

**ANNEX 2**

**RESOLUTION MEPC.162(56)**

**Adopted on 13 July 2007**

**GUIDELINES FOR RISK ASSESSMENT UNDER REGULATION A-4  
OF THE BWM CONVENTION (G7)**

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

RECALLING ALSO that the International Conference on Ballast Water Management for Ships held in February 2004 adopted the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (the Ballast Water Management Convention) together with four Conference resolutions,

NOTING that regulation A-2 of the Ballast Water Management Convention requires that discharge of ballast water shall only be conducted through Ballast Water Management in accordance with the provisions of the Annex to the Convention,

NOTING FURTHER that regulation A-4 of the Convention stipulates that a Party or Parties, in waters under their jurisdiction, may grant exemptions to any requirements to apply regulation B-3 or C-1, in addition to those exemptions contained elsewhere in this Convention, but only when they are, *inter alia*, granted based on the Guidelines on risk assessment developed by the Organization.

NOTING ALSO that the International Conference on Ballast Water Management for Ships, in its resolution 1, invited the Organization to develop the Guidelines for uniform application of the Convention as a matter of urgency,

HAVING CONSIDERED, at its fifty-sixth session, the draft Guidelines for risk assessment under regulation A-4 (G7) of the BWM Convention developed by the Ballast Water Working Group, and the recommendation made by the Sub-Committee on Bulk Liquids and Gases at its eleventh session,

1. **ADOPTS** the Guidelines for risk assessment under regulation A-4 (G7) of the BWM Convention as set out in the annex to this resolution;
2. **INVITES** Governments to apply the Guidelines as soon as possible, or when the Convention becomes applicable to them; and
3. **AGREES** to keep the Guidelines under review.

## ANNEX

### **GUIDELINES FOR RISK ASSESSMENT UNDER REGULATION A-4 OF THE BWM CONVENTION (G7)**

#### **1 PURPOSE**

1.1 The purpose of these Guidelines is to assist Parties to ensure that provisions of regulation A-4 of the Convention are applied in a consistent manner, and based on scientifically robust risk assessment, which ensures that the general and specific obligations of a Party to the Convention are achieved.

1.2 An additional purpose is to provide assurance to affected States that exemptions granted by a Party meet the regulation A-4.3 obligations.

1.3 The Guidelines outline three risk assessment methods that will enable Parties to identify unacceptable high risk scenarios and acceptable low risk scenarios, and advise Parties on procedures for granting and withdrawing exemptions in accordance with regulation A-4.

#### **2 INTRODUCTION**

2.1 Regulation A-4 of the Convention states that a Party or Parties, in waters under their jurisdiction may grant exemptions to any requirements to apply regulation B-3 or C-1, in addition to those exemptions contained elsewhere in the Convention, but only when they are:

- .1 granted to a ship or ships on a voyage or voyages between specified ports or locations; or to a ship which operates exclusively between specified ports or locations;
- .2 effective for a period of no more than five years subject to intermediate review;
- .3 granted to ships that do not mix ballast water or sediments other than between the ports or locations specified in paragraph 2.1.1; and
- .4 granted based on the Guidelines that have been developed by the Organization.

2.2 These Guidelines provide advice and information regarding risk assessment principles and methods, data needs, advice on application of risk assessment methods, procedures for granting exemptions, consultation and communication processes, information for reviewing exemptions and advice regarding technical assistance, co-operation and regional co-operation.

2.3 These Guidelines also provide advice regarding the roles of the Organization, shipping industry, port States and other States that might be affected by granting an exemption in accordance with regulation A-4 of the Convention.

2.4 Scientifically robust risk assessment underpins the process of Parties granting exemptions under regulation A-4 of the Convention. The assessment must be sufficiently robust to distinguish between unacceptable high risk scenarios and acceptable low risk scenarios where the discharge of ballast water not meeting regulations B-3 and C-1 is unlikely to impair or damage the environment, human health, property or resources of the granting Party and of adjacent or other States.

2.5 Risk assessments should be based on best available scientific information.

2.6 The Guidelines should be kept under review in order to incorporate experiences gained during their application and any new scientific and technical knowledge.

### **3 APPLICATION**

3.1 These Guidelines apply to Parties granting exemptions to ships under regulation A-4 of the Convention.

3.2 Shipowners or operators wanting to seek an exemption under regulation A-4 should also consult these Guidelines.

### **4 DEFINITIONS**

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

4.2 “Anadromous”: species that spawn/reproduce in freshwater environments, but spend at least part of their adult life in a marine environment.

4.3 “Biogeographic region”: a large natural region defined by physiographic and biologic characteristics within which the animal and plant species show a high degree of similarity. There are no sharp and absolute boundaries but rather more or less clearly expressed transition zones.

4.4 “Catadromous”: species that spawn/reproduce in marine environments, but spend at least part of their adult life in a freshwater environment.

4.5 “Cryptogenic”: species that are of unknown origin, i.e. species that are not demonstrably native or introduced to a region.

4.6 “Donor Port”: port or location where the ballast water is taken onboard.

4.7 “Euryhaline”: species able to tolerate a wide range of salinities.

4.8 “Eurythermal”: species able to tolerate a wide range of temperatures.

4.9 “Freshwater”: water with salinity lower than 0.5 psu (practical salinity units).

4.10 “Marine water”: Water with salinity higher than 30 psu.

4.11 “Non-indigenous species”: any species outside its native range, whether transported intentionally or accidentally by humans or transported through natural processes.

4.12 “Recipient port”: port or location where the ballast water is discharged.

4.13 “Target species”: species identified by a Party that meet specific criteria indicating that they may impair or damage the environment, human health, property or resources and are defined for a specific port, State or biogeographic region.

## 5 RISK ASSESSMENT PRINCIPLES

5.1 Risk assessment is a logical process for assigning the likelihood and consequences of specific events, such as the entry, establishment, or spread of harmful aquatic organisms and pathogens. Risk assessments can be qualitative or quantitative, and can be a valuable decision aid if completed in a systematic and rigorous manner.

5.2 The following key principles define the nature and performance of risk assessment:

- .1 **Effectiveness** – That risk assessments accurately measures the risks to the extent necessary to achieve an appropriate level of protection.
- .2 **Transparency** – That the reasoning and evidence supporting the action recommended by risk assessments, and areas of uncertainty (and their possible consequences to those recommendations), are clearly documented and made available to decision-makers.
- .3 **Consistency** – That risk assessments achieve a uniform high level of performance, using a common process and methodology.
- .4 **Comprehensiveness** – That the full range of values, including economic, environmental, social and cultural, are considered when assessing risks and making recommendations.
- .5 **Risk Management** – That low risk scenarios may exist, but zero risk is not obtainable, and as such risk should be managed by determining the acceptable level of risk in each instance.
- .6 **Precautionary** – That risk assessments incorporate a level of precaution when making assumptions, and making recommendations, to account for uncertainty, unreliability, and inadequacy of information. The absence of, or uncertainty in, any information should therefore be considered an indicator of potential risk.
- .7 **Science based** – That risk assessments are based on the best available information that has been collected and analysed using scientific methods.
- .8 **Continuous improvement** – Any risk model should be periodically reviewed and updated to account for improved understanding.

5.3 In undertaking risk assessment when considering granting an exemption, the risk assessment principles should be carefully applied. The lack of full scientific certainty should be carefully considered in the decision making process. This is especially important under these Guidelines, as any decision to grant an exemption will allow for the discharge of ballast water that does not meet the standards of regulation D-1 or D-2.

## **6 RISK ASSESSMENT METHODS**

### **6.1 General**

6.1.1 There are three risk assessment methods outlined in these Guidelines for assessing the risks in relation to granting an exemption in accordance with regulation A-4 of the Convention:

- Environmental matching risk assessment
- Species' biogeographical risk assessment
- Species-specific risk assessment

6.1.2 Environmental matching risk assessment relies on comparing environmental conditions between locations, species' biogeographical risk assessment compares the overlap of native and non-indigenous species to evaluate environmental similarity and to identify high risk invaders, while species-specific risk assessment evaluates the distribution and characteristics of identified target species. Dependent on the scope of the assessment being performed, the three approaches could be used either individually or in any combination, recognizing that each approach has its limitations.

6.1.3 Environment matching and species' biogeographical risk assessment may be best suited to assessments between biogeographic regions. Species-specific risk assessment may be best suited to situations where the assessment can be conducted on a limited number of harmful species within a biogeographic region.

### **6.2 Environmental matching risk assessment**

6.2.1 Environmental matching risk assessments compare environmental conditions including temperature and salinity between donor and recipient regions. The degree of similarity between the locations provides an indication of the likelihood of survival and the establishment of any species transferred between those locations.

6.2.2 Since species are widely distributed in a region, and are rarely restricted to a single port the environmental conditions of the source region should be considered.

6.2.3 These regions are typically defined as biogeographic regions. Noting that all of the existing biogeographical schemes were derived for different purposes than proposed here, it is suggested that the Large Marine Ecosystems (LME) scheme (<http://www.edc.uri.edu/lme>) be used based on best available information at this time, with local and regional adaptation as necessary. It is recognized that the suggested biogeographical scheme may not be appropriate in certain circumstances and in this case other recognized biogeographical schemes may need to be considered<sup>1</sup>.

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<sup>1</sup> Watling and Gerkin (<http://marine.rutgers.edu/OBIS/index.html>) based on Briggs (1953) and Springer (1982); IUCN bioregion system; Briggs (1953) and Ekman (1974; 1995); Longhurst provinces.

6.2.4 Environmental matching should therefore compare environmental conditions between the donor biogeographic region and the recipient port to determine the likelihood that any species found in the donor biogeographic region are able to survive in the recipient port in another biogeographic region. The environmental conditions that may be considered for environmental matching include salinity, temperature or other environmental conditions, such as nutrients or oxygen.

6.2.5 The difficulty in using environmental matching risk assessments is identifying the environmental conditions that are predictive of the ability of the harmful species to successfully establish and cause harm in the new location, and in determining whether the risk of ballast water discharge is sufficiently low to be acceptable. Environmental matching risk assessments have limited value where the differences between a donor biogeographic region and a recipient port are small as high similarity is likely to indicate high likelihood of successful establishment.

6.2.6 Environmental conditions should also be compared between the donor and recipient ports. Similarity in key environmental conditions between the two ports is a stronger indication that species entrained in ballast water in the donor port could survive when released into the waters of the recipient port. The environmental conditions that may be considered for environmental matching include salinity, temperature or other environmental conditions, such as nutrients or oxygen.

6.2.7 The data necessary to enable a risk assessment using environmental matching includes, but is not limited to:

- .1 Origin of the ballast water to be discharged in recipient port.
- .2 Biogeographic region of donor and recipient port(s).
- .3 The average and range of environmental conditions, in particular salinity and temperature.

This information is used to determine the degree of environmental similarity between the donor and recipient environments. In many cases, it should be possible to use existing data for part or all of these environmental profiles.

6.2.8 The following should be considered in gathering data on the environmental conditions:

- .1 The seasonal variations in surface and bottom salinities and temperatures at the recipient port and the larger water body the port is contained within (e.g., estuary or bay). Surface and bottom values are needed to determine the full range of environmental conditions available for a potential invader (e.g., low salinity surface waters allowing the invasion of a freshwater species). Salinity and temperature depth profiles are not required if available data indicates the waters are well mixed over the entire year.
- .2 In recipient ports with strong tides or currents, the temporal variations in salinity should be determined over a tidal cycle.
- .3 In areas with seasonal or depth variations, the salinity should be determined on a seasonal and/or depth basis.

- .4 Any anthropogenic influences on freshwater flow that could temporarily or permanently alter the salinity regime of the recipient port and surrounding waters.
- .5 The seasonal temperature variation of coastal waters for the biogeographic region of the recipient port. Consideration should be given to both surface waters and to how temperature varies with depth.

6.2.9 It is recommended that the analysis of environmental conditions be followed by a consideration of the species known to be in the donor region that can tolerate extreme environmental differences. If present, a species-specific approach should be used to evaluate the risks associated with these species. Such species include:

- species that utilize both fresh and marine environments to complete their life-cycle (including anadromous (e.g., Sea Lamprey) and catadromous (e.g., Chinese Mitten crab) species);
- species with a tolerance to a wide range of temperatures (eurythermal species) or salinities (euryhaline species).

### **6.3 Species' biogeographical risk assessment**

6.3.1 Species' biogeographical risk assessment compares the biogeographical distributions of nonindigenous, cryptogenic, and harmful native species that presently exist in the donor and recipient ports and biogeographic regions. Overlapping species in the donor and recipient ports and regions are a direct indication that environmental conditions are sufficiently similar to allow a shared fauna and flora. The biogeographical analysis could also be used to identify high risk invaders. For example, native species in the donor biogeographic region that have successfully invaded other similar biogeographic regions but that are not found in the recipient biogeographic region could be considered high risk invaders for the recipient port or location. The larger the number of biogeographic regions that such species have invaded, the greater the potential that those species would be able to become established in the recipient port or biogeographic region if introduced by ballast water not meeting regulation B-3 or C-1. Another general indicator of risk would be if the donor biogeographic region is a major source of invaders to other areas.

6.3.2 The data necessary to enable a risk assessment using a species biogeographical approach includes but may not be limited to:

- .1 records of invasion in the donor and recipient biogeographic regions and ports;
- .2 records of native or non-indigenous species that could be transferred through ballast water in the donor biogeographic region that have invaded other biogeographic regions and the number and nature of biogeographic regions invaded;
- .3 records of native species in the donor region that have the potential to affect human health or result in substantial ecological or economic impacts after introduction in the recipient region through ballast water transfer.

6.3.3 The species' biogeographical risk assessment could also be used to identify potential target species in the donor regions as indicated by native species with wide biogeographical or habitat distributions or which are known invaders in other biogeographic regions similar to that of the recipient port.

#### **6.4 Species-specific risk assessment**

6.4.1 Species-specific risk assessments use information on life history and physiological tolerances to define a species' physiological limits and thereby estimate its potential to survive or complete its life cycle in the recipient environment. That is, they compare individual species characteristics with the environmental conditions in the recipient port, to determine the likelihood of transfer and survival.

6.4.2 In order to undertake a species-specific risk assessment, species of concern that may impair or damage the environment, human health, property or resources need to be identified and selected. These are known as the target species. Target species should be selected for a specific port, State, or geographical region, and should be identified and agreed on in consultation with affected States.

6.4.3 To determine the species that are potentially harmful and invasive, parties should initially identify all species (including cryptogenic species) that are present in the donor port but not in the recipient port. Target species should then be selected based on criteria that identify the species that have the ability to invade and become harmful. The factors to consider when identifying target species include, but should not be limited to:

- evidence of prior introduction;
- demonstrated impacts on environment, economy, human health, property or resources;
- strength and type of ecological interactions, e.g. ecological engineers;
- current distribution within biogeographic region and in other biogeographic regions; and
- relationship with ballast water as a vector.

6.4.4 Species-specific risk assessments should then be conducted on a list of target species, including actual or potentially harmful non-indigenous species (including cryptogenic species). As the number of species included in the assessment increases the number of low risk scenarios decreases. This is justified if the species assessments are accurate. The difficulty arises when the assessments are conservative due to lack of data. It should be recognized however, that the fewer the number of species analyzed, the greater the uncertainty in predicting the overall risk. The uncertainty associated with limiting the analysis to a small number of species should therefore be considered in assessing the overall risk of invasion.

6.4.5 It should be noted that there are limitations involved with using a target species approach. Although some data and information can be obtained to support decision making, identifying species that may impair or damage the environment, human health, property or resources is subjective and there will be a degree of uncertainty associated with the approach. For example, it

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is possible that species identified as harmful in some environments may not be harmful in others and vice versa.

6.4.6 If species-specific risk assessments are undertaken when the donor and recipient ports are within different biogeographic regions, Parties should identify and consider any uncertainties resulting from lack of data on the presence of potentially harmful species in the donor location.

6.4.7 The data necessary to enable a risk assessment using the species-specific approach includes, but is not limited to:

- .1 biogeographic region of donor and recipient port(s);
- .2 the presence of all non-indigenous species (including cryptogenic species) and native species in the donor port(s), port region and biogeographic region, not present in the recipient port, to allow identification of target species;
- .3 the presence of all target species in the recipient port(s), port region, and biogeographic region;
- .4 the difference between target species in the donor and recipient ports, port region, and biogeographic region;
- .5 life history information on the target species and physiological tolerances, in particular salinity and temperature, of each life stage; and
- .6 habitat type required by the target species and availability of habitat type in the recipient port.

6.4.8 If a target species is already present in the recipient port, it may be reasonable to exclude that species from the overall risk assessment for that port unless that species is under active control. It is important to recognize, however, that even when a non-indigenous species or cryptogenic species has been reported from the donor and recipient ports, its continual introduction into the recipient ports could increase the probability that it will become established and/or achieve invasive population densities.

6.4.9 A risk assessment can take different forms. A simple assessment can be undertaken as outlined in paragraph 6.4.7 of whether a target species is present in the donor port but not in a recipient port and can be transported through ballast water. However, if considered appropriate, the likelihood of target species surviving each of the following stages may be assessed, including:

- .1 Uptake – probability of viable stages entering the vessel’s ballast water tanks during ballast water uptake operations;
- .2 Transfer – probability of survival during the voyage;
- .3 Discharge – probability of viable stages entering the recipient port through ballast water discharge on arrival; and

- .4 Population establishment – probability of the species establishing a self-maintaining population in the recipient port.

6.4.10 To determine the likelihood of transfer and survival of a harmful species, the probability of each species surviving each of the stages contained in paragraph 6.4.9 may be assessed. To the extent possible the different life stages of the target species may also be assessed considering seasonal variations of life stage occurrence in donor port with seasonal conditions in the recipient port. The overall risk assessment for the discharge of unmanaged ballast water is therefore determined based on the assessment of all target species surviving all these stages.

6.4.11 In assessing whether a species will survive in the recipient port, physiological tolerances of all life stages need to be considered.

- .1 The ability of the adults to survive would be indicated by the physiological limits for both temperature and salinity that fall within the environmental ranges observed in the recipient port and larger water body. As a check, a comparison could be made with the native and/or introduced ranges of the species to determine if the predicted tolerances (based on lab or field studies) reflect actual distributions.
- .2 For other life stages the physiological requirements of each stage in the life cycle should be compared against the environmental conditions during the season(s) of reproduction, noting that these stage(s) may live in different habitats to complete their life cycle (e.g., coastal pelagic larvae of estuarine benthic invertebrates). Data should be collected as appropriate.
- .3 Comparisons of known physiological tolerances for other conditions should be conducted if the data are available and relevant.

6.4.12 To evaluate whether the species-specific risk assessment approach is sufficiently robust to predict invaders, the approach could be used to estimate the probabilities of invasion for a suite of existing invaders within the recipient port. Failure to accurately predict existing invaders may indicate that the model under predicts the risk.

## **6.5 Evaluation and decision-making**

6.5.1 The port State granting exemptions shall, in both the evaluation and consultation processes, give special attention to regulation A-4.3 which states that any exemptions granted under this regulation shall not impair or damage the environment, human health, property or resources of adjacent or other States. Regulation A-4.3 also states that States that may be adversely affected shall be consulted, and Parties should refer to section 8 regarding consultation.

6.5.2 It is important for the transparency and consistency of the risk assessments to define a priori criteria to distinguish between unacceptable high risk scenarios and acceptable low risk scenarios where the risk of ballast water not meeting regulations B-3 and C-1 is unlikely to impair or damage the environment, human health, property or resources of the granting Party and of adjacent or other States. The specific criteria depend upon the risk assessment approach, as well as the uncertainty in the analysis.

6.5.3 For an environmental matching risk assessment:

- .1 A high-risk scenario could be indicated if the environmental conditions of the donor ports overlap the environmental conditions of the recipient region.
- .2 A low-risk scenario could be indicated if the environmental conditions of the donor port do not overlap the environmental conditions of the recipient region.

6.5.4 For the species' biogeographical risk assessment:

- .1 A high-risk could be indicated if the recipient port presently contains non-indigenous species whose native range includes the donor biogeographic region.
- .2 A high-risk could be indicated if the donor and recipient ports share non-indigenous species whose source is from other biogeographic regions.
- .3 A moderate to high risk could be indicated if the recipient biogeographic region presently contains non-indigenous species whose native range includes the donor biogeographic region.
- .4 A moderate to high risk could be indicated if the donor biogeographic region is a major source for invaders for other biogeographic regions.

6.5.5 For a species-specific risk assessment, an assessment could be deemed high risk if it identifies at least one target species that satisfies all of the following:

- likely to cause harm;
- present in the donor port or biogeographic region;
- likely to be transferred to the recipient port through ballast water; and
- likely to survive in the recipient port.

6.5.6 The overall probability of a successful invasion also depends in part on the number of organisms and the frequency with which they are introduced over the entire period of the exemption. Therefore, it is recommended that a risk assessment should consider estimates of at least the following four factors:

- .1 the total volume of water discharged
- .2 the volume of water discharged in any event (voyage)
- .3 the total number of discharge events
- .4 the temporal distribution of discharge events.

6.5.7 In all cases, the level of uncertainty needs to be considered in evaluating the extent of risk. High levels of uncertainty in the biogeographical distributions and/or physiological tolerances of a target species may be sufficient in themselves to classify the risk as high. Additionally, the potential ecological impact of the target species should be considered in deciding the level of acceptable risk. The absence of, or uncertainty in, any information should not be considered a reason to grant an exemption to regulation B-3 or C-1.

6.5.8 Once the level of risk and the extent of uncertainty have been assessed, the result can be compared to the levels a Party(s) is willing to accept in order to determine whether an exemption can be granted.

6.5.9 Ships on a voyage(s) or route(s) that satisfy the requirements of regulation A-4.1 and that pass(es) the terms of acceptance in the risk assessment may be granted an exemption.

6.5.10 It is recommended that an independent peer review of the risk assessment method, data and assumptions be undertaken in order to ensure that a scientifically rigorous analysis has been conducted. The peer review should be undertaken by an independent third party with biological and risk assessment expertise.

## **7 PROCEDURES FOR GRANTING EXEMPTIONS**

7.1 The purpose of this section is to provide guidance for Parties, Administrations and ships, engaged in the process of applying for, evaluating and/or granting exemptions in accordance with the provisions of regulation A-4. The appendix also identifies minimum information required for an exemption application.

7.2 Parties may undertake the risk assessment themselves in order to grant exemptions, or require the shipowner or operator to undertake the risk assessment. In any event the Party granting an exemption is responsible for evaluating the risk assessment, verifying the data and information used, and ensuring the risk assessment is conducted in a thorough and objective manner in accordance with the Guidelines. The recipient port State(s) should reject any application for exemption found not to be in accordance with these Guidelines, and should provide reasons as to why the application was not accepted.

7.3 Shipowners or operators wanting to seek an exemption should contact the relevant Parties to ascertain the risk assessment procedures to be undertaken and the information requirements of these procedures.

7.4 Where a Party has determined that the shipowner or operator should undertake the risk assessment, the Party should provide relevant information, including any application requirements, the risk assessment model to be used, any target species to be considered, data standards and any other required information. The shipowner or operator should follow these Guidelines and submit relevant information to the Party.

7.5 The port State shall ensure that, as required by regulation A-4.1.3, exemptions are only granted to ships that do not mix ballast water or sediments other than between the locations specified in the exemption. The port State should require evidence of the specific measures undertaken to ensure compliance with this regulation at the time the exemption is granted and over the duration of the exemption. Non-compliance during the period of exemption should result in prompt suspension or revocation of the exemption.

7.6 An exemption shall not be effective for more than 5 years from the date granted. The approval may contain seasonal and time-specific or other restrictions within the time of validity.

7.7 The result of the risk assessment should be stated as:

- .1 The voyage(s) or route(s) represent(s) an acceptable risk. The application for an exemption is granted.

- .2 The voyage(s) or route(s) may represent an unacceptable risk. Further consideration is required.
- .3 The voyage(s) or route(s) represent(s) an unacceptable risk. The exemption from the ballast water management requirements of regulation B-3 or C-1 of the Convention is not granted.

## 8 CONSULTATION

8.1 In accordance with regulation A-4.3, Parties shall consult any State that may be adversely affected from any exemptions that may be granted. This should include adjacent States and any other States that may be affected, including those located in the same biogeographic region as the recipient port(s). States should exchange information and endeavour to resolve any identified concerns. Sufficient time must be given for affected States to consider proposed exemptions carefully.

8.2 Affected States should be provided with information on: the risk assessment method applied; the quality of the information used in the assessment; uncertainties in the model, model inputs and/or risk assessments; the rationale for the proposed exemption; and any terms or conditions applicable to the exemption.

8.3 The risk assessment should document the following elements as appropriate:

- Criteria or reference for defining target species in the risk method.
- The inventories of native, non-indigenous, and cryptogenic species used in the species' biogeographical risk assessment.
- Acceptance criteria applied in each step of the analysis. The risk assessment has to be put in a relevant context to enable determination of whether the risk level is acceptable or not. The only transparent verifiable way of doing this is to compare the actual risk level with clear predefined acceptance criteria in paragraphs 6.5.2 to 6.5.8.

8.4 In addition, the criteria or scientific methods used in defining and delimiting the biogeographic regions shall be presented if a scheme other than that recommended in paragraph 6.2.3 is used.

8.5 The invitation for comments should contain one of the two following options for the affected State's response:

- .1 Supported without comments or conditions.
- .2 Supported with comments and/or conditions.

8.6 The deadline for comments from the affected State(s) should be specified in the invitation. If no response within the given time-limit is received, this may be regarded as "Accepted without comments or conditions".

8.7 If an affected State does not support the granting of the exemption(s), the appropriate reasons should be provided. Any conditions or limitations which an affected State believes to be necessary to enable them to support an exemption should be clearly identified.

## **9 COMMUNICATION OF INFORMATION**

9.1 Each Party to the Convention that has indicated it will grant exemptions should establish a point or points of contact for receipt of applications. Relevant contact details should be submitted to the Organization. In the absence of such information from a Party, the IMO MEPC contact point should be regarded as the contact point for the purpose of these Guidelines.

9.2 The Organization should circulate the list of contacts, and keep this list updated on a regular basis.

9.3 The decision of the recipient port State(s) shall be communicated to the shipowners or operators, the affected State(s), and the Organization as soon as possible before the effective date of the exemption. The decision should explain the basis for granting the exemption and how any comments from affected States were addressed and specify the voyage or voyages in which the exemption is granted, including the specified ports or location(s), the duration of the exemption and details of any conditions or limitations on the exemption.

9.4 Exemptions granted in accordance with regulation A-4 of the Convention, shall be effective after communication to the Organization and circulation of relevant information to Parties.

9.5 Any exemption granted shall also be recorded in the ballast water record book in accordance with regulation A-4.4.

9.6 Where exemptions have been granted for a specific voyage, any changes in voyage plans must be communicated to the Party that has granted the exemption prior to undertaking the voyage or prior to discharge of ballast water.

## **10 REVIEW OF RISK ASSESSMENT AND WITHDRAWAL OF EXEMPTIONS**

10.1 It is recommended that information used in the risk assessment be reviewed regularly as data and assumptions used in the assessment can become outdated.

10.2 It is recommended that an intermediate review be undertaken within 12 months but in any circumstances no later than 36 months after permission is granted. A recipient port State may require several reviews to be taken during the period the exemption is granted for, but more frequent than annual reviews generally should not be required.

10.3 Renewal of an exemption following the initial 60 months must not be granted without a thorough review of the risk assessment, consultation with affected States, and notice of the decision to the Organization under regulation A-4.2.

10.4 An exemption granted under regulation A-4 of the Convention may need to be withdrawn where the actual risk associated with a voyage has increased substantially since the risk assessment was conducted. This would include emergency situations such as outbreaks, incursions, infestations, or proliferations of populations of harmful aquatic organisms and pathogens (e.g., harmful algal blooms) which are likely to be taken up in ballast water (regulation C-2 of the Convention).

10.5 When a port State notifies mariners of areas under its jurisdiction where ships should not uptake ballast water due to an emergency or other high risk situation, all exemptions should be withdrawn from ships that take up ballast water in the defined area. In such circumstances the shipowners or operators should be notified of the decision to withdraw the exemption as soon as possible.

10.6 Guidelines for additional measures regarding ballast water management including emergency situations (G13) adopted by resolution MEPC.161(56) provide guidance to rapidly identify appropriate additional measures whenever emergency situations occur in relation to ballast water operations.

## **11 TECHNICAL ASSISTANCE, CO-OPERATION AND REGIONAL CO-OPERATION**

11.1 Article 13 of the Convention provides that Parties undertake, directly or through the Organization and other international bodies, to provide support for those Parties which request technical assistance, that Parties undertake to co-operate and that Parties shall endeavour to enhance regional co-operation.

11.2 With regard to these risk assessment Guidelines, assistance should include provision of data and information required to undertake a risk assessment, technical assistance regarding the methods for undertaking risk assessment and acceptance criteria.

## APPENDIX

### APPLICATION TO PORT STATE

An application for exemption to the port State should as a minimum contain information on the points listed below.

#### 1 GENERAL INFORMATION

- Period for which an application is sought; from month and year to month and year.
- Why an exemption under regulation A-4 is sought.

#### 2 SHIP'S INFORMATION

- Ship name
- IMO number
- Port of registry
- Gross Tonnage
- Owner
- Call sign
- Ballast water management option usually undertaken by ship, including ballast water treatment technology, if installed
- A copy of the Ship's Ballast Water Management Plan should be submitted
- The Administration may also require ballast water and sediment management history for a determined period

#### 3 ROUTE INFORMATION

- Route of application, given as donor port(s) and recipient port for ballast water discharge.
- If single voyage: Date and time of departure and arrival.
- If multiple voyages: Voyage frequency, regularity and estimated amount of ballast water discharged during the exemption period. Estimated time and dates for departures and arrivals.
- Any voyages the ship plans to take to ports other than the specified ports during the duration of the exemption.
- If multiple voyages, the estimated total number of voyages and the amount of ballast water discharged under the duration of the exemption.

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