the nearest land. Where the discharge of animal carcasses at sea occurs under these circumstances, the entry in the Garbage Record Book of the position of the ship should also include a remark about these circumstances.

---

<sup>7</sup> The World Organisation for Animal Health (OIE) formulated "Guidelines for the Transport of Animals by Sea" as part of the Terrestrial Animal Health Code (2010).

2.12.7 Animal carcasses should be split or otherwise treated prior to their discharge at sea. Procedures for the treatment of carcasses should take into account the health and safety of the crew and other livestock cargo. Treatment should facilitate the sinking or dispersal of the carcass when it is discharged into the sea.

2.12.8 Treatment of a carcass involves:

- manually slitting or cutting the carcass to the extent that the thoracic and abdominal cavities are opened; or
- passing the carcass through equipment such as a comminuter, grinder, hogger, or mincer.

2.12.9 For each animal carcass incinerated, discharged into the sea or discharged to a reception facility, an entry in the Garbage Record Book shall be made. The entry should include the date/time, position of the ship and remarks to specify the animal species (e.g. sheep, cattle, goats), the category "H" and the number of carcasses discharged. Where the discharge is to a reception facility, the receipt obtained from the facility should be attached to the Garbage Record Book.

2.12.10 Following the completion of a voyage, the master of the ship is encouraged to provide a copy of the pages of the Garbage Record Book that contain the entries for the discharges of animal carcasses at sea to the flag State and the State from whose port the voyage originated, and other information requested.

2.12.11 Governments are encouraged to analyse the garbage records of discharges of animal carcasses and other relevant information to inform and assist future reviews of the Annex V guidelines and regulations.

#### **Mortalities in excess of those generated during the normal operation of a ship**

2.12.12 Carcasses of animals resulting from mortalities in excess of those generated during the normal operation of a ship are not "garbage" under Annex V and are not covered under these guidelines. To assist in managing these situations, masters should contact the flag State of the ship and where appropriate, port and/or coastal State(s) to seek guidance on the appropriate legal regimes and requirements, as well as consult relevant IMO guidelines and circulars. In particular, masters should refer to the joint London Convention-London Protocol/MEPC "Guidance on Managing Spoilt Cargoes".

2.12.13 "Mortalities in excess of those generated during the normal operation of a ship" refers to animal mortalities in excess of those described in paragraph 2.12.2. While this could be a number of animals dying at the same time or within a short period of time, the number of mortalities that exceed those generated during the normal operation of a ship will depend upon the animal species and the total number and/or species carried in the consignment.

2.12.14 Circumstances that may result in mortalities that exceed those generated during the normal operation of the ship, include:

- malfunctioning of ventilation or watering systems;
- weather events such as heat waves or storm systems;
- infectious disease outbreaks; and
- refusal of cargo offloading by authorities at destination, leading to the need to euthanize some or all of the live animal cargo.

2.12.15 The guidance provided above and in the LC-LP/MEPC Circular on guidance on managing spoilt cargoes is not a substitute for any stricter requirements imposed upon a ship by a port State, a flag State or the exporting country, for the management of livestock cargoes.

## **2.13 Discharge of fish carried as a cargo**

2.13.1 Fish, including shellfish, carried on board as cargo that have died or been euthanized on board during the voyage are considered to be animal carcasses and should, to the extent practicable, be treated in the manner set out in section 2.12 of these guidelines. Governments may want to consider additional actions to reduce the risk of spreading parasitic or pathogenic organisms.

## **3 MANAGEMENT OF CARGO RESIDUES OF SOLID BULK CARGOES**

3.1 Cargo residues are included in the definition of garbage within the meaning of Annex V, regulation 1.9 and may be discharged in accordance with regulations 4.1.3 and 6.1.2. However, cargo material contained in the cargo hold bilge water should not be treated as cargo residues if the cargo material is not harmful to the marine environment and the bilge water is discharged from a loaded hold through the ship's fixed piping bilge drainage system.

3.2 Cargo residues are considered harmful to the marine environment and subject to regulations 4.1.3 and 6.1.2.1 of the revised MARPOL Annex V if they are residues of solid bulk substances which are classified according to the criteria of the United Nations Globally Harmonized System for Classification and Labelling of Chemicals (UN GHS) meeting the following parameters<sup>1)</sup>:

- .1 Acute Aquatic Toxicity Category 1; and/or
- .2 Chronic Aquatic Toxicity Category 1 or 2; and/or
- .3 Carcinogenicity<sup>2)</sup> Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation; and/or
- .4 Mutagenicity<sup>2)</sup> Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation; and/or
- .5 Reproductive Toxicity<sup>2)</sup> Category 1A or 1B combined with not being rapidly degradable and having high bioaccumulation; and/or
- .6 Specific Target Organ Toxicity Repeated Exposure<sup>2)</sup> Category 1 combined with not being rapidly degradable and having high bioaccumulation; and/or
- .7 Solid bulk cargoes containing or consisting of synthetic polymers, rubber, plastics, or plastic feedstock pellets (this includes materials that are shredded, milled, chopped or macerated or similar materials).

---

### **Notes:**

- 1) The criteria are based on UN GHS, fourth revised edition (2011). For specific products (e.g. metals and inorganic metal compounds) guidance available in UN GHS, annexes 9 and 10 are essential for proper interpretation of the criteria and classification and should be followed.
- 2) Products that are classified for Carcinogenicity, Mutagenicity, Reproductive toxicity or Specific Target Organ Toxicity Repeated Exposure for oral and dermal hazards or without specification of the exposure route in the hazard statement.



3.3 Cargo residues that are harmful to the marine environment may require special handling not normally provided by reception facilities. Ports and terminals receiving such cargoes should have adequate reception facilities for all relevant residues, including when contained in washwater.

3.4 Solid bulk cargoes should be classified and declared by the shipper as to whether or not they are harmful to the marine environment. Such declaration should be included in the information required in section 4.2 of the IMSBC Code.

3.5 Ports, terminals and ship operators should consider cargo loading, unloading and onboard handling practices<sup>8</sup> in order to minimize production of cargo residues. Cargo residues are created through inefficiencies in loading, unloading, onboard handling. Options that should be considered to decrease the amount of such garbage include the following:

- .1 ensuring ships are suitable to carry the intended cargo and also suitable for unloading the same cargo using conventional unloading methods;
- .2 unloading cargo as efficiently as possible, utilizing all appropriate safety precautions to prevent injury or ship and equipment damage and to avoid or minimize cargo residues; and
- .3 minimizing spillage of the cargo during transfer operations by carefully controlling cargo transfer operations, both on board and from dockside. This should include effective measures to enable immediate communications between relevant ship and shore-based personnel during the transfer operations and when feasible, enclosure of conveyance devices such as conveyor belts. Since this spillage typically occurs in port, it should be completely cleaned up immediately following the loading and unloading event and handled as cargo; delivering it into the intended cargo space or into the appropriate unloading holding area.

3.6 When the master, based on the information received from the relevant port authorities, determines that there are no adequate reception facilities<sup>9</sup> at either the port of departure or the port of destination in the case where both ports are situated within the same special area, the condition under regulation 6.1.2.3 should be considered satisfied.

3.7 MARPOL Annex V, regulation 6.1.2 also applies when the "port of departure" and the "next port of destination" is the same port. To discharge cargo hold washwater in this situation, the ship must be en route and the discharge must take place not less than 12 miles from the nearest land.

## **4 TRAINING, EDUCATION AND INFORMATION**

4.1 These guidelines are intended to address governments, shipowners, ship operators, ships' crews, cargo owners, port reception facility operators and equipment manufacturers as sources of pollution of the sea by garbage. Accordingly, governments should develop and undertake training, education and public information programmes suited for all seafaring communities under their jurisdiction, prepared and presented in such a way that they communicate with that segment of the community.

---

<sup>8</sup> Refer to the International Maritime Solid Bulk Cargoes Code and supplement 2009 Edition (IMSBC Code).

<sup>9</sup> IMO Circular MEPC.1/Circ.469/Rev.1, Revised Consolidated Format for Reporting Alleged Inadequacy of Port Reception Facilities.

4.2 Governments may exchange and maintain information relevant to compliance, non-compliance and information on legal proceedings for violations with Annex V regulations through the Organization. Governments are encouraged to provide the Organization with the following:

- .1 technical information on shipboard garbage management methods such as minimization, recovery, recycling, reuse, incineration, compaction, separation, sorting and sanitation system, packaging and provisioning methods;
- .2 educational materials developed to raise the level of compliance with Annex V. This includes printed materials (e.g. placards, posters, brochures, etc.), photographs, DVDs, audio and video tapes, and films as well as synopses of training programmes, seminars and formal curricula; and
- .3 information and reports on the nature and extent of garbage from shipping found along beaches and in coastal waters under their respective jurisdictions. In order to assess the effectiveness of Annex V, these studies should provide details on amounts, distribution, sources and impacts of garbage from shipping.

4.3 Governments are encouraged to amend their maritime certification examinations and requirements, as appropriate, to include a knowledge of duties imposed by national and international law regarding the control of pollution of the sea by garbage.

4.4 Placards required by regulation 10.1 should contain a summary declaration stating the prohibition and restrictions for discharging garbage from ships under MARPOL Annex V and the possible penalties for failure to comply. Governments are encouraged to develop appropriate placards for use by every ship of their registry of more than 12 metres in length overall and fixed and floating platforms. (Sample placards targeting crew and shipboard operations; fixed or floating platforms and ships operating within 500 metres of such platforms; and passengers are shown in figures 1, 2 and 3.)

4.4.1 The declaration should be placed on a placard at least 12.5 cm by 20 cm, made of durable material and fixed in conspicuous and prominent places on board the ship. Placards should also be replaced when damage or wear compromises the readability of the declaration.

4.4.2 The placards should also be placed in prominent places where crew will be working and living, and in areas where bins are placed for collection of garbage. These places include galley spaces, mess room(s), wardroom, bridge, main deck and other areas of the ship, as appropriate. The placards should be displayed at line of sight height and be printed in the working language of the crew. Ships which operate internationally will also have placards printed in English, French or Spanish, in accordance with regulation 10.1.2 of MARPOL Annex V.

4.4.3 Where the ship carries passengers, placards also should be placed in prominent places where passengers are accommodated and congregate. These include cabins, all deck areas for recreational purposes open to passengers.

4.5 Governments should ensure that appropriate education and training in respect of MARPOL is included in the training programmes leading to STCW and STCW-F certification.

4.6 Governments are encouraged to have maritime colleges and technical institutes under their jurisdiction develop or augment curricula to include both the legal duties as well as the technical options available to professional seafarers for handling ship-generated garbage. These curricula should also include information on environmental and ecological impacts of garbage. A list of suggested topics to be included in the curriculum is provided below:

- .1 garbage in the marine environment, sources, methods for prevention of release of garbage to the environment and impacts on the environment;
- .2 national and international laws relating to, or impinging upon shipboard waste management;
- .3 health and sanitation considerations related to the storage, handling and transfer of ship-generated garbage;
- .4 current technology for onboard and shoreside<sup>10</sup> processing of ship generated garbage; and
- .5 provisioning options, materials and procedures to minimize the generation of garbage aboard ships.

4.7 Professional associations and societies of ship officers, engineers, naval architects, shipowners and managers, and seafarers are encouraged to ensure their members' competency regarding the handling of ship-generated garbage.

4.8 Ship and reception facility operators should establish detailed training programmes for personnel operating and maintaining ships garbage reception or processing equipment. It is suggested that the programme include instruction on what constitutes garbage and the applicable regulation for handling and disposing of it. Such training should be reviewed annually and updated as appropriate.

4.9 Generalized public information programmes are needed to provide information to non-professional seafarers, and others concerned with the health and stability of the marine environment, regarding the impacts of garbage at sea. Governments and involved commercial organizations are encouraged to utilize the Organization's library and to exchange resources and materials, as appropriate, to initiate internal and external public awareness programmes.

4.9.1 Methods for delivering this information include radio and television, articles in periodicals and trade journals, voluntary public projects such as beach clean-up days and adopt-a-beach programmes, public statements by high government officials, posters, brochures, social media, conferences and symposia, cooperative research and development, voluntary product labelling and teaching materials for public schools.

4.9.2 Audiences include recreational sailors and fishermen, port and terminal operators, coastal communities, ship supply industries, shipbuilders, garbage management industries, plastic manufacturers and fabricators, trade associations, educators and governments.

---

<sup>10</sup> Reference may also be made to other technical guidance such as, ISO/CD16304 Ships and marine technology – Marine environment protection – Arrangement and management of port waste reception facilities.

4.9.3 The subjects addressed in these programmes are recommended to include the relevant domestic and international law; options for handling garbage at sea and upon return to shore; known sources and types of garbage; impacts of plastics on marine life and ship operations; the accumulation of garbage in the world's oceans and seas impacts on coastal tourist trade; current actions by governments, intergovernmental organizations, non-governmental organizations and sources of further information.

## **5 PORT RECEPTION FACILITIES FOR GARBAGE**

5.1 The methodology for determining the adequacy of a reception facility should be based on the number and types of ships that will call at the port, the waste management requirements of each type of ship as well as the size and location of a port. Emphasis should also be placed on calculating the quantities of garbage, including recyclable material from ships which are not discharged into the sea in accordance with the provisions of Annex V.

5.2 It should be noted that, due to differences in port reception procedures and additional treatment among ports, port reception facilities may require the separation on board of:

- .1 food wastes (e.g. animal derived products and by-products because of risk of animal diseases);
- .2 cooking oil (animal derived products and by-products because of risk of animal diseases);
- .3 plastics;
- .4 domestic waste, operational waste and recyclable or reusable material;
- .5 special items like medical waste, outdated pyrotechnics and fumigation remnants;
- .6 animal wastes, including used bedding from the transport of live animals (due to risk of disease) but excluding drainage from spaces containing living animals; and
- .7 cargo residues.

5.3 Ship, port and terminal operators should consider the following when determining quantities and types of garbage on a per ship basis:

- .1 types of garbage normally generated;
- .2 ship type and design;
- .3 ship operating route;
- .4 number of persons on board;
- .5 duration of voyage;
- .6 time spent in areas where discharge into the sea is prohibited or restricted; and
- .7 time spent in port.

5.4 Governments, in assessing the adequacy of reception facilities, should also consider the technological challenges associated with the recycling, treatment and discharge of garbage received from ships. Governments should take responsible actions within their national programmes to consider garbage management standards. In doing so, relevant international standards should be taken into account.

5.4.1 The type and capacity of equipment for treatment and final disposal of garbage is a significant factor in determining the adequacy of a reception facility. It not only provides a measure of the time required to complete the process, but it also is the primary means for ensuring that ultimate disposal of the garbage is environmentally sound.

5.4.2 Governments should continue to carry out studies into the provision of reception facilities at ports in their respective countries. Governments should carry out the studies in close cooperation with port authorities and other local authorities responsible for garbage handling. Such studies should include information such as a port-by-port listing of available garbage reception facilities, the types of garbage they are equipped to handle their capacities and any special procedures required to use them. Governments should submit data on the availability of port reception facilities to GISIS.

5.4.3 While selecting the most appropriate type of reception facility for a particular port, consideration should be given to several alternative methods available. In this regard, floating plants for collection of garbage, such as barges or self-propelled ships, might be considered more effective in a particular location than land-based facilities.

5.5 These guidelines aim to stimulate governments to develop modern waste reception facilities and continue to improve their garbage management processes. Information on developments in this area should be forwarded to the Organization.

5.6 Governments are encouraged to develop policies and practices that facilitate the reduction, use and recycling of ship-generated garbage. The development of port reception facilities and associated guidance that aids the handling of separated garbage from ships should encourage ships to separate garbage on board.

## **6 ENHANCEMENT OF COMPLIANCE WITH MARPOL ANNEX V**

6.1 Recognizing that direct enforcement of Annex V regulations, particularly at sea, is difficult to accomplish, governments are encouraged to consider not only restrictive and punitive measures consistent with international law, but also the removal of any disincentives, the creation of positive incentives and initiatives to facilitate more effective compliance, and the development of voluntary measures within the regulated community when developing programmes and domestic legislation to ensure compliance with Annex V.

### **6.2 Compliance Facilitation and Enforcement**

6.2.1 Ships should inform their flag State of ports in foreign countries Party to Annex V which do not have adequate port reception facilities for garbage. This can provide a basis for advising responsible governments of possible problems and calling the Organization's attention to possible issues of compliance. An acceptable reporting format is reproduced in MEPC.1/Circ.671, along with the procedure for submitting and handling such reports.

6.2.2 Governments should develop a strategy to assess or audit port reception facilities under their jurisdiction. Detailed guidance in this regard is provided by the Organization. At a minimum, periodic inspection of the reception facilities is recommended and consideration should be given to establishing a documentation system (e.g. letters or certificates) stating that adequate facilities are available for receiving ship-generated garbage.

6.2.2.1 Governments are encouraged to improve the adequacy and efficiency of existing port reception facilities for fishing gear.

6.2.3 Governments should identify appropriate agencies for enforcement and facilitating compliance and provide legal authority, adequate training, funding and equipment to incorporate the goals and objectives under Annex V regulations into their responsibilities. In those cases where customs or agricultural officials are responsible for receiving and inspecting garbage, governments should ensure that the inspections are facilitated.

6.2.4 Governments should consider the use of garbage management reporting systems. Such reporting systems may provide valuable data for measuring and monitoring the impacts of garbage regulations and management and identifying trends over time. A reporting system could be based on the information in garbage record books (where applicable) or ship's log. In addition advance notification forms and garbage reception receipts could provide input into the garbage reporting system.

6.2.5 A garbage management reporting system may also include reporting of discharges of garbage. Particular attention should be given to the reporting of any discharge in special areas; discharge at port reception facilities; and discharge of garbage into the sea. Reports should include the date, time, location by latitude and longitude, or name of port, type of garbage and estimated amount of garbage discharged. Particular attention should be given to the reporting of:

- .1 the loss of fishing gear;
- .2 the discharge of cargo residues;
- .3 any discharge in special areas;
- .4 discharge at port reception facilities; and
- .5 discharge of garbage into the sea, in those limited situations, where permitted.

6.2.6 The issuance of documents or receipts (i.e. IMO standard forms) by port reception facilities might also be used in maintaining a garbage management reporting system.

### **6.3 Compliance incentive systems**

6.3.1 The augmentation of port reception facilities to serve ship traffic without undue delay or inconvenience may call for capital investment from port and terminal operators as well as the garbage management companies serving those ports. Governments are encouraged to evaluate means within their authority to lessen this impact, thereby helping to ensure that garbage delivered to port is actually received and disposed of properly at reasonable cost or without charging special fees to individual ships. Such means could include, but are not limited to:

- .1 tax incentives;
- .2 loan guarantees;
- .3 public vessel business preference;
- .4 special funds to assist in problem situations such as remote ports with no land-based garbage management system in which to deliver ships' garbage;
- .5 government subsidies; and
- .6 special funds to help defray the cost of a bounty programme for lost, abandoned or discarded fishing gear or other persistent garbage. The programme would make appropriate payments to persons who retrieve such fishing gear, or other persistent garbage other than their own, from marine waters under the jurisdiction of government.

6.3.2 The minimization of taking packaging on board and the installation of shipboard garbage management handling and processing equipment would facilitate compliance with Annex V and lessen the burden on port reception facilities to process garbage for discharge. Therefore, governments might consider actions to encourage the reduction of packaging and the installation of certain types of garbage processing equipment on ships operating under its flag. For example, programmes to lessen costs to shipowners for purchasing and installing such equipment, or requirements for installing compactors, incinerators and comminuters during construction of new ships could be very helpful.

6.3.3 Governments are encouraged to consider the economic impacts of domestic regulations intended to ensure compliance with Annex V. Due to the highly variable nature of ship operations and configurations, consideration should be given in domestic regulations to permitting ships the greatest range of options for complying with Annex V. However, any range of options needs to be consistent with Annex V and should facilitate the implementation of and compliance with Annex V.

6.3.4 Governments are encouraged to support research and development of technology that facilitates compliance with Annex V regulations for ships and ports. This research should concentrate on:

- .1 minimization of packaging;
- .2 shipboard garbage handling systems;
- .3 ship provision innovations to minimize garbage generation;
- .4 loading, unloading and cleaning technologies to minimize dunnage, spillage and cargo residues;
- .5 new ship construction design to facilitate garbage management and transfer and to minimize retention of cargo in ship holds; and
- .6 wharf and berth design to facilitate garbage management and transfer.

6.3.5 Governments are encouraged to work within the Organization to develop port reception systems that simplify the transfer of garbage for international vessels.

#### **6.4 Voluntary measures**

6.4.1 Governments are encouraged to assist ship operators and seafarers' organizations in developing resolutions, by-laws and other internal mechanisms that encourage compliance with Annex V regulations. Some of these groups include:

- .1 seamen and officer unions;
- .2 associations of shipowners, insurers, classification societies;
- .3 pilot associations; and
- .4 fishermen's organizations.

6.4.2 Governments are encouraged to assist and support, where possible, the development of mechanisms to promote compliance with Annex V among port authorities, terminal operators, stevedores, longshoremen, and land-based garbage management authorities.



### **Sample placard targeting crew and shipboard operations**

## **Discharge of all garbage into the sea is prohibited except provided otherwise**

The MARPOL Convention and domestic law prohibit the discharge of most garbage from ships. Only the following garbage types are allowed to be discharged and under the specified conditions.

Outside Special Areas designated under MARPOL Annex V:

- Comminuted or ground food wastes (capable of passing through a screen with openings no larger than 25 millimetres) may be discharged not less than 3 nautical miles from the nearest land.
- Other food wastes may be discharged not less than 12 nautical miles from the nearest land.
- Cargo residues classified as not harmful to the marine environment may be discharged not less than 12 nautical miles from the nearest land.
- Cleaning agents or additives in cargo hold, deck and external surfaces washing water may be discharged only if they are not harmful to the marine environment.
- With the exception of discharging cleaning agents in washing water, the ship must be en route and as far as practicable from the nearest land.

Inside Special Areas designated under MARPOL Annex V

- More stringent discharge requirements apply for the discharges of food wastes and cargo residues; AND
- Consult Annex V and the shipboard garbage management plan for details.

For all areas of the sea, ships carrying specialized cargoes such as live animals or solid bulk cargoes should consult Annex V and the associated Guidelines for the implementation of Annex V.

Discharge of any type of garbage must be entered in the Garbage Record Book  
Violation of these requirements may result in penalties.

**Sample placard targeting fixed or floating platforms and ships operating within 500 metres of such platforms**

## Discharge of all garbage into the sea is prohibited except provided otherwise

The MARPOL Convention and domestic law prohibit the discharge of all garbage into the sea from fixed or floating platforms and from all other ships when alongside or within 500 metres of such platforms.

Exception: Comminuted or ground food wastes may be discharge from fixed or floating platforms located more than 12 miles from the nearest land and from all other ships when alongside or within 500 metres of such platforms. Comminuted or ground food wastes must be capable of passing through a screen no larger than 25 millimetres.

Discharge of any type of garbage must be entered in the Garbage Record Book

Violation of these requirements may result in penalties.

**Sample placard targeting passengers**

Discharge of all garbage into the sea is prohibited except provided otherwise

The MARPOL Convention and domestic law generally prohibit the discharge of most forms of garbage from ships into the sea.

Violation of these requirements may result in penalties.

All garbage is to be retained on board and placed in the bins provided.

\*\*\*

**ANNEX 25****RESOLUTION MEPC.220(63)****Adopted on 2 March 2012****2012 GUIDELINES FOR THE DEVELOPMENT OF  
GARBAGE MANAGEMENT PLANS**

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 the international conventions for the prevention and control of marine pollution,

RECALLING ALSO that Annex V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto provides regulations for the prevention of pollution by garbage from ships,

NOTING that the Committee, at its thirty-eighth session, adopted the Guidelines for the Development of Garbage Management Plans by resolution MEPC.71(38),

NOTING ALSO that the Committee, at its sixty-second session, adopted the revised MARPOL Annex V by resolution MEPC.201(62), which is expected to enter into force on 1 January 2013,

NOTING FURTHER that regulation 10.2 of the revised MARPOL Annex V provides that every ship of 100 gross tonnage and above, and every ship which is certified to carry 15 or more persons and fixed or floating platforms shall carry a Garbage Management Plan based on the guidelines developed by the Organization,

RECOGNIZING the need to review the Guidelines for the Development of Garbage Management Plans, in light of the revised MARPOL Annex V,

HAVING CONSIDERED, at its sixty-third session, the draft 2012 Guidelines for the Development of Garbage Management Plans,

1. ADOPTS the 2012 Guidelines for the Development of Garbage Management Plans, the text of which is set out in the annex to this resolution;
2. INVITES Governments to apply the 2012 Guidelines for the Development of Garbage Management Plans, upon the entry into force of the revised MARPOL Annex V; and
3. REVOKES the Guidelines for the Development of Garbage Management Plans (resolution MEPC.71(38)), upon the entry into force of the revised MARPOL Annex V.

## ANNEX

### 2012 GUIDELINES FOR THE DEVELOPMENT OF GARBAGE MANAGEMENT PLANS

**For compliance with regulation 10 of the revised MARPOL Annex V**

## 1 INTRODUCTION

1.1 In 2011, IMO adopted amendments to MARPOL Annex V which require that:

- .1 every ship of 100 gross tonnage and above, and every ship certified to carry 15 or more persons, and fixed or floating platforms shall carry a garbage management plan;
- .2 every ship of 400 gross tonnage and above, and every ship certified to carry 15 or more persons engaged in voyages to ports or offshore terminals of another Party, and every fixed or floating platform shall be provided with a Garbage Record Book; and
- .3 every ship of 12 metres or more in length overall, and fixed or floating platforms shall display placards which notify the crew and passengers of the ship's disposal requirements of regulations 3, 4, 5 and 6 of the Annex as applicable.

These provisions are included in regulation 10 to the revised MARPOL Annex V with an entry into force date of 1 January 2013.

1.2 These Guidelines provide direction on complying with the requirements for a ship's garbage management plan, and are intended to assist the shipowner/operator in the implementation of regulation 10.2 of the revised MARPOL Annex V. It is assumed that the author of the garbage management plan is familiar with the requirements of the revised MARPOL Annex V and the IMO Guidelines for the Implementation of MARPOL Annex V.

1.3 Shipowners and operators should also consult other available technical guidance on shipboard garbage handling such as, ISO 21070 "Standard for the Management and handling of shipboard garbage" which outlines best management practices for shipboard garbage management and, to the extent it is consistent with the revised MARPOL Annex V, should be incorporated in any garbage management plan.

1.4 A ship's garbage management plan should detail the specific ship's equipment, arrangements and procedures for the handling of garbage. The plan may contain extracts and/or references to existing company instructions.

## 2 REGULATORY REQUIREMENTS

2.1 Regulation 10.2 of MARPOL Annex V reads as follows:

*"Every ship of 100 gross tonnage and above, and every ship which is certified to carry 15 or more persons, and fixed or floating platforms, shall carry a garbage management plan which the crew shall follow. This plan shall provide written procedures for minimizing, collecting, storing, processing and disposing of garbage, including the use of the equipment on board. It shall also designate the person or*

*persons in charge of carrying out the plan. Such a plan shall be based on the guidelines developed by the Organization and written in the working language of the crew."*

### **3 PREVENTION OF POLLUTION FROM GARBAGE**

3.1 To achieve cost-effective and environmentally sound results, many garbage management planners use a combination of complementary techniques to manage garbage, such as the following:

- .1 reduction at source;
- .2 reusing or recycling;
- .3 onboard processing (treatment);
- .4 discharge into the sea in those limited situations where it is permitted; and
- .5 discharge to a port reception facility.

3.2 When requisitioning stores and provisions, shipping companies should encourage their suppliers to remove, reduce, all packaging, at an early stage, to limit the generation of garbage on board ships.

3.3 When garbage is generated aboard a ship, procedures should be defined to enable the crew to sort the material that can be reused onboard the ship or recycled at an appropriate port reception facility.

3.4 Ship's garbage is made up of distinct components, some of which are regulated in MARPOL Annex V, while others may be regulated locally, nationally or regionally. Each component of the garbage should be evaluated separately to determine the best management practice for that type of garbage.

### **4 MATTERS WHICH SHOULD BE ADDRESSED IN THE GARBAGE MANAGEMENT PLAN**

#### **4.1 Designated person in charge of carrying out the plan**

4.1.1 In accordance with regulation 10.2 of the revised MARPOL Annex V, the plan shall designate a person in charge of carrying out the plan. The person should ensure the garbage management plan is followed.

4.1.2 This person should be assisted by ship's crew to ensure that the minimization, collection, separation and processing of garbage is appropriate and efficient in all areas of the ship.

#### **4.2 Procedures for collecting garbage**

4.2.1 Identify suitable receptacles for collection and separation<sup>1</sup>.

---

<sup>1</sup> Separation of garbage for the purposes of these Guidelines is considered part of the collection process. Separation may take place at the source or at a separate designated station.

4.2.2 Identify the locations of receptacles and collection and separation stations.

4.2.3 Describe the process of how garbage is transported from the source of generation to the collection and separation stations.

4.2.4 Describe how garbage is to be handled between primary collection and separation stations and other handling methods relating to the following:

- .1 needs of reception facilities, taking into account possible local recycling arrangements;
- .2 onboard processing and potential reuse of garbage aboard the ship;
- .3 storage; and
- .4 discharge into the sea in those limited situations where it is permitted.

4.2.5 Describe the training or education programmes to facilitate collection of garbage and sorting of reusable or recyclable material.

#### **4.3 Procedures for processing garbage**

4.3.1 Identify personnel responsible for the operation of the processing equipment.

4.3.2 Identify available processing devices and their capacities.

4.3.3 Identify the locations of processing devices and processing stations.

4.3.4 Identify the categories of garbage that are to be processed by each of the available processing devices.

4.3.5 Describe how material that can be reused or recycled is to be handled between primary processing stations and the storage or transfer stations.

4.3.6 Describe processing procedures used for the following:

- .1 needs of reception facilities, taking into account available recycling arrangements;
- .2 storage; and
- .3 discharge into the sea in those limited situations where it is permitted.

4.3.7 Describe the training or education programmes to facilitate the processing of garbage and reuse or recycling of material.

4.3.8 Identify standard operating procedures for the operation and maintenance of the equipment used to manage garbage. This may be done by reference to documents available on board.

#### **4.4 Procedures for storing garbage or reusable or recyclable material**

4.4.1 Identify the locations, the intended use, and the capacities of available storage stations for each category of garbage or reusable or recyclable material.

4.4.2 Describe the condition of how the garbage will be stored (for example, "food – frozen"; "cans – compacted and stacked"; "paper – compacted and should remain dry", etc.).

4.4.3 Describe how garbage, including reusable and recyclable material, is to be handled between storage stations and discharge with regard to the following:

- .1 discharge to reception facilities, taking into account available recycling arrangements; and
- .2 discharge into the sea in those limited situations where it is allowed.

4.4.4 Describe the training or education programmes to facilitate the storing of garbage and options for reusing and recycling components of the waste stream.

#### **4.5 Procedures for discharging of garbage**

4.5.1 Describe the ship's procedures to ensure and demonstrate compliance with the requirements of the revised MARPOL Annex V for the discharge of garbage.

\*\*\*