INTERNATIONAL MARITIME ORGANIZATION

E

MARINE ENVIRONMENT PROTECTION COMMITTEE
62nd session
Agenda item 24

MEPC 62/24/Add.1
26 July 2011
Original: ENGLISH

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

Attached are annexes 17 to 37 to the report of the Marine Environment Protection Committee on its sixty-second session (MEPC 62/24).

LIST OF ANNEXES

ANNEX 17

STATEMENTS BY THE DELEGATIONS OF BRAZIL, INDIA, AUSTRALIA AND CHILE ON THE CIRCULATION OF THE PROPOSED AMENDMENTS TO MARPOL ANNEX VI

Statement by the delegation of Brazil

Through the submission of document MEPC 62/6/15 by Argentina, Brazil, Chile, China, Ecuador, India, Nicaragua, Peru, the Philippines, South Africa and Venezuela, the co-sponsors comment on document MEPC 62/6/3 submitted by the Secretariat, which sets out the text of the proposed draft amendments to MARPOL Annex VI, as submitted by nine Parties to said Annex.

Paragraph 3 of that document states that MEPC 61 noted the intention of the delegation of Norway to request that the Secretary-General circulated the proposed draft amendments to MARPOL Annex VI as prepared by the working group.

However, the proposed draft amendments, presented by the Secretariat as an Annex to the afore-mentioned document and circulated at the request of nine Parties to MARPOL Annex VI under cover of Circular letter No.3128, are in fact not the draft amendments as prepared by the Working Group at MEPC 61 (annex 1 to document MEPC 61/WP.10), but new draft amendments as prepared by the said Parties, and for the first time submitted to IMO Member States, and Parties to the MARPOL Convention which are not Members of IMO, on pink paper.

In this respect, the long-established procedure of the Organization is to circulate proposed amendments printed on pink paper, as an indication that such amendments have previously been approved for adoption by the Committee. Since the amendments proposed by the said Parties, and circulated according to Article 16(2)(a), have neither been approved, nor have they been considered as yet by the Organization, there are no logical grounds, nor any indication of such in Article 16(2)(a), why they should have been circulated on pink paper.

Furthermore, Article 16(2)(b) of the Convention states that "*any amendment proposed and circulated as above shall be submitted to an appropriate body by the Organization for consideration*". However, document MEPC 62/6/3 by the Secretariat submits the draft amendments together with a draft MEPC resolution for their adoption. Should this procedure be correct, surely Article 16(2)(b) should read: "*any amendment proposed and circulated as above shall be submitted to an appropriate body by the Organization for consideration and adoption*".

There is no doubt that all the amendments to the MARPOL Convention, approved and adopted by the Organization, have followed the procedures specified in Article 16 of the Convention. The co-sponsors thus do not comprehend why the Organization, at this particular instance, decided to apply the provisions of Articles 16(2)(b) and 16(2)(d) at the same session of the Committee. It is our firm understanding that Article 16(2)(d) should not be applied at this stage consistent with the customary procedure of the Organization.

Therefore, the co-sponsors cannot endorse the action requested of the Committee in document MEPC 62/6/3. It is also against this background, and in view of the fact that the Committee is expected at this session to continue its work on the development of technical, operational and Market-Based Measures for the reduction of GHG emissions from ships (MEPC 62/1/1, annex 1, paragraphs 5.1 to 5.3), that the co-sponsors deem it appropriate to refer the proposed draft amendments for consideration under agenda item 5, where a Working Group is expected to be established.

Statement by the delegation of India

The document MEPC 62/6/9 by India discusses Circular letter No.3128 dated 24 November 2010, circulated by the Secretary-General in accordance with article 16(2)(a) of the MARPOL Convention.

This document also discusses the Vienna Convention on the Law of Treaties, Article 31, and proposes that IMO should not deliberate on any mandatory application of measures to reduce GHG emissions from ships. It may not be quite compatible to rely on the argument of "no more favourable treatment" to detract from the specific commitments of Annex I Parties under the Kyoto Protocol to address the challenge of climate change.

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change (UNFCCC). The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European Community for reducing greenhouse gas (GHG) emissions.

The major distinction between the Protocol and the Convention is that while the Convention *encouraged* industrialized countries to stabilize GHG emissions, the Protocol *commits* them to do so. The Kyoto Protocol should be read in furtherance to and in line with UNFCCC from which it derives, particularly, in observing the preamble of the Kyoto Protocol and UNFCCC's fundamental object and purpose, which clearly enshrines the doctrine of CBDR.

Therefore it is evident, that the provisions in Article 31, paragraphs 1 and 2 of the Vienna Convention on the Law of Treaties, requiring that a treaty should be (i) interpreted in good faith and (ii) in the light of its objective and purpose, and that (iii) for the purpose of interpretation both the annex and the preamble of the treaty should be taken into consideration. This has not been adhered by those Governments requesting the circulation for making amendments in MARPOL Annex VI.

The argument used by a number of delegations in the debates that IMO's "non-discriminatory approach" and the principle of "no more favourable treatment" can be made applicable in this particular case, contradicts the fundamentals of UNFCCC.

As said earlier, the Convention and the Protocol form an inseparable body of principles, rules and regulations that should be read and interpreted in unison. Therefore, when interpreting provisions of the Kyoto Protocol, the IMO should have taken into consideration its preamble, which recalls UNFCCC, and in particular the pursuit of the Convention's ultimate objective (Article 2) and guiding principles (Article 3). Sadly, this does not appear to have been done.

As the Vienna Convention on the Law of Treaties obviously calls for appreciating the broadest possible perspective to be taken into account in cases where interpretation of an international treaty is necessary for resolving any matter under the same treaty, India is constrained to oppose the proposal of making amendments to MARPOL Annex VI related to GHG, as it cannot be construed as "amendments".

India does not share the understanding that the provisions of Article 16(2) (a) of MARPOL has been met, thus enabling the IMO to circulate the proposed amendments. On the contrary, India believes that the Organization has not formally considered the proposed "amendments", any more than, taking cognizance of the views expressed by a select few Countries. In order to enable formal consideration by the Organization, it is imperative to take appropriate note of the outcome of MEPC 61, which established that there was no consensus among the delegations on the mandatory application of the GHG issues.

India's reasoning is based on IMO's customary practice that only proposed amendments that have been approved by a Committee may be circulated for consideration with a view to adoption at a succeeding session of the Committee considering the proposed amendments.

Second statement by the delegation of Brazil

As regards the circulation of the proposed amendments, Brazil would like to make clear that we do not question the right of a Party to MARPOL Annex VI to submit any proposal of amendment to the Convention, for consideration of an appropriate body of the Organization. This right is clearly set out in its Articles 16(2)(a) and 16(2)(b). However, we do question the intended course of action as regards the approval and adoption of the proposed amendments to MARPOL Convention in one single session of the Committee, which in our view is not only unjustified but also unprecedented in this Organization.

As far as we are aware, and we stand to be corrected, there has just been one comparable case in the past, namely the amendments proposed by 15 EU countries to regulations 13G and 27 of MARPOL Annex I. Again, there is no question as to the fact that the proposal strictly followed the procedures set out in Article 16, and yet, at that instance, the proposed amendments were submitted to MEPC 49, and approved at that session, but adopted only at MEPC 50.

Having said that, we also note that a significant number of documents have been submitted presenting new proposals or concerns pertaining to the draft regulations on energy efficiency for ships, although in principle only simple drafting issues should be addressed under this agenda item.

In particular, we would like to highlight the well founded concerns expressed by Vanuatu in document MEPC 62/6/23, and those of China in document MEPC 62/6/16, amongst several others. Therefore, given the considerable amount of work still pending as regards uncertainties and information gaps on the use of technical and operational measures to reduce GHG emission from ships, it is clear that the issue is still a ***long way from being finalized***, thus the intended adoption of the proposed amendments at this session is neither recommended nor feasible.

Statement by the delegation of Australia

I would like to start by indicating this delegation's agreement with your summing up of this issue prior to our break.

I would next like to thank the Director of Legal Affairs, the Secretary-General and our colleagues from Norway and Japan. They have brought those of us new to this house up to speed, and given us sound grounds for concluding that the proposed amendments have been brought to this meeting consistent with procedure, and that the amendments themselves fall within the scope of the provisions of MARPOL.

From this strong basis we can then turn to the substance of the proposed amendments. They are the product of the co-sponsors extensive consultations. They are not the preferred formulation of the co-sponsors but do capture a common ground amongst many countries.

We are encouraged by the statements from our colleagues, most recently South Africa, that they want to engage in a discussion of the proposals. Let us turn to the issues they have raised.

We have heard that we must respect the principle of CBDR. That is a guiding principle of another international body. While we respect that body, we must remember that we are an independent sovereign body. We have our own principles – most importantly the principle to operate on the basis of universal rules applying without discrimination to all ships. This principle was shaped to reflect the nature of our work and must be respected.

Aside from the fact that CBDR is not a principle of this house, it is also not compatible with the outcome we are trying to achieve. Differentiating between which flag States would apply the proposed measures would undermine the very environmental goal we are pursuing through the proposed amendments.

In terms of the detail of the proposed amendments, countries' interventions seem to coalesce around two main areas – outstanding technical issues and uncertainties; and the need for more time in order to implement the proposed measures.

Regarding the outstanding technical issues and uncertainties, we recognise they exist. We are confident that those issues that need to be resolved before the proposed amendments can be adopted can be resolved at this meeting. The other issues should still be addressed and can be the subject of a forward work programme. Perfection is always attractive but we must make sure that perfection is not the enemy of the good.

Regarding the need for more time, we are interested in hearing more about the substance of what needs to be done during this time. We have heard from the shipping industry that they are ready to implement the proposed amendments. Consequently, we are keen to understand why further time is needed by certain countries to implement the amendments.

Mr. Chair, we believe our proposed amendments are strong and reflect the views of many countries. Nevertheless, we are ready to heed the call of our Secretary-General and consider further revisions to the proposal in the interests of retaining a united house and preserving its spirit.

In closing, we would like to recall that another delegation said we should consider the repercussions of the proposed amendments. Indeed, this is an important point. What are the repercussions? This delegation hopes that the repercussions will be two-fold:

.1 Action by the international shipping industry to contribute to the global effort to reduce greenhouse gases. Such collective effort is critical to avoiding the dangerous climate change that threatens us all, in particular the most vulnerable amongst us from small island developing states and least developed countries.

.2 Delivery of our regulatory mandate relating to the environment and maintenance of international shipping as the most environmentally sustainable mode of transport.

Third statement by the delegation of Brazil

Brazil would like to thank Dr. Balkin for the view expressed. In this respect we would like to make some comments.

This delegation reiterates that, as far as the MEPC Committee is concerned, the only comparable case in the past was the mentioned amendments proposed by 15 EU countries to regulations 13G and 27 of MARPOL Annex I. Dr. Balkin expressed the view that "this is only one example" – but we beg to differ – this is the only example, as there is no other

regarding MEPC. And again, even in this particular and only precedent, approval and adoption did not occur at the same session of this Committee.

Dr. Balkin also referred to past procedure of approval and adoption of amendments to the MARPOL Convention as "just a practice". Nevertheless, we trust that all amendments to the Convention have so far strictly followed the procedures set out in Article 16.

As for the information provided by the delegation of Norway, we are of the view that, apart from the fact that it is not related to the MEPC, the amendments were also either consequential, reflecting decisions already approved and adopted previously; emergential, as in the case of an accident with a ship where the reasons were identified and amendments quickly made to the Convention in order to prevent similar cases in the future; or editorial. There is usually general agreement to these amendments.

As for the present amendments to Annex VI:

.1 they are neither consequential, nor emergential or editorial;

.2 there has been no previous agreement to them, either by the MEPC or any subsidiary body;

.3 there are still evident technical uncertainties and information gaps relating to the use of technical and operational measures to include GHG emissions from ships; and

.4 there is no consensus.

In brief, Mr. Chairman, this Committee has never before approved and adopted amendments to the MARPOL Convention at the same session. Therefore, we question the unprecedented and dangerous nature of the procedure being followed at this time, particularly on an important issue which does not have the consensus of the Parties at all.

Last but not least, this is a discussion that all Parties to the Convention and not only those to Annex VI should take part in, as we are discussing procedures, not the amendments themselves, at this stage.

Statement by the delegation of Chile

Our delegation is grateful for the work of those countries that have developed proposals and discussion points with respect to future amendments to the MARPOL Convention, and also for the explanations provided by Dr. Balkin. As co-sponsors of document MEPC 62/6/15 we would like to bring the following general considerations before the plenary concerning the content of document MEPC 62/6/3 submitted by the Secretariat:

Chile understands the urgent need to maximize energy efficiency in the international maritime industry. Its awareness of the problem is such that the Chilean fleet has voluntarily implemented strict measures, not only to reduce gas emissions but also out of the need to reach our commercial partners' more remote markets and ports by employing competitive standards and in a sustainable manner.

We firmly believe it is advisable to continue the progress made towards implementing a package of measures that can enhance energy efficiency as a contribution to the reduction of greenhouse gas emissions from ships.

Our country believes that the amendments submitted in document MEPC 62/6/3, although clearly aimed at optimizing ships' energy efficiency, require more time and more thorough consideration in order to understand their real significance for our fleets in the future and the economic impact they will have, especially for the developing countries.

Likewise, our delegation considers that the regulations in the Energy Efficiency Design Index for ships are not sufficiently mature to be incorporated as an amendment to MARPOL Annex VI, the more so as, for this session, a number of comments and concerns have been put forward which need to be clarified before those regulations can be adopted.

In this regard, we wish to make the following specific comments regarding the development of technical and operational measures affecting global maritime transport:

The Chilean view is that the industry's efforts should be focused on continuing to develop, jointly and consensually, these amendments together with their technical and operational guidelines and recommendations, so that in the near future we will be able to understand the package of proposed amendments more clearly and accurately before IMO finally adopts them. We believe it important to consider incorporating in the amendments to MARPOL Annex VI a commitment by the developed countries to provide technical cooperation on these aspects, as well as capacity building that will enable all Member States to proceed in a more fair and impartial manner.

Our country needs to clarify what the future impact and/or benefits for the industry will be once these measures are applied. In this regard the amendments contained in the above-mentioned Secretariat document do not yet provide sufficient certainty to permit a clear opinion to be expressed, and the operational measures have not yet been settled, as demonstrated by regulation 22 of the draft amendments. In short, the draft amendments and their related documents must be fully endorsed by the Committee before they can be adopted.

From the operational viewpoint, we believe that whatever future emission reduction measures are adopted, there should be no speed limits imposed on ships and no attempt to incentivize speed reductions, as such a measure would have a particularly negative effect on those countries that are in an unfavourable geographical position in relation to the major world markets.

We wish to make clear that we are not intrinsically opposed to the amendment of MARPOL Annex VI, but we would certainly wish to see resolved those aspects that remain unclear in the current package of amendments, before they are approved. Accordingly, we wish to state our determination to move forward on this issue, and we request the Committee to seek consensus among the Members of this Organization, so that together we can go on to achieve measures that are right for the industry, for the countries that are less developed economically, and for the environment as a whole.

***

ANNEX 18

STATEMENT BY THE DELEGATION OF SWEDEN ON THE RO-RO SEGMENT AND THE PROPOSAL FOR A RESOLUTION ON THE FUTURE WORK OF THE ORGANIZATION PERTAINING TO MARPOL ANNEX VI

Sweden would like to thank Japan and the Marshall Islands for their paper and the work they have done to prepare a set of draft resolutions that could be adopted together with possible adoption of the amendments to MARPOL Annex VI. We support these drafts to serve as the basis for such resolutions when we reach that point. However, we do have a comment and a proposal to add some text to annex four of that document – a proposal for a resolution on the future work of the organization pertaining to MARPOL Annex VI.

Since the very start of the work of developing EEDI, Sweden has worked actively to find a solution to include the ro-ro segment. The problem of applying the methodology that sets EEDI reference lines to this segment has been recognized – and that problem is the very reason the proposed regulation does not include any reduction rates for ro-ro ships. I want to be clear that Sweden wants the ro-ro segment to be included in the framework and we wholeheartedly support a firm commitment to include these ships.

However, as it has been acknowledged that the methodology in the regulation makes it difficult to define a required EEDI for ro-ro ships, we have to allow the consideration of alternative methodologies when firm requirements are to be included for these ships.

With this background, Sweden strongly supports the adoption of a resolution on the future work of the organization pertaining to MARPOL Annex VI, as proposed in MEPC 62/6/7 annex 4 that includes firm commitments to develop, with a view to adopt, a set of requirements for ships defined in regulations 2.32 to 2.36. However, in order to allow alternative, more effective methodologies to be considered, we propose to include some words in operative paragraph 1 of the proposed resolution. After the text "including the establishment of appropriate EEDI reference lines and EEDI reduction factors" we propose to include "or equivalent (energy efficiency) instruments". This amendment would not affect the commitment or mandatory reductions for these ships – it would only recognize the difficulty of applying the methodology that is currently in the regulation. Again, the fact that the application of the methodology to certain ship types is difficult and has unjust consequences is the very reason they have been omitted at this stage.

***

ANNEX 19

RESOLUTION MEPC.203(62)

Adopted on 15 July 2011

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

(Inclusion of regulations on energy efficiency for ships in MARPOL Annex VI)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention"), article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") and article 4 of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as the "1997 Protocol"), which together specify the amendment procedure of the 1997 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 and 1997 Protocols,

NOTING ALSO that, by the 1997 Protocol, Annex VI entitled Regulations for the Prevention of Air Pollution from Ships was added to the 1973 Convention (hereinafter referred to as "Annex VI"),

NOTING FURTHER that the revised Annex VI was adopted by resolution MEPC.176(58) and entered into force on 1 July 2010,

RECOGNIZING that the amendments to Annex VI and inclusion of a new chapter 4 intend to improve energy efficiency for ships through a set of technical performance standards, which would result in reduction of emissions of any substances that originate from fuel oil and its combustion process, including those already controlled by Annex VI,

RECOGNIZING ALSO that adoption of the amendments to Annex VI in no way prejudges the negotiations held in other international fora, such as the United Nations Framework Convention on Climate Change (UNFCCC), nor affect the positions of the countries that participate in such negotiation,

HAVING CONSIDERED draft amendments to the revised Annex VI for inclusion of regulations on energy efficiency for ships,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex VI, the text of which is set out in the annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2012, unless prior to that date, not less than one third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2013 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, certified copies of the present resolution and the text of the amendments contained in the Annex;

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, copies of the present resolution and its Annex; and

6. INVITES the Parties to MARPOL Annex VI and other Member Governments to bring the amendments to MARPOL Annex VI to the attention of shipowners, ship operators, shipbuilders, ship designers, marine diesel engine and equipment manufacturers as well as any other interested groups.

ANNEX

AMENDMENTS TO MARPOL ANNEX VI ON REGULATIONS FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS BY INCLUSION OF NEW REGULATIONS ON ENERGY EFFICIENCY FOR SHIPS

CHAPTER 1

GENERAL

Regulation 1

Application

1 The regulation is amended as follows:

"The provisions of this Annex shall apply to all ships, except where expressly provided otherwise in regulations 3, 5, 6, 13, 15, 16, 18, 19, 20, 21, 22 and 23 of this Annex."

Regulation 2

Definitions

2 Paragraph 21 is amended as follows:

"21 *Tanker* in relation to regulation 15 means an oil tanker as defined in regulation 1 of Annex I or a chemical tanker as defined in regulation 1 of Annex II of the present Convention."

3 The following is added at the end of regulation 2:

"For the purpose of chapter 4:

22 "Existing ship" means a ship which is not a new ship.

23 "New ship" means a ship:

.1 for which the building contract is placed on or after 1 January 2013; or

.2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 July 2013; or

.3 the delivery of which is on or after 1 July 2015.

24 "Major Conversion" means in relation to chapter 4 a conversion of a ship:

.1 which substantially alters the dimensions, carrying capacity or engine power of the ship; or

.2 which changes the type of the ship; or

.3 the intent of which in the opinion of the Administration is substantially to prolong the life of the ship; or

.4 which otherwise so alters the ship that, if it were a new ship, it would become subject to relevant provisions of the present Convention not applicable to it as an existing ship; or

.5 which substantially alters the energy efficiency of the ship and includes any modifications that could cause the ship to exceed the applicable required EEDI as set out in regulation 21.

25 "Bulk carrier" means a ship which is intended primarily to carry dry cargo in bulk, including such types as ore carriers as defined in SOLAS chapter XII, regulation 1, but excluding combination carriers.

26 "Gas carrier" means a cargo ship constructed or adapted and used for the carriage in bulk of any liquefied gas.

27 "Tanker" in relation to chapter 4 means an oil tanker as defined in MARPOL Annex I, regulation 1 or a chemical tanker or an NLS tanker as defined in MARPOL Annex II, regulation 1.

28 "Container ship" means a ship designed exclusively for the carriage of containers in holds and on deck.

29 "General cargo ship" means a ship with a multi-deck or single deck hull designed primarily for the carriage of general cargo. This definition excludes specialized dry cargo ships, which are not included in the calculation of reference lines for general cargo ships, namely livestock carrier, barge carrier, heavy load carrier, yacht carrier, nuclear fuel carrier.

30 "Refrigerated cargo carrier" means a ship designed exclusively for the carriage of refrigerated cargoes in holds.

31 "Combination carrier" means a ship designed to load 100% deadweight with both liquid and dry cargo in bulk.

32 "Passenger ship" means a ship which carries more than 12 passengers.

33 "Ro-ro cargo ship (vehicle carrier)" means a multi deck roll-on-roll-off cargo ship designed for the carriage of empty cars and trucks.

34 "Ro-ro cargo ship" means a ship designed for the carriage of roll-on-roll-off cargo transportation units.

35 "Ro-ro passenger ship" means a passenger ship with roll-on-roll-off cargo spaces.

36 "Attained EEDI" is the EEDI value achieved by an individual ship in accordance with regulation 20 of chapter 4.

37 "Required EEDI" is the maximum value of attained EEDI that is allowed by regulation 21 of chapter 4 for the specific ship type and size."

CHAPTER 2

SURVEY, CERTIFICATION AND MEANS OF CONTROL

Regulation 5

Surveys

4 Paragraph 1 is amended as follows:

"1 Every ship of 400 gross tonnage and above and every fixed and floating drilling rig and other platforms shall to ensure compliance with chapter 3 be subject to the surveys specified below:

.1 An initial survey before the ship is put into service or before the certificate required under regulation 6 of this Annex is issued for the first time. This survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of chapter 3;

.2 A renewal survey at intervals specified by the Administration, but not exceeding five years, except where regulation 9.2, 9.5, 9.6 or 9.7 of this Annex is applicable. The renewal survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with applicable requirements of chapter 3;

.3 An intermediate survey within three months before or after the second anniversary date or within three months before or after the third anniversary date of the certificate which shall take the place of one of the annual surveys specified in paragraph 1.4 of this regulation. The intermediate survey shall be such as to ensure that the equipment and arrangements fully comply with the applicable requirements of chapter 3 and are in good working order. Such intermediate surveys shall be endorsed on the IAPP Certificate issued under regulation 6 or 7 of this Annex;

.4 An annual survey within three months before or after each anniversary date of the certificate, including a general inspection of the equipment, systems, fittings, arrangements and material referred to in paragraph 1.1 of this regulation to ensure that they have been maintained in accordance with paragraph 5 of this regulation and that they remain satisfactory for the service for which the ship is intended. Such annual surveys shall be endorsed on the IAPP Certificate issued under regulation 6 or 7 of this Annex; and

.5 An additional survey either general or partial, according to the circumstances, shall be made whenever any important repairs or renewals are made as prescribed in paragraph 5 of this regulation or after a repair resulting from investigations prescribed in paragraph 6 of this regulation. The survey shall be such as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals are in all respects satisfactory and that the ship complies in all respects with the requirements of chapter 3."

5 Paragraph 2 is amended as follows:

"2 In the case of ships of less than 400 gross tonnage, the Administration may establish appropriate measures in order to ensure that the applicable provisions of chapter 3 are complied with."

6 A new paragraph 4 is added after existing paragraph 3 as follows:

"4 Ships to which chapter 4 applies shall also be subject to the surveys specified below, taking into account Guidelines adopted by the Organization[1]:

.1 An initial survey before a new ship is put in service and before the International Energy Efficiency Certificate is issued. The survey shall verify that the ship's attained EEDI is in accordance with the requirements in chapter 4, and that the SEEMP required by regulation 22 is on board;

.2 A general or partial survey, according to the circumstances, after a major conversion of a ship to which this regulation applies. The survey shall ensure that the attained EEDI is recalculated as necessary and meets the requirement of regulation 21, with the reduction factor applicable to the ship type and size of the converted ship in the phase corresponding to the date of contract or keel laying or delivery determined for the original ship in accordance with regulation 2.23;

.3 In cases where the major conversion of a new or existing ship is so extensive that the ship is regarded by the Administration as a newly constructed ship, the Administration shall determine the necessity of an initial survey on attained EEDI. Such a survey, if determined necessary, shall ensure that the attained EEDI is calculated and meets the requirement of regulation 21, with the reduction factor applicable corresponding to the ship type and size of the converted ship at the date of the contract of the conversion, or in the absence of a contract, the commencement date of the conversion. The survey shall also verify that the SEEMP required by regulation 22 is on board; and

.4 For existing ships, the verification of the requirement to have a SEEMP on board according to regulation 22 shall take place at the first intermediate or renewal survey identified in paragraph 1 of this regulation, whichever is the first, on or after 1 January 2013."

[1] Refer to Guidelines on Survey and Certification of the Energy Efficiency Design Index.

7 Paragraph 4 is renumbered paragraph 5.

8 Paragraph 5 is renumbered paragraph 6.

Regulation 6

Issue or endorsement of a Certificate

9 The heading is amended as follows:

"***Issue or endorsement of Certificates***"

10 The following sub-heading is added at the beginning of the regulation:

"International Air Pollution Prevention Certificate"

11 Paragraph 2 is amended as follows:

"2 A ship constructed before the date Annex VI enters into force for that particular ship's Administration, shall be issued with an International Air Pollution Prevention Certificate in accordance with paragraph 1 of this regulation no later than the first scheduled dry-docking after the date of such entry into force, but in no case later than three years after this date."

12 The following is added at the end of the regulation:

"International Energy Efficiency Certificate

4 An International Energy Efficiency Certificate for the ship shall be issued after a survey in accordance with the provisions of regulation 5.4 to any ship of 400 gross tonnage and above before that ship may engage in voyages to ports or offshore terminals under the jurisdiction of other Parties.

5 The certificate shall be issued or endorsed either by the Administration or any organization duly authorized by it[2]. In every case, the Administration assumes full responsibility for the certificate."

Regulation 7

Issue of a Certificate by another Party

13 Paragraph 1 is amended as follows:

"1 A Party may, at the request of the Administration, cause a ship to be surveyed and, if satisfied that the applicable provisions of this Annex are complied with, shall issue or authorize the issuance of an International Air Pollution Prevention Certificate or an International Energy Efficiency Certificate to the ship,

[2] Refer to the Guidelines for the authorization of organizations acting on behalf of the Administration, adopted by the Organization by resolution A.739(18), as may be amended by the Organization, and the Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration, adopted by the Organization by resolution A.789(19), as may be amended by the Organization.

and where appropriate, endorse or authorize the endorsement of such certificates on the ship, in accordance with this Annex."

14 Paragraph 4 is amended as follows:

"4 No International Air Pollution Prevention Certificate or International Energy Efficiency Certificate shall be issued to a ship which is entitled to fly the flag of a State which is not a Party."

Regulation 8

Form of Certificate

15 The heading is amended as follows:

"***Form of Certificates***"

16 The following subheading is added, and the existing regulation is renumbered as paragraph 1:

"International Air Pollution Prevention Certificate"

17 The following new paragraph 2 is added at the end of the regulation:

"International Energy Efficiency Certificate

2 The International Energy Efficiency Certificate shall be drawn up in a form corresponding to the model given in appendix VIII to this Annex and shall be at least in English, French or Spanish. If an official language of the issuing Party is also used, this shall prevail in case of a dispute or discrepancy."

Regulation 9

Duration and Validity of Certificate

18 The heading is amended as follows:

"***Duration and Validity of Certificates***"

19 The following subheading is added at the beginning of the regulation:

"International Air Pollution Prevention Certificate"

20 The following is added at the end of the regulation:

"International Energy Efficiency Certificate

10 The International Energy Efficiency Certificate shall be valid throughout the life of the ship subject to the provisions of paragraph 11 below.

11 An International Energy Efficiency Certificate issued under this Annex shall cease to be valid in any of the following cases:

.1 if the ship is withdrawn from service or if a new certificate is issued following major conversion of the ship; or

.2 upon transfer of the ship to the flag of another State. A new certificate shall only be issued when the Government issuing the new certificate is fully satisfied that the ship is in compliance with the requirements of chapter 4. In the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Government of the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the Administration copies of the certificate carried by the ship before the transfer and, if available, copies of the relevant survey reports."

Regulation 10

Port State Control on Operational Requirements

21 A new paragraph 5 is added at the end of the regulation as follows:

"5 In relation to chapter 4, any port State inspection shall be limited to verifying, when appropriate, that there is a valid International Energy Efficiency Certificate on board, in accordance with article 5 of the Convention."

22 A new chapter 4 is added at the end of the Annex as follows:

"**CHAPTER 4**

REGULATIONS ON ENERGY EFFICIENCY FOR SHIPS

Regulation 19

Application

1 This chapter shall apply to all ships of 400 gross tonnage and above.

2 The provisions of this chapter shall not apply to:

.1 ships solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly. However, each Party should ensure, by the adoption of appropriate measures, that such ships are constructed and act in a manner consistent with chapter 4, so far as is reasonable and practicable.

3 Regulation 20 and regulation 21 shall not apply to ships which have diesel-electric propulsion, turbine propulsion or hybrid propulsion systems.

4 Notwithstanding the provisions of paragraph 1 of this regulation, the Administration may waive the requirement for a ship of 400 gross tonnage and above from complying with regulation 20 and regulation 21.

5 The provision of paragraph 4 of this regulation shall not apply to ships of 400 gross tonnage and above:

.1 for which the building contract is placed on or after 1 January 2017; or

.2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or after 1 July 2017; or

.3 the delivery of which is on or after 1 July 2019; or

.4 in cases of a major conversion of a new or existing ship, as defined in regulation 2.24, on or after 1 January 2017, and in which regulation 5.4.2 and regulation 5.4.3 of chapter 2 apply.

6 The Administration of a Party to the present Convention which allows application of paragraph 4, or suspends, withdraws or declines the application of that paragraph, to a ship entitled to fly its flag shall forthwith communicate to the Organization for circulation to the Parties to the present Protocol particulars thereof, for their information.

Regulation 20

Attained Energy Efficiency Design Index (Attained EEDI)

1 The attained EEDI shall be calculated for:

.1 each new ship;

.2 each new ship which has undergone a major conversion; and

.3 each new or existing ship which has undergone a major conversion, that is so extensive that the ship is regarded by the Administration as a newly constructed ship

which falls into one or more of the categories in regulations 2.25 to 2.35. The attained EEDI shall be specific to each ship and shall indicate the estimated performance of the ship in terms of energy efficiency, and be accompanied by the EEDI technical file that contains the information necessary for the calculation of the attained EEDI and that shows the process of calculation. The attained EEDI shall be verified, based on the EEDI technical file, either by the Administration or by any organization[3] duly authorized by it.

2 The attained EEDI shall be calculated taking into account guidelines[4] developed by the Organization.

[3] Refer to the Guidelines for the authorization of organizations acting on behalf of the Administration, adopted by the Organization by resolution A.739(18), as may be amended by the Organization, and the Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration, adopted by the Organization by resolution A.789(19), as may be amended by the Organization.

[4] Guidelines on the method of calculation of the Energy Efficiency Design Index for new ships.

Regulation 21

Required EEDI

1 For each:

.1 new ship;

.2 new ship which has undergone a major conversion; and

.3 new or existing ship which has undergone a major conversion that is so extensive that the ship is regarded by the Administration as a newly constructed ship

which falls into one of the categories defined in regulation 2.25 to 2.31 and to which this chapter is applicable, the attained EEDI shall be as follows:

$$\text{Attained EEDI} \leqq \text{Required EEDI} = (1\text{-}X/100) \times \text{Reference line value}$$

where X is the reduction factor specified in Table 1 for the required EEDI compared to the EEDI Reference line.

2 For each new and existing ship that has undergone a major conversion which is so extensive that the ship is regarded by the Administration as a newly constructed ship, the attained EEDI shall be calculated and meet the requirement of paragraph 21.1 with the reduction factor applicable corresponding to the ship type and size of the converted ship at the date of the contract of the conversion, or in the absence of a contract, the commencement date of the conversion.

Table 1. Reduction factors (in percentage) for the EEDI relative to the EEDI Reference line

Ship Type	Size	Phase 0 1 Jan 2013 – 31 Dec 2014	Phase 1 1 Jan 2015 – 31 Dec 2019	Phase 2 1 Jan 2020 – 31 Dec 2024	Phase 3 1 Jan 2025 and onwards
Bulk carrier	20,000 DWT and above	0	10	20	30
	10,000 – 20,000 DWT	n/a	0-10*	0-20*	0-30*
Gas carrier	10,000 DWT and above	0	10	20	30
	2,000 – 10,000 DWT	n/a	0-10*	0-20*	0-30*
Tanker	20,000 DWT and above	0	10	20	30
	4,000 – 20,000 DWT	n/a	0-10*	0-20*	0-30*
Container ship	15,000 DWT and above	0	10	20	30
	10,000 – 15,000 DWT	n/a	0-10*	0-20*	0-30*

Ship Type	Size	Phase 0 1 Jan 2013 – 31 Dec 2014	Phase 1 1 Jan 2015 – 31 Dec 2019	Phase 2 1 Jan 2020 – 31 Dec 2024	Phase 3 1 Jan 2025 and onwards
General Cargo ships	15,000 DWT and above	0	10	15	30
	3,000 – 15,000 DWT	n/a	0-10*	0-15*	0-30*
Refrigerated cargo carrier	5,000 DWT and above	0	10	15	30
	3,000 – 5,000 DWT	n/a	0-10*	0-15*	0-30*
Combination carrier	20,000 DWT and above	0	10	20	30
	4,000 – 20,000 DWT	n/a	0-10*	0-20*	0-30*

* Reduction factor to be linearly interpolated between the two values dependent upon vessel size. The lower value of the reduction factor is to be applied to the smaller ship size.

n/a means that no required EEDI applies.

3 The Reference line values shall be calculated as follows:

Reference line value = $a \times b^{-c}$

where a, b and c are the parameters given in Table 2.

Table 2. Parameters for determination of reference values for the different ship types

Ship type defined in regulation 2	**a**	**b**	**c**
2.25 Bulk carrier	961.79	DWT of the ship	0.477
2.26 Gas carrier	1120.00	DWT of the ship	0.456
2.27 Tanker	1218.80	DWT of the ship	0.488
2.28 Container ship	174.22	DWT of the ship	0.201
2.29 General cargo ship	107.48	DWT of the ship	0.216
2.30 Refrigerated cargo carrier	227.01	DWT of the ship	0.244
2.31 Combination carrier	1219.00	DWT of the ship	0.488

4 If the design of a ship allows it to fall into more than one of the above ship type definitions, the required EEDI for the ship shall be the most stringent (the lowest) required EEDI.

5 For each ship to which this regulation applies, the installed propulsion power shall not be less than the propulsion power needed to maintain the manoeuvrability of the ship under adverse conditions as defined in the guidelines to be developed by the Organization.

6 At the beginning of Phase 1 and at the midpoint of Phase 2, the Organization shall review the status of technological developments and, if proven necessary, amend the time periods, the EEDI reference line parameters for relevant ship types and reduction rates set out in this regulation.

Regulation 22

Ship Energy Efficiency Management Plan (SEEMP)

1 Each ship shall keep on board a ship specific Ship Energy Efficiency Management Plan (SEEMP). This may form part of the ship's Safety Management System (SMS).

2 The SEEMP shall be developed taking into account guidelines adopted by the Organization.

Regulation 23

Promotion of technical co-operation and transfer of technology relating to the improvement of energy efficiency of ships

1 Administrations shall, in co-operation with the Organization and other international bodies, promote and provide, as appropriate, support directly or through the Organization to States, especially developing States, that request technical assistance.

2 The Administration of a Party shall co-operate actively with other Parties, subject to its national laws, regulations and policies, to promote the development and transfer of technology and exchange of information to States which request technical assistance, particularly developing States, in respect of the implementation of measures to fulfil the requirements of chapter 4 of this annex, in particular regulations 19.4 to 19.6."

23 A new appendix VIII is added at the end of the Annex as follows:

"**APPENDIX VIII**

Form of International Energy Efficiency (IEE) Certificate

INTERNATIONAL ENERGY EFFICIENCY CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended by resolution MEPC.203(62), to amend the International Convention for the Prevention of Pollution by Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as "the Convention") under the authority of the Government of:

.....
(Full designation of the Party)

by .....
(Full designation of the competent person or organization
authorized under the provisions of the Convention)

Particulars of ship[5]

Name of ship .....

Distinctive number or letters .....

Port of registry .....

Gross tonnage .....

IMO Number[6] .....

THIS IS TO CERTIFY:

1 That the ship has been surveyed in accordance with regulation 5.4 of Annex VI of the Convention; and

2 That the survey shows that the ship complies with the applicable requirements in regulation 20, regulation 21 and regulation 22.

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

Issued at .....
(Place of issue of certificate)

(dd/mm/yyyy): ....
(Date of issue) (Signature of duly authorized official issuing the certificate)

(Seal or stamp of the authority, as appropriate)

5 Alternatively, the particulars of the ship may be placed horizontally in boxes.

6 In accordance with IMO ship identification number scheme, adopted by the Organization by resolution A.600(15).

Supplement to the International Energy Efficiency Certificate (IEE Certificate)

RECORD OF CONSTRUCTION RELATING TO ENERGY EFFICIENCY

Notes:

1 This Record shall be permanently attached to the IEE Certificate. The IEE Certificate shall be available on board the ship at all times.

2 The Record shall be at least in English, French or Spanish. If an official language of the issuing Party is also used, this shall prevail in case of a dispute or discrepancy.

3 Entries in boxes shall be made by inserting either: a cross (x) for the answers "yes" and "applicable"; or a dash (-) for the answers "no" and "not applicable", as appropriate.

4 Unless otherwise stated, regulations mentioned in this Record refer to regulations in Annex VI of the Convention, and resolutions or circulars refer to those adopted by the International Maritime Organization.

1 Particulars of ship

1.1 Name of ship .....

1.2 IMO number .....

1.3 Date of building contract .....

1.4 Gross tonnage .....

1.5 Deadweight .....

1.6 Type of ship* .....

2 Propulsion system

2.1 Diesel propulsion ..... ☐

2.2 Diesel-electric propulsion ..... ☐

2.3 Turbine propulsion ..... ☐

2.4 Hybrid propulsion ..... ☐

2.5 Propulsion system other than any of the above ..... ☐

* Insert ship type in accordance with definitions specified in regulation 2. Ships falling into more than one of the ship types defined in regulation 2 should be considered as being the ship type with the most stringent (the lowest) required EEDI. If ship does not fall into the ship types defined in regulation 2, insert "Ship other than any of the ship type defined in regulation 2".

3 Attained Energy Efficiency Design Index (EEDI)

3.1 The Attained EEDI in accordance with regulation 20.1 is calculated based on the information contained in the EEDI technical file which also shows the process of calculating the Attained EEDI. …. ..... ☐

The Attained EEDI is: ..... grams-CO_2/tonne-mile

3.2 The Attained EEDI is not calculated as:

3.2.1 the ship is exempt under regulation 20.1 as it is not a new ship as defined in regulation 2.23 ..... ☐

3.2.2 the type of propulsion system is exempt in accordance with regulation 19.3 …. .....☐

3.2.3 the requirement of regulation 20 is waived by the ship's Administration in accordance with regulation 19.4 ..... ☐

3.2.4 the type of ship is exempt in accordance with regulation 20.1 ..... ☐

4 Required EEDI

4.1 Required EEDI is: ..... grams-CO_2/tonne-mile

4.2 The required EEDI is not applicable as:

4.2.1 the ship is exempt under regulation 21.1 as it is not a new ship as defined in regulation 2.23 ..... ☐

4.2.2 the type of propulsion system is exempt in accordance with regulation 19.3 …. ..... ☐

4.2.3 the requirement of regulation 21 is waived by the ship's Administration in accordance with regulation 19.4 ..... ☐

4.2.4 the type of ship is exempt in accordance with regulation 21.1 …..... ☐

4.2.5 the ship's capacity is below the minimum capacity threshold in Table 1 of regulation 21.2 …. ..... ☐

5 Ship Energy Efficiency Management Plan

5.1 The ship is provided with a Ship Energy Efficiency Management Plan (SEEMP) in compliance with regulation 22 ..... ☐

6 EEDI technical file

6.1 The IEE Certificate is accompanied by the EEDI technical file in compliance with regulation 20.1 ..... ☐

6.2 The EEDI technical file identification/verification number .....

6.3 The EEDI technical file verification date .....

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at .....
(Place of issue of the Record)

(dd/mm/yyyy): ....
(Date of issue) (Signature of duly authorized official issuing the Record)

(Seal or stamp of the authority, as appropriate)"

***

ANNEX 20

STATEMENTS BY THE DELEGATIONS OF BRAZIL, CHINA, INDIA, SAUDI ARABIA AND THE BOLIVARIAN REPUBLIC OF VENEZUELA AND THE OBSERVERS OF THE PACIFIC ENVIRONMENT AND CLEAN SHIPPING COALITION AFTER THE ADOPTION OF AMENDMENTS TO MARPOL ANNEX VI

Statement by the delegation of Brazil

As raised by this delegation, the procedure of approval and adoption at the same session in unprecedented in this Committee. This may be due to the fact that relevant issues discussed by MEPC need to be thoroughly analysed and matured, and not considered in a hasty manner.

The adoption of the amendments to Annex VI of the MARPOL Convention completely disregards the pending technical, technological and economic uncertainties, particularly as regards the potential impacts on developing countries. The provisions and principles of the UNFCCC and the Kyoto Protocol have not been properly addressed, and we consider that we cannot possibly adopt measures on climate change, which do not comply with those provisions and principles.

We have been presented with no assurances as to technology transfer, as the negotiations implied a package deal so as to ensure balance, which clearly did not happen. We have heard several mentions to "compromise" and "good faith", and yet have constantly been presented with inflexibility.

Therefore, Mr. Chairman, Brazil is regrettably forced to reserve its position as regards the adoption of said amendments at this session and request that this statement be included in the final report of the Committee.

Statement by the delegation of China

The Chinese delegation appreciates the effort of IMO in addressing the issue of climate change from the international shipping. But we have to express our regret for the failure of not reflecting the common but differentiated responsibility principle in a full and objective manner in the MARPOL Annex VI amendments concerning energy efficiency requirements.

Mr. Chairman, the Chinese delegation would like to take this opportunity to reiterate our position as follows:

.1 United Nations Framework Convention on Climate Change and its Kyoto Protocol constitute the fundamental basis and main channel for international cooperation in addressing the issue of climate change, and the Principle of Common but Differentiated Responsibility it established becomes the basic principle for international community to commonly address climate change, therefore, should be strictly abided by. This is not only the consistent position of China, but also the one upheld by many developing countries.

.2 The effort by the international shipping community in addressing the issue of climate change is an integral part of the international cooperation, which should not only take into account the uniqueness and common practice of the international shipping, but also comply with the common but differentiated responsibility principle.

.3 The following serious concerns were still exist during the discussion and adoption of the MARPOL Annex VI amendments, therefore, the Chinese delegation would like to make a reservation and oppose the adoption of the amendments.

Firstly, the EEDI formula is not yet mature. Though following many years of discussions, a considerable number of technical issues have not been properly resolved in the EEDI regulations. As demonstrated in many submissions to this session of the MEPC, agreements have not been reached on important technical issues including the baseline, ship types, reduction factors and verification etc., therefore further studies are needed. If these issues could not be properly addressed, the implementation of the EEDI regulations will have adverse impact on the international shipping.

Secondly, the amendments do not reflect the common but differentiated responsibility principle, and violate the common understanding and core principle of the international community in addressing the issue of climate change. This will impact and impede IMO to make further contribution to the GHG issue in the future. This will also constitute a bad precedence for the international community, adversely impacting the correct direction for international cooperation within the UNFCCC.

Lastly, there are largely divergent views regarding whether or not the amendments should be included in MARPOL Annexes, and adopted at this session of the MEPC. Moreover, the specific articles in the amendments are also under disputes. Despite of this fact, the amendments were adopted in the absence of consensus, which has resulted in the division among the IMO Member States.

In the light of the above, the Chinese delegation opposes the adoption of this amendment and in no position to acknowledge and accept the amendment.

In conclusion, this delegation believes that IMO will continue the discussion of the GHG issue in the successive session of the MEPC, we hope that IMO and Member States spare no effort to look for solutions to reflect the common but differentiated responsibility principle, in particular on matters relating to the technology transfer, capacity building and financial support to the developing countries by the developed countries. In its future discussions on market-based measures, China hopes that IMO will duly consider the common but differentiated responsibility principle, so that this principle would be fully reflected in its market-based measures.

Statement by the delegation of India

The Indian delegation shares the sentiments expressed by the delegation of China, especially regarding the requirement of applicability of CBDR principle. In particular, India would like to regret the adoption of amendment to MARPOL Annex VI through a vote, even though India is not yet a Party to the Convention.

The urgency of adopting the amendments at this session is not understood, especially when several developing countries have voiced their reservations on several aspects of the amendments including the EEDI formula which is not mature for adoption, and also for getting the mandates from the respective Government.

It may also be worthwhile to draw the attention of the Committee to the Doha Round of negotiations at the WTO which have not yet concluded since last 10 years, where efforts are continuing for consensus building.

The procedure adopted by the MEPC will set a wrong precedence not only for the IMO but also in other multilateral organizations.

Statement by the delegation of Saudi Arabia

Saudi Arabia would like to associate itself with the statement of China and would like to highlight the reason for the Kingdom of Saudi Arabia's rejection of the amendment included in document MEPC 62/WP.11/Add.1/Rev.1 dated 15 July 2011, which can be summarized as follows:

.1 there are issues with the maturity of the EEDI;

.2 the inconsistency of the amendment with the main purpose of MARPOL 73/78 Convention. The convention was for the prevention of pollution into the marine environment. Greenhouse gases are not classified by the UN as pollutants;

.3 lack of a mechanism to ensure measurable, reportable and verifiable technology transfer to developing county parties; and

.4 the absence of reference to the principle of CBDR.

Finally, it unfortunate that the IMO has chosen not to follow the example of ICAO to adopt matters dealing with climate change by consensus and using the principles of the UNFCCC, especially the principle of CBDR.

Statement by the delegation of the Bolivarian Republic of Venezuela

Our delegation thanks all countries and you in particular for the time and effort dedicated to tackling the complexities relating to the adoption of amendments to MARPOL Annex VI. However, in view of the result reached, which has clearly been characterized by a lack of consensus, we express our reservations concerning the decision adopted, being still of the opinion that there are insufficient references or elements in the approved texts that are conducive to the principles continuously maintained and defended by our country, namely the principle of common but differentiated responsibilities and recognition of the Kyoto proposals in keeping with the spirit of progress already been achieved in the context of negotiations under the United Nations Framework Convention on Climate Change.

Through this statement, we are echoing the views expressed by the delegations of Brazil, China, Argentina, Saudi Arabia, India and Cuba, among others, and we request that our reservation is recorded in the report of the meeting.

Statement by the observer of the Pacific Environment

This is Pacific Environment's first intervention, so we would like to thank the IMO, MEPC and its distinguished delegates for welcoming our participation as well as congratulate you Mr. Chairman on your re-election.

Currently, Arctic Indigenous peoples are on the front lines of climate change. Indigenous peoples are faced with problems such as receding sea ice which will bring increased shipping into our traditional waters. Greenhouse gases and air emissions will only continue to compound the already devastating impacts of climate change. For example, due to the reduction in sea ice Indigenous hunters are being forced to go further and further off shore to gain access to traditional foods, increasing the risks tremendously.

Two months ago in New York more than 1400 Indigenous people gathered at the 10th session of the United Nations Permanent Forum on Indigenous Peoples Issues where there was much discussion on the implementation of the Declaration for the Rights of Indigenous Peoples.

The final report from the meeting was released last week and included in the final recommendations was a call on the IMO to implement the UN DRIP and to begin including Indigenous participation in these important proceedings which will have a great impact on Indigenous Peoples globally.

We cannot deny the dangers of climate change on Indigenous Peoples and their human rights. Climate change threatens traditional food systems and ability to practice spiritual ceremonies, forces removals from traditional home lands and territories, and creates disproportionate health impacts on Indigenous Peoples.

I myself am from a traditional Indigenous village located in the Arctic. In our traditional language there is not a way to separate the word environment from the word peoples – it is one in the same. Indigenous cultures are inextricably linked with the oceans and the environment. Distinguished delegates, I call upon us to remember in our future deliberations over the next year, that we ourselves are not the owners of the oceans but instead we are the guardians of it, hopefully keeping it safe not only for ourselves but for future generations to come.

Statement by the observer of the Clean Shipping Coalition

The EEDI is about setting energy efficiency standards for a leading global industry which will reduce long-term costs and environmental impacts. When setting fuel efficiency standards in other transport modes, industry has invariably resisted vehemently. To its great credit, the shipping industry is largely onboard with the EEDI.

Ironically, the difficulty here has not been with industry, nor has any lack of technology been a problem, nor has it been about differences in levels of development between developed and developing countries - ships built in developing countries are some of the most advanced and innovative. Rather the difficulty has been about the political positions of some in other UN forums, and the misconception of others that consensus on its own is a worthy objective. These concerns, regrettably, have seriously undermined the effectiveness of the world's first globally binding climate change initiative.

During the almost 7 year phase-in period of EEDI, shipping GHG emissions, by the Organization's own estimates, will have almost doubled to 6% of global emissions. Environmental NGOs supported this process from the beginning in the belief that the potential for improvements in ship efficiency is significant particularly as many measures can be taken at zero or low cost to industry. Those possibilities risk being set aside with this decision.

If there is a rush to have all new ships take advantage of the waiver by flagging them with obliging registries, this will have enormous implications for the administration of all sorts of IMO rules and conventions, endangering both the environment and seafarer safety.

The CSC therefore calls on all enlightened ship-owners to put the question of delay aside and implement immediately the EEDI as good business sense and sound environmental practice. We call on the European Union to embrace the EEDI as an effective instrument to complement other measures it is now considering. We call on shippers, the logistics industry and harbours to use the EEDI when taking decisions on chartering and when setting port dues.

Mr. Chairman, as difficult as today's decision seems to have been, it is only IMOs' first step to address shipping's climate change impact. A package of additional market-based and operational measures such as emissions trading, a levy, speed limits and mandatory cuts is urgently needed to properly address the rapidly growing emissions from shipping. This work on existing ships is almost in its 15th year and needs to be accelerated urgently.

***

ANNEX 21

DRAFT AMENDMENTS TO MARPOL ANNEXES I, II, IV, V AND VI ON REGIONAL ARRANGEMENTS FOR PORT RECEPTION FACILITIES

1 ***New paragraphs 3bis and 4bis are added to regulation 38 of Annex I:***

3*bis* Small Island Developing States may satisfy the requirements in paragraph 2 through regional arrangements. Parties participating in a regional arrangement shall develop a Regional Reception Facilities Plan, taking into account the guidelines developed by the Organization.

The Government of each Party participating in the arrangement shall notify the Organization for circulation to the Parties of the present Convention:

.1 how the Regional Reception Facilities Plan takes into account the Guidelines;

.2 particulars of the identified Regional Ships Waste Reception Centres; and

.3 particulars of those ports with only limited facilities.

4*bis* Small Island Developing States may satisfy the requirements in paragraph 4 through regional arrangements. Parties participating in a regional arrangement shall develop a Regional Reception Facilities Plan, taking into account the guidelines developed by the Organization.

The Government of each Party participating in the arrangement shall notify the Organization for circulation to the Parties of the present Convention:

.1 how the Regional Reception Facilities Plan takes into account the Guidelines;

.2 particulars of the identified Regional Ships Waste Reception Centres; and

.3 particulars of those ports with only limited facilities.

2 ***New paragraph 4bis is added to regulation 18 of Annex II:***

4*bis* Small Island Developing States may satisfy the requirements in paragraphs 1 to 4 through regional arrangements. Parties participating in a regional arrangement shall develop a Regional Reception Facilities Plan, taking into account the guidelines developed by the Organization.

The Government of each Party participating in the arrangement shall notify the Organization for circulation to the Parties of the present Convention:

.1 how the Regional Reception Facilities Plan takes into account the Guidelines;

.2 particulars of the identified Regional Ships Waste Reception Centres; and

.3 particulars of those ports with only limited facilities.

3 ***New paragraph 2bis is added to regulation 12 of Annex IV:***

2*bis* Small Island Developing States may satisfy the requirements in paragraph 1 through regional arrangements. Parties participating in a regional arrangement shall develop a Regional Reception Facilities Plan, taking into account the guidelines developed by the Organization.

The Government of each Party participating in the arrangement shall notify the Organization for circulation to the Parties of the present Convention:

.1 how the Regional Reception Facilities Plan takes into account the Guidelines;

.2 particulars of the identified Regional Ships Waste Reception Centres; and

.3 particulars of those ports with only limited facilities.

4 ***New paragraphs 2bis and 3.2bis are added to regulation 8 of Annex V[1]:***

2*bis* Small Island Developing States may satisfy the requirements in paragraph 4a through regional arrangements. Parties participating in a regional arrangement shall develop a Regional Reception Facilities Plan, taking into account the guidelines developed by the Organization.

The Government of each Party participating in the Arrangement shall notify the Organization for circulation to the Parties of the present Convention:

.1 how the Regional Reception Facilities Plan takes into account the Guidelines;

.2 particulars of the identified Regional Ships Waste Reception Centres; and

.3 particulars of those ports with only limited facilities.

3.2*bis* Small Island Developing States may satisfy the requirements in paragraph 1 through regional arrangements. Parties participating in a regional arrangement shall develop a Regional Reception Facilities Plan, taking into account the guidelines developed by the Organization.

The Government of each Party participating in the arrangement shall notify the Organization for circulation to the Parties of the present Convention:

.1 how the Regional Reception Facilities Plan takes into account the Guidelines;

.2 particulars of the identified Regional Ships Waste Reception Centres; and

.3 particulars of those ports with only limited facilities.

[1] Text of revised Annex V adopted by resolution MEPC.201(62).

5 ***New paragraph 1bis is added to regulation 17 of Annex VI:***

1*bis* Small Island Developing States may satisfy the requirements in paragraph 1 through regional arrangements. Parties participating in a regional arrangement shall develop a Regional Reception Facilities Plan, taking into account the guidelines developed by the Organization.

The Government of each Party participating in the arrangement shall notify the Organization for circulation to the Parties of the present Convention:

.1 how the Regional Reception Facilities Plan takes into account the Guidelines;

.2 particulars of the identified Regional Ships Waste Reception Centres; and

.3 particulars of those ports with only limited facilities.

***

ANNEX 22

RESOLUTION MEPC.204(62)

Adopted on 15 July 2011

DESIGNATION OF THE STRAIT OF BONIFACIO AS A PARTICULARLY SENSITIVE SEA AREA

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

BEING AWARE of the ecological, socio-economic and scientific attributes of the Strait of Bonifacio, as well as its vulnerability to damage by international shipping activities and the steps taken by France and Italy to address that vulnerability,

NOTING the Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas adopted by resolution A.982(24) (PSSA Guidelines) and the Revised Guidance Document for Submission of PSSA Proposals to IMO set forth in MEPC.1/Circ.510,

HAVING CONSIDERED the proposal made by the Governments of France and Italy that the Strait of Bonifacio be designated as a Particularly Sensitive Sea Area,

HAVING AGREED that the criteria for the identification and designation of a Particularly Sensitive Sea Area provided in resolution A.982(24) are fulfilled for the Strait of Bonifacio,

HAVING NOTED that the Sub-Committee on Safety of Navigation, at its fifty-seventh session, approved the Recommendation on navigation through the Strait of Bonifacio as an associated protective measure for the application of the Strait of Bonifacio as a Particularly Sensitive Sea Area aiming at improving the safety of navigation and the protection of the marine environment,

1. DESIGNATES the Strait of Bonifacio described in annex 1 as a Particularly Sensitive Sea Area pending the final adoption of the associated protective measure for the PSSA, as set out in annex 2 to document NAV 57/15;

2. INVITES Member Governments to recognize the ecological, socio-economic, and scientific attributes of the area, set forth in annex 2, as well as its vulnerability to damage by international shipping activities, as described in annex 3; and

3. FURTHER INVITES Member Governments to note the associated protective measure established to address the area's vulnerability, the details of which are contained in annex 4, which is expected to enter into force following final adoption on a date to be circulated by the Organization to all Member Government, and request ships flying their flag that they act in accordance with such measures.

ANNEX 1

DESCRIPTION OF THE STRAIT OF BONIFACIO PSSA*

Description of the Particularly Sensitive Sea Area for the Strait of Bonifacio

To avoid the risk of damage from ship groundings and pollution damage by international shipping activities and the destruction and degradation of this unique, diverse, and significant habitats and ecosystem, mariners should exercise extreme care when navigating in the area bounded by a line connecting the following geographical positions which is designated as a Particularly Sensitive Sea Area:

- To the north: a line linking point 41° 45' 00" N – 008° 01' 48" E to point 41° 45' 00" N – 009° 48' 30" E passing the French coast (Cap Muro to the west and Anse de Tarcu to the east);

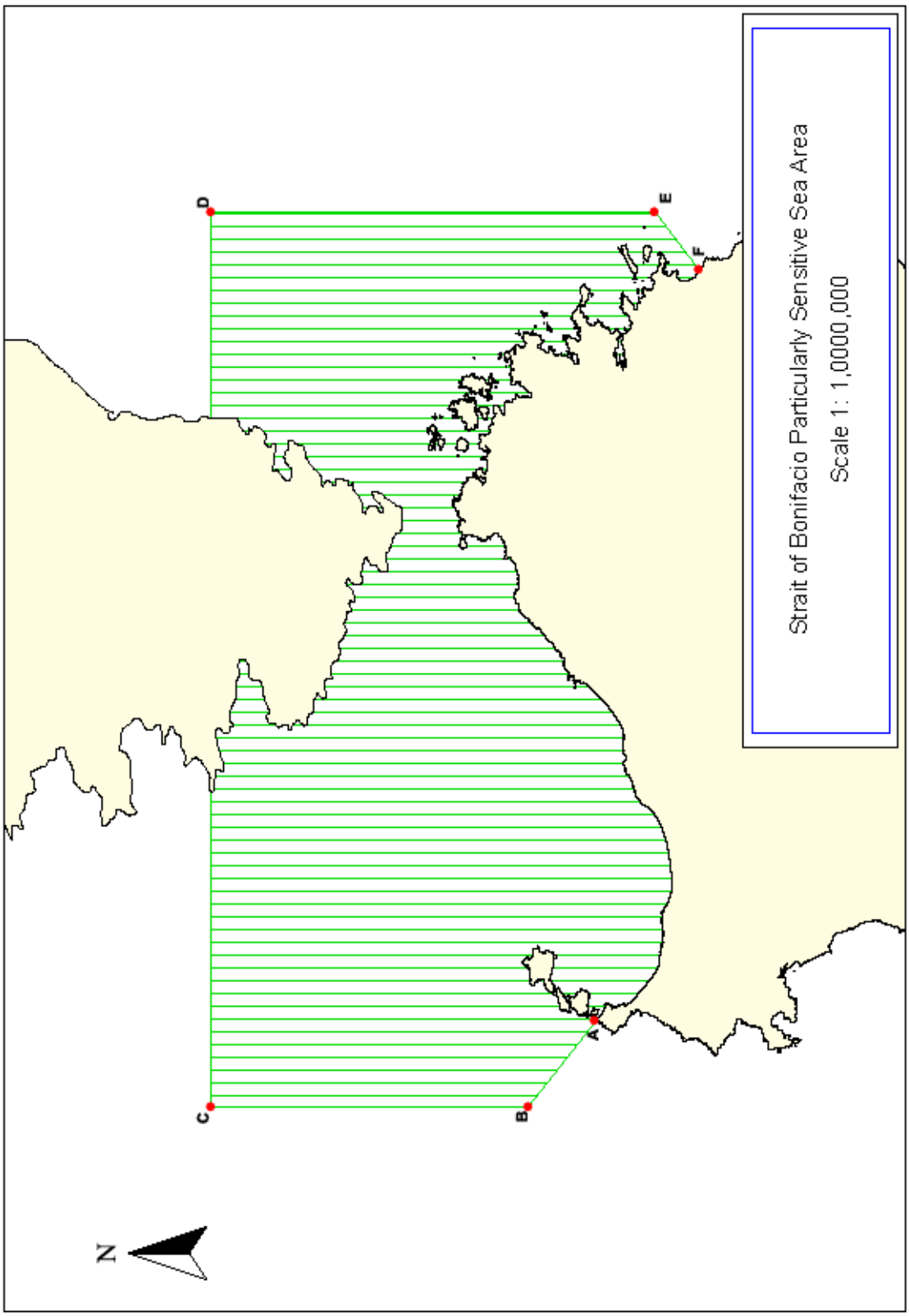
- On the western side: a line linking points 41° 45' 00" N – 008° 01' 48" E; 41° 06' 36" N – 008° 01' 48" E and 40° 58' 00" N – 008° 12' 00" E on the Italian coast; and

- On the eastern side, a line linking points 41° 45' 00" N – 009° 48' 30" E; 40° 41' 08" N – 009° 48' 30" E and 40° 45' 56" N – 009° 41' 42" E on the Italian coast to the south.

The Particularly Sensitive Sea Area is bounded by the points A, B, C, D, E, and F as set out in the chartlet below.

* The text in this annex is taken from the submission by France and Italy contained in documents MEPC 61/9 and MEPC 61/INF.26.

CHARTLET


Strait of Bonifacio Particularly Sensitive Sea Area
Scale 1: 1,0000,000
D
E
F
A
B
C
N

ANNEX 2

ECOLOGICAL, SOCIO-ECONOMIC, AND SCIENTIFIC ATTRIBUTES OF THE STRAIT OF BONIFACIO PSSA*

1 Ecological criteria

1.1 The ecological significance of the Strait of Bonifacio region was internationally recognized when it was granted the status of specially protected area of Mediterranean importance (SPAMI) at the sixteenth session of the Conference of Contracting Parties to the Barcelona Convention for the Protection of the Mediterranean Sea against Pollution, which took place from 3 to 5 November 2009 in Marrakesh.

1.2 The ecological significance of the French part of the Strait of Bonifacio is recognized by a number of official listings involving a total of 104,000 ha of mainly marine environment:

- Listing as a nature reserve by a decree of 23 September 1999 (80,000 ha);

- Listing as a Natura 2000 site, these being a network of European Union areas which, owing to their great environmental value, need the protection of States:

  - a special protection area under directive No. 79/409/EEC (Birds), "Lavezzi Islands, Strait of Bonifacio", covering 98, 941 ha, designated by inter-ministerial decree of 30 October 2008;

  - three sites of Community importance under directive 92/43/EEC (Habitat) concerning the conservation of natural habitats and wild fauna and flora:

    Strait of Bonifacio, Monk Islands (94, 612 ha);
    Cerbical Islands and coastal strip (3,698 ha);
    Pertusato/Bonifacio plateau and Lavezzi Islands (6,071 ha).

1.3 The ecological significance of the Italian part of the Strait of Bonifacio is recognized by several listings, as follows:

The La Maddalena archipelago national park, by decree of the President of the Republic dated 17 May 1996, covering 5,100 ha on land and 15,046 ha at sea;

The Asinara national park, by decree of the President of the Republic dated 13 October 2002, covering 5,170 ha on land;

The Isola Asinara protected marine area, by ministerial decree of 12 August 2002, covering 10,732 ha at sea;

The Tavolara Punta Coda Cavallo protected marine area, by ministerial decree of 12 December 1997, amended by ministerial decree of 28 November 2001, covering 15,357 ha;

* The text in this annex is taken from the submission by France and Italy contained in documents MEPC 61/9 and MEPC 61/INF.26.

Listings of Natura 2000 sites, as follows:

Six special protection areas under directive No. 79/409/EEC (Birds):

Isola Asinara (9,669 ha)
Isola Piana – Golfo dell'Asinara (399 ha)
Stagno di Pilo, Casaraccio e Saline di Stintino (1,290 ha)
Arcipelago La Maddalena (20,955 ha)
Isole del Nord-Est tra Capo Ceraso e Stagno di San Teodoro (18,174 ha)
Capo Figari, Cala Sabina, Punta Canigione e Isola Figarolo (4,053 ha)

Twelve sites of Community significance under directive No. 92/43/EEC (Habitat), in connection with the conservation of natural habitats and wild fauna and flora:

Coste e Isolette a Nord Ovest della Sardegna (3, 731 ha)
Isola Asinara (9,669 ha)
Isola Piana (510 ha)
Stagno di Pilo e di Casaraccio (1,879 ha)
Stagno e ginepreto di Platamona (1,618 ha)
Foci del Coghinas (2, 267 ha)
Isola Rossa – Costa Paradiso (5,409 ha)
Monte Russu (1,971 ha)
Capo Testa (1,217 ha)
Arcipelago La Maddalena (20,955 ha)
Isola Tavolara, Molara e Molarotto (3,764 ha)
Capo Figari e Isola Figarolo (851 ha).

1.4 The European Commission approved the above-mentioned list of sites of Community importance by its decision of 22 December 2009 in relation to the Mediterranean biogeographical region enforceable under Directive No. 92/43/EEC.

1.5 The following information is taken from the declaration forms of the Natura 2000 sites mentioned above and from the biological evaluation of the Strait of Bonifacio nature reserve for the 2007-2011 management plan.

1.6 This sector is also covered by the Pelagos Agreement for the Creation of a Mediterranean Sanctuary for Marine Mammals, signed in Rome on 25 November 1999 by France, Italy and the Principality of Monaco. The aim of the agreement is to maintain a level of conservation beneficial to marine mammal populations, and to that end monitor the cetacean populations, strengthen the application of the existing external legislation for certain types of fishing and to reduce pollution, regulate the numbers of tourists who come to observe cetaceans, and improve the information provided for the public. The bottlenose dolphin is a regular visitor to the edges of this area.

1.7 The exceptional ecological wealth of the area comprises a wide range of marine environments, including:

- inclines and rocky shallows harbouring varied fauna and flora;

- well preserved Posidonia beds;

- near Figari, a rare estuary system in which areas emerge at low tide on the island.

1.8 Species and habitats whose rarity or significance are recognized at national, Community or international level find the environmental conditions ideal here.

Uniqueness or rarity

1.9 The Strait of Bonifacio area contains 37 per cent of species of Mediterranean importance (SPAMI Annex II and III, Barcelona Convention). The flora includes some 15 endemic species (Corsican or Corsican-Sardinian or Corsican/Sardinian/ Balearic), with one endemic to the island of Lavezzu.

1.10 The area contains between 40 and 50 per cent of the sites for *Silene velutina*, a small endemic flower whose distribution is limited to the extreme south of Corsica and the north of Sardinia. Another protected plant belonging to the first rank in terms of floral heritage is *Limonium lambinonii*, which is endemic to Lavezzu island.

1.11 The leatherback turtle has not been seen here since the 1960s, but the loggerhead turtle has been spotted more regularly in the Strait of Bonifacio in the past decade. In October 2001 its nests were even discovered on the beaches of Palombaggia, south of the Cerbicale archipelago.

1.12 While the alga *Goniolothon byssoides* is difficult not to notice, sightings are very rare. It appears to be vulnerable, given the small number of sites where it can be found. Also, its pads detach very easily, making it highly vulnerable to trampling by fishermen and swimmers (Boudouresque *et al*., 1990). Verlaque (1991) noted its presence around the Lavezzi Islands.

Critical habitat

1.13 This area offers great potential for the conservation of a large number of nationally important habitats and species. Certain species (the European shag, the giant limpet *Patella ferruginea*) are present in numbers which provide the nucleus of genetically stable populations that may be considered source populations capable of providing the starting point for colonization (natural or artificial) of potential habitats, to differing degrees, depending on the manner in which the larvae and individual representatives of those species are distributed. This area of the Strait of Bonifacio is thus of vital importance for declining populations or small sub-populations of species. For example, conservation of the national gene pool of threatened meta-populations of species such as the giant limpet could allow it to be reintroduced into areas of the Mediterranean where it is now extinct.

1.14 The care of this area is also very important to marine avifauna. This is a major site for the European shag (*Phalacrocorax aristotelis aristotelis*) and for sizeable numbers of Cory's shearwater (*Calonectris diomedea*). The Strait of Bonifacio is also a main point for the passage, roosting and feeding of the Yelkouan shearwater. The whole area is a feeding ground for these species.

1.15 The European shag population does not exceed 10,000 pairs across the whole of its small area of distribution in the Mediterranean. The Strait of Bonifacio has high priority in the conservation of this species. In 2001, the nesting population of the Strait of Bonifacio represented more than 50 per cent of the French population and 7 per cent of the world population. The main problems for this species are disturbance to nesting sites, accidental capture during small-scale fishing and the disappearance of habitats owing to the expansion of tourism.

1.16 The nesting population of Cory's shearwater accounts for 40 per cent of the national nesting total. With 345 pairs, the Lavezzu island colony is the most numerous in France. This species is on the decline owing to the introduction of allocthonous species (dogs, cats and rats), the removal of eggs from certain colonies and the development of tourism, which disturbs colonies and destroys habitat.

1.17 With around 200 nesting pairs within the perimeter of the area, the population of the highly unobtrusive storm petrel (*Hydrobates pelagicus*) represents around one third of the French Mediterranean population and between 15 and 18 per cent of the French population including Atlantic birds. Europe's smallest marine bird (15 cm) is in steep decline in the Mediterranean, mainly owing to the introduction of predators such as the black rat (*Rattus rattus*). The colonies are now highly localized and concentrated, making them very vulnerable.

Dependency

1.18 The main ecosystems of the Strait of Bonifacio area, whether deep-sea or coastal, are closely interconnected: pelagic open-water systems, gulfs, intertidal zone, supralittoral environments, islets and lagoons.

1.19 Being an open system, the marine environment does not experience fragmentation of habitats to the same degree as the land environment. In the Strait of Bonifacio the long-protected areas of the Lavezzi, the fish confinement areas and the decreed biotopes of the Monk and Bruzzi islands shelter balanced populations which embrace all age-groups and assure the reproduction of larvae (fish, crustaceans, ...) and their diffusion to more recently established nature reserves. Plankton production and the gathering of animal larvae condition the introduction of both marine and littoral trophic chains. By virtue of its geographical position and the existence of violent currents which facilitate larva distribution, the Strait of Bonifacio could play a not inconsiderable role in coastal fishing management in the north-western Mediterranean.

1.20 While the plankton-eating organisms are an indispensable resource for large pelagic species, seriolae and tuna, not to mention cetaceans (particularly bottlenose dolphins), they are also attractive to the marine birds present (European shag, Cory's shearwater, seagulls).

Representativeness

1.21 Beds of *Posidonia oceanica*, high-priority protected habitats, are widely represented. A Posidonia bed is a very valuable ecosystem from the biodiversity point of view, and is also very important to fishing, coastal protection and the enrichment of certain other coastal ecosystems. It is an excellent indicator of the overall quality of the natural environment. In many parts of the Mediterranean, it has been seriously affected by human activities, and some beds are in serious decline. Beds of *Posidonia oceanica* are characteristic of the infralittoral stage in the Mediterranean. Those in the Strait of Bonifacio area cover more than 5,000 ha and are in excellent condition. They play a leading role in the area's productivity and provide sites for breeding, spawning and raising young.

1.22 The alga *Lithophyllum lichenoides* found in belts in the intertidal zone is included in annex I of the "Habitat" directive. This species is well represented along the battered granite and limestone coasts of the Strait of Bonifacio. The oldest and largest belts are found along the cliffs at Bonifacio and in the Lavezzi Islands.

1.23 Like other algae typical of sheltered sites in the infralittoral stage, certain types of *Cystoseira* have become rare because its habitat is suffering from pollution or eutrophication or has been destroyed by coastal management. Overgrazing by sea urchins, whose predators have been partially eliminated by man, also has to be taken into account. The *Cystoseira* are very well represented in the strait and certain species such as *C. Funkii* are seen on rare occasions at near-surface depths (Ballesteros & Pineda, 2003).

Diversity

1.24 The number of species recorded to date in the Strait of Bonifacio is 1,745. Among the 977 species of fauna are 18 mammals, 165 birds, seven reptiles, two amphibians, 187 fish, 11 protochordates, 13 echinoderms, 262 insects, 11 arachnids, six bryozoans, 103 crustaceans, 143 molluscs, seven annelids, 23 cnidarians and 19 spongarians.

1.25 Considering the faunistic taxons as a whole, it should be noted that:

- Twenty-three animal species are of Community significance. Care of this area is particularly important for two amphibians (*Discoglossus sardus* and *Hyla arborea sarda*), the bottlenose dolphin (*Tursiops truncatus*), chiroptera, marine molluscs, the fish *Aphanius fasciatus*, the loggerhead turtle *Caretta caretta*, the gecko *Phyllodactylus europaeus*, the lizards *Podarcis tiliguerta* and *Lacerta bedriagae* and the snake *Coluber viridiflavus*. Among the animal species of Community significance whose capture in natural surroundings and cultivation can be managed, only the red coral *Corallium rubrum*, can be and is being cultivated;

- Seventy-seven taxons are listed in the "Birds" directive (all annexes combined). Among these birds are 16 species nesting in the area (including 10 from annex I), 24 regular migrants, 30 occasional migrants and five accidental migrants;

- The taxons strictly protected under the Berne Convention (annex II) amount to 139, with 70 other species being considered as protected species whose exploitation must be regulated (annex III);

- Three migratory species are in danger of extinction, namely the Audouin's gull *Larus audouinii* and the loggerhead and leatherback turtles *Caretta caretta* and *Demochelys coriacea*, which require strict protection under annex I of the Bonn Convention. Sixty-seven other species (reptiles, mammals and birds) are considered to be in a poor state of conservation under that convention. All these species are also listed under the Berne Convention;

- Thirty-seven rare species are listed in the three annexes of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Washington Convention), for example the peregrine falcon *Falco peregrinus*, the loggerhead turtle *Caretta caretta*, the bottlenose dolphin *Tursiops truncates*, and Hermann's Tortoise (*Testudo hermanii*);

- Thirty-three species are identified as endangered or threatened under the Barcelona Protocol concerning specially protected areas of Mediterranean importance (SPAMI) (annex II) and 14 as requiring control over their exploitation. These species are also listed in the annexes to the Berne Convention. Among the exploited species, we note two large fish: the swordfish *Xiphias gladius* and the red tuna *Thunnus thynnus*;

- There are 148 wildlife taxons protected at national level, of which the great majority comprises birds (121 species). Nineteen of these nest in the Strait of Bonifacio area. Thirteen mammals present are protected at national level: seven cetaceans, four bats, the hedgehog *Ericeanus europeus italicus* and the weasel *Mustella nivalis corsicana*. Also protected are four land reptiles, two amphibians, two marine turtles and one fish, namely the Mediterranean shad (*Alosa fallax nilotica).* Among the marine species the needle-spined sea urchin *Centrostephanus longispinus,* the Mediterranean slipper lobster *Scyllarides latus*, the pen shell *Pinna nobilis* and the limpet *Patella ferruginea* are protected;

- In the context of the International Union for Conservation of Nature (IUCN) Red List, the leatherback turtle *Demochelys coriacea*, observed only a few times in the past 50 years, is classified as critically endangered and four species, the fin whale *Balaenoptera physalus*, the loggerhead turtle *Caretta caretta*, the dusky grouper *Epinephelus marginatus* and the common seabream *Pagrus pagrus*, as endangered. Nine species are considered vulnerable, i.e. as facing a high risk of extinction in the wild. These include the gecko *Phyllodactus europaeus*, the long-fingered bat *Myotis capaccini* and certain threatened cartilaginous fish: the great white shark *Carcharodon carcharias*, the basking shark *Cetorhinus maximus*, the manta ray *Mobula mobular*, the liver-oil shark *Galeorhinus galeus*, and the angel shark *Squatina squatina*. Lastly, the status of 161 species is considered to be of concern (10 mammals, 143 birds, one amphibian, two reptiles and four fish);

- Seventy species feature in the red lists of the French Natural History Museum in Paris. The endangered species number 13 including the loggerhead turtle *Caretta caretta* and the Mediterranean slipper lobster *Scyllarides latus*. The following are considered to be vulnerable in France: the pen shell *Pinna nobilis,* the limpet *Patella ferruginea*, the brown meagre *Sciaena umbra* and the nursehound *Scyliorhinus stellaris*.

1.26 Among the floral taxons:

- Eight are included in annex I of the Berne Convention, including *Silene velutina* and *Posidonia oceanica*;

- Five algae are also included in SPAMI Annex III;

- Fifteen plant species are protected at national level, including 12 terrestrial species. The marine species include *Posidonia oceanica* and another marine phanerogam, namely the seagrass *Cymodocea nodosa*, which is also well represented in the Strait of Bonifacio;

- Four species are considered to be vulnerable by the IUCN: *Helicodiceros muscivorus, Drimia fugax, Nananthea perpusilla* and *Silene velutina*. They all enjoy protected status.

1.27 The diversity and complementarity found among the various littoral ecological compartments can be considered a major asset for this area. There are around fifty elementary habitats, with ecosystems ranging from coastal scrub to salt grass and from lagoons to the depths of the circalittoral zone.

1.28 The coastal, littoral and salty habitats, such as the mobile and fixed dunes of the Mediterranean shores where *Crucianella maritima* is found, and halophilous scrub, conceal all the floral taxons of major heritage importance.

1.29 At sea, the major "reefs" type of habitat brings together rocky habitats of the mediolitteral zone as well as all the fauna and flora of the intertidal zone. Biocoenoses of photophilous algae and coral are also integrated into this major type of habitat. All the types of gorgonia, cystoseira and the large bryozoans are also important elements of the area's rich heritage and require special protection against the impact of underwater activities and of global changes relating to rise in sea temperature.

Productivity

1.30 The large expanse of sea and strong currents, as well as the richness of the fish stocks, widely recognized by Mediterranean ichthyologists, give this protected marine area a major role in the dispersion of larvae throughout the western Mediterranean. That role is essential for the threatened species in a good state of preservation in the Strait of Bonifacio, such as the dusky grouper *Epinephelus marginatus*, but also for other species of importance in the heritage and fishing contexts.

Spawning or breeding grounds

1.31 The waters of the lagoon habitats (Pisciu Cane, Testarella and Ventilègne), rich in nutritive salts carried from the drainage basins across which they pass, stimulate the growth of lagoon phytoplankton. These lagoons nourish and shelter many marine species. The dense plant growth, adapted to the complementary influences of sea and land, is home to many aquatic and avian species. These biotopes provide ideal shelter for nesting and reproduction and are an important source of food. Yellow-legged gulls, grey herons, little egrets and even young ospreys are regularly observed there. The mosaic of vegetation and the presence of smooth stretches of standing water make it possible for certain wintering or migrating anatidae to come here on an irregular basis (mallard ducks, pintails, Northern shovellers, common teals and garganeys ...), as well as migrating shorebirds (common snipes, jack snipes, sandpipers, black-tailed godwits, little stints). Mallards, moorhens and water rails occasionally nest on Testarella lake. As mentioned above, the Posidonia beds play a major role in the area's productivity and provide areas for breeding, spawning and the raising of young.

Fragility

1.32 Many habitats are important, in terms of heritage, by virtue of their representativity in the Mediterranean context and the direct and indirect threats they face.

1.33 For 15,000 years man has been exerting his influence as an integral part of the ecological system of the Strait of Bonifacio. Man-induced factors (sample-captures, alteration or destruction of habitat, disturbances, introduction of species...), whether old or more recent, direct or indirect, are exerting an increasing impact as methods of navigation and sampling techniques evolve. Those factors are responsible for the disappearance of the monk seal (*Monachus monachus*) and the reduced populations of the limpet *Patella ferruginea*, a process which has been affecting that mollusc since prehistoric times, and the grouper *Epinephelus marginatus* for 30 years.

1.34 It is also quite clear that climate change, especially the increases in air and sea temperatures, as well as fishing activities across the Mediterranean, is exerting an ever increasing influence on the overall functioning of the Strait of Bonifacio.

1.35 Increase in seawater temperature triggers significant changes in the ways that pelagic communities (tropicalization of plankton production) or benthic communities function in the north-west Mediterranean. It benefits tropical species, such as the yellowmouth barracuda *Sphyraena viridensis,* to the detriment of certain Mediterranean species that cannot support the rise in temperature. In this regard, the spectacular rise in mortality rates since 1998 among gorgonias is cause for concern.

1.36 Man-induced activities also generate cascade effects. Such occurrences may be confined to the territory of a protected marine area or affect its periphery. Thus, the destabilization of *Posidonia oceanica* owing to increased numbers of unregulated anchorages or sediment erosion is leading to a reduction in the populations of species associated with this habitat, in particular the pen shell *Pinna nobilis*. Failure to manage household waste and the existence of open-air public landfill sites for over 30 years have brought about an increase in the population of yellow-legged gulls (*Larus cachinnans*) and a serious deterioration in the micro-insular systems of southern Corsica (destabilization of vegetation by the action of nitro-phosphates on floristic corteges, and inter-species competition between the very rare Audouin's gull (*Larus audouinii*) and the yellow-legged gull, to the latter's advantage).

1.37 Waste from purification plants undergoing repair is also likely to affect the existing habitats. Large-scale recreational use of the location also produces effluent and larger waste products, particularly plastic bags, which become mixed in with schools of jellyfish and are then consumed by loggerhead turtles and bottlenose dolphins, causing obstruction of their digestive systems.

1.38 The habitat known as "silty sands in sheltered areas (Mediterranean) biocoenosis" in the large creeks and shallow bays of Lavezzi, Cavallu, Ventilegne, Santa Manza, Porto Novo and Rondinara remain under the influence of the nutrients and pollutants which arrive from the drainage basins, bringing the risk of hypoxia or anoxia owing to the low water renewal rate. This habitat can also prove to be a good indicator of anthropization level in the drainage basins themselves.

1.39 The habitats of submerged or semi-submerged sea caves are extremely sensitive to the impact of man. The Sdragonato cave and undersea caves used in diving are areas of particular sensitivity.

1.40 In France, the belts of *Lithophyllum lichenoides* have receded in polluted areas. The situation of the algal limestone belts, like that of L. Lichenoides at the mediolittoral level, and their porous structure, makes these formations highly vulnerable to surface pollution by effluents, oily film on the water and other agents. The loss of even a little salinity in the water prevents them from forming. There could also be a threat from phosphate ions and detergents (LABOREL, unpublished, in Boudouresque *et al*., 1990). A belt appears to take an exceptionally long time to build up (several centuries) and it is imperative to protect the existing ones (Boudouresque *et al*., 1990).

2 Scientific and educational criteria

2.1 Baseline for monitoring studies

2.1.1 In considering the importance of preserving the habitats and meta-populations mentioned above, their vulnerability must be assessed with caution. Long-term observation of reliable scientific indicators will help distinguish between natural cycles and genuine man-induced disturbances.

2.1.2 This area can also play a role in the transfer of ecological engineering in relation to sustainable resource management. The length of time that protection measures have been in place in southern Corsica, differences in regulations and hence in the pressures from fishing activities inside this protected area in Corsica and in Sardinia, the conservation of reference areas (areas of strict protection) and finally the long-standing acquisition of reliable scientific data are factors which can be used in establishing sustainable development models for Mediterranean coastal areas.

ANNEX 3

VULNERABILITY TO DAMAGE BY INTERNATIONAL SHIPPING ACTIVITIES*

1 Natural factors

1.1 Hydrographical

1.1.1 The hydrographical conditions in the Strait of Bonifacio are strongly influenced by the region's landscape and climate. In particular, there are frequent very strong currents (3-4 knots) largely determined by the winds. These strong currents have already, on two occasions, caused the South Lavezzi signalling buoy to shift. They derive from cyclonic and anti-cyclonic conditions and are responsible for surface changes among the Tyrrhenian and Algero-Provencal water masses. Movements originating in the Atlantic and Tyrrhenian systems, being less subject to the vagaries of the weather where water masses of permanent density are concerned, also affect the bathymetric layer between 50 and 100 m. This situation explains (Romano, 2004), at least for surface waters, the existence of strong currents, especially as the strait between Corsica and Sardinia is characterized by a rise in depths.

1.1.2 The tides are semidiurnal with diurnal inequality, with a tidal range of less than 0.5 m.

1.2 Meteorological

1.2.1 Having a sub-humid Mediterranean climate, with temperate winters, the Strait of Bonifacio region is also particularly windy. Data recorded by the Pertusato semaphore station on the Bonifacio plateau show that the wind blows on 328 days per year (171 days of wind >16 m/s or 57.6 km/h). There is high frequency of winds of a speed faster than 8 m/s, almost exclusively from two directions: west (280°) and east (80°).

1.2.2 Given the hydrographical, topographical and meteorological conditions (shoals, strong winds and currents), the major risk to the Strait of Bonifacio area relates to accidental pollution from all forms of navigation in the Strait itself (several merchant ships have sunk in the past 30 years), and also on its periphery. The risk of collision with a bottlenose dolphin is also a threat identified by the Pelagos sanctuary for Mediterranean marine mammals.

2 Vessel Traffic characteristics

2.1 In 2009, Bonifacio Trafic (the Franco-Italian service) received 2,984 mandatory ship reports. Among them were 180 abnormalities (breaches of IMO Assembly resolution A.766(18)) of which 108 were for transport of dangerous goods, amounting to 147,013 tonnes (141,867 tonnes in 2008). The offences included 55 cases of sending a mandatory report after entering the system, 19 relating to ships found to be following a route that was not recommended (down by 33% on 2008) and 108 relating to ships carrying dangerous goods (+9%).

* The text in this annex is taken from the submission by France and Italy contained in documents MEPC 61/9 and MEPC 61/INF.26.

2.2 In 2009 a total of 157 ships carrying dangerous goods passed through the Strait of Bonifacio:

- 70 container ships;
- 61 ro-ro ships;
- 13 bulk carriers;
- five chemical carriers;
- three oil tankers;
- three gas tankers;
- two ferries.

2.3 The 2,984 vessels which navigated in the Strait of Bonifacio in 2009 were distributed as follows:

European Union

Italy 831; France 371; Malta 251; Netherlands 152; Portugal 78; United Kingdom 67; Cyprus 50.

Non-EU

Turkey 100; Antigua 183; Bahamas 165; Panama 143.

2.4 The status that the Strait of Bonifacio enjoys as an international strait and the provisions of IMO resolution A.766(18) contribute to making it, although it is apart from the major shipping routes (3,000 ships per year) and its dangerousness is well known, an area in which the coastal authorities are confined to the role of spectator, waiting for a maritime accident to happen.

ANNEX 4

ASSOCIATED PROTECTIVE MEASURE FOR THE STRAIT OF BONIFACIO PSSA

Description of the Area

The Strait of Bonifacio separates the Italian island of Sardinia from the French island of Corsica; they are only 11 km apart. The Strait takes its name from Bonifacio, the southernmost town of Corsica. It enables passage from the Sea of Sardinia in the west to the Tyrrhenian Sea in the east. Its width varies from eight to ten nautical miles and its maximum depth is 100 m.

At the eastern end lies the Italian archipelago of La Maddalena, and Cavallo island and the Lavezzi Islands, belonging to France. This is a sensitive area for navigation. In the northern part of the Strait, ships have to avoid the reefs of Perduto and the Lavezzi Islands, while in the south lie the Sardinian islands of Razzoli and Persa. Navigation is possible along a narrow three-mile wide stretch and ships are asked to take a recommended route wide just over one mile.

Recommendation on navigation through the Strait of Bonifacio*

1 Use of ships' routeing

Vessels navigating in the Strait shall exercise full diligence and regard for the requirements of the existing recommended two-way route in the Strait of Bonifacio. Due to the narrowness of the Strait, masters of vessels shall ensure that an appropriate monitoring of the ship's route is done on board in order to avoid groundings and collisions.

2 Ship reporting and navigation information

Ships of 300 GT and over entering the Strait shall participate in the mandatory ship reporting system (BONIFREP) established by the competent authorities as described in IMO's publication on Ships' Routeing (Section G I/8).

3 Pilotage

Masters of vessels passing through the Strait are recommended to avail themselves of the services of a qualified pilot.

3.1 Categories of ships concerned

Ships for which the IMO Assembly recommends in its resolution A.766(18) of 17 November 1993 to Governments to prohibit or at least strongly discourage the transit in the Strait of Bonifacio: laden oil tankers and ships carrying dangerous chemicals or substances in bulk, as listed in the annex to resolution MEPC.49(31) adopted on 4 July 1991.

* The text on this APM is directly taken from document NAV 57/15, annex 2.

3.2 Description of the applicable procedure for requesting a pilot

Vessels wishing to order a Bonifacio Strait pilot should, as much as possible, send by e-mail or by fax the following information to the service named "Bonifacio Strait pilotage":

- ship's name and call sign;
- type of vessel and gross tonnage;
- draught;
- destination port/name and address of the local agent;
- boarding position and ETA.

24 hours prior to arrival, vessels should inform or confirm their ETA to the head office of the Bonifacio Strait pilotage service.

Once on Bonifacio Strait road, vessels should confirm their ETA 2 hours prior to arrival calling "Bonifacio Traffic" on VHF 10.

3.3 Description of the pilotage service

The pilotage area covers the Strait and its approaches. Usually the vessels entering the Strait board their pilots out of the "BONIFREP" zone.

The boarding positions are the following (WGS 84):

- Eastern boarding position: 41° 24′.80 N 009° 30′.00 E;
- Western boarding position: 41° 17′.28 N 008° 58′.50 E.

4.1 Relevant rules and regulations in force in the area

The Strait of Bonifacio falls into the category of "Straits used for international navigation" regulated by the "United Nations Convention on the Law of the Sea" (UNCLOS) better known as the Montego Bay Convention (10 December 1982).

The maritime traffic is represented mainly by merchant ships that cross the Strait along east-west direction (several dozens of ships per day). Considering the traffic that occurs in the direction north-south, it concerns mainly passenger ships (approximately ten daily connections) is very intense and growing during the summer, especially between Bonifacio (Corsica) and Santa Teresa di Gallura (Sardinia). In addition, there are about 5,000 pleasure craft crossing this area during the summer season.

Regulation applied to navigation on the Strait of Bonifacio is based on resolution A.766(18) adopted in 1993 by IMO. This text urges ships carrying hazardous materials to avoid along this seaway. It has been complemented by circulars of IMO SN/Circ.198 and 201 (26 May 1998) concerning "routeing measures other than traffic separation schemes" and "mandatory ship reporting systems" applicable to the Bouches of Bonifacio from 1 December 1998 at 00:00 a.m.

France and Italy have implemented these provisions through the establishment of the rule "Bonifacio Trafic", that represents a more restrictive device; inasmuch as the French and Italian ships carrying hazardous materials are banned entirely from transit of the "Bouches of Bonifacio".

For this reason, in 1993, both Italy, with the Decree of 26 February 1993 of the Italian Ministry of Merchant Marine, and France, by ordinance of 15 February of the Prefecture of Toulon, have banned the transit of tankers flying Italian or French flag that carrying hydrocarbons and other hazardous and noxious substances, as defined by international conventions in force in both countries[1].

On the basis of these decrees, the prohibition of navigation in the Strait does not apply to merchant ships flying flags of third countries and to Italian and French ships empty or those that carry different cargoes, which, even if properly ballasted, however represent an environmental risk factor in case of accident for the presence of fuel in their tanks. This ban has led to a reduction of marine traffic, but at the same time, it leaves the possible passage of ships flying other flags and often these ships are in unsafe conditions (especially the lack of double hull or similar technologies) and poor maintenance.

Moreover, the arrêté n° 84/98 of 3 November 1998 of the Prefecture Maritime of Toulon[2] (amended by the arrêté 56/2003 of the Prefecture Maritime of Toulon) disciplines the navigation in the Strait of Bonifacio to prevent accidental episodes of marine pollution.

It institutes areas of caution at the extreme of bearings recommended double sense of movement, and the creation of the system of monitoring of ships from a radius of 20 miles from the Strait of Bonifacio. In parallel, the Decree of Italian Ministry of Transport and Navigation on the organization of traffic in the Bonifacio's Strait establishes the same procedures contained in the Decree n° 84/98.

Furthermore, a technical agreement between Italy and France to implement the reporting system of the ships in the Bouches of Bonifacio (Bonifacio Trafic) was signed in Rome on 3 June 1999.

Moreover, in order to restrict dangerous maritime traffic through Bonifacio Strait, it was drawn up in Italy the "*Accordo volontario per l'attuazione di una serie di interventi finalizzati al conseguimento di più elevati standard di sicurezza ambientale in materia di trasporti marittimi di sostanze pericolose*" (Voluntary agreement to carrying out a series of interventions aimed at the achievement of higher security environmental standards concerning the maritime transport of dangerous substances), signed by the Italian Ministry of the Environment, Land and Sea, by the Italian Ministry of Transportation and Navigation, by Confindustria, by Assoporti, by some environmental organizations and by unions (Rome, 1 June 2001).

Inter alia, the sixth article of the agreement foresaw the commitment by companies to use from 1 July 2001 ships carrying dangerous substances listed in Annexes I and II of MARPOL 73/78 solely based on contracts that explicitly exclude the transit in the Strait of Bonifacio, against a number of other compensations by government, including the engagement in an international venue for the encouragement of a PSSA in the Strait of Bonifacio.

---

1 Particularly, the Decree n°1/93 (signed in Toulon on 15 February 1993) of the Prefecture maritime de la Mediterranée, applicable only to French ships, prohibits in the Bouches of Bonifacio the circulation of tankers that carrying hydrocarbon and ships carrying hazardous or toxic materials. The annex of the Decree lists the hydrocarbons and the substances in question, in reference to the MARPOL Convention. At the same time, the Decree of the Italian merchant marine of 26 February 1993 prohibits the movement of Italian tanker carrying hydrocarbon and ships carrying hazardous or toxic materials.

2 Arrêté Prefectoral n. 84/94 del 3 novembre 1998 della Prefettura Marittima di Tolone – "Réglementant la navigation dans le Strait of Bonifacio en vue de prévenir les pollution marines accidentelles".

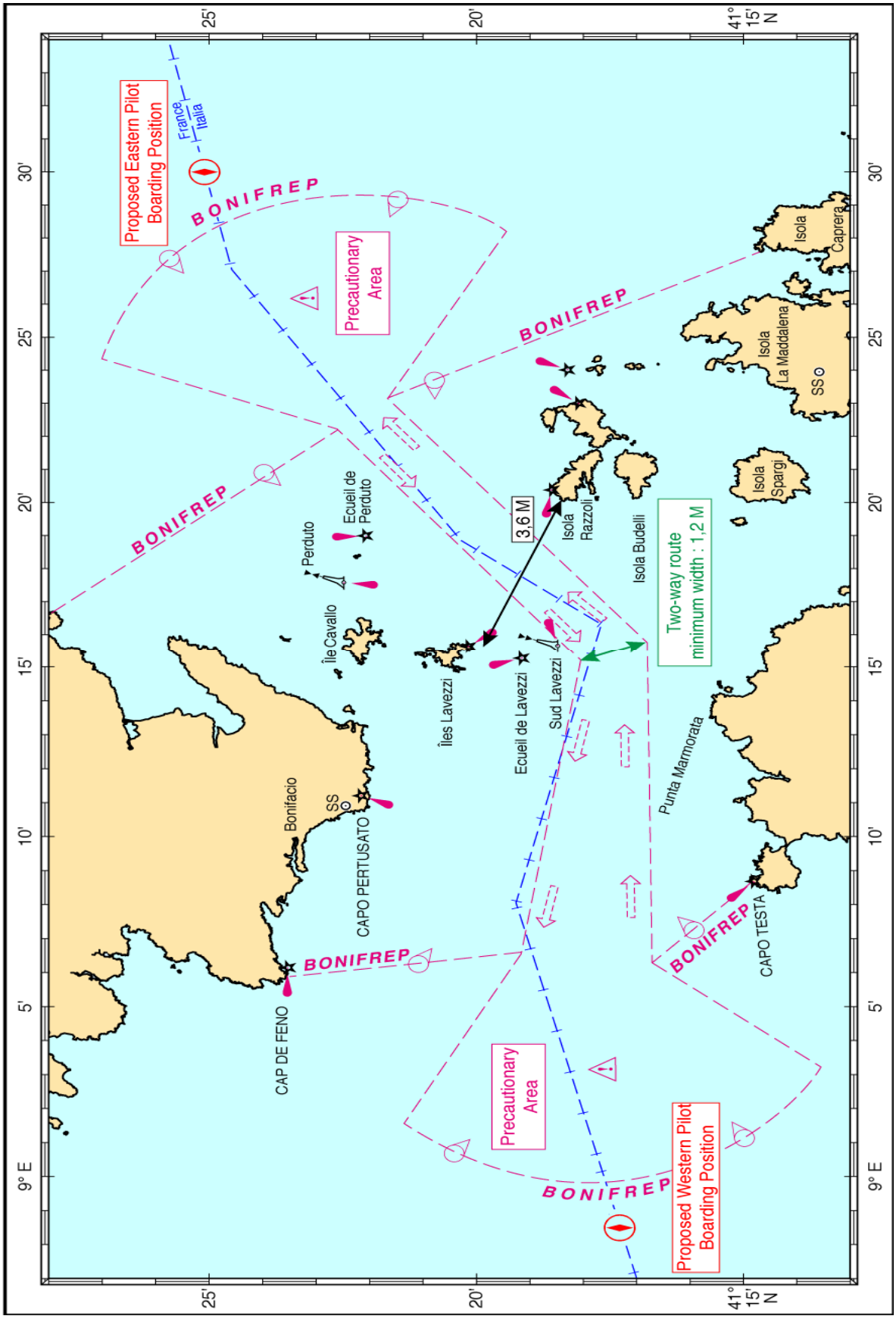
Particularly, the sixth article of the Voluntary Agreement provides that:

> "6.1 – Confindustria and the interested industrial sectors undertake to promote immediately the insertion in the charter party for the use of ships carrying dangerous substances listed in Annexes I and II of MARPOL 73/78 of clauses that expressly exclude the transit in the Strait of Bonifacio.
>
> 6.2 – From 1 July 2001, Confindustria and the interested industrial sectors, also on behalf of firms and associated companies, undertake to use ships carrying dangerous substances listed in Annexes I and II of MARPOL 73/78 solely based on contracts that explicitly exclude the transit in the Strait of Bonifacio
>
> 6.3 – The government engages to act in all EU and international venues to achieve the elimination of dangerous substances traffic in the Strait of Bonifacio, starting by defining by IMO the Strait of Bonifacio as Particularly Sensitive Sea Area (PSSA). Moreover, the government engages to promote every type of voluntary adherence of the EU member and candidate states to the above-mentioned elimination of dangerous substances traffic in the Strait of Bonifacio."

In the end, by the Decree of the Italian Ministry of Infrastructures and Transport of 29 July 2008 "definition of the control of maritime traffic area in the Bouches of Bonifacio and activation of the relevant control centre at the Harbour Office of La Maddalena", was activated the centre VTS (Vessel Traffic Services) of the Bouches of Bonifacio, whose international name is "Bonifacio Trafic" and whose headquarters is located at the area Guardia Vecchia, under the authority of the Harbour Office – Coast Guard of La Maddalena.

Existing routeing measures and mandatory systems are set out in the chartlet, below.

CHART OF THE EXISTING ROUTEING MEASURES AND MANDATORY SHIP REPORTING SYSTEM



***

ANNEX 23

STATEMENT BY THE DELEGATION OF SINGAPORE ON PROCEDURES IN ASSESSING PSSA APPLICATIONS

This delegation would like to express appreciation to France and Italy for their constructive efforts in addressing our concerns. We further commend the efforts of the Technical Group in examining the PSSA applications to ensure that all relevant criteria were satisfied.

We note that some procedures in assessing the Strait of Bonifacio PSSA application did not follow the sequence as set out in the Revised Guidelines for the Identification and Designation of PSSAs. There is a logic to the sequence provided in the revised guidelines for proper consideration of PSSA applications. This sequence should be strictly adhered to in order to ensure the integrity of the process and to give proper effect to the guidelines.

This delegation would like to emphasize the principle that all PSSA applications must follow the guidelines and procedures that have been adopted by the IMO.

We would also like to state for the record that the procedures in assessing the Strait of Bonifacio PSSA application should not be regarded as a precedent for future PSSA applications.

***

ANNEX 24

RESOLUTION MEPC.205(62)

Adopted on 15 July 2011

2011 GUIDELINES AND SPECIFICATIONS FOR ADD-ON EQUIPMENT FOR UPGRADING RESOLUTION MEPC.60(33)-COMPLIANT OIL FILTERING EQUIPMENT

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING resolution MEPC.107(49), adopted on 18 July 2003, by which the Marine Environment Protection Committee adopted, at its forty-ninth session, the current revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships and invited Governments to adopt and apply them to the maximum possible extent which they found reasonable and practicable and to report to the Organization the results of such application,

NOTING FURTHER the provisions of regulation 14.6 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL), in which reference is made to the above-mentioned revised Guidelines and Specifications,

HAVING CONSIDERED, at its sixty-second session, the Guidelines and Specifications for add-on equipment for upgrading resolution MEPC.60(33)-compliant oil filtering equipment, developed by the Sub-Committee on Ship Design and Equipment,

1. ADOPTS the 2011 Guidelines and Specifications for add-on equipment for upgrading resolution MEPC.60(33)-compliant oil filtering equipment, the text of which is set out in the annex to this resolution;

2. INVITES Governments to:

   (a) consider the Guidelines and Specifications and encourage their application so that add-on equipment voluntarily installed on board ships to upgrade existing oil filtering equipment compliant with the provisions of the revised Guidelines and Specifications for Pollution Prevention Equipment for Machinery Space Bilges of Ships adopted by resolution MEPC.60(33) meets these Guidelines and Specifications for add-on equipment; and

   (b) provide the Organization with information on experience gained from their application and, in particular, on successful testing of equipment against the Specifications;

3. REQUESTS the Secretariat, on the basis of information received, to maintain and update a list of approved equipment and to make it available through the Global Integrated Shipping Information System (GISIS);

4. FURTHER INVITES Governments to issue an appropriate "Certificate of type approval" as referred to in paragraph 4.2.1 of the Specifications and to recognize such certificates issued under the authority of other Governments as having the same validity as certificates issued by them.

ANNEX

2011 GUIDELINES AND SPECIFICATIONS FOR ADD-ON EQUIPMENT FOR UP-GRADING RESOLUTION MEPC.60(33)-COMPLIANT OIL FILTERING EQUIPMENT

TABLE OF CONTENTS

1 INTRODUCTION

1.1 General

1.1.1 In 2003, the Marine Environment Protection Committee adopted the Revised guidelines and specifications for pollution prevention equipment for machinery space bilges of ships (resolution MEPC.107(49)). The main purpose of this revision of the specifications of oil filtering equipment was to improve their capability of treating emulsified oil.

1.1.2 The present Guidelines have been developed to provide further assistance for upgrading systems installed on board ships prior to 1 January 2005, and of which oil filtering equipment was approved under resolution MEPC.60(33).

1.1.3 It has been recognized that the best measure to prevent pollution resulting from oily bilge water is installation of Integrated Bilge Water Treatment System (IBTS) in accordance with MEPC.1/Circ.642 as may be amended. IBTS prevents generation of oily bilge water. Although it may not be easy or practicable to fit complete IBTS on existing ships, pre-cleaning of oily bilge water, e.g., provision of a primary tank between bilge wells and bilge tank, should be seriously considered in order to remove impurities in bilge through surfacing or sedimentation, which is an effective way of preventing clogging of bilge separators.

1.2 Scope

These guidelines apply to add-on post-treatment equipment for resolution MEPC.60(33)-compliant oil filtering equipment in order to improve their capabilities of treating emulsified oil so that emulsion-breaking performance of oily bilge separators to be achieved by installation of add-on equipment could be equivalent to that of resolution MEPC.107(49)-compliant equipment.

1.3 Up–grading options

Equipment for upgrading existing oil filtering equipment are the following two types:

.1 equipment which could upgrade specific make of oil filtering equipment. Such equipment should be tested in accordance with Part 1 of the test specifications contained in the annex hereto, connected to a resolution MEPC.60(33) oil filtering equipment and type approved for use in conjunction with that specific make of oil filtering equipment tested, subject to: 1) environmental testing contained in Part 3 of the annex to resolution MEPC.107(49) and 2) the limiting conditions of the certification of the upgraded equipment.

.2 equipment which could upgrade any make of resolution MEPC.60(33)-compliant oil filtering equipment. Such equipment should be tested in accordance with Part 2 of the test specifications contained in the annex hereto and type approved for use in conjunction with any make of oil filtering equipment, subject to: 1) environmental testing contained in Part 3 of the annex to resolution MEPC.107(49) and 2) the limiting conditions of the certification of the upgraded equipment.

2 DEFINITIONS

Unless otherwise specified, definitions of the terms used in the Revised guidelines and specifications for pollution prevention equipment for machinery space bilges of ships (resolution MEPC.107(49)) apply to these Guidelines.

3 TECHNICAL SPECIFICATIONS

3.1 The add-on equipment should be strongly constructed and suitable for shipboard use, bearing in mind its intended location on the ship.

3.2 It should, if intended to be fitted in locations where flammable atmospheres may be present, comply with the relevant safety regulations for such spaces. Any electrical equipment which forms part of the add-on equipment should be based in a non-hazardous area, or should be certified by the Administration as safe for use in a hazardous area. Any moving parts which are fitted in hazardous areas should be arranged so as to avoid the formation of static electricity.

3.3 The add-on equipment should be so designed that it functions automatically in conjunction with the existing equipment.

3.4 The add-on equipment should require the minimum of attention to bring it into operation. In the case of equipment used for engine room bilges, there should be no need for any adjustment to valves and other equipment to bring the add-on equipment into operation. The equipment should be capable of operating for at least 24 hours of normal duty without attention.

3.5 It should be understood that the complete type approval with the test fluid C should be performed without interruption to attend, clean or maintain the bilge water separator. This test would be regarded as a simulation of the 24 hours of unattended operation not requiring any crew attention.

3.6 It should be understood that the 15 ppm bilge separator should operate continuously and automatically without any interruptions. It should be assured that back flushing if performed during the certification test does not cause:

.1 dilution of the test fluid C, or

.2 dilution of the test sample sent to the laboratory for analysis.

3.7 If input flow of test fluid C is interrupted during the performance of the test it should be assured that the total quantities of test fluid C processed automatically are not less than the nominal flow of the tested equipment multiplied by the specified test duration of 150 minutes (2.5 hours). While all the time, the tested equipment operates continuously and automatically without human intervention.

3.8 The continuous and automatic operation should apply to the performance tests with the test fluid C according to the test result diagrams in the appendix to appendix 1 of resolution MEPC.107(49) as it relates to test fluid C. However, if due to the separation process any interruption in feeding the test fluid with nominal flow rate, e.g., for back flushing, is deemed necessary, the time for these interruptions should be added to the required time of the test step which was interrupted during the performance test. While all the time, the tested equipment operates continuously and automatically without human intervention.

3.9 All working parts of the add-on equipment which are liable to wear or to damage should be easily accessible for maintenance.

4 SPECIFICATION FOR TYPE APPROVAL TESTING OF ADD-ON EQUIPMENT

4.1 Testing requirements

4.1.1 The production model of add-on equipment, for which the approval will apply, should be identical to the equipment, type-tested in accordance with the performance and test specifications contained in part 1 or 2 of the annex to these Guidelines. The equipment should also be type-tested in accordance with the specifications for environmental testing contained in part 3 of the annex to resolution MEPC.107(49).

4.1.2 Where a range of add-on equipment of the same design, but of different capacities, requires certification in accordance with these specifications, the Administration may accept tests in two capacities within the range, in lieu of tests on every size, providing that the two tests actually performed are from the lowest quarter and highest quarter of the range.

4.2 Approval and certification procedures

Add-on equipment which in every respect fulfils the provisions of these Guidelines may be approved by the Administration for fitting on board ships. The approval should take the form of a certificate of type approval specifying the main particulars of the apparatus and any limiting conditions on its usage necessary to ensure its proper performance. Such certificate should be issued in the format shown in part 3 of the annex.

5 INSTALLATION REQUIREMENTS

5.1 Before installation of add-on equipment, it is important to ascertain that the existing oil filtering equipment is well maintained and in good working condition and that the rated capacity match that of add-on equipment.

5.2 The add-on equipment should be installed between the existing oil filtering equipment and the sampling point provided for inspection purposes on board ship.

5.3 The add-on equipment should be fitted with a permanently attached plate giving any operational or installation limits considered necessary by the manufacturer or by the Administration.

5.4 A vessel fitted with an add-on equipment should, at all times, have on board a copy of the operating and maintenance manuals.

5.5 For inspection purposes on board ship, a sampling point should be provided in a vertical section of the water effluent piping as close as is practicable to the 15 ppm bilge separator and add-on equipment outlet. Re-circulating facilities should be provided, after and adjacent to the overboard outlet of the stopping device to enable the 15 ppm bilge separator system, including the 15 ppm bilge alarm and the automatic stopping device where fitted, to be tested with the overboard discharge closed.

5.6 Where fitted, the bilge alarm should be approved according to resolution MEPC.107(49).

ANNEX

TEST AND PERFORMANCE SPECIFICATIONS FOR TYPE APPROVAL OF ADD-ON EQUIPMENT FOR UPGRADING RESOLUTION MEPC.60(33)-COMPLIANT OIL FILTERING EQUIPMENT

PART 1

ADD-ON EQUIPMENT TO BE FITTED TO SPECIFIC OIL FILTERING EQUIPMENT APPROVED UNDER RESOLUTION MEPC.60(33)

1 General

1.1 These test and performance specifications for type approval relate to add-on equipment for oil filtering equipment type approved in accordance with resolution MEPC.60(33) (hereinafter referred to as "oil filtering equipment"). In addition, the electrical and electronic systems of the add-on equipment should be tested in accordance with the specifications for environmental testing contained in part 3 of resolution MEPC.107(49).

1.2 The test of add-on equipment should be carried out in combination with oil filtering equipment to which add-on equipment being tested is intended to be added on.

2 Test specifications

2.1 These specifications relate to add-on equipment for oil filtering equipment. A set of oil filtering equipment and add-on equipment should be capable of producing an effluent for discharge to the sea containing not more than 15 ppm of oil, when 3,000 ppm oil in water emulsions are fed.

2.2 The test rig must be so constructed as to include not only oil filtering equipment and add-on equipment, but also the pumps, valves, pipes and fittings as shown in figure 1:

.1 for the testing of oil filtering equipment having no integral pump, the centrifugal pump "A" (figure 1) is used to feed oil filtering equipment with valves 2 and 4 open, and valve 3 closed. The rate of flow from the centrifugal pump "A" is matched to the design throughput of oil filtering equipment by adjustment of the centrifugal pump's discharge valve;

.2 a centrifugal pump "B" should be fitted to re-circulate the test fluid "C" in the tank to ensure that the test fluid "C" is maintained in a stable condition throughout the testing;

.3 to ensure a good mix of the test fluid and the water, a conditioning pipe as specified in paragraph 2.4 should be fitted immediately before oil filtering equipment;

.4 other valves, flow meters and sample points should be fitted to the test rig as shown in figure 1; and

.5 the pipe work should be designed for a maximum liquid velocity of 3 metres/second.

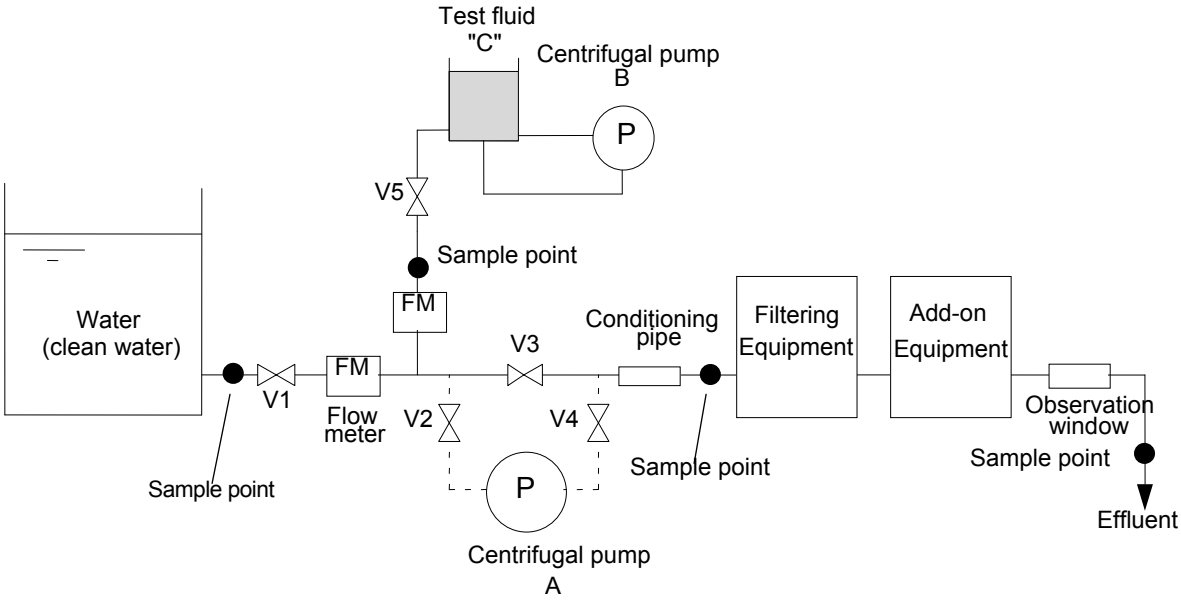


Figure 1 – Test rig

2.3 Tests should be performed using test fluid "C" as defined in resolution MEPC.107(49).

2.4 If oil filtering equipment includes an integrated feed pump, oil filtering equipment and add-on equipment should be tested with that pump supplying the required quantity of test fluid and water to oil filtering equipment at its rated capacity. If oil filtering equipment is to be fed by the ship's pumps, then the unit will be tested by supplying the required quantity of test fluid and water mixture to the inlet of a centrifugal pump operating at not less than 1,000 rpm (see dotted line in figure 1). This pump should have a delivery capacity of not less than 1.1 times the rated capacity of oil filtering equipment at the delivery pressure required for the test. If a centrifugal pump is used, the excess pump capacity should be controlled by a throttle valve on the discharge side of the pump. In all cases, to ensure uniform conditions, the piping arrangements immediately prior to oil filtering equipment should be such that the influent to oil filtering equipment should have a Reynolds number of not less than 10,000 as calculated in fresh water, a liquid velocity of not less than 1 metre per second and the length of the supply pipe from the point of test fluid injection to oil filtering equipment should have a length not less than 20 times its diameter. A mixture inlet sampling point and a thermometer pocket should be provided near oil filtering equipment inlet and an outlet sampling point and observation window should be provided on the discharge pipe.

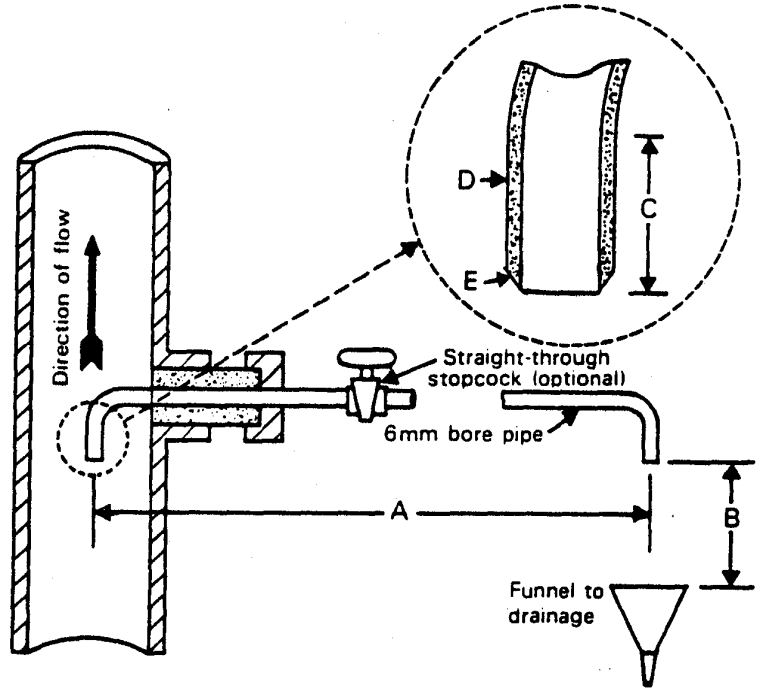


Figure 2 − Diagram of sampling arrangements

A Distance A, not greater than 400 mm
B Distance B, sufficient to insert sampling bottle
C Dimension C, straight length should not be less than 60 mm
D Dimension D, pipe thickness should not be greater than 2 mm
E Detail E, chisel-edged chamfer (30˚)

2.5 In order to approach isokinetic sampling – i.e. the sample enters the sampling pipe at stream velocity – the sampling arrangement should be as shown in figure 2 and, if a cock is fitted, free flow should be effected for at least one minute before any sample is taken. The sampling points should be in pipes running vertically.

2.6 In the case of oil filtering equipment and add-on equipment depending essentially on gravity, the feed to the system of the test water and test fluid mixture should be maintained at a temperature not greater than 40ºC, and heating and cooling coils should be provided where necessary. The water shall have a density of not more than 1.015 at 20ºC. In other forms of separation where the dependence of separation efficiency on temperature is not established, tests should be carried out over a range of influent temperatures representing the normal shipboard operating range of 10ºC to 40ºC or should be taken at a temperature in this range where the separation efficiency is known to be worst.

2.7 In those cases where, for oil filtering equipment and add-on equipment, it is necessary to heat water up to a given temperature and to supply heat to maintain that temperature, the tests should be carried out at the given temperature.

2.8 The tests with test fluid "C" should be carried out as follows:

.1 prior to the test with test fluid "C", oil filtering equipment and add-on equipment should be filled up with water (density of not more than 1.015 at 20ºC);

.2 oil filtering equipment and add-on equipment should be fed with a mixture composed of 6% test fluid "C" and 94% water to have emulsified oil content of 3,000 ppm in the test water until steady conditions have been established. Steady conditions are assumed to be the conditions established after pumping through oil filtering equipment and add-on equipment a quantity of test fluid "C"/water mixture not less than twice the volume of oil filtering and add-on equipment; and

.3 the test should then proceed for 2.5 h. Samples should be taken at the effluent outlet at 50 minutes and 100 minutes after conditioning. At the end of this test, an air cock should be opened on the suction side of the pump and, if necessary, the test fluid "C" and water valves should be slowly closed together, and a sample taken at the effluent discharge as the flow ceases (this point can be checked from the observation window).

2.9 Sampling should be carried out as shown in figure 2 so that the sample taken will suitably represent the fluid issuing from the effluent outlet of add-on equipment.

2.10 Samples should be taken in accordance with ISO 9377–2:2000. The sample is to be extracted on the same day of collection, and be sealed and labelled in the presence of a representative of the national authority and arrangements should be made for analysis as soon as possible and in any case within seven days, provided the samples are being kept between 2ºC and 6ºC at laboratories approved by the Administration.

2.11 The oil content of the samples should be determined in accordance with part 4 of the annex to resolution MEPC.107(49).

2.12 When accurate and reliable oil content meters are fitted at inlet and outlet of add-on equipment, one sample at inlet and outlet taken during each test will be considered sufficient if they verify, to within ±10%, the meter readings noted at the same instant.

PART 2

ADD-ON EQUIPMENT TO BE FITTED TO ANY OIL FILTERING EQUIPMENT

3 General

These test and performance specifications for type approval relate to add-on equipment for any oil filtering equipment type-approved in accordance with resolution MEPC.60(33). In addition, the electrical and electronic systems of the add-on equipment should be tested in accordance with the specifications for environmental testing contained in part 3 of resolution MEPC.107(49).

4 Test specifications

4.1 These specifications relate to add-on equipment. The add-on equipment should be capable of producing an effluent for discharge to the sea containing not more than 15 ppm of oil when 3,000 ppm oil in water emulsions are fed.

4.2 The test rig must be so constructed as to include not only add-on equipment but also the pumps, valves, pipes and fittings as shown in figure 3:

.1 for the testing centrifugal pump "A" (figure 3) is used to feed the add-on equipment. The rate of flow from the centrifugal pump "A" is matched to the design throughput of the add-on equipment by the adjustment of the centrifugal pump's discharge valve;

.2 a centrifugal pump "B" should be fitted to re-circulate the test fluid C in the tank to ensure that the test fluid C is maintained in a stable condition throughput the testing;

.3 to ensure a good mix of the test fluid and the water, a conditioning pipe as specified in paragraph 4.4 should be fitted immediately before add-on equipment;

.4 other valves, flow meters and sample points should be fitted to the test rig as shown in figure 3; and

.5 the pipe work should be designed for a maximum liquid velocity of 3 metres/second.

4.3 Tests should be performed using test fluid "C" as defined in resolution MEPC.107(49).

4.4 The add-on equipment is tested by supplying the required quantity of test fluid and water mixture to the inlet by a centrifugal pump operating at not less than 1,000 rpm. This pump should have a delivery capacity of not less than 1.1 times the rated capacity of add-on equipment at the delivery pressure required for the test. The excess pump capacity should be controlled by a throttle valve on the discharge side of the pump. In all cases, to ensure uniform conditions, the piping arrangements immediately prior to add-on equipment should be such that the influent to add-on equipment should have a Reynolds number of not less than 10,000 as calculated in fresh water, a liquid velocity of not less than 1 metre per second and the length of the supply pipe from the point of test fluid injection to add-on equipment should have a length not less than 20 times its diameter. A mixture inlet sampling point and a thermometer pocket should be provided near add-on equipment inlet and an outlet sampling point and observation window should be provided on the discharge pipe.

4.5 In order to approach isokinetic sampling – i.e. the sample enters the sampling pipe at stream velocity – the sampling arrangement should be as shown in figure 2 and, if a cock is fitted, free flow should be affected for at least one minute before any sample is taken. The sampling points should be in pipes running vertically.

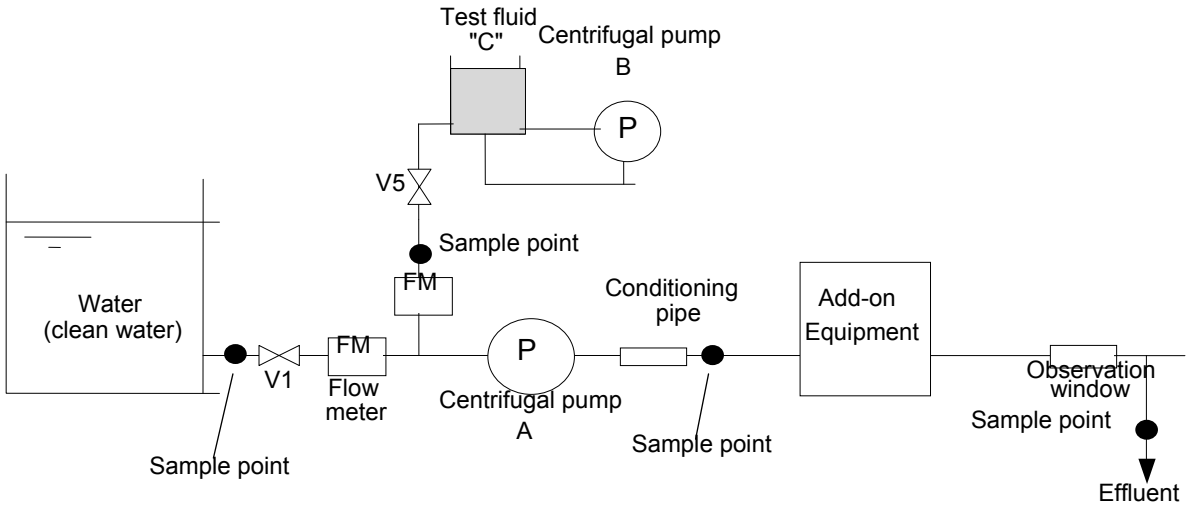


Figure 3 – Test rig

4.6 In the case of add-on equipment depending essentially on gravity, the feed to the add-on equipment of the test water and test fluid mixture should be maintained at a temperature not greater than 40ºC, and heating and cooling coils should be provided where necessary. The water should have a density of not more than 1.015 at 20ºC. In other forms of separation where the dependence of separation efficiency on temperature is not established, tests should be carried out over a range of influent temperatures representing the normal shipboard operating range of 10ºC to 40ºC or should be taken at a temperature in this range where the separation efficiency is known to be worst.

4.7 In those cases where, for add-on equipment, it is necessary to heat water up to a given temperature and to supply heat to maintain that temperature, the tests should be carried out at the given temperature.

4.8 The tests with test fluid "C" should be carried out as follows:

.1 prior to the test with test fluid "C", add-on equipment should be filled up with water (density of not more than 1.015 at 20ºC);

.2 add-on equipment should be fed with a mixture composed of 6% test fluid "C" and 94% water to have emulsified oil content of 3,000 ppm in the test water until steady conditions have been established. Steady conditions are assumed to be the conditions established after pumping through add-on equipment a quantity of test fluid "C"/water mixture not less than twice the volume of add-on equipment; and

.3 the test should then proceed for 2.5 h. Samples should be taken at the effluent outlet at 50 minutes and 100 minutes after conditioning. At the end of this test, an air cock should be opened on the suction side of the pump and, if necessary, the test fluid "C" and water valves should be slowly closed together, and a sample taken at the effluent discharge as the flow ceases (this point can be checked from the observation window).

4.9 Sampling should be carried out as shown in figure 2 so that the sample taken will suitably represent the fluid issuing from the effluent outlet of add-on equipment.

4.10 Samples should be taken in accordance with ISO 9377–2:2000. The sample is to be extracted on the same day of collection, and be sealed and labelled in the presence of a representative of the national authority and arrangements should be made for analysis as soon as possible and in any case within seven days, provided the samples are being kept between 2ºC and 6ºC at laboratories approved by the Administration.

4.11 The oil content of the samples should be determined in accordance with part 4 of the annex to resolution MEPC.107(49).

4.12 When accurate and reliable oil content meters are fitted at inlet and outlet of add-on equipment, one sample at inlet and outlet taken during each test will be considered sufficient if they verify, to within ±10%, the meter readings noted at the same instant.

PART 3

DOCUMENTATION OF APPROVAL

5.1 Satisfactory compliance with all the test requirements enumerated in part 1 or 2 of this annex should be shown in the certificate of type approval issued by the Administration in the format specified in paragraph 5.2 below. An Administration may issue a certificate of type approval based on separate testing or on testing already carried out under supervision by another Administration.

5.2 A certificate of type approval should be in the format shown in the appendix to this annex. The Certificate should identify the type and model of the add-on equipment to which it applies and identify equipment assembly drawings, duly dated. Each drawing should bear the model specification numbers or equivalent identification details. The certificate should include the full performance test protocol on which it is based. If a certificate of type approval is issued by an Administration based on a certificate previously issued by another Administration, the certificate should identify the Administration which conducted the test on add-on equipment and a copy of the original test results should be attached to it.

BADGE OR CIPHER

Appendix 1

Certificate of type approval for add-on equipment

Name of Administration

This is to certify that the add-on equipment listed below has been examined and tested in accordance with the requirements of the specifications of the annex to the 2011 Guidelines contained in resolution MEPC.205(62). This certificate is valid only for add-on equipment referred to below.

Add-on equipment supplied by
.....
Under type and model designation .....
and incorporating:
*Add-on equipment manufactured by .....
to specification/assembly drawing No ..... date
*Coalescer/Absorbent/Membrane/Filter manufactured by .....
to specification/assembly drawing No .....
*Control equipment manufactured by .....
to specification/assembly drawing No ..... date
*Other means .....
to specification/assembly drawing No .....

*For installation on oil filtering equipment supplied by
.....
Under type and model designation .....

Maximum throughput of system …… m^3/h ___

Limiting conditions imposed .....
Test date and results attached in the appendix.

Official stamp

Signed .....
Administration of .....
Date this ..... day of ..... 20 .....

* Delete as appropriate.

Appendix 2

Test data and results of tests conducted on add-on equipment in accordance with Part 1 or 2 of the annex to the 2011 Guidelines contained in resolution MEPC.205(62)

Add-on equipment submitted by
.....
Test location .....

Method of sample analysis .....
.....
.....
.....

Samples analysed by .....

Environmental testing of the electrical and electronic sections of the add-on equipment has been carried out in accordance with part 3 of the annex to the 2011 Guidelines contained in resolution MEPC.205(62). The equipment functioned satisfactorily on completion of each test specified on the environmental test protocol.
.....
.....
.....
.....

Test fluid .C.

Surfactant – documentary evidence*

Iron oxides – documentary evidence*

Test water

Density	at 20ºC
Solid matter present	

Test temperatures

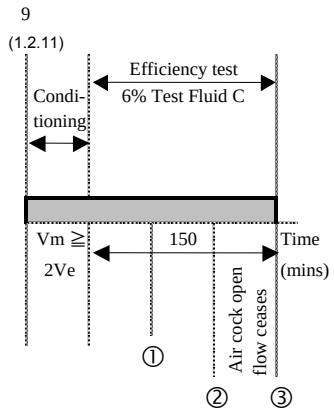
Ambient	ºC
Test fluid .C.	ºC
Test water	ºC

Diagram of test rig attached
Diagram of sampling arrangement attached

* Certificate or laboratory analysis.

TEST RESULTS (IN PPM) AND TEST PROCEDURES

Test fluid C



	1	2	3
Influent			
Effluent			

Signed …… Date …… Official stamp

(Official stamp or equivalent identification and the date of approval to be placed on all pages of the test protocol.)

***

ANNEX 25

RESOLUTION MEPC.206(62)

Adopted on 15 July 2011

PROCEDURE FOR APPROVING OTHER METHODS OF BALLAST WATER MANAGEMENT IN ACCORDANCE WITH REGULATION B-3.7 OF THE BWM CONVENTION

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

RECALLING ALSO the adoption by the International Conference on Ballast Water Management for Ships, held at the Organization's Headquarters in 2004, of the International Convention for the Control and Management of Ships' Ballast Water and Sediments (hereinafter "the BWM Convention"),

RECALLING FURTHER that regulation A-2 of the BWM Convention requires that discharge of ballast water shell only be conducted through ballast water management in accordance with the provisions of the Annex to the Convention,

NOTING that regulation B-3.7 of the BWM Convention permits the use of "Other Methods" of ballast water management to achieve at least the same level of protection to the environment, human health, property or resources as described in regulations B-3.1 to B-3.5,

RECOGNIZING that such "Other Methods" should take into account safety considerations relating to the ship and the crew, environmental acceptability, practicality, cost-effectiveness, economics and biological effectiveness and should be approved in principle by the Marine Environment Protection Committee,

HAVING CONSIDERED, at its sixty-second session, the draft Procedure for approving Other Methods of ballast water management in accordance with regulation B-3.7 of the BWM Convention, developed by the Sub-Committee on Bulk Liquids and Gases at its fifteenth session,

1. ADOPTS the Procedure for approving Other Methods of ballast water management in accordance with regulation B-3.7 of the BWM Convention, as set out in the annex to the present resolution;

2. INVITES Administrations to apply the annexed Procedure as soon as possible, or when the Convention becomes applicable to them;

3. URGES Member States to bring the annexed Procedure to the attention of shipowners, shipbuilders and manufacturers of ballast water management systems, as well as any other parties concerned; and

4. AGREES to keep the Procedure under review.

ANNEX

PROCEDURE FOR APPROVING OTHER METHODS OF BALLAST WATER MANAGEMENT IN ACCORDANCE WITH REGULATION B-3.7 OF THE BWM CONVENTION

1 INTRODUCTION

1.1 Regulation B-3.7 of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (the BWM Convention) permits the use of Other Methods of ballast water management to achieve at least the same level of protection to the environment, human health, property or resources as described in regulations B-3.1 to B-3.5, and approved in principle by the MEPC.

1.2 Those developing Other Methods should also take into account: safety considerations relating to the ship and the crew; environmental acceptability (i.e. not causing greater environmental impacts than they solve); practicality (i.e. compatibility with ship design and operations); cost-effectiveness and economics; and biological effectiveness.

1.3 The Procedure for approving Other Methods of ballast water management in accordance with regulation B-3.7 of the BWM Convention (hereafter referred to as "the Procedure"), aims at providing criteria for the evaluation and approval of Other Methods of ballast water management (hereafter referred to as "Other Methods").

1.4 This Procedure has been developed to ensure that these Other Methods provide at least the same level of protection to the environment, human health, property or resources as those methods permitted under regulations B-3.1 to B-3.5.

1.5 Other Methods of ballast water management are to be approved in principle by the Committee prior to approval of an Other Method by the Administration.

1.6 Systems based on an Other Method where Active Substances and Preparations are added to the ballast water, or are generated on board ships by the system, should also be subject to the approval by the Committee in accordance with the Procedure for approval of ballast water management systems that make use of Active Substances (G9).

1.7 All shipboard systems based on an Other Method will also have to gain Type Approval or Prototype Approval, as appropriate, under the Guidelines for approval of ballast water management systems (G8), or Guidelines for approval of prototype ballast water treatment technologies (G10).

1.8 Where an Other Method cannot be type approved due to the nature of the method, the Administration should recommend to the Committee an appropriate method of recognition or certification.

1.9 The environmental impacts of any chemical by-products and/or physical effects formed by an Other Method will also have to be evaluated by the Administration during the approval process, with respect to safety to the environment.

1.10 The Procedure identifies the information to be provided, identifies the responsible parties for providing such information and outlines the approval processes required by the Committee.

1.11 The use of Other Methods of ballast water management should be consistent with the objectives of the Convention – "to prevent, minimize and ultimately eliminate the risks to the environment, human health, property and resources arising from the transfer of harmful aquatic organisms and pathogens through the control and management of ships' ballast water and sediments, as well as to avoid unwanted side effects from that control, and to encourage developments in related knowledge and technology". Depending on the new technology used in the Other Method, verifications for approval could be different from those specified in paragraph 1.7 but keep the same level of protection.

1.12 Other Methods using organisms are not within the scope of this Procedure.

2 PURPOSE

2.1 The Procedure aims to ensure that any Other Methods approved provide an equivalent level of protection to the standards contained in the BWM Convention. The Procedure will be kept under review and updated by the Committee in light of the experience gained during its application and as the state of knowledge and technology may require.

2.2 The purpose of the Procedure is to:

.1 provide a uniform interpretation and application of the requirements for the approval of Other Methods permitted under regulation B-3.7;

.2 ensure that Other Methods approved by an Administration are capable of at least achieving equivalence to the level of protection provided by the standards of the BWM Convention with respect to the prevention of the transfer of harmful aquatic organisms and pathogens as required by regulations B-3.1 to B-3.5;

.3 assist in determining the information necessary for the approval in principle of Other Methods under regulation B-3.7 of the BWM Convention and identify the roles and responsibilities in providing such information;

.4 assist Administrations in conducting the approval of an Other Method;

.5 provide guidance to manufacturers, shipowners and other interested parties involved in determining the suitability of an Other Method to meet the requirements of the BWM Convention; and

.6 provide the approval process used by the Committee.

3 DEFINITIONS

3.1 For the purposes of this Procedure, the definitions in the Convention apply and:

.1 **Method** means a process developed and designed to reduce the transfer of harmful aquatic organisms through ships' ballast water to meet the requirements specified under regulations B-3.1 to B-3.5 of the BWM Convention.

.2 **Other Method** means an alternative to a Method defined in paragraph 3.1.1 above, which provides a level of protection equivalent to the requirements specified in regulations B-3.1 to B-3.5 of the BWM Convention.

4 APPLICABILITY

4.1 The Procedure applies to all Administrations, Parties to the BWM Convention and other IMO Member States, seeking approval in principle for an Other Method under regulation B-3.7 or assessing or granting approval for such Other Methods. This Procedure is also for the use of the Committee when considering approval in principle.

4.2 Equipment manufacturers wanting to seek approval for an Other Method should also consult this Procedure.

4.3 Ballast water management methods subject to regulation A-4.1 of the BWM Convention are not subject to this procedure or to regulation B-3.7.

5 APPLICATION TO THE COMMITTEE FOR APPROVAL IN PRINCIPLE OF AN OTHER METHOD

5.1 The information provided to support the application for approval in principle should be complete, of sufficient quality and in accordance with this Procedure.

5.2 The applicant for approval in principle of an Other Method should provide independently validated and/or operational proof that the Other Method being submitted:

.1 provides a level of protection at least equivalent to that provided by the requirements specified in regulations B-3.1 to B-3.5 of the BWM Convention; and

.2 is capable of providing a consistent level of protection at all times in all environments/locations.

Equivalence and benchmark criteria for an application for approval in principle of an Other Method

5.3 Applications for Other Methods should contain a fully developed independently validated approach for assessing the level of protection provided by that Other Method against the transfer of harmful aquatic organisms and pathogens and its equivalence to the requirements in regulations B-3.1 to B-3.5 of the BWM Convention and the additional requirements outlined in this Procedure, as appropriate. A possible starting point for such an approach could be a comparison of the level of protection ensured by ballast water management in compliance with regulations B-3.1 to B-3.5 and the level of protection ensured by the Other Method if used on comparable ships.

5.4 Other Methods should demonstrate by risk assessment, independently validated physical and biological modelling, operational testing of this modelling and full-scale operational testing, where applicable, that the Other Method is capable of meeting at all times a level of protection that is at least equivalent to the level of protection with respect to the prevention of the transfer of harmful aquatic organisms and pathogens via discharge of ballast water compared to existing requirements. The risk assessment should be at least to the same level of rigour as stipulated in Guidelines (G7).

5.5 Applications for Other Methods should specify the benchmark against which the performance of any systems based on that particular Other Method can be measured. The benchmark would:

.1 enable a transparent comparison by the Committee of the level of protection provided by the Other Method with that provided by the requirements in regulations B-3.1 to B-3.5 of the BWM Convention;

.2 be measurable and able to be evaluated for approval (similar to the requirements of the Convention, i.e. D-1 being a process evaluation, while D-2 is a measurable performance standard);

.3 be verifiable by port and flag States through sampling, records or other processes (to be properly defined, listed and technically explained/clarified, in the pertinent application, in terms of proposed verifications for flag State or port State control inspections to be carried out on board);

.4 need to be contained in the application, agreed by the Committee and then be used for consideration of approval through compliance testing by Port State Control;

.5 provide an assurance that systems based on an Other Method are providing the same level of protection for the environment as the Other Method that has received the approval in principle from the Committee; and

.6 be based on a recognized international standard, where appropriate, so long as they can be proved as equivalent to the existing requirements.

5.6 An Other Method may provide the same level of protection for the environment, human health, property or resources where:

.1 the ballasting and de-ballasting process does not transfer harmful aquatic organisms and pathogens; or

.2 the ballast water discharge contains no harmful aquatic organisms and pathogens.

Sampling protocol criteria for an application for approval in principle of an Other Method

5.7 The application for an Other Method should contain a ballast water sampling and analysis protocol that should be consistent with the Guidelines for ballast water sampling (G2).

Ship and personnel safety criteria for an application for approval in principle of an Other Method

5.8 The application should include a Formal Safety Assessment or a Safety Case to ensure that the Other Method or system based on an Other Method is safe for installation on board ship and any risks to the ship's crew resulting from the system are identified and adequately addressed. This Formal Safety Assessment or Safety Case should be consistent with part 3 of the annex to the Guidelines for approval of ballast water management systems (G8) and approved by the Administration.

6 SUBMISSION PROCESS

6.1 The applicant should evaluate the Other Method against the benchmark according to a protocol that is approved by an Administration.

6.2 The applicant should then prepare an application for the Other Method and submit it to the Member State concerned.

6.3 The Administration should review the application to ensure it is satisfactory (i.e. contains all of the information that is required and the information provided is of a sufficient standard to enable a decision to be made by the Committee). If the application is satisfactory, the Member State should submit a proposal for approval in principle to the Committee taking into account the deadlines prior to the MEPC at which approval in principle is to be sought.

6.4 When in session, the Committee should decide if the proposal is acceptable for consideration by the Committee and set the time frame for the evaluation of the proposal as follows:

.1 the Committee may commission an independent review of the risk assessment method, data and assumptions in order to ensure that a scientifically rigorous analysis has been conducted. The review should be undertaken by independent experts with ecological, aquatic biology, ship design and operation, and risk assessment expertise; and

.2 the reviewers' report should be in written form and circulated to the Parties, Members of the Organization, the United Nations and its Specialized Agencies, intergovernmental organizations having agreements with the Organization and non-governmental organizations in consultative status with the Organization, prior to its consideration by the Committee.

6.5 All proprietary data should be treated as confidential by the Committee, the competent authorities involved, and the independent reviewers, if any. However, all information related to safety and environmental protection, including physical/chemical properties and data on environmental fate and toxicity, should be treated as non-confidential.

6.6 The Committee should evaluate the application for approval in principle of an Other Method in accordance with this Procedure.

7 ASSESSMENT OF EQUIVALENCE

7.1 The Committee should review the benchmarks detailed in the application and, as appropriate, take them into account when assessing equivalence to the level of protection for the environment, human health, property or resources as provided for in regulations B-3.1 to B-3.5.

7.2 Other Methods designed to provide at least an equivalent level of protection with respect to the prevention of the transfer of harmful aquatic organisms and pathogens via discharge of ballast water should demonstrate by risk assessment, independently validated physical and biological modelling, operational testing of this modelling and full-scale operational testing, where applicable, that the Other Method is capable of meeting a level of protection at all times that is, at least equivalent to, or better than, the applicable requirements contained in the BWM Convention.

7.3 Risk assessment is the logical process for assigning the likelihood and consequences of specific events, such as entry, establishment or spread of harmful aquatic organisms and pathogens in situations where a direct comparison of application benchmarks with the D-1 and D-2 standards is not possible.

7.4 In undertaking risk assessment to consider and evaluate the equivalence of an Other Method with the existing standards, the risk assessment principles outlined in the Guidelines for risk assessment under regulation A-4 of the BWM Convention (G7) should be carefully applied. The lack of full scientific certainty should be carefully considered in the decision-making process.

Equivalence with the D-1 standard

7.5 Other Methods designed to provide equivalence to the D-1 standard can be used only until the ship type, under the BWM Convention, is required to comply with the D-2 standard (unless the system proves it can also provide equivalence to the D-2 standard):

.1 these methods should demonstrate through risk assessment, independently validated physical and biological modelling, operational testing of this modelling and full-scale operational testing of systems based on Other Methods, where applicable, that the Other Method is capable of meeting at all times a level of protection that is, at least equivalent to, or better than, regulation D-1 of the BWM Convention;

.2 if there is a question about the environmental impact of an Other Method during its development, such approval should be split in the same way as it is in Procedure (G9). That is, Other Methods should be approved by the Administration and Committee based on independently validated data prior to being tested at sea; and

.3 the relevant water quality parameters (e.g., suspended solids, salinity, oxygen concentration, particulate organic matter) should be reasonably the same in the incoming as well as in the outflowing water.

Equivalence with the D-2 standard

7.6 Other Methods designed to provide equivalence to the D-2 standard should demonstrate through risk assessment, independently validated physical and biological modelling, operational testing of this modelling and full-scale operational testing of systems based on Other Methods, where applicable, that the Other Method is capable of meeting at all times a level of protection that is at least equivalent to, or better than, regulation D-2 of the BWM Convention, as follows:

.1 where appropriate, benchmarks should be based on recognized international standards as long as they can be proven to provide an equivalent level of protection to the D-2 standard;

.2 the description of the main characteristics of the ballast water as well as the absence/presence of harmful aquatic organisms is to be supported by independent verification; and

.3 onboard test results, equipment specification and quality assurance should be available.

8 APPROVAL

8.1 The approval takes place in two steps:

.1 an approval in principle of the Other Method following review and evaluation by the Committee (regulation B-3.7); and

.2 an approval of the Other Method in a manner analogous to Guidelines (G8) and (G10), by the Administration.

Assessment for approval in principle

8.2 The application for approval in principle should be assessed by the Committee to ascertain whether:

.1 the application for approval in principle is complete, of sufficient quality, and in accordance with this Procedure;

.2 the Other Method does not cause any unacceptable adverse effects to environment, human health, property or resources;

.3 the Other Method does not contravene other regulations in the BWM Convention, or any other convention or code applicable to the ship type;

.4 the Other Method ensures at least the same level of protection to the environment, human health, property or resources as those methods permitted under regulations B-3.1 to B-3.5; and

.5 the Procedure for approval set out by the Administration is appropriate.

8.3 The application should not be granted approval in principle when there is absence of information or significant uncertainty.

8.4 The Committee should decide whether to approve in principle the proposal, introduce any modifications thereto, if appropriate, taking into account the reviewers' report.

8.5 The Administration that submitted the application to the Committee should inform in writing the applicant about the decision made with regard to the Other Method.

Approval by the Administration

8.6 An Other Method, having received approval in principle from the Committee, is to be approved by an Administration.

8.7 A shipboard system may need to be assessed for Type Approval.

8.8 The Administration should evaluate an Other Method for safety to the environment, human health, property, or resources.

9 NOTIFICATION OF APPROVAL

9.1 The Committee will record the approval in principle of Other Methods and circulate the list once a year including the following information:

- the document reference of the approval in principle of the Other Method by the Committee;
- name and brief description of the Other Method;
- name of ballast water management system that makes use of the Other Method if appropriate;
- date of approval;

- name of applicant;

- the benchmark that the Other Method is designed to meet, and the methods of assessing compliance to this benchmark;

- copies of or access routes to test reports, test methods, etc. (as resolution MEPC.175(58)); and

- any other specifications, if necessary.

9.2 Administrations, when approving an Other Method should report to the Committee in a manner consistent with resolution MEPC.175(58) "Information reporting on Type Approved ballast water management systems".

10 MODIFICATION

10.1 The holder of an Other Method approval should report any modifications to the Administration.

10.2 Any modifications to an approved Other Method should be re-evaluated in accordance with this Procedure.

11 WITHDRAWAL OF APPROVAL

11.1 The Committee may withdraw any approval in principle in the following circumstances:

.1 if the Other Method or system based on an Other Method no longer conforms to requirements due to amendments of the BWM Convention;

.2 if any data or test records differ materially from data relied upon at the time of approval and are deemed not to satisfy the approval criteria;

.3 if a request for withdrawal of approval is made by the Administration on behalf of the holder of an Other Method approval; and

.4 if unreasonable harm to environment, human health, property or resources is determined to have been caused by an approved Other Method.

11.2 The decision to withdraw an approval in principle should specify all necessary further details, including the date upon which the withdrawal takes effect.

12 USE ON SHIPS

12.1 Ships using an Other Method under regulation B-3.7 of the BWM Convention, to meet their obligations under this Convention, can only do so once the Other Method has been approved in principle by the Committee and has been approved by an Administration.

***

ANNEX 26

RESOLUTION MEPC.207(62)

Adopted on 15 July 2011

2011 GUIDELINES FOR THE CONTROL AND MANAGEMENT OF SHIPS' BIOFOULING TO MINIMIZE THE TRANSFER OF INVASIVE AQUATIC SPECIES

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38 of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee relating to any matter within the scope of the Organization concerned with the prevention and control of marine pollution from ships,

RECALLING ALSO that Member States of the International Maritime Organization made a clear commitment to minimizing the transfer of invasive aquatic species by shipping in adopting the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004,

RECALLING FURTHER that studies have shown biofouling on ships to be an important means of transferring invasive aquatic species which, if established in new ecosystems, may pose threats to the environment, human health, property and resources,

NOTING the objectives of the Convention on Biological Diversity, 1992, and that the transfer and introduction of aquatic invasive species through ships' biofouling threatens the conservation and sustainable use of biological diversity,

NOTING ALSO that implementing practices to control and manage ships' biofouling can greatly assist in reducing the risk of the transfer of invasive aquatic species,

NOTING FURTHER that this issue, being of worldwide concern, demands a globally consistent approach to the management of biofouling,

HAVING CONSIDERED, at its sixty-second session, the draft Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species, developed by the Sub-Committee on Bulk Liquids and Gases,

1. ADOPTS the 2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species, as set out in the annex to the present resolution;

2. REQUESTS Member States to take urgent action in applying these Guidelines, including the dissemination thereof to the shipping industry and other interested parties, taking these Guidelines into account when adopting measures to minimize the risk of introducing invasive aquatic species via biofouling, and reporting to the MEPC on any experience gained in their implementation; and

3. AGREES to keep these Guidelines under review in light of the experience gained.

ANNEX

2011 GUIDELINES FOR THE CONTROL AND MANAGEMENT OF SHIPS' BIOFOULING TO MINIMIZE THE TRANSFER OF INVASIVE AQUATIC SPECIES

TABLE OF CONTENTS

1 INTRODUCTION

1.1 In the adoption of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention), Member States of the International Maritime Organization (IMO) made a clear commitment to minimizing the transfer of invasive aquatic species by shipping. Studies have shown that biofouling can also be a significant vector for the transfer of invasive aquatic species. Biofouling on ships entering the waters of States may result in the establishment of invasive aquatic species which may pose threats to human, animal and plant life, economic and cultural activities and the aquatic environment.

1.2 While the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001 (AFS Convention) addresses anti-fouling systems on ships, its focus is on the prevention of adverse impacts from the use of anti-fouling systems and the biocides they may contain, rather than preventing the transfer of invasive aquatic species.

1.3 The potential for invasive aquatic species transferred through biofouling to cause harm has been recognized by the IMO, the Convention on Biological Diversity (CBD), several UNEP Regional Seas Conventions (e.g., Barcelona Convention for the Protection of the Mediterranean Sea Against Pollution), the Asia Pacific Economic Cooperation forum (APEC), and the Secretariat of the Pacific Region Environmental Program (SPREP).

1.4 All ships have some degree of biofouling, even those which may have been recently cleaned or had a new application of an anti-fouling coating system. Studies have shown that the biofouling process begins within the first few hours of a ship's immersion in water. The biofouling that may be found on a ship is influenced by a range of factors, such as follows:

.1 design and construction, particularly the number, location and design of niche areas;

.2 specific operating profile, including factors such as operating speeds, ratio of time underway compared with time alongside, moored or at anchor, and where the ship is located when not in use (e.g., open anchorage or estuarine port);

.3 places visited and trading routes; and

.4 maintenance history, including: the type, age and condition of any anti-fouling coating system, installation and operation of anti-fouling systems and dry-docking/slipping and hull cleaning practices.

1.5 Implementing practices to control and manage biofouling can greatly assist in reducing the risk of the transfer of invasive aquatic species. Such management practices can also improve a ship's hydrodynamic performance and can be effective tools in enhancing energy efficiency and reducing air emissions from ships. This concept has been identified by the IMO in the "Guidance for the development of a ship energy efficiency management plan (SEEMP)" (MEPC.1/Circ.683).

1.6 These Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (hereafter "the Guidelines") are intended to provide a globally consistent approach to the management of biofouling. As scientific and technological advances are made, the Guidelines will be refined to enable the risk to be more adequately addressed. Port States, flag States, coastal States and other parties that can assist in mitigating the problems associated with biofouling should exercise due diligence to implement the Guidelines to the maximum extent possible.

2 DEFINITIONS

2.1 For the purposes of these Guidelines, the following definitions apply:

AFS Convention means the International Convention on the Control of Harmful Anti-Fouling Systems on Ships, 2001.

Anti-fouling coating system means the combination of all component coatings, surface treatments (including primer, sealer, binder, anti-corrosive and anti-fouling coatings) or other surface treatments, used on a ship to control or prevent attachment of unwanted aquatic organisms.

Anti-fouling system means a coating, paint, surface treatment, surface, or device that is used on a ship to control or prevent attachment of unwanted organisms.

Biofouling means the accumulation of aquatic organisms such as micro-organisms, plants, and animals on surfaces and structures immersed in or exposed to the aquatic environment. Biofouling can include microfouling and macrofouling (see below).

In-water cleaning means the physical removal of biofouling from a ship while in the water.

Invasive aquatic species means a species which may pose threats to human, animal and plant life, economic and cultural activities and the aquatic environment.

Marine Growth Prevention System (MGPS) means an anti-fouling system used for the prevention of biofouling accumulation in internal seawater cooling systems and sea chests and can include the use of anodes, injection systems and electrolysis.

Member States means States that are Members of the International Maritime Organization.

Macrofouling means large, distinct multicellular organisms visible to the human eye such as barnacles, tubeworms, or fronds of algae.

Microfouling means microscopic organisms including bacteria and diatoms and the slimy substances that they produce. Biofouling comprised of only microfouling is commonly referred to as a slime layer.

Niche areas mean areas on a ship that may be more susceptible to biofouling due to different hydrodynamic forces, susceptibility to coating system wear or damage, or being inadequately, or not, painted, e.g., sea chests, bow thrusters, propeller shafts, inlet gratings, dry-dock support strips, etc.

Organization means the International Maritime Organization.

Port State authority means any official or organization authorized by the Government of a port State to verify the compliance and enforcement of standards and regulations relevant to the implementation of national and international shipping control measures.

Ship means a vessel of any type whatsoever operating in the aquatic environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft, fixed or floating platforms, floating storage units (FSUs) and floating production storage and off-loading units (FPSOs).

States means coastal, port or Member States as appropriate.

Treatment means a process which may use a mechanical, physical, chemical or biological method to remove or render sterile, invasive or potentially invasive aquatic species fouling a ship.

3 APPLICATION

3.1 The Guidelines are intended to provide useful recommendations on general measures to minimize the risks associated with biofouling for all types of ships and are directed to States, shipmasters, operators and owners, shipbuilders, ship cleaning and maintenance operators, port authorities, ship repair, dry-docking and recycling facilities, ship designers, classification societies, anti-fouling paint manufacturers and suppliers and any other interested parties. A State should determine the extent that the Guidelines are applied within that particular State.

3.2 A separate guidance document, based on these Guidelines, provides advice relevant to owners and/or operators of recreational craft less than 24 metres in length, using terminology appropriate for that sector.

3.3 States should inform the Organization of any relevant biofouling regulations, management requirements or restrictions they are applying to international shipping.

4 OBJECTIVES

4.1 The objectives of these Guidelines are to provide practical guidance to States, ship masters, operators and owners, shipbuilders, ship repair, dry-docking and recycling facilities, ship cleaning and maintenance operators, ship designers, classification societies, anti-fouling paint manufacturers and suppliers and any other interested parties, on measures to minimize the risk of transferring invasive aquatic species from ships' biofouling. It is important that biofouling management procedures be effective as well as environmentally safe, practical, designed to minimize costs and delays to the ship, and based upon these Guidelines whenever possible.

4.2 To minimize the transfer of invasive aquatic species, a ship should implement biofouling management practices, including the use of anti-fouling systems and other operational management practices to reduce the development of biofouling. The intent of such practices is to keep the ship's submerged surfaces, and internal seawater cooling systems, as free of biofouling as practical. A ship following this guidance and minimizing macrofouling would have a reduced potential for transferring invasive aquatic species via biofouling.

4.3 The management measures outlined within these Guidelines are intended to complement current maintenance practices carried out within the industry.

5 BIOFOULING MANAGEMENT PLAN AND RECORD BOOK

5.1 Implementation of an effective biofouling management regime is critical for minimizing the transfer of invasive aquatic species. The biofouling management measures to be undertaken on a ship should be outlined in a biofouling management plan, and records of biofouling management practices kept in a biofouling record book, as outlined below.

Biofouling Management Plan

5.2 It is recommended that every ship should have a biofouling management plan. The intent of the plan should be to provide effective procedures for biofouling management. An example of a Biofouling Management Plan is outlined in appendix 1 of these Guidelines. The Biofouling Management Plan may be a stand-alone document, or integrated in part or fully, into the existing ships' operational and procedural manuals and/or planned maintenance system.

5.3 The biofouling management plan should be specific to each ship and included in the ship's operational documentation. Such a plan should address, among other things, the following:

.1 relevant parts of these Guidelines;

.2 details of the anti-fouling systems and operational practices or treatments used, including those for niche areas;

.3 hull locations susceptible to biofouling, schedule of planned inspections, repairs, maintenance and renewal of anti-fouling systems;

.4 details of the recommended operating conditions suitable for the chosen anti-fouling systems and operational practices;

.5 details relevant for the safety of the crew, including details on the anti-fouling system(s) used; and

.6 details of the documentation required to verify any treatments recorded in the Biofouling Record Book as outlined in appendix 2.

5.4 The biofouling management plan should be updated as necessary.

Biofouling Record Book

5.5 It is recommended that a Biofouling Record Book is maintained for each ship. The book should record details of all inspections and biofouling management measures undertaken on the ship. This is to assist the shipowner and operator to evaluate the efficacy of the specific anti-fouling systems and operational practices on the ship in particular, and of the biofouling management plan in general. The record book could also assist interested State authorities to quickly and efficiently assess the potential biofouling risk of the ship, and thus minimize delays to ship operations. The Biofouling Record Book may be a stand-alone document, or integrated in part, or fully, into the existing ships' operational and procedural manuals and/or planned maintenance system.

5.6 It is recommended that the Biofouling Record Book be retained on the ship for the life of the ship.

5.7 Information that should be recorded in a Biofouling Record Book includes the following:

.1 details of the anti-fouling systems and operational practices used (where appropriate as recorded in the Anti-fouling System Certificate), where and when installed, areas of the ship coated, its maintenance and, where applicable, its operation;

.2 dates and location of dry-dockings/slippings, including the date the ship was re-floated, and any measures taken to remove biofouling or to renew or repair the anti-fouling system;

.3 the date and location of in-water inspections, the results of that inspection and any corrective action taken to deal with observed biofouling;

.4 the dates and details of inspection and maintenance of internal seawater cooling systems, the results of these inspections, and any corrective action taken to deal with observed biofouling and any reported blockages; and

.5 details of when the ship has been operating outside its normal operating profile including any details of when the ship was laid-up or inactive for extended periods of time.

5.8 An example of a Biofouling Record Book and information to be recorded is included as appendix 2 to these Guidelines.

6 ANTI-FOULING SYSTEM INSTALLATION AND MAINTENANCE

6.1 Anti-fouling systems and operational practices are the primary means of biofouling prevention and control for existing ships' submerged surfaces, including the hull and niche areas. An anti-fouling system can be a coating system applied to exposed surfaces, biofouling resistant materials used for piping and other unpainted components, marine growth prevention systems (MGPSs) for sea chests and internal seawater cooling systems, or other innovative measures to control biofouling.

6.2 The anti-fouling system used should comply with the AFS Convention, where necessary.

Choosing the anti-fouling system

6.3 Different anti-fouling systems are designed for different ship operating profiles so it is essential that ship operators, designers and builders obtain appropriate technical advice to ensure an appropriate system is applied or installed. If an appropriate anti-fouling system is not applied, biofouling accumulation increases.

6.4 Some factors to consider when choosing an anti-fouling system include the following:

.1 planned periods between dry-docking – including any mandatory requirements for ships survey;

.2 ship speed – different anti-fouling systems are designed to optimize anti-fouling performance for specific ship speeds;

.3 operating profile – patterns of use, trade routes and activity levels, including periods of inactivity, influence the rate of biofouling accumulation;

.4 ship type and construction; and

.5 any legal requirements for the sale and use of the anti-fouling systems.

6.5 Consideration should also be given to the need for tailored, differential installation of anti-fouling coating systems for different areas of the ship to match the required performance and longevity of the coating with the expected wear, abrasion and water flow rates in specific areas, such as the bow, rudder, or internal seawater cooling systems and sea chest interiors.

Installing, re-installing, or repairing the anti-fouling system

6.6 Whether installing, re-installing or repairing the anti-fouling system, care should be taken in surface preparation to ensure all biofouling residues, flaking paint, or other surface contamination is completely removed, particularly in niche areas, to facilitate good adhesion and durability of the anti-fouling system.

6.7 For sea chests the following should be considered when installing, re-installing, or repairing their anti-fouling systems:

.1 inlet grates and the internal surfaces of sea chests should be protected by an anti-fouling coating system that is suitable for the flow conditions of seawater over the grate and through the sea chest;

.2 care should be taken in surface preparation and application of any anti-fouling coating system to ensure adequate adhesion and coating thickness. Particular attention should be paid to the corners and edges of sea chests, blowout pipes, holding brackets and the bars of grates. Grates may require a major refurbishment type of surface preparation at each dry-docking to ensure coating durability; and

.3 the installation of MGPSs is encouraged to assist in treating the sea chest and internal seawater piping as part of the biofouling management plan. A careful evaluation of the consequential effects of MGPSs should be made before installation, including potential effects on the ship and/or the environment and the existence of regulations affecting the use of MGPSs.

6.8 Other niche areas can also be particularly susceptible to biofouling growth. Management measures for niche areas are outlined below.

.1 **Dry-docking support strips** – Positions of dry-docking blocks and supports should be varied at each dry-docking, or alternative arrangements made to ensure that areas under blocks are painted with anti-fouling, at least at alternate dry-dockings. These areas should receive a major refurbishment type of surface preparation and be coated at each dry-docking that they are accessible. Where it is not possible to alternate the position of dry-docking support strips, e.g., in critical weight bearing areas such as under the engine-room, these areas should be specially considered and managed by other means, e.g., the application of specialized coatings or procedures.

.2 **Bow and stern thrusters** – The body and area around bow, stern and any other thrusters prone to coating damage, should be routinely maintained at dry-dockings. Particular attention should be paid to any free flooding spaces which may exist around the thruster tunnel. The housings/recesses, and retractable fittings such as stabilizers and thruster bodies, should have an anti-fouling coating system of adequate thickness for optimal effectiveness.

.3 **Edges and weld joints** – Exposed edges on the hull, such as around bilge keels and scoops, and weld joints, should be faired and coated to ensure adequate coating thickness to optimize system effectiveness.

.4 **Rudder hinges and stabilizer fin apertures** – Recesses within rudder hinges and behind stabilizer fins need to be carefully and effectively cleaned and re-coated at maintenance dry-dockings. Rudders and stabilizer fins should be moved through their full range of motion during the coating process to ensure that all surfaces are correctly coated to the specification of the anti-fouling system. Rudders, rudder fittings and the hull areas around them should also be adequately coated to withstand the increased wear rates experienced in these areas.

.5 **Propeller and shaft** – Propellers and immersed propeller shafts should be coated with fouling release coatings where possible and appropriate, to maintain efficiency and enable self-cleaning, so that the need for regular in-water cleaning and polishing is minimized.

.6 **Stern tube seal assemblies and the internal surfaces of rope guards** – Exposed sections of stern tube seal assemblies and the internal surfaces of rope guards should be carefully painted with anti-fouling coating systems appropriate to the degree of water movement over and around these surfaces.

.7 **Cathodic protection (CP) anodes** – Niche areas for biofouling can be minimized if: anodes are flush-fitted to the hull; a rubber backing pad is inserted between the anode and the hull; or the gap is caulked. Caulking the gap will make the seam or joint watertight. If not flush-fitted, the hull surface under the anode and the anode strap should be coated with an anti-fouling coating system suitable for low water flow to prevent biofouling accumulation. If anodes are attached by bolts recessed into the anode surface, the recess should be caulked to remove a potential niche.

.8 **Pitot tubes** – Where retractable pitot tubes are fitted, the housing should be internally coated with an anti-fouling coating system suitable for static conditions.

.9 **Sea inlet pipes and overboard discharges** – Anti-fouling coating systems should be applied inside the pipe opening and accessible internal areas. The anti-corrosive or primer coating selected should be appropriate to the specific pipe material if this material is different to the hull. Care should be taken in surface preparation and coating application to ensure good adhesion and coating thickness.

Procedures for ship maintenance and recycling facilities

6.9 Ship maintenance and recycling facilities should adopt measures (consistent with applicable national and local laws and regulations) to ensure that viable biofouling organisms or chemical and physical pollutants are not released into the local aquatic environment. These measures include the following:

.1 capturing biological material to minimize the risk of organism survival and establishment and other impacts of biological material being released into the aquatic environment;

.2 treating and/or disposing of captured biological material in an environmentally appropriate manner;

.3 scheduling of ships' arrival and departure at cleaning and maintenance facilities and at locations where ships are moored while waiting for cleaning and maintenance to minimize the risk of fouled ships contaminating other ships and the surrounding environment;

.4 removing biofouling from all underwater surfaces of a ship when in dry-dock, including niche areas; and

.5 lowering or extending retractable equipment such as stabilizers, thrusters, transducers and similar when a ship is in dry-dock or slipped, to permit access for the removal of biofouling from the equipment and its housing.

7 IN-WATER INSPECTION, CLEANING AND MAINTENANCE

7.1 Despite the use of effective anti-fouling systems and operational practices, undesirable amounts of biofouling may still accumulate during the intended lifetime of the anti-fouling system. To maintain a ship as free of biofouling as practical, it may be advisable for the ship to undertake in-water inspection, cleaning and maintenance.

In-water inspection of ships

7.2 In-water inspection can be a useful and flexible means to inspect the condition of anti-fouling systems and the biofouling status of a ship. In-water inspections should be undertaken periodically as a general means of routine surveillance, augmented by specific inspections as necessary to address any situations of elevated risk. Specific occasions when an in-water inspection may be appropriate, include the following:

.1 before and after any planned period of inactivity or significant or unforeseen change to the ship's operating profile;

.2 prior to undertaking in-water cleaning to determine the presence of known or suspected invasive aquatic species or other species of concern on the ship;

.3 after a known or suspected marine pest or other species of concern is discovered in a ship's internal seawater cooling systems; and

.4 following damage to, or premature failure of, the anti-fouling system.

7.3 It is recommended that ship operators identify niche areas on the ship that may accumulate biofouling to enable these areas to be effectively targeted during inspections. Areas may include the following:

- propeller thrusters and propulsion units;
- sea chests;
- rudder stock and hinge;
- stabilizer fin apertures;
- rope guards, stern tube seals and propeller shafts;

- cathodic protection anodes;
- anchor chain and chain lockers;
- free flood spaces inherent to the ships' design;
- sea chest and thruster tunnel grates;
- echo sounders and velocity probes;
- overboard discharge outlets and sea inlets; and
- areas prone to anti-fouling coating system damage or grounding (e.g., areas of the hull damaged by fenders when alongside, leading edges of bilge keels and propeller shaft "y" frames).

7.4 Dive and remotely operated vehicle (ROV) surveys can be practical options for in-water inspections although they do have limitations regarding visibility and available dive time compared with the area to be inspected, and difficulties with effectively accessing many biofouling prone niches. Such surveys should be undertaken by persons who are suitably qualified and experienced and familiar with biofouling and associated invasive aquatic species risks and the safety risks relating to in-water surveys. Regulatory authorities may have recommended or accredited biofouling inspection divers.

In-water cleaning and maintenance

7.5 In-water cleaning can be an important part of biofouling management. In-water cleaning can also introduce different degrees of environmental risk, depending on the nature of biofouling (i.e. microfouling versus macrofouling), the amount of anti-fouling coating system residue released and the biocidal content of the anti-fouling coating system. Relative to macrofouling, microfouling can be removed with gentler techniques that minimize degradation of the anti-fouling coating system and/or biocide release. Microfouling removal may enhance a ship's hull efficiency, reducing fuel consumption and greenhouse gas emissions. It is, therefore, recommended that the ship's hull is cleaned when practical by soft methods if significant microfouling occurs. In-water cleaning can also reduce the risk of spreading invasive aquatic species by preventing macrofouling accumulation.

7.6 It may be appropriate for States to conduct a risk assessment to evaluate the risk of in-water cleaning activities and minimize potential threats to their environment, property and resources. Risk assessment factors could include the following:

.1 biological risk of the biofouling organisms being removed from the ship (including viability of the biofouling organisms or the ability to capture biofouling material);

.2 factors that may influence biofouling accumulation, such as changes to the operating profile of the ship;

.3 geographical area that was the source of the biofouling on the ship, if known; and

.4 toxic effects related to substances within the anti-fouling coating system that could be released during the cleaning activity, and any subsequent damage to the anti-fouling coating system.

7.7 Personnel proposing to undertake in-water cleaning should be aware of any regulations or requirements for the conduct of in-water cleaning, including any regulations regarding the discharge of chemicals into the marine environment and the location of sensitive areas (such as marine protected areas and ballast water exchange areas). Where significant macrofouling growth is detected, it should be removed or treated (if this can be done without damaging the anti-fouling system) in accordance with such regulations. Where available, appropriate technology should be used to minimize the release of both anti-fouling coating or paint debris, and viable adult, juvenile, or reproductive stages of macrofouling organisms. The collected material should be disposed of in a manner which does not pose a risk to the aquatic environment.

7.8 For immersed areas coated with biocidal anti-fouling coatings, cleaning techniques should be used that minimize release of biocide into the environment. Cleaning heavily fouled anti-fouling coating systems can not only generate biofouling debris, but prematurely depletes the anti-fouling coating system and may create a pulse of biocide that can harm the local environment and may impact on future applications by the port authority for the disposal of dredge spoil. Depleted anti-fouling coating systems on hulls will rapidly re-foul. In-water cleaning or scrubbing of hulls for the purpose of delaying dry-dockings beyond the specified service life of the coating is, therefore, not recommended.

7.9 Immersed areas coated with biocide-free anti-fouling coating systems may require regular in-water cleaning as part of planned maintenance to maintain hull efficiency and minimize the risk of transferring invasive aquatic species. Cleaning techniques should be used which do not damage the coating and impair its function.

7.10 Any maintenance or repair activities should take care not to impede future in-service cleaning and/or maintenance, e.g., care should be taken to ensure sea chest grates do not become welded shut during repair work.

7.11 Care should be taken to ensure that any MGPSs installed are operating effectively to prevent accumulation of biofouling.

7.12 Regular polishing of uncoated propellers to maintain operational efficiency will also minimize macrofouling accumulation. Uncoated propeller shafts may require cleaning at the same time as the propeller. As a ship's routine propeller polishing will involve the use of divers, it is recommended that this opportunity is taken to assess sea chests, and other similar areas, for macrofouling.

7.13 Internal seawater cooling systems need to be regularly monitored to ensure effective biofouling control is maintained. Seawater cooling systems that operate while the ship is in port may be vulnerable to biofouling accumulation, and should be closely monitored. If seawater cooling systems become fouled, they should be appropriately treated. Any discharge of treated water from internal seawater cooling systems should be undertaken in accordance with applicable regulations.

8 DESIGN AND CONSTRUCTION

8.1 Initial ship design and construction offers the most comprehensive, effective and durable means by which to minimize ship biofouling risks. In the design and construction of a ship, or when a ship is being significantly altered, the following should be taken into consideration:

.1 Small niches and sheltered areas should be excluded from the ship as far as practical, e.g., flush mounting pipes in sea chests. Where not practical, these should be designed so that they may be easily accessed for inspection, cleaning and application of anti-fouling measures.

.2 Rounding and/or bevelling of corners, gratings and protrusions to promote more effective coverage of anti-fouling coating systems, and hinging of gratings to enable diver access.

.3 Providing the capacity to blank off the sea chest and other areas, such as moon pools, floodable docks and other free flood spaces, for treatment and/or cleaning.

8.2 Internal seawater cooling systems should be designed and made of appropriate material to minimize biofouling and constructed with a minimum of bends, kinks and flanges in seawater piping.

8.3 To avoid creation of avoidable niches while ensuring effective safety and operation of the ship, where practical, particular attention should be given to avoidance of unfilled gaps in all skin fittings and the detailed design of the items as follows:

.1 sea chests – minimize size and number, and use smooth surfaces to maximize flow efficiency, fit MGPS, and steam or hot water cleaning systems, grills and their opening arrangements designed for in-water inspection and maintenance;

.2 retractable fittings and equipment – avoid external reinforcement (such as stiffeners) where possible, design for in-water inspection and maintenance;

.3 tunnel thrusters – tunnels to be above light water line or accessible to divers, grills and their opening arrangements designed for in-water inspection, maintenance and operation;

.4 sponsons and hull blisters – use fully enclosed in preference to free flooding types, with access provisions made for in-water inspection, cleaning and maintenance;

.5 stern tube seal assemblies and rope guards – design for in-water inspection, cleaning and maintenance; and

.6 immersible and seabed equipment – ensure facilities for equipment washdown during retrieval and enclosed washdown areas for cleaning of equipment on board, if necessary, are provided.

9 DISSEMINATION OF INFORMATION

9.1 States are encouraged to maintain and exchange information relevant to these Guidelines through the Organization. Accordingly, States are encouraged to provide the Organization with the information related to the management of biofouling as follows:

.1 copies of current regional, national and local laws, regulations, standards, exemptions or guidelines;

.2 technical and research information, including any studies on the impact and control of invasive aquatic species in ships' biofouling, and on the efficacy and practicality of environmentally protective in-water cleaning technologies;

.3 education materials such as CD's, DVD's or printed materials; and

.4 the location of and the terms of use for cleaning and maintenance services and facilities for ships and equipment that comply with these Guidelines.

9.2 State authorities should provide ships with timely, clear and concise information on biofouling management measures and treatment requirements that are being applied to shipping and ensure these are widely distributed. Shipowners and operators should endeavour to become familiar with all requirements related to biofouling by requesting such information from their port or shipping agents or competent authorities (i.e. State authorities). State authorities should also provide ships with any available information on particular invasive aquatic species that may be present in a port and could attach to a ship as biofouling (e.g., if a particular species of concern is spawning) in a timely manner.

9.3 Organizations or shipping agents representing shipowners and operators should be familiar with the requirements of State authorities with respect to biofouling management and treatment procedures, including information that will be needed to obtain entry clearance. Verification and detailed information concerning State requirements should be obtained by the ship prior to arrival.

9.4 To monitor the effectiveness of these Guidelines, States, as part of the evaluation process could provide to the Organization details of records describing reasons why ships could not apply these Guidelines, e.g., design, construction or operation of a ship, particularly from the view point of ships' safety, or lack of information concerning the Guidelines.

10 TRAINING AND EDUCATION

10.1 Training for ships' masters and crews, in-water cleaning or maintenance facility operators and those surveying or inspecting ships as appropriate should include instructions on the application of biofouling management and treatment procedures, based upon the information contained in these Guidelines. Instruction should also be provided on the following:

.1 maintenance of appropriate records and logs;

.2 impacts of invasive aquatic species from ships' biofouling;

.3 benefits to the ship of managing biofouling and the threats posed by not applying management procedures;

.4 biofouling management measures and associated safety procedures; and

.5 relevant health and safety issues.

10.2 States and industry organizations should ensure that relevant marine training organizations are aware of these Guidelines and include this in their syllabuses as appropriate.

11 OTHER MEASURES

11.1 To the extent practical, States and port authorities should aim to ensure smooth flow of ships going in and out of their ports to avoid keeping ships waiting offshore so that anti-fouling systems can operate as effectively as possible.

11.2 States may apply other measures on ships within their jurisdiction for the purpose of providing additional protection for their marine environment, or in emergency situations. In managing emergency situations for biofouling, States should consider the guidance document for ballast water emergency situations (BWM.2/Circ.17).

11.3 States should take into account these Guidelines when developing other measures and/or restrictions for managing ships' biofouling.

11.4 Where other measures are being applied, States should notify the Organization of the specific requirements, with supporting documentation, for dissemination to other States and non-governmental agencies where appropriate.

11.5 The application of other measures by States should not place the safety of the ship and crew at risk.

12 FUTURE WORK

Research needs

12.1 States and other interested parties should encourage and support research into, and development of technologies for:

.1 minimizing and/or managing both macrofouling and microfouling particularly in niche areas (e.g., new or different anti-fouling systems and different designs for niche areas to minimize biofouling);

.2 in-water cleaning that ensures effective management of the anti-fouling system, biofouling and other contaminants, including effective capture of biological material;

.3 comprehensive methods for assessing the risks associated with in-water cleaning;

.4 shipboard monitoring and detection of biofouling;

.5 reducing the macrofouling risk posed by the dry-docking support strips, (e.g., alternative keel block designs that leave less uncoated hull area);

.6 the geographic distribution of biofouling invasive aquatic species; and

.7 the rapid response to invasive aquatic species incursions, including diagnostic tools and eradication methods.

12.2 Potential operational benefits of such technologies should also be highlighted and relevant information provided to the Organization.

Independent information needs

12.3 Summaries are needed of the different types of anti-fouling systems and other biofouling management measures currently available, how they work and their performance under different operating conditions and situations. This information could assist shipowners and operators when making decisions about the most appropriate coatings and coating systems for their ship type and activity.

APPENDIX 1

BIOFOULING MANAGEMENT PLAN AND RECORD BOOK

Format and content of Biofouling Management Plan

The following information should be considered when developing a Biofouling Management Plan (the Plan). It is important that the Plan be specific to each ship.

The Plan may be a stand-alone document or integrated in part or full in the ships' operational and procedures manuals and/or planned maintenance systems.

INTRODUCTION

This section should contain a brief introduction for the ship's crew, explaining the need for biofouling management, and the importance of accurate record keeping.

The Plan should state that it is to be available for viewing on request by a port State authority and should be written in the working language of the crew.

SHIP PARTICULARS

At least the following details should be included:

- Ship's name.
- Flag.
- Port of registry.
- Gross tonnage.
- Registration number (i.e. IMO number and/or other registration numbers, if applicable).
- Regulation Length.
- Beam.
- Ship type (as classified by Lloyds Register – see Table 1).
- International call sign and Maritime Mobile Service Identity (MMSI).

Table 1: Ship types, as classified by Lloyd's Register

anchor handling fire fighting tug/supply	dredger	lighthouse/tender	roll on roll off
anchor handling tug	drill platform	Liquid Natural Gas Carrier	salvage tug
anchor handling tug/supply	drill ship	Liquid Petroleum Gas Carrier	seismographic research
asphalt tanker	ferry	livestock	semi-sub heavy lift vessel
barge	fire fighting tug	meteorological research	suction dredger
bulk carrier	fire fighting tug/supply	naval auxiliary tanker	supply
bulk carrier with container capacity	fish carrier	naval vessel	support
bulk cement carrier	fish factory	oceanographic research	tank barge
bulk ore carrier	fishery protection	offshore safety	tanker (unspecified)
bunkering tanker	fishing (general)	passenger (cruise)	trailing suction hopper dredger
cable ship	floating gas production	passenger roll on roll off	training
chemical tanker	floating production tanker	patrol ship	trawler (all types)
combined bulk and oil carrier	floating storage tanker	pipe layer	tug
combined chemical and oil tanker	fully cellular containership	pollution control vessel	tug/supply
combined LNG and LPG Gas Carrier	general cargo	pontoon	vehicle carrier
combined ore and oil carrier	general cargo with container capacity	product tanker	whaler
crane barge	grab dredger	pusher tug	wood-chip carrier
crane ship	hopper barge	reefer	yacht
crude oil tanker	hopper dredger	research	
cutter suction dredger	icebreaker	research/supply ship	
diving support	landing craft	roll on roll off with container capacity	

INDEX

A table of contents should be included.

PURPOSE

The purpose of the Plan is to outline measures for the control and management of ships' biofouling in accordance with the Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species (the Guidelines). It provides operational guidance for the planning and actions required for ships' biofouling management.

DESCRIPTION OF THE ANTI-FOULING SYSTEMS

The Plan should describe the anti-fouling systems in place for different parts of the ship, including as follows:

- type(s) of anti-fouling coating systems applied;
- details of where anti-fouling systems are and are not applied or installed;
- manufacturer and product names of all coatings or products used in the anti-fouling coating systems; and
- anti-fouling system specifications (including dry film thickness for coatings, dosing and frequency for MGPSs, etc.) together with the expected effective life, operating conditions required for coatings to be effective, cleaning requirements and any other specifications relevant for paint performance.

Previous reports on the performance of the ship's anti-fouling systems should be included, if applicable, and the AFS certificate or statement of compliance or other documentation should also be referenced, as appropriate.

DESCRIPTION OF OPERATING PROFILE

The Plan should describe the ship's operating profile that has determined the performance specifications of the ship's anti-fouling systems and operational practices, including:

- typical operating speeds;
- periods underway at sea compared with periods berthed, anchored or moored;
- typical operating areas or trading routes; and
- planned duration between dry-dockings/slippings.

DESCRIPTION OF AREAS ON THE SHIP SUSCEPTIBLE TO BIOFOULING

The Plan should identify the hull areas, niche areas and seawater cooling systems on the ship that are particularly susceptible to biofouling and describe the management actions required for each area. It should also describe the actions to be taken if the ship is operating outside of the desired operating profile, or if excessive unexpected biofouling is observed, and any other actions that can be taken to minimize the accumulation of biofouling on the ship. Table 1 provides an example of an action plan.

Table 2: Biofouling management action plan

Areas of the ship which are particularly susceptible to biofouling	**Management actions required for each area** (e.g., inspections, cleaning, repairs and maintenance)	**Management actions to be undertaken if ship operates outside its usual operating profile**
External hull surfaces: - Vertical sides - Flats - Boottop - Bow dome - Transom		
Hull appendages and fittings: - Bilge keels - A-brackets - Stabilizer fins - CP anodes		

Steering and propulsion:
 	
- Propeller
- Propeller shaft
- Stern tube seal
- Anchor chain
- Chain locker
- Rope guard
- Rudder
- Bow/Stern thrusters
  - Propeller
  - Thruster body
  - Tunnel
- Tunnel grates		

Seawater intakes and internal seawater cooling systems: - Engine cooling system - Sea chests (identify number and position) - Sea chest grate - Internal pipework and heat exchanger - Fire-fighting system - Ballast uptake system - Auxiliary services system		

A diagram of the ship should be included in the Plan to identify the location of those areas of the ship that are particularly susceptible to biofouling (including access points in the internal seawater cooling systems). If necessary these should show both side and bottom views of the ship.

OPERATION AND MAINTENANCE OF THE ANTI-FOULING SYSTEM

This section should contain a detailed description of the operation and maintenance of the anti-fouling system(s) used, including schedule(s) of activities and step-by-step operational procedures.

Timing of operational and maintenance activities

This section should stipulate the schedule of planned inspections, repairs, maintenance and renewal of the anti-fouling systems.

In-water cleaning and maintenance procedures

This section should set out planned maintenance procedures (other than for on board treatment processes) that need to be completed between dry-docking events to minimize biofouling. This should include routine cleaning or other treatments. Details should be provided on the treatment/cleaning to be conducted, the specification of any equipment required, details of the areas to which each specific treatment/cleaning is to be applied, step-by-step operational procedures where relevant and any other details relevant to the processes (e.g., chemicals required for treatment, any discharge standards).

Operation of onboard treatment processes

This section should provide specific advice about MGPS fitted, internal seawater cooling systems covered by the system and any not covered, and the associated maintenance and inspection schedule and procedures. This would include information such as when each MGPS is run, for how long and any cleaning/maintenance requirements of the system once use is finished. This section should also include advice for ship operators on procedures for biofouling management if the MGPS is temporarily out of operation.

SAFETY PROCEDURES FOR THE SHIP AND THE CREW

Details of specific operational or safety restrictions, including those associated with the management system that affects the ship and/or the crew.

Details of specific safety procedures to be followed during ship inspections.

DISPOSAL OF BIOLOGICAL WASTE

This section should contain procedures for the disposal of biological waste generated by treatment or cleaning processes when the cleaning is conducted by, or under the direct supervision of, the shipowner, master or crew.

RECORDING REQUIREMENTS

This section should contain details of the types of documentation to be kept to verify the operations and treatments to be recorded in the Biofouling Record Book as outlined in appendix 2.

CREW TRAINING AND FAMILIARIZATION

This section should contain information on the provision of crew training and familiarization.

APPENDIX 2

BIOFOULING MANAGEMENT PLAN AND RECORD BOOK

Biofouling Record Book Form

2011 Guidelines for the control and management of ships' biofouling to minimize the transfer of invasive aquatic species

Period From: …… To: .....

Name of Ship .....

Registration number* .....

Gross tonnage .....

Flag .....

* Registration number = IMO number and/or other registration numbers.

The ship is provided with a Biofouling Management Plan ☐

Diagram of ship indicating underwater hull form (showing both side and bottom views of the ship, if necessary) and recognized biofouling niches:

1 Introduction

The Guidelines recommend that a Biofouling Record Book is maintained for each ship, in which should be recorded the details of all inspections and biofouling management measures undertaken on the ship.

2 Entries in the Biofouling Record Book

The following information should be recorded in the Biofouling Record Book:

2.1 After each dry-docking:

a. Date and location that the ship was dry-docked.

b. Date that ship was re-floated.

c. Any hull cleaning that was performed while dry-docked, including areas cleaned, method used for cleaning and the location of dry-dock support blocks.

d. Any anti-fouling coating system, including patch repairs, that was applied while dry-docked. Detail the type of anti-fouling coating system, the area and locations it was applied to, the coating thickness achieved and any surface preparation work undertaken (e.g., complete removal of underlying anti-fouling coating system or application of new anti-fouling coating system over the top of existing anti-fouling coating system).

e. Name, position and signature of the person in charge of the activity for the ship.

2.2 When the hull area, fittings, niches and voids below the waterline have been inspected by divers:

a. Date and location of ship when dive surveyed and reason for survey.

b. Area or side of the ship surveyed.

c. General observations with regard to biofouling (i.e. extent of biofouling and predominant biofouling types, e.g., mussels, barnacles, tubeworms, algae and slime).

d. What action was taken, if any, to remove or otherwise treat biofouling.

e. Any supporting evidence of the actions taken (e.g., report from the classification society or contractor, photographs and receipts).

f. Name, position, signature of the person in charge of the activity.

2.3 When the hull area, fittings, niches and voids below the waterline have been cleaned by divers:

a. Date and location of ship when cleaning/treatment occurred.

b. Hull areas, fittings, niches and voids cleaned/treated.

c. Methods of cleaning or treatment used.

d. General observations with regard to biofouling (i.e. extent of biofouling and predominant biofouling types, e.g., mussels, barnacles, tubeworms, algae and slime).

e. Any supporting evidence of the actions taken (e.g., report from the classification society or contractor, photographs and receipts).

f. Records of permits required to undertake in-water cleaning if applicable.

g. Name, position and signature of the person in charge of the activity.

2.4 When the internal seawater cooling systems have been inspected and cleaned or treated:

a. Date and location of ship when inspection and/or cleaning occurred.

b. General observations with regard to biofouling of internal seawater cooling systems (i.e. extent of biofouling and predominant biofouling types, e.g., mussels, barnacles, tubeworms, algae, slime).

c. Any cleaning or treatment undertaken.

d. Methods of cleaning or treatment used.

e. Any supporting evidence of the actions taken (e.g., report from the classification society or contractor, photographs and receipts).

f. Name, position and signature of the person in charge of the activity.

2.5 For ships with a MGPS fitted:

a. Records of operation and maintenance (such as regularly monitoring the electrical and mechanical functions of the systems).

b. Any instances when the system was not operating in accordance with the biofouling management plan.

2.6 Periods of time when the ship was laid up/inactive for an extended period of time:

a. Date and location where ship was laid up.

b. Date when ship returned to normal operations.

c. Maintenance action taken prior to and following the period laid up.

d. Precautions taken to prevent biofouling accumulation (e.g., sea chests blanked off).

2.7 Periods of time when ship operating outside its normal operating profile:

a. Duration and dates when ship not operating in accordance with its normal operating profile.

b. Reason for departure from normal operating profile (e.g., unexpected maintenance required).

2.8 Details of official inspection or review of ship biofouling risk (for ships arriving internationally, if applicable):

a. Date and location of ship when inspection or review occurred.

b. Port State authority conducting the inspection/review and details of procedures followed or protocol adhered to and inspector/s involved.

c. Result of inspection/review.

d. Name, position, signature of the person in charge of the activity for the ship.

2.9 Any additional observations and general remarks:

a. Since the ship was last cleaned, has the ship spent periods of time in locations that may significantly affect biofouling accumulation (e.g., fresh water, high latitude (Arctic and Antarctic) or tropical ports).

Record of Biofouling Management Actions

SAMPLE BIOFOULING RECORD BOOK PAGE

Name of Ship: .....

Registration number: .....

Date	Item (number)	Record of management actions	Signature of officers in charge

Signature of master ……..……

***

ANNEX 27

RESOLUTION MEPC.208(62)

Adopted on 15 July 2011

2011 GUIDELINES FOR INSPECTION OF ANTI-FOULING SYSTEMS ON SHIPS

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

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

RECALLING ALSO that the International Conference on the Control of Harmful Anti-fouling Systems for Ships, 2001, held in October 2001, adopted the International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001 (the AFS Convention) together with four Conference resolutions,

RECALLING FURTHER that Article 11 of the AFS Convention prescribes that ships to which this Convention applies may, in any port, shipyard, or offshore terminal of a Party, be inspected by officers authorized by that Party for the purpose of determining whether the ship is in compliance with this Convention,

NOTING that Article 3(3) of the AFS Convention prescribes that Parties to this Convention shall apply the requirements of this Convention as may be necessary to ensure that no more favourable treatment is given to ships of non-Parties to this Convention,

NOTING ALSO resolution MEPC.105(49) by which the Committee adopted the Guidelines for inspection of anti-fouling systems on ship on 18 July 2003,

NOTING FURTHER that by resolution MEPC.105(49), the Committee resolved to keep the 2003 Guidelines under review in the light of experience gained,

HAVING CONSIDERED, at its sixty-second session, the draft 2011 Guidelines for inspection of anti-fouling systems on ships developed by the Sub-Committee on Flag State Implementation at its nineteenth session,

1. ADOPTS the 2011 Guidelines for inspection of anti- fouling systems on ships, as set out in the annex to this resolution;

2. INVITES Governments to apply the 2011 Guidelines when exercising port State control inspections;

3. RECOMMENDS that the 2011 Guidelines be adopted as amendments to resolution A.787(19) on Procedures for port State control, as amended;

4. AGREES to keep the 2011 Guidelines under review in the light of experience gained; and

5. REVOKES the Guidelines adopted by resolution MEPC.105(49).

ANNEX

2011 GUIDELINES FOR INSPECTION OF ANTI-FOULING SYSTEMS ON SHIPS

1 INTRODUCTION

1.1 The right of the port State to conduct inspections of anti-fouling systems on ships is in Article 11 of the AFS Convention. The guidelines for conducting these inspections are described below.

1.2 Ships of 400 gross tonnage and above engaged in international voyages (excluding fixed or floating platforms, FSUs and FPSOs) will be required to undergo an initial survey before the ship is put into service or before the International Anti-fouling System Certificate (IAFS) is issued for the first time; and a survey should be carried out when the anti-fouling systems are changed or replaced.

1.3 Ships of 24 metres in length or more but less than 400 gross tonnage engaged in international voyages (excluding fixed or floating platforms, FSUs and FPSOs) will have to carry a Declaration on Anti-fouling Systems signed by the owner or authorized agent. Such declaration shall be accompanied by appropriate documentation (such as a paint receipt or a contractor invoice) or contain appropriate endorsement.

2 INITIAL INSPECTION

2.1 Ships required to carry an IAFS Certificate or Declaration on Anti-Fouling Systems (Parties of the AFS Convention)

2.1.1 The PSCO should check the validity of the IAFS Certificate or Declaration on Anti-Fouling Systems, and the attached Record of Anti-Fouling Systems, if appropriate.

2.1.2 The only practical way to apply paint to the ship's bottom (underwater part) is in a dry dock. This means that the date of application of paint on the IAFS Certificate should be checked by comparing the period of dry-docking with the date on the certificate.

2.1.3 If the paint has been applied during a scheduled dry-dock period, it has to be registered in the ship's logbook (in order to be legal). Furthermore, this scheduled dry-docking can be verified by the endorsement date on the (statutory) Safety Construction Certificate (SOLAS, regulation I/10).

2.1.4 In case of an unscheduled dry-dock period, it could be verified by the registration in the ship's logbook (in order to be legal).

2.1.5 It can be additionally verified by the endorsement date on the (Class) Hull Certificate, the dates on the Manufacturer's Declaration or by confirmation of the shipyard.

2.1.6 The IAFS Certificate includes a series of tick boxes indicating:

.1 if an anti-fouling system controlled under Annex 1 of the AFS Convention has or has not been applied, removed or been covered with a sealer coat;

.2 if an anti-fouling system controlled under Annex 1 of the AFS Convention was applied on the ship prior to 1 January 2003 or a later date if specified by the Administration; and

.3 if an anti-fouling system controlled under Annex 1 of the AFS Convention was applied on the ship on/after 1 January 2003 or a later date if specified by the Administration.

2.1.7 Particular attention should be given to verifying that the survey for issuance of the current IAFS Certificate matches the dry-dock period listed in the ship's log(s) and that only one tick box is marked.

2.1.8 The Record of Anti-Fouling Systems should be attached to the IAFS Certificate and be up to date. The most recent record should agree with the tick box on the front of the IAFS Certificate.

2.2 Ships of non-Parties to the AFS Convention

2.2.1 Ships of non-Parties to the AFS Convention are not entitled to be issued with an IAFS Certificate. Therefore the PSCO should ask for documentation that contains the same information as in an IAFS Certificate and take this into account in determining compliance with the requirements.

2.2.2 If the existing anti-fouling system is declared not to be controlled under Annex 1 of the Convention, without being documented by an International Anti-Fouling System Certificate, verification should be carried out to confirm that the anti-fouling system complies with the requirements of the Convention. This verification may be based on sampling and/or testing and/or reliable documentation, as deemed necessary, based on experience gained and the existing circumstances. Documentation for verification could be, e.g., MSDSs (Material Safety Data Sheets), or similar, a declaration of compliance from the anti-fouling system manufacturer, invoices from the shipyard and/or the anti-fouling system manufacturer.

2.2.3 Ships of non-Parties may have Statements of Compliance issued in order to comply with regional requirements, for example, Regulation (EC) 782/2003 as amended by Regulation (EC) 536/2008, which could be considered as providing sufficient evidence of compliance.

2.2.4 In all other aspects the PSCO should be guided by the procedures for ships required to carry an IAFS Certificate.

2.2.5 The PSCO should ensure that no more favourable treatment is applied to ships of non-Parties to the AFS Convention.

3 MORE DETAILED INSPECTION

3.1 Clear ground

3.1.1 A more detailed inspection may be carried out when there has been clear grounds to believe that the ship does not substantially meet the requirements of the AFS Convention. Clear grounds for a more detailed inspection may be when:

.1 the ship is from a flag of a non-Party to the Convention and there is no AFS documentation;

.2 the ship is from a flag of a Party to the Convention but there is no valid IAFS Certificate;

.3 the painting date shown on the IAFS Certificate does not match the dry-dock period of the ship;

.4 the ship's hull shows excessive patches of different paints; and

.5 the IAFS Certificate is not properly completed.

3.1.2 If the IAFS Certificate is not properly completed, the following questions may be pertinent:

.1 "When was the ship's anti-fouling system last applied?";

.2 "If the anti-fouling system is controlled under Annex 1 to the AFS Convention and was removed, what was the name of the facility and date of the work performed?";

.3 "If the anti-fouling system is controlled under Annex 1 of the AFS Convention and has been covered by a sealer coat, what was the name of the facility and date applied?";

.4 "What is the name of the anti-fouling/sealer products and the manufacturer or distributor for the existing anti-fouling system?"; and

.5 "If the current anti-fouling system was changed from the previous system, what was the type of anti-fouling system and name of the previous manufacturer or distributor?".

3.2 Sampling

3.2.1 A more detailed inspection may include sampling and analysis of the ship's anti-fouling system, if necessary, to establish whether or not the ship complies with the AFS Convention. Such sampling and analysis may involve the use of laboratories and detailed scientific testing procedures.

3.2.2 If sampling is carried out, the time to process the samples cannot be used as a reason to delay the ship.

3.2.3 Any decision to carry out sampling should be subject to practical feasibility or to constraints relating to the safety of persons, the ship or the port (see appendix 1 for sampling procedures; an AFS Inspection Report template for sampling and analysis is attached to the Guidelines).

3.3 Action taken under the AFS Convention

Detention

3.3.1 The port State could decide to detain the ship following detection of deficiencies during an inspection on board.

3.3.2 Detention could be appropriate in any of the following cases:

.1 certification is invalid or missing;

.2 the ship admits it does not comply (thereby removing the need to prove by sampling); and

.3 sampling proves it is non-compliant within the ports jurisdiction.

3.3.3 Further action would depend on whether the problem is with the certification or the anti-fouling system itself.

3.3.4 If there are no facilities in the port of detention to bring the ship into compliance, the port State could allow the ship to sail to another port to bring the anti-fouling system into compliance. This would require an agreement of that port.

Dismissal

3.3.5 The port State could dismiss the ship, meaning that the port State demands that the ship leaves port – for example if the ship chooses not to bring the AFS into compliance but the port State is concerned that the ship is leaching tributyltin (TBTs) into its waters.

3.3.6 Dismissal could be appropriate if the ship admits it does not comply or sampling proves it is non-compliant while the ship is still in port. Since this would also be a detainable deficiency the PSCO can detain first and require rectification before release. However, there may not be available facilities for rectification in the port of detention. In this case the port State could allow the ship to sail to another port to bring the anti-fouling system into compliance. This could require agreement of that port.

3.3.7 Dismissal could be appropriate in any of the following cases:

.1 certification is invalid or missing;

.2 the ship admits it does not comply (thereby removing the need to collect proof by sampling; and

.3 sampling proves that the ship is non-compliant within the ports jurisdiction.

3.3.8 In these cases the ship will probably already have been detained. However, detention does not force the ship to bring the AFS into compliance (only if it wants to depart). In such a situation the port State may be concerned that the ship is leaching TBTs while it remains in its waters.

Exclusion

3.3.9 The port State could decide to exclude the ship to prevent it entering its waters. Exclusion could be appropriate if sampling proves that the ship is non-compliant but the results have been obtained after it has sailed or after it has been dismissed.

3.3.10 Exclusion could be appropriate if sampling proves that the ship is non-compliant but the results have been obtained after it has sailed or after it has been dismissed. Article 11(3) of the AFS Convention only mentions that the "party carrying out the inspection" may take such steps. This means that, if a port State excludes a ship, the exclusion cannot be automatically applied by other port States.

3.3.11 In accordance with Procedures for Port State Control (resolution A.787(19), as amended), where deficiencies cannot be remedied at the port of inspection, the PSCO may allow the ship to proceed to another port, subject to any appropriate conditions determined. In such circumstances, the PSCO should ensure that the competent authority of the next port of call and the flag State are notified.

Reporting to flag State

3.3.12 Article 11(3) of the AFS Convention requires that when a ship is detained, dismissed or excluded from a port for violation of the Convention, the Party taking such action shall immediately inform the flag Administration of the ship and any Recognized Organization which has issued a relevant certificate.

4 AFS REPORT TO FLAG STATE IN RESPONSE TO ALLEGED CONTRAVENTIONS

4.1 Article 11(4) of the AFS Convention allows Parties to inspect ships at the request of another Party, if sufficient evidence that the ship is operating or has operated in violation of the Convention is provided. Article 12(2) permits port States conducting the inspection to send the Administration (flag State) of the ship concerned any information and evidence it has that a violation has occurred. Information sent to the flag State is often inadequate for a prosecution. The following paragraphs detail the sort of information needed.

4.2 The report to the authorities of the port or coastal State should include as much as possible the information listed in section 3. The information in the report should be supported by facts which, when considered as a whole, would lead the port or coastal State to believe a contravention had occurred.

4.3 The report should be supplemented by documents such as:

.1 the port State report on deficiencies;

.2 a statement by the PSCO, including his rank and organization, about the suspected non-conforming anti-fouling system. In addition to the information required in section 3, the statement should include the grounds the PSCO had for carrying out a more detailed inspection;

.3 a statement about any sampling of the anti-fouling system including:

.1 the ship's location;

.2 where the sample was taken from the hull, including the vertical distance from the boot topping;

.3 the time of sampling;

.4 person(s) taking the samples; and

.5 receipts identifying the persons having custody and receiving transfer of the samples;

.4 reports of the analyses of any samples including:

.1 the results of the analyses;

.2 the method employed;

.3 reference to or copies of scientific documentation attesting the accuracy and validity of the method employed;

.4 the names of persons performing the analyses and their experience; and

.5 a description of the quality assurance measures of the analyses;

.5 statements of persons questioned;

.6 statements of witnesses;

.7 photographs of the hull and sample areas; and

.8 a copy of the IAFS Certificate, including copies of relevant pages of the Record of Anti-fouling Systems, log books, MSDS or similar, declaration of compliance from the anti-fouling system manufacturer, invoices from the shipyard and other dry dock records pertaining to the anti-fouling system.

4.4 All observations, photographs and documentation should be supported by a signed verification of their authenticity. All certifications, authentications or verifications should be in accordance with the laws of the State preparing them. All statements should be signed and dated by the person making them, with their name printed clearly above or below the signature.

4.5 The reports referred to under paragraphs 2 and 3 of this section should be sent to the flag State. If the coastal State observing the contravention and the port State carrying out the investigation on board are not the same, the port State carrying out the investigation should also send a copy of its findings to the coastal State.

APPENDIX 1

SAMPLING

Considerations related to brief sampling may be found in section 2.1 of Guidelines for brief sampling of anti-fouling systems on ships (resolution MEPC.104(49)).

Any obligation to take a sample should be subject to practical feasibility or to constraints relating to the safety of persons, the ship or the port.

The PSCO should consider the following:

- liaise with the ship on the location and time needed to take samples; the PSCO should verify that the time required will not unduly prevent the loading/unloading, movement or departure of the ship;

- do not expect the ship to arrange safe access but liaise with the ship over the arrangements that the port State competent authority has made, for example boat, cherry-picker, staging, etc.;

- select sampling points covering representative areas;

- take photographs of the hull, sample areas and sampling process;

- avoid making judgements on the quality of the paint (e.g., surface, condition, thickness, application);

- the need of inviting the ship representative's presence during brief sampling to ensure that the evidence is legally obtained;

- complete and sign the inspection report form together with the included sampling record sheets (to be filled in by the sampler), as far as possible, and leave a copy with the ship as a proof of inspection/sampling;

- inform the next port State where the inspected ship is to call;

- agree with or advise the ship on to whom the ship's copy of the finalized inspection report will be sent in cases when it cannot be completed in the course of the inspection; and

- ensure that receipts identifying the persons having custody and receiving transfer of the samples accompany the samples are filled in to reflect the transfer chain of the samples. PSCOs are reminded that the procedures set in national legislation regarding custody of evidence are not affected by the regulation. These guidelines therefore do not address this issue in detail.

1 Sampling methodologies

It is to the discretion of the port State to choose the sampling methodology. The Guidelines for brief sampling of anti-fouling systems on ships adopted by resolution MEPC.104(49) allow that any other scientifically recognized method of sampling and analysis of AFS controlled by the Convention than those described in the appendix to the Guidelines may be used (subject to the satisfaction of the Administration or the port State). The sampling methodology will depend, *inter alia*, on the surface hardness of the paint, which may vary considerably. The amount of paint mass removed may vary correspondingly.

Sampling procedures, based on the removal of paint material from the hull, require the determination of paint mass. It is important that procedures used are validated, produce unambiguous results and contain an adequate control.

The competent port State authority can decide to contract specialist companies to carry out sampling. In this case the PSCO should attend the ship during the sampling procedure to ensure the liaison and arrangements mentioned above are in place.

If a specialist company is not used, the port State competent authority should provide appropriate training to the PSCO in the available sampling methods and procedures and ensure that agreed procedures are followed.

The following general terms should be observed:

- the PSCO should choose a number of sample points preferably covering all the representative areas of the hull, but it is desirable to have at least eight (8) sample points equally spaced down and over the length of the hull, if possible divided over PS and SB *(*keeping in mind that different parts of the hull may be treated with different anti-fouling systems);

- triplicate specimens of paint at each sampling point should be taken in close proximity to each other on the hull (e.g., within 10 cm of each other);

- contamination of the samples should be avoided, which normally includes the wearing of non-sterilized non-powdered disposable gloves of suitable impervious material – e.g., nitrile rubber;

- the samples should be collected and stored in an inert container (e.g., containers should not consist of materials containing organotins or have the capacity to absorb organotins);

- samples should be taken from an area where the surface of the anti-fouling system is intact, clean and free of fouling;

- loose paint chips coming from detached, peeled or blistered hull areas should not be used for sampling;

- samples should not be taken from a heated or area where the paint is otherwise softened (e.g., heavy fuel tanks); and

- the underlying layers (primers, sealers, TBT containing AFS) should not be sampled if there is no clear evidence of exposure of extended areas.

2 Validity of the sampling

In order to safeguard the validity of the sampling as evidence of non-compliance, the following should be considered:

- only samples taken directly from the hull and free of possible contamination should be used;

- all samples should be stored in containers, marked and annotated on the record sheet. This record sheet should be submitted to the Administration;

- the receipts identifying the persons having custody and receiving transfer of the samples should be filled in and accompany the samples to reflect the transfer chain of the samples;

- the PSCO should verify the validity of the instrument's calibration validity date (according to the manufacturer instruction);

- in cases when a contracted specialist company is used for carrying out sampling, the PSCO should accompany its representative to verify sampling; and

- photographs of the hull, sample areas and sampling process could serve as additional proof.

It is also the case that sampling companies and/or procedures can be certified.

3 Health and safety when sampling

Any obligation to take a sample should be subject to practical feasibility or any constraints relating to the safety of persons, the ship or the port.

The PSCO is advised to ensure their safety taking the following points into account:

- general requirements enforced by the terminal or port authority and national health, safety and environmental policy;

- condition of the ship (ballast condition, ship's operations, mooring, anchorage, etc.);

- surroundings (position of ship, traffic, ships movement, quay operations, barges or other floating vessels alongside);

- safety measures for the use of access equipment (platforms, cherry picker, staging, ladders, railings, climbing harness, etc.), e.g., ISO 18001;

- weather (sea state, wind, rain, temperature, etc.); and

- precautions to avoid falling into the water between the quay and the ship. If in doubt, a lifejacket and if possible a safety line, should be worn when sampling.

Any adverse situation encountered during sampling that could endanger the safety of personnel, shall be reported to the safety coordinator.

Care should be taken to avoid contact of the removed paint with the skin and the eyes, and no particles should be swallowed or come into contact with foodstuffs. Eating or drinking during sampling is prohibited and hands should be cleaned afterwards. Persons carrying out sampling should be aware that the AFS and solvents or other materials used for sampling may be harmful and appropriate precautions should be taken. Personal protection should be considered by using long sleeve solvent-resistant gloves, dust mask, safety glasses, etc.

Standard (and specific, if applicable) laboratory safety procedures should be followed at all times when undertaking the sampling procedures and subsequent analysis.

4 Conducting analyses

The Guidelines for brief sampling of anti-fouling systems on ships envisage a two-stage analysis of samples for both methods presented in the appendix to the Guidelines. The first stage is a basic test, which can be carried out on site as in the case of Method 2. The second stage is carried out when the first stage results are positive. It is noted that in the IMO Guidelines, these stages are referred to as Steps 1 and 2 as in the case of Method 1. It is to the discretion of the port State competent authorities to choose which analysis methods are used.

The following points are presented for port State consideration:

- approval procedure for the recognition of laboratories meeting ISO 17025 standards or other appropriate facilities should be set up by the port State competent authorities. These procedures should define the recognition criteria. Exchange of information between port States on these procedures, criteria and laboratories/facilities would be beneficial, i.e. for the purposes of exchange of best practices and possible cross-border recognition and provision of services;

- the company that undertakes the analysis and/or samples should comply with national regulations and be independent from paint manufacturers;

- the PSCO carrying out the AFS inspection of a ship should verify the validity of the ISO 17025 certificate and/or the recognition of the laboratory;

- if more time is needed for analysis than available considering the ship's scheduled time of departure, the PSCO shall inform the ship and report the situation to the port State competent authority. However, the time needed for analysis does not warrant undue delay of the ship; and

- PSCOs should ensure completion of the record sheets for the sampling procedure as proof of analysis. In cases when the laboratory procedures prescribe presentation of the analyses' results in a different format, this technical report could be added to the record sheets.

5 The first-stage analysis

The first-stage analysis serves to detect the total amount of tin in the AFS applied.

It is to the discretion of the port State competent authority to choose the first-stage analysis methodology. However, the use of a portable X-ray fluorescence analyser (mentioned under Method 2) or any other scientifically justified method allowing the conduction of first-stage analyses on site could be considered best practice.

The port State competent authority has to decide whether the first-stage analysis should be carried out by PSCOs or by contracted companies.

The port State competent authority could provide PSCOs with this equipment (e.g., portable X-ray fluorescence analyser) and provide the appropriate training.

6 The second-stage analysis

The second-stage (final) analysis is used to verify whether or not the AFS system complies with the Convention requirements, i.e. whether organotin compounds are present in the AFS at a level which would act as a biocide.

The port State could consider implementing only a second-stage analysis.

It is to the discretion of the Authority to choose the second-stage analysis methodology. In this respect it is hereby noted that the second-stage analysis methodology for sampling Method 2 provided in the Guidelines is only tentative and "should be thoroughly reviewed by experts based on scientific evidence" (section 5.1 of Method 2).

7 Conclusions on compliance

The Authority should only make conclusions on compliance based on the second-stage analysis of the sample (organotin). In case the results indicate non-compliance at that stage, there are clear grounds to take further steps.

If considered necessary, more thorough sampling can be also carried out in addition or instead of brief sampling.

Sampling results should be communicated as soon as possible to the vessel (as part of the inspection report) and in the case of non-compliance also to the flag State and Recognized Organization acting on behalf of the flag State if relevant.

Authorities should, in accordance with section 5.2 of the Guidelines for brief sampling of anti-fouling systems on ships, develop and adopt procedures to be followed for those cases where compliance with acceptable limits or lack thereof, is unclear, considering additional sampling or other methodologies for sampling.

FORM S/1

REPORT OF INSPECTION of a ship's anti-fouling system (AFS)

SHIP PARTICULARS

1. **Name of ship :** 2. **IMO number :**

3. **Type of ship :** 4. **Call sign :**

5. **Flag of ship :** _____ 6. **Gross tonnage :** _____

7. **Date keel laid / major conversion commenced :** _____

INSPECTION PARTICULARS

8. **Date & time :** _____

9. **Name of facility:**
(dry-dock, quay, location) _____

Place & country: _____

10. **Areas inspected** ☐ **Ship's logbook** ☐ **Certificates** ☐ **Ship's hull**

11. **Relevant certificate(s)**

	(a) title	(b) issuing authority	(c) dates of issue	
1.	*IAFS Cert.*			
2.	*Record of AFS*			
3.	*Declaration of AFS*			
4.				

12. **Dry-dock period AFS applied :** _____

13. **Name of facility AFS applied :** _____

14. **Place & country AFS applied :** _____

15. **AFS samples taken :** ☐ **No** ☐ **Yes** **Nature of sampling :** ☐ **Brief** ☐ **Extent**

16. **Reason for sampling of AFS:**

17. **Record sheet attached :**
(country-code / IMO number / dd-mm-yy) _____

18. **Copy to:** ☐ **PSCO** ☐ **Flag State** ☐ **Recognized Organization**
☐ **Head office** ☐ **Master** ☐ **Other:** _____

PORT STATE PARTICULARS

Reporting authority: ..... **District office:** .....

Address: .....

.....

Telephone/Fax/ Mobile: .....

E-mail: .....

Name:
(duly authorized inspector of reporting authority) .....

Date: ..... **Signature:** .....

FORM S/2

Record sheet for the sampling procedure for compliance with the convention in terms of the presence of organotin acting as a biocide in anti-fouling systems on ship hulls

RECORD NUMBER	

(country-code / IMO number / dd-mm-yy)

Name of ship : ..... **IMO number :** .....

SAMPLING PARTICULARS

1. **Date & time initiated:** 2. **Date & time completed:**
3. **Name of paint manufacturer:**
4. **AFS product name & colour:**
5. **Reason for Sampling:** ☐ **Port State Control** ☐ **Survey & Certification** ☐ **Other flag State compliance inspection**
6. **Sampling Method:** _____
7. **Hull areas sampled:** ☐ **Port Side** ☐ **Starboard Side** ☐ **Bottom**

   Number of sampling points: _____ ....
8. **Back-up samples' storage location:**
   (e.g., Port State inspection office)
9. ☐ **Photos taken of the sample points** **Comments:** .....
10. ☐ **Paint samples (wet)** **Comments:** .....
11. ☐ **First-stage analysis** **Comments:** .....
12. ☐ **Second-stage analysis** **Comments:** .....
13. **Comments concerning sampling procedure**

14. **Sampling company** **Name**

    Date

    Signature

PORT STATE PARTICULARS

Reporting authority: ..... **District office:** .....

Address: .....

.....

Telephone/ Fax/ Mobile: .....

E-mail: .....

Name*:*
(duly authorized inspector of reporting authority) .....

Date: ..... **Signature:** .....

FORM S/3

RECORD NUMBER	

Name of ship: ..... **IMO number:** .....

METHOD 1 ANALYSIS

1.	**Instrument I.D.:**			**Calibration Expire Date:**		
2.	**Specimens "A"** results total number of specimens "A" analysed:					
3.	**No.**	**Sample location** *(Frame & Distance from boot topping)*	**mg Sn/ kg**	**No.**	**Sample location** *(Frame & distance from boot topping)*	**mg Sn/ kg**
	1			**9**		
	2			**10**		
	3			**11**		
	4			**12**		
	5			**13**		
	6			**14**		
	7			**15**		
	8			**16**		
4.	**Results** Number of specimens exceeding 2,500 mg/kg: ☐ Yes ☐ No 1 or more specimens exceeding 3,000 mg/kg				☐ Step 2 required ☐ Compliance, NO further analysis	
5.	**Additional comments concerning analysis of results from Specimens "A"**					
6.	**Company**			**Name** **Date** **Signature**		

7.	**Instrument I.D.:**				**Calibration Expire Date:**			
8.	**Specimens "B"** results total number of specimens "B" analysed :							
9.	**No.**	**organotin** (mg Sn/ kg) as Sn	**No.**	**organotin** (mg Sn/ kg) as Sn	**No.**	**organotin** (mg Sn/ kg) as Sn	**No.**	**organotin** (mg Sn/ kg) as Sn
	1		**5**		**9**		**13**	
	2		**6**		**10**		**14**	
	3		**7**		**11**		**15**	
	4		**8**		**12**		**16**	
10.	**Results** Number of specimens exceeding 2,500 mg/kg: 1 or more specimens exceeding 3,000 mg/kg ☐ Yes ☐ No					☐ Non-compliance assumed ☐ Compliance assumed		
11.	**Additional comments concerning analysis of results from Specimens "B"**							
12.	**Company**				**Name** **Date** **Signature**			

FORM S/4

RECORD NUMBER	

Name of ship: _____ **IMO number:** .....

METHOD 2 FIRST-STAGE ANALYSIS

1. **Instrument I.D.:**	**Calibration Expire Date:**

2. **Sample location** *(Frame & distance from boot topping)*	**Specimen I.D.**	**Sample Disc**	**Content of Tin (mg/ kg)**	**max**	**min**	**Average**
A	A1	☐ abrasive		☐	☐	
	A2	☐ metal		☐	☐	
	A3	☐ others		☐	☐	Average
	A4	☐ abrasive		☐	☐	
	A5	☐ metal		☐	☐	mg/kg
	A6	☐ others		☐	☐	☐ >2,500 mg/kg
	A7	☐ abrasive		☐	☐	☐ >3,000 mg/kg
	A8	☐ metal		☐	☐	
	A9	☐ others		☐	☐	
B	B1	☐ abrasive		☐	☐	
	B2	☐ metal		☐	☐	
	B3	☐ others		☐	☐	Average
	B4	☐ abrasive		☐	☐	
	B5	☐ metal		☐	☐	mg/kg
	B6	☐ others		☐	☐	☐ >2,500 mg/kg
	B7	☐ abrasive		☐	☐	☐ >3,000 mg/kg
	B8	☐ metal		☐	☐	
	B9	☐ others		☐	☐	
C	C1	☐ abrasive		☐	☐	
	C2	☐ metal		☐	☐	
	C3	☐ others		☐	☐	Average
	C4	☐ abrasive		☐	☐	
	C5	☐ metal		☐	☐	mg/kg
	C6	☐ others		☐	☐	☐ >2,500 mg/kg
	C7	☐ abrasive		☐	☐	☐ >3,000 mg/kg
	C8	☐ metal		☐	☐	
	C9	☐ others		☐	☐	
D	D1	☐ abrasive		☐	☐	
	D2	☐ metal		☐	☐	
	D3	☐ others		☐	☐	Average
	D4	☐ abrasive		☐	☐	
	D5	☐ metal		☐	☐	mg/kg
	D6	☐ others		☐	☐	☐ >2,500 mg/kg
	D7	☐ abrasive		☐	☐	☐ >3,000 mg/kg
	D8	☐ metal		☐	☐	
	D9	☐ others		☐	☐	

3.	**Results First-Stage Analysis**	☐ samples out of are above 2,500 mg/kg ☐ Sample(s) is (are) above 3,000 mg/kg	☐ Compliant ☐ Second-stage required
4.	**Comments**		
5.	**Company**	**Name** **Date** **Signature**	

FORM S/5

RECORD NUMBER	

Name of ship: ..... **IMO number:** _____

METHOD 2 SECOND-STAGE ANALYSIS

1. **Instrument ID:**	**Calibration Expire Date:**

2.	**Specimen used** *(Specimen I.D.)*	**Content of Tin First-Stage** (*XRF Analysis*) **(mg Sn/kg)**	**Content of Tin Second-Stage** (as organotin) **(mg Sn/kg)**	**Compliance**
A				
				☐ >2,500mg/kg
				☐ >3,000mg/kg
B				
				☐ >2,500mg/kg
				☐ >3,000mg/kg
C				
				☐ >2,500mg/kg
				☐ >3,000mg/kg
D				
				☐ >2,500mg/kg
				☐ >3,000mg/kg

3. **Results Second-Stage Analysis**		
	☐ Samples out of are above 2,500mg (Sn)/kg (dry paint) ☐ Sample(s) is (are) above 3,000mg(Sn)/kg (dry paint)	☐ Compliant ☐ NOT Compliant

4.	**Comments**	
5.	**Laboratory**	**Name** **Date** **Signature**

PORT STATE PARTICULARS

Reporting authority: ..... **District office:** .....

Address: .....

.....

Telephone/Fax/ Mobile: .....

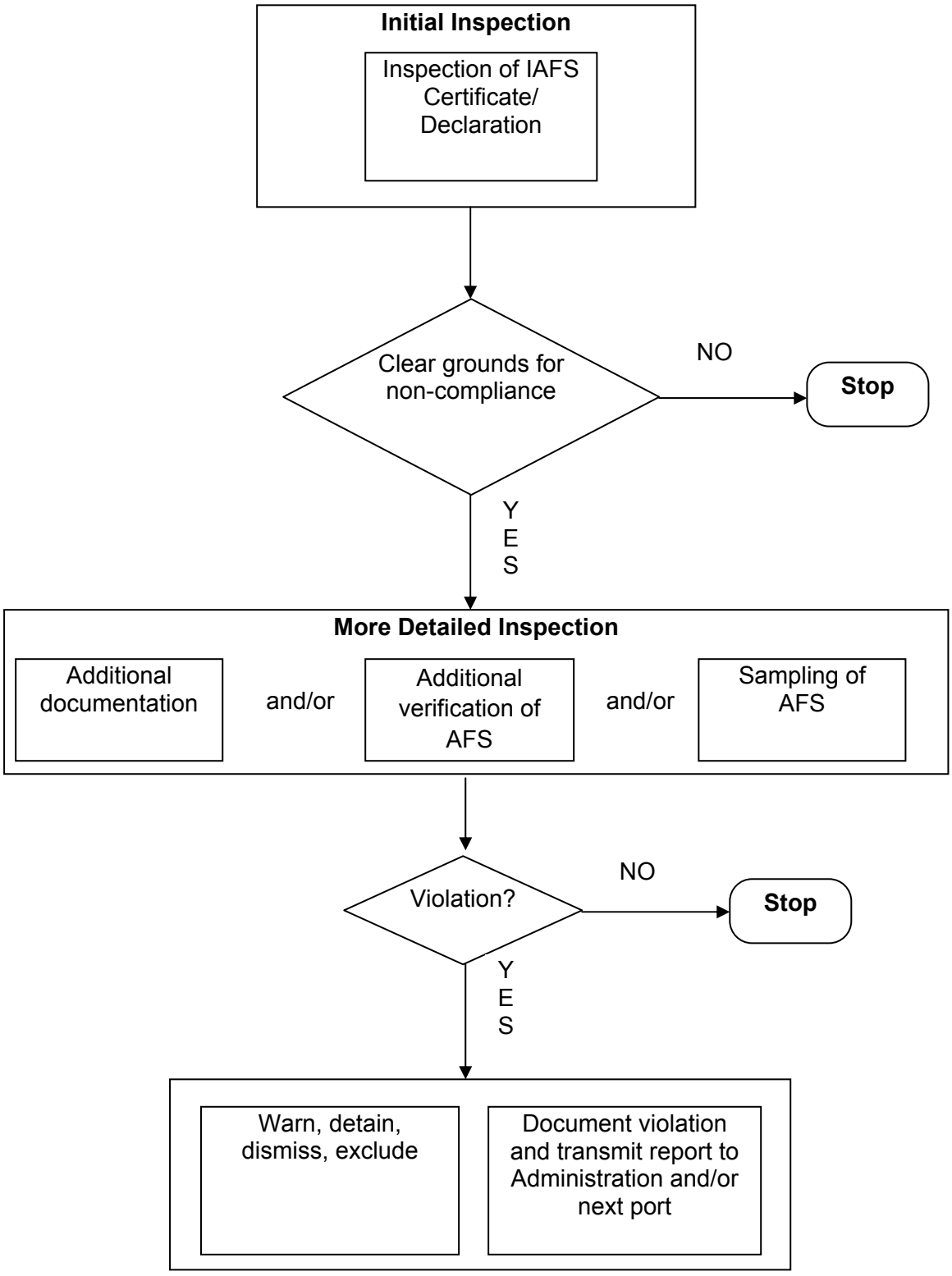
E-mail: .....

Name*:*
(duly authorized inspector of reporting authority) .....

Date: ..... **Signature:** .....

APPENDIX 2

AFS INSPECTION PROCESS



***

ANNEX 28

DRAFT ASSEMBLY RESOLUTION ON PROCEDURES FOR PORT STATE CONTROL, 2011

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO resolution A.787(19) by which it adopted Procedures for port State control and resolution A.882(21) by which it adopted amendments to the Procedures for port State control as adopted by resolution A.787(19),

RECALLING FURTHER that, at its twenty-first session, when adopting resolution A.882(21), it requested the Maritime Safety Committee and the Marine Environment Protection Committee to keep the revised Procedures under review on the basis of experiences gained from the implementation of such procedures,

RECOGNIZING that efforts by port States have greatly contributed to enhanced maritime safety and security, and prevention of marine pollution,

RECOGNIZING FURTHER the need for the revised Procedures to be further revised to take account of the amendments to the IMO instruments which have entered into force or become effective since the adoption of resolutions A.787(19) and A.882(21),

HAVING CONSIDERED the recommendations made by the Maritime Safety Committee at its eighty-ninth session and by the Marine Environment Protection Committee at its sixty-second session,

1. ADOPTS the port State control Procedures 2011 as set out in the annex to the present resolution;

2. INVITES Governments, when exercising port State control, to implement the aforementioned procedures;

3. REQUESTS the Maritime Safety Committee and the Marine Environment Protection Committee to keep the Procedures under review and to amend them as necessary;

4. REVOKES resolutions A.787(19) and A.882(21).

ANNEX

PROCEDURES FOR PORT STATE CONTROL 2011

[MSC 89/25, annex 24]

***

ANNEX 29

DRAFT ASSEMBLY RESOLUTION ON SURVEY GUIDELINES UNDER THE HARMONIZED SYSTEM OF SURVEY AND CERTIFICATION (HSSC), 2011

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO the adoption by:

(a) the International Conference on the Harmonized System of Survey and Certification, 1988, of the Protocol of 1988 relating to the International Convention for the Safety of Life at Sea, 1974, and the Protocol of 1988 relating to the International Convention on Load Lines, 1966, which, *inter alia*, introduced the harmonized system of survey and certification under the International Convention for the Safety of Life at Sea, 1974 and the International Convention on Load Lines, 1966, respectively;

(b) resolution MEPC.39(29), of amendments to introduce the harmonized system of survey and certification into the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the 1978 Protocol relating thereto (MARPOL 73/78);

(c) resolution MEPC.132(53), of amendments to introduce the harmonized system of survey and certification into MARPOL Annex VI; and

(d) the resolutions given below, of amendments to introduce the harmonized system of survey and certification into:

(i) the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) (resolutions MEPC.40(29) and MSC.16(58));

(ii) the International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (IGC Code) (resolution MSC.17(58)); and

(iii) the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (BCH Code) (resolutions MEPC.41(29) and MSC.18(58)),

RECALLING FURTHER that, by resolution A.1020(26), it adopted amendments to the Survey Guidelines under the Harmonized System of Survey and Certification, 2007, as adopted by resolution A.997(25), with a view to assisting Governments in the implementation of the requirements of the aforementioned instruments,

RECOGNIZING the need for the Survey Guidelines to be further revised to take into account the amendments to the IMO instruments referred to above, which have entered into force or become effective since the adoption of resolution A.1020(26),

HAVING CONSIDERED the recommendations made by the Maritime Safety Committee, at its eighty-ninth session, and the Marine Environment Protection Committee, at its sixty-second session,

1. ADOPTS the Survey Guidelines under the Harmonized System of Survey and Certification, 2011, set out in the annex to the present resolution;

2. INVITES Governments carrying out surveys required by the relevant IMO instruments to follow the provisions of the annexed Survey Guidelines;

3. REQUESTS the Maritime Safety Committee and the Marine Environment Protection Committee to keep the Survey Guidelines under review and amend them as necessary;

4. REVOKES resolutions A.997(25), A.1020(26) and MEPC.180(59).

ANNEX

SURVEY GUIDELINES UNDER THE HARMONIZED SYSTEM OF SURVEY AND CERTIFICATION (HSSC), 2011

[MSC 89/25, annex 25]

***

ANNEX 30

DRAFT ASSEMBLY RESOLUTION ON THE CODE FOR THE IMPLEMENTATION OF MANDATORY IMO INSTRUMENTS, 2011

THE ASSEMBLY,

RECALLING Article 15(j) of the Convention on the International Maritime Organization concerning the functions of the Assembly in relation to regulations and guidelines concerning maritime safety and the prevention and control of marine pollution from ships,

RECALLING ALSO that, by resolution A.1019(26), it adopted amendments to the Code for the Implementation of Mandatory IMO Instruments, 2007, as adopted by resolution A.996(25),

RECOGNIZING the need for the above Code to be further revised to take account of the amendments to the IMO instruments referred to above, which have entered into force or become effective since the adoption of resolution A.1019(26),

BEING AWARE of the request of the seventh session of the UN Commission on Sustainable Development (CSD 7) that measures be developed to ensure that flag States give full and complete effect to the IMO and other relevant conventions to which they are party, so that the ships of all flag States meet international rules and standards,

RECOGNIZING that parties to the relevant international conventions have, as part of the ratification process, accepted to fully meet their responsibilities and to discharge their obligations under the conventions and other instruments to which they are party,

REAFFIRMING that States have the primary responsibility to have in place an adequate and effective system to exercise control over ships entitled to fly their flag, and to ensure that they comply with relevant international rules and regulations in respect of maritime safety, security and protection of the marine environment,

REAFFIRMING ALSO that States, in their capacity as port and coastal States, have other obligations and responsibilities under applicable international law in respect of maritime safety, security and protection of the marine environment,

NOTING that, while States may realize certain benefits by becoming party to instruments aiming at promoting maritime safety, security and the prevention of pollution from ships, these benefits can only be fully realized when all parties carry out their obligations as required by the instruments concerned,

NOTING ALSO that the ultimate effectiveness of any instrument depends, *inter alia*, upon all States:

(a) becoming party to all instruments related to maritime safety, security and pollution prevention and control;

(b) implementing and enforcing such instruments fully and effectively; and

(c) reporting to the Organization, as required,

NOTING FURTHER that, in the context of the Voluntary IMO Member State Audit Scheme, the enactment of appropriate legislation and its implementation and enforcement are the three key issues on which a Member State's performance can be measured,

BEARING IN MIND that the Voluntary IMO Member State Audit Scheme contains references to the Code for the Implementation of Mandatory IMO Instruments, as appropriate; and that the Code, in addition to providing guidance for the implementation and enforcement of IMO instruments, forms the basis of the Audit Scheme, in particular concerning the identification of the auditable areas,

HAVING CONSIDERED the recommendations made by the Maritime Safety Committee, at its eighty-ninth session and the Marine Environment Protection Committee, at its sixty-second session,

1. ADOPTS the Code for the Implementation of Mandatory IMO Instruments, 2011, set out in the annex to the present resolution;

2. URGES Governments of all States in their capacity as flag, port and coastal States to implement the amendments to the Code on a national basis;

3. REQUESTS the Maritime Safety Committee and the Marine Environment Protection Committee to keep the Code under review and, in coordination with the Council, to propose amendments thereto to the Assembly;

4. REVOKES resolutions A.996(25) and A.1019(26).

ANNEX

CODE FOR THE IMPLEMENTATION OF MANDATORY IMO INSTRUMENTS, 2011

[MSC 89/25, annex 27]

***

ANNEX 31

**FSA ENVIRONMENTAL RISK EVALUATION CRITERIA:
AMENDMENTS TO THE FSA GUIDELINES –
A PROPOSED NEW APPENDIX**

Noting that the most appropriate conversion formula to use will depend on the specific scope of each FSA to be performed, a general approach to be followed is outlined in the following suggested examples.

1. Consolidated oil spill database based on:

   a. IOPCF data;
   b. US Data;
   c. Norwegian data;

Figure 1 shows the data of the consolidated oil spill database in terms of specific costs per tonne spilled (Figure 5 of document MEPC 62/INF.24). Further information with respect to the basis of the database can be found in document MEPC 62/INF.24. It should be acknowledged that the consolidated oil spill database has limitations and possible deficiencies. These are described in document MEPC 62/INF.24 and may also involve incomplete or missing data on costs or other information.

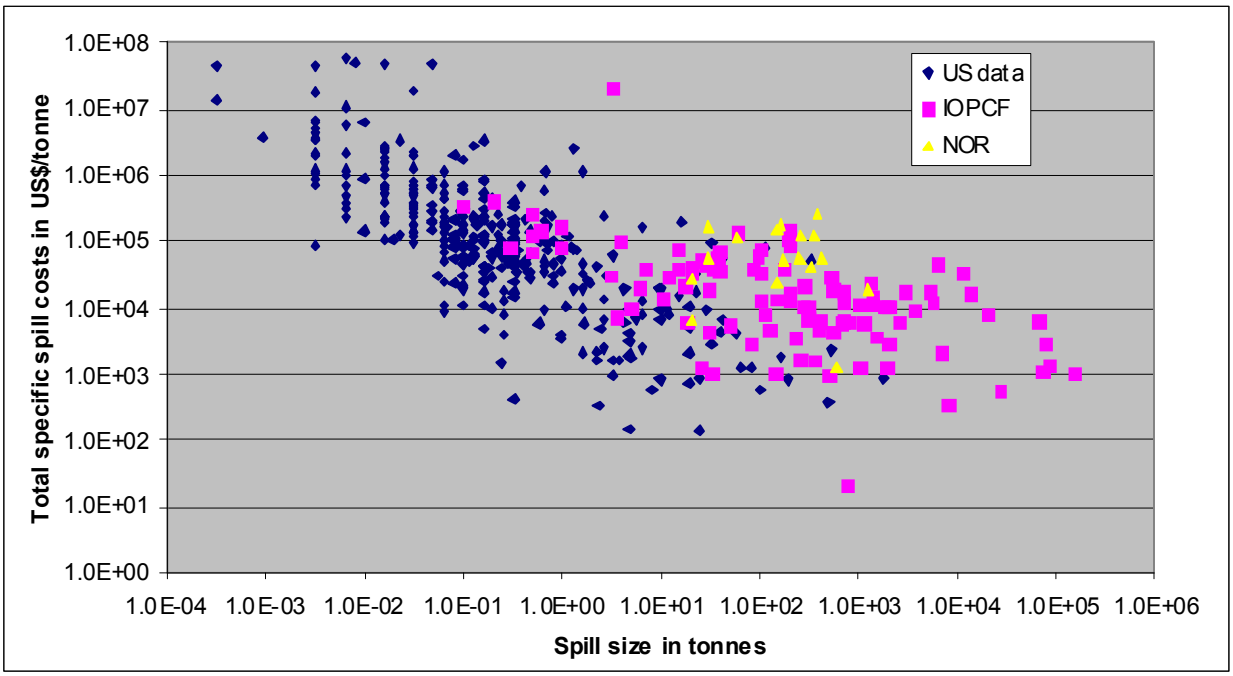


Figure 1: All specific oil spill cost data in 2009 USD (spill cost per tonne). Source: document MEPC 62/INF.24.

The submitter of the FSA can amend this database with new oil spill data, however, this amendment should be properly documented.

2. Some regression formulae derived from the consolidated oil spill database are summarized in Table 1 in which V is spill size in tonnes.

Table 1: Regression formulae derived from the consolidated database

Dataset	f(V)=Total Spill Cost (TSC) (2009 US dollars)	Reference
All spills	$67{,}275\ V^{0.5893}$	MEPC 62/INF.24
V>0.1 tonnes	$42{,}301\ V^{0.7233}$	MEPC 62/18[1]

FSA analysts are free to use other conversion formulae, so long as these are well documented by the data. For example, if an FSA is considering only small spills, the submitter may filter the data and perform his or her own regression analysis.

3. It is recommended that the FSA analyst use the following formula to estimate the societal oil spill costs (SC) used in the analysis:

$$SC_{threshold} = F_{Assurance} * F_{Uncertainty} * f(V)$$

This equation considers:

1. Assurance factor ($F_{Assurance}$): allowing for society's willingness to pay to avert accidents;
2. Uncertainty factor ($F_{Uncertainty}$): allowing for uncertainties in the cost information from occurred spill accidents; and
3. Volume-dependent total cost function (*f(V)*): representing the fact that the cost per unit oil spilled decreases with the spill size in US$ per tonne oil spilled.

The values of both assurance and uncertainty factors should be well documented.

In order to consider the large scatter, the FSA analyst may perform a regression to determine a function *f(V)* that covers a percentile different than 50 % and document it in the report.

4. Application in RCO evaluation

The FSA analyst should perform a cost-benefit and cost-effectiveness evaluation of the RCOs identified and provide all relevant details in the report, as outlined below.

4.1 RCOs affecting oil spills only

In case an RCO affects oil spills only:

RCO is cost effective if ΔC < ΔSC

ΔC = Expected cost of the RCO

ΔSC = (Expected SC **without** the RCO) – (Expected SC **with** the RCO) = Expected benefit of the RCO

[1] Updated regression made on the final consolidated dataset.

4.2 RCOs affecting both safety and environment

In case of RCOs addressing both safety and environment the following formula is recommended:

NCAF = (ΔC – ΔSC) / ΔPLL

In the above,

ΔC = Expected cost of the RCO
ΔSC = (Expected SC **without** the RCO) – (Expected SC **with** the RCO) = Expected benefit of the RCO
ΔPLL = Expected reduction of fatalities due to the RCO

The criteria for NCAF are as per table 2 of appendix 7 of document MSC 83/INF.2.

In case there is an economic benefit (ΔB), ΔC should be replaced by ΔC-ΔB.

It is also emphasized that all cost and benefit components of the cost-benefit or cost-effectiveness inequality should be shown in an FSA study for better transparency.

The user is free to develop new approaches taking into account the objectives of the FSA.

5. Index for environmental criteria

The table below should be inserted **in Appendix 4 (paragraph 3) of the FSA Guidelines**

Severity Index		
SI	SEVERITY	DEFINITION
1	Category 1	Oil spill size < 1 tonne
2	Category 2	Oil spill size between 1-10 tonnes
3	Category 3	Oil spill size between 10-100 tonnes
4	Category 4	Oil spill size between 100-1,000 tonnes
5	Category 5	Oil spill size between 1,000-10,000 tonnes
6	Category 6	Oil spill size >10,000 tonnes

***

ANNEX 32

BIENNIAL AGENDA FOR THE BLG SUB-COMMITTEE AND PROVISIONAL AGENDA FOR BLG 16

SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG)*					
PLANNED OUTPUTS 2012-2013 (resolution A.[…](27))		Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Target completion year
Number**	Description				
1.1.2.2	**Cooperation with IACS: consideration of unified interpretations**	MSC/MEPC		BLG	Ongoing
2.0.1.13	**Non-mandatory instruments: additional guidelines for implementation of the BWM Convention, including port State control**	MEPC	BLG		2012
5.2.1.3	**Development of international code of safety for ships using gases or other low flashpoint fuels**	MSC	BLG	FP, DE	2013
5.2.1.4	**Development of revised IGC Code**	MSC	BLG	FP, DE, SLF, STW	2013
5.2.2.9	**Consideration of amendments to SOLAS to mandate enclosed space entry and rescue drills**	MSC	DSC	BLG	2012
7.1.2.14	**Guidance on bio-fouling for recreational craft less than 24 metres**	MEPC	BLG		2012
7.1.2.32	**Development of a Code for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk in offshore support vessels**	MSC/MEPC	BLG	DE	2012 2013
7.2.2.4	**Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments**	MEPC	BLG		Ongoing

* Items printed in bold have been selected for the draft provisional agenda for BLG 16.

** Numbers refer to the planned outputs for the 2010-2011 biennium.

SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG)*					
PLANNED OUTPUTS 2012-2013 (resolution A.[…](27))		Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Target completion year
Number**	Description				
7.3.1.1	**Review of relevant non-mandatory instruments as a consequence of the amended MARPOL Annex VI and the NO_x Technical Code**	MEPC	BLG		2012
12.3.1 12.1.2.2	**Casualty analysis**	MSC	FSI	BLG	Ongoing

SUB-COMMITTEE ON BULK LIQUIDS AND GASES (BLG) – 16TH SESSION

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments

4 Development of guidelines and other documents for uniform implementation of the 2004 BWM Convention

5 Development of international measures for minimizing the transfer of invasive aquatic species through bio fouling of ships

6 Development of international code of safety for ships using gases or other low flashpoint fuels

7 Development of revised IGC Code

8 Review of relevant non-mandatory instruments as a consequence of the amended MARPOL Annex VI and the NO_x Technical Code

9 Development of a code for the transport and handling of limited amounts of hazardous and noxious liquid substances in bulk in offshore support vessels

10 Consideration of amendment to SOLAS to mandate enclosed space entry and rescue drills

11 Consideration of IACS unified interpretations

12 Casualty analysis

13 Biennial agenda and provisional agenda for BLG 17

14 Election of Chairman and Vice-Chairman for 2013

15 Any other business

16 Report to the Committees

***

ANNEX 33

BIENNIAL AGENDA FOR THE FSI SUB-COMMITTEE AND PROVISIONAL AGENDA FOR FSI 20

SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI)*					
PLANNED OUTPUTS 2012-2013 (resolution A.[...](27))		Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Target completion year
Number**	Description				
1.1.2.1	**Cooperation with FAO: preparation and holding of the third meeting of the Joint FAO/IMO Working Group on IUU Fishing and Related Matters**	MSC/MEPC	FSI	SLF	2013
1.1.2.2	**Cooperation with IACS: consideration of unified interpretations**	MSC/MEPC		FSI	Ongoing
1.1.2.4	**Development PSC guidelines on seafarers' hours of rest taking into account the Maritime Labour Convention 2006**	MSC	FSI	STW	2013
2.0.1.13	**Non-mandatory Instruments: additional guidelines for implementation of the BWM Convention, including port State control**	MEPC	FSI		2013
2.01.18	**Development of a Code for Recognized Organizations**	MSC/MEPC	FSI		2012
2.0.1.25	**Comprehensive review of issues related to the responsibilities of Governments and development of measures to encourage flag State compliance**	MSC/MEPC	FSI		2013
2.0.1.27	**Summary reports and analyses of mandatory reports under MARPOL**	MEPC	FSI		Ongoing
2.0.2.2	**Review of the Code for implementation of mandatory IMO instruments and consolidated audit summary reports, adoption of the new IMO Instruments Implementation Code (IIIC) and making the III Code and auditing mandatory**	MSC/MEPC	FSI		2013

* Items printed in bold have been selected for the draft provisional agenda for FSI 20.

** Numbers refer to the planned outputs for the 2010-2011 biennium.

SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI)*					
PLANNED OUTPUTS 2012-2013 (resolution A.[...](27))		Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Target completion year
Number**	Description				
5.1.2.1.1	**Making the provisions of MSC.1/Circ.1206/Rev.1 mandatory**	MSC	DE	FSI, NAV, STW	2012
5.1.2.3	**Measures to protect the safety of persons rescued at sea**	MSC	COMSAR	FSI/FAL	2012
5.2.1.22	**Development of a non-mandatory instrument on regulation for non-convention ships**	MSC	FSI		2013
5.2.1.23	**Review and update of the Survey Guidelines under the HSSC and the annexes to the Code for the Implementation of Mandatory IMO Instruments**	MSC/MEPC	FSI		Ongoing
5.3.1.6	**Promote the harmonization of port State control activities and collect PSC Data**	MSC	FSI		Ongoing
12.1.2.1/2 12.3.1.1	**Collection and analysis of casualty data to study trends and develop knowledge and risk-based recommendations**	MSC	FSI	All Sub-Committees	Ongoing

SUB-COMMITTEE ON FLAG STATE IMPLEMENTATION (FSI) – 20TH SESSION

Opening of the session

1 Adoption of the agenda

2 Decisions of other IMO bodies

3 Responsibilities of Governments and measures to encourage flag State compliance

4 Mandatory reports under MARPOL

5 Casualty statistics and investigations

6 Harmonization of port State control activities

7 PSC Guidelines on seafarers' hours of rest and PSC guidelines in relation to the Maritime Labour Convention, 2006

8 Development of guidelines on port State control under the 2004 BWM Convention

9 Comprehensive analysis of difficulties encountered in the implementation of IMO instruments

10 Review of the Survey Guidelines under the HSSC and the annexes to the Code for the Implementation of Mandatory IMO Instruments

11 Consideration of IACS Unified Interpretations

12 Review of the IMO Instruments Implementation Code

13 Development of a Code for Recognized Organizations

14 Measures to protect the safety of persons rescued at sea

15 Illegal unregulated and unreported (IUU) fishing and related matters

16 Biennial agenda and provisional agenda for FSI 21

17 Election of Chairman and Vice-Chairman for 2013

18 Any other business

19 Report to the Committees

***

ANNEX 34

ITEMS IN BIENNIAL AGENDAS OF THE DE, DSC, NAV AND STW SUB-COMMITTEES RELATING TO ENVIRONMENTAL ISSUES

SUB-COMMITTEE ON SHIP DESIGN AND EQUIPMENT (DE)					
PLANNED OUTPUTS 2012-2013 (resolution A.[...](27))		Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Target completion year
Number*	Description				
NEW	**Revision of the standard specification for shipboard incinerators (resolution MEPC.76(40))**	MEPC	DE		2012
5.2.1.19	**Development of a mandatory Code for ships operating in polar waters**	MSC/MEPC	DE		2012
7.1.2.4	**Provisions for the reduction of noise from commercial shipping and its adverse impacts on marine life**	MEPC	DE		2012
7.1.2.31	**Revision of the Revised guidelines on implementation of effluent standards and performance tests for sewage treatment plants (resolution MEPC.159(55))**	MEPC	DE		2012

* Numbers refer to the planned outputs for the 2010-2011 biennium.

SUB-COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS (DSC)					
PLANNED OUTPUTS 2012-2013 (resolution A.[...](27))		Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Target completion year
Number	Description				
5.2.3.3	**Amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes**	MSC/MEPC	DSC		Ongoing
NEW	**Development of criteria for the evaluation of environmentally hazardous solid bulk cargoes in relation to the revised MARPOL Annex V**	MEPC	DSC		2012
12.3.1.3	**Reports on incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas**	MSC/MEPC	DSC		Ongoing

SUB-COMMITTEE ON SAFETY OF NAVIGATION (NAV)					
PLANNED OUTPUTS 2012-2013 (resolution A.[...](27))		Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Target Completion Year
Number	Description				
5.2.4.1	**Routeing of ships, ship reporting and related matters**	MSC/MEPC	NAV		Ongoing

SUB-COMMITTEE ON TRAINING AND WATCHKEEPING (STW)					
	PLANNED OUTPUTS 2012-2013 (resolution A.[...](27))	Parent organ(s)	Coordinating organ(s)	Associated organ(s)	Target Completion year
Number	Description				
5.4.1	**Consideration of role of the human element matters**	MSC/MEPC	STW		Ongoing

***

ANNEX 35

STATUS OF THE PLANNED OUTPUTS OF THE COMMITTEE FOR THE 2010-2011 BIENNIUM

Planned output number in the High-level Action Plan for 2010-2011 [a]	Description	Target completion year [b]	Status of output for Year 1 [c]	Status of output for Year 2 [c]	References [d]
1.1.1.1	Permanent analysis, demonstration and promotion of the linkage between a safe, secure, efficient and environmentally friendly maritime transport infrastructure, the development of global trade and the world economy and the achievement of the MDGs	continuous	ongoing	ongoing	
1.1.2.2	Cooperation with IACS: consideration of unified interpretations	continuous	ongoing	ongoing	
1.1.2.7	Cooperation with data providers: protocols on data exchange with international, regional and national entities	continuous	ongoing	ongoing	
1.1.2.26	Policy input/guidance to Environment Management Group (established by UN General Assembly resolution A/53/463UN): inter-agency sharing of information and agreement on priorities	continuous	ongoing	ongoing	
1.1.2.27	Policy input/guidance on GESAMP-related IMO developments	continuous	ongoing	ongoing	
1.1.2.28	Policy input/guidance to GESAMP-BW Working Group: evaluation of ballast water management systems	continuous	ongoing	ongoing	
1.1.2.29	Policy input/guidance to GESAMP-EHS Working Group: evaluation of bulk chemicals	continuous	ongoing	ongoing	
1.1.2.30	Policy input/guidance to UNFCCC: greenhouse gas emissions from ships	continuous	ongoing	ongoing	
1.1.2.31	Policy input/guidance to UN Globally Harmonized System: classification and labelling of products	continuous	ongoing	ongoing	
1.1.2.32	Policy input/guidance to UN-Oceans: inter-agency coordination on oceans and coastal issues	continuous	ongoing	ongoing	
1.1.2.33	Policy input/guidance to UN Regular Process: assessment of the state of the marine environment	continuous	ongoing	ongoing	

Planned output number in the High-level Action Plan for 2010-2011 [a]	Description	Target completion year [b]	Status of output for Year 1 [c]	Status of output for Year 2 [c]	References [d]
1.1.2.42	Follow-up to the 3rd meeting of the Joint ILO/IMO/BC Working Group on Ship Scrapping	continuous	ongoing	ongoing	
1.3.1.3	Identification of PSSAs, taking into account article 211 and other related articles of UNCLOS (MEPC)	continuous	ongoing	ongoing	
1.3.2.1	Contributions to the follow-up to UNCED and WSSD	continuous	ongoing	ongoing	
1.3.3.1	Hazard profiles and evaluation of newly submitted substances to be incorporated into the IBC Code	continuous	ongoing	ongoing	
1.3.3.2	Approval of ballast water management systems	continuous	ongoing	ongoing	
2.0.1.2	Mandatory instruments: amendments to MARPOL Annexes I to VI, including revised MARPOL Annex V	2011	In progress	In progress	Revised MARPOL Annex V adopted at MEPC 62
2.0.1.11	Non-mandatory instruments: clarified boundaries between MARPOL and the London Convention 1972	2011	In progress	In progress	
2.0.1.12	Non-mandatory instruments: guidelines for enforcement of MARPOL Annex I	continuous	ongoing	ongoing	
2.0.1.13	Non-mandatory instruments: guidelines for the BWM Convention (updating and consolidation of existing guidelines)	continuous	ongoing	ongoing	
2.0.1.14	Non-mandatory instruments: guidelines for replacement engines not required to meet the Tier III limit (MARPOL Annex VI)	2011	In progress	In progress	
2.0.1.15	Non-mandatory instruments: guidelines on the provision of reception facilities (MARPOL Annex VI)	2011	In progress	completed	Adopted by resolution MEPC.199(62) at MEPC 62
2.0.1.16	Non-mandatory instruments: other relevant guidelines pertaining to equivalents set forth in regulation 4 of MARPOL Annex VI and not covered by other guidelines	2011	In progress	In progress	
2.0.1.17	Non-mandatory instruments: guidelines called for under paragraph 2.2.5.6 of the NO_x Technical Code	2011	In progress	In progress	
2.0.1.24	Unified interpretations of the MARPOL regulations	continuous	ongoing	ongoing	

Planned output number in the High-level Action Plan for 2010-2011 [a]	Description	Target completion year [b]	Status of output for Year 1 [c]	Status of output for Year 2 [c]	References [d]
2.0.1.25	Promotion of the implementation of mandatory and non-mandatory instruments	continuous	ongoing	ongoing	
2.0.1.26	Reports on the average sulphur content of residual fuel oil supplied for use on board ships	continuous	ongoing	ongoing	
2.0.1.27	Summary reports and analyses of mandatory reports under MARPOL	continuous	ongoing	ongoing	
2.0.1.29	Interpretation of application of SOLAS, MARPOL and Load Line requirements for major conversions of oil tankers	continuous	In progress	completed	Unified interpretation approved by MSC 89 and MEPC 62
2.0.2.1	Input related to marine environment protection to the Voluntary IMO Member State Audit Scheme and to the Code for the implementation of mandatory IMO instruments	continuous	ongoing	ongoing	
2.0.2.2	A revised Code for the Implementation of Mandatory IMO Instruments	2011	In progress	completed	Approved by MSC 89 and MEPC 62 for adoption by A 27
2.0.2.3	Implementation of approved proposals for the further development of the Audit Scheme	2011	In progress	In progress	
3.1.1.1	Guidance for the Secretariat concerning the environmental programmes and projects to which the Organization contributes or executes, such as GEF, UNDP, UNEP and World Bank projects or programmes, and the IMO/UNEP forum on regional cooperation in combating marine pollution	continuous	ongoing	ongoing	
3.1.1.2	Reports on resource mobilization for, and on implementation of, environmental programmes	continuous	ongoing	ongoing	
3.1.2.1	Guidance for the Secretariat concerning partnerships with the industry (Global Initiative) aiming at promoting implementation of the OPRC Convention and the OPRC-HNS Protocol	2011	In progress	In progress	

Planned output number in the High-level Action Plan for 2010-2011 [a]	Description	Target completion year [b]	Status of output for Year 1 [c]	Status of output for Year 2 [c]	References [d]
3.4.1.1	Guidance on identifying the emerging needs of developing States, in particular SIDS and LDCs	continuous	ongoing	ongoing	
3.5.1.3	Input to the ITCP on marine environment protection	continuous	ongoing	ongoing	
3.5.3.2	A capacity-building mechanism for new measures or instruments, as called for under resolution A.998(25)	2011	In progress	In progress	
4.0.2.1	Guidance on the establishment or further development of information systems (databases, websites, etc.) as part of the Global Integrated Shipping Information System (GISIS) platform, as appropriate	continuous	ongoing	ongoing	
4.0.2.3	Protocols on data exchange with other international, regional and national data providers	continuous	ongoing	ongoing	
4.0.5.1	Revised guidelines on organization and method of work, as appropriate	2011	In progress	completed	Revised Guidelines approved by MSC 89 and MEPC 62, issued as MSC-MEPC.1/Circ.4
5.2.2.2	Mandatory instruments: input regarding MARPOL, BWM and other environmental conventions for the training and operational procedures for maritime personnel	continuous	ongoing	ongoing	
5.2.3.10	Mandatory instruments: input regarding MARPOL Annexes I and II and the IBC Code for the review of standards for safe handling and carriage by sea of solid and liquid cargoes	continuous	ongoing	ongoing	
5.2.3.11	Mandatory instruments: amendments to MARPOL Annex III concerning review of standards for safe handling and carriage by sea of solid and liquid cargoes	2011	completed		Revised MARPOL Annex III adopted through resolution MEPC.193(61)
5.3.1.5	Non-mandatory instruments: review of Guidelines for inspection of anti-fouling systems on ships	2011	In progress	completed	Adopted by resolution MEPC.208(62) at MEPC 62

Planned output number in the High-level Action Plan for 2010-2011 [a]	Description	Target completion year [b]	Status of output for Year 1 [c]	Status of output for Year 2 [c]	References [d]
7.1.1.1	Follow-up to the GESAMP study on "Estimates of Oil Entering the Marine Environment from Sea Based Activities"	continuous	ongoing	ongoing	
7.1.1.2	Technical guidance for the Secretariat for the development, on the basis of reporting requirements under MARPOL, OPRC and the OPRC-HNS Protocol, as well as other relevant sources of information, of a pollution incident information structure for regular reporting to the FSI and BLG Sub-Committees, and/or the MEPC	2011	In progress	In progress	
7.1.2.1	Mandatory instruments: follow-up to the Hong Kong Convention on Ship Recycling, including development and adoption of associated guidelines	2011	In progress	In progress	
7.1.2.2	Mandatory instruments: designation of Special Areas and PSSAs and adoption of their associated protective measures	continuous	ongoing	ongoing	
7.1.2.3	Non-mandatory instruments: consolidated guidelines on ballast water management	2011	In progress	In progress	
7.1.2.4	Provisions for the reduction of noise from commercial shipping and its adverse impacts on marine life	2011	In progress	In progress	
7.1.2.5	Approved ballast water management systems	continuous	ongoing	ongoing	
7.1.2.6	Approved list of active substances used by ballast water management systems	continuous	ongoing	ongoing	
7.1.2.7	Production of a manual entitled "Ballast Water Management – How to do it"	2011	In progress	In progress	
7.1.2.8	Holding of the third BWM R&D symposium	2011	completed		Held in January 2010 in Malmö (Sweden) in cooperation with WMU
7.1.2.9	Policies on Practices Related to the Reduction of Greenhouse Gas Emissions from Ships (resolution A.963(23)): Ship CO_2 indexing scheme; CO_2 emission baseline	2011	In progress	In progress	

Planned output number in the High-level Action Plan for 2010-2011 [a]	Description	Target completion year [b]	Status of output for Year 1 [c]	Status of output for Year 2 [c]	References [d]
7.1.2.10	Measures to promote the AFS Convention	continuous	ongoing	ongoing	
7.1.2.11	Manual on chemical pollution to address legal and administrative aspects of HNS incidents	2011	In progress	In progress	
7.1.2.12	Revised Manual on oil pollution, Section 1 – Prevention	2011	completed		To be published through the IMO Publishing Service
7.1.2.13	Guidance on the carriage of biofuels and biofuel blends as cargo	2011	In progress	completed	Approved at MEPC 62 and disseminated as MEPC.1/Circ.761
7.1.2.14	Guidance on translocation of invasive aquatic species through biofouling of ships	2011	In progress	completed	Adopted by resolution MEPC.207(62) at MEPC 62
7.1.2.15	Guidance document on the identification and observation of spilled oil	2011	completed		To be published as a Joint IMO/IPIECA publication
7.1.2.16	Technical guidelines on sunken oil assessment and removal techniques	2011	In progress	In progress	
7.1.2.17	Guidance document on Incident Command System during oil response	2011	completed		To be published through the IMO Publishing Service
7.1.2.18	Guidance for oil spill response in fast currents	2011	In progress	In progress	
7.1.2.19	Guide on Oil Spill Response in Ice and Snow Conditions	2011	In progress	In progress	
7.1.2.20	Updated IMO Dispersant Guidelines	2011	In progress	In progress	
7.1.2.21	Guideline for oil spill response – offshore *in situ* burning	2011	In progress	In progress	
7.1.2.22	Waste Management Decision Support Tool	2011	In progress	In progress	
7.1.2.23	Guidance on sensitivity mapping for oil spill response	2011	In progress	In progress	
7.1.2.24	Operational guide on the use of sorbents	2011	In progress	In progress	
7.1.2.25	Publication checklist for new IMO manuals, guidance documents and training materials	2011	completed		Approved at MEPC 60

Planned output number in the High-level Action Plan for 2010-2011 [a]	Description	Target completion year [b]	Status of output for Year 1 [c]	Status of output for Year 2 [c]	References [d]
7.1.2.26	Guidance on obligations and actions required by States to prepare for implementation of the OPRC-HNS Protocol	2011	In progress	In progress	
7.1.2.27	Test standards for type approval of add-on equipment	2011	In progress	completed	Adopted by resolution MEPC.205(62) at MEPC 62
7.1.2.28	Measures to promote integrated bilge water treatment systems	2011	In progress	completed	Approved at MEPC 62 and disseminated as MEPC.1/Circ.760
7.1.2.29	Guidelines for a shipboard oil waste pollution prevention plan	2011	In progress	completed	Approved at MEPC 62 and disseminated as MEPC.1/Circ.759
7.1.2.30	Manually operated alternatives in the event of pollution prevention equipment malfunctions	2011	In progress	In progress	
7.1.2.31	Development of guidance on the safe operation and performance standards of oil pollution combating equipment	2012	In progress	In progress	
7.1.3.1	Reports on inadequacy of port reception facilities	continuous	ongoing	ongoing	
7.1.3.2	Follow-up to the implementation of the Action Plan on port reception facilities	2011	In progress	In progress	
7.1.4.1	Action Plan on prevention and control of marine pollution from small craft, including development of appropriate measures	continuous	ongoing	ongoing	
7.2.1.2	Input to the review of the Guidelines on the identification of places of refuge with regard to marine environment protection	continuous	ongoing	ongoing	
7.2.2.2	Environmental aspects of alternative tanker designs	continuous	ongoing	ongoing	
7.2.2.3	Amendments to MARPOL Annex I on the use and carriage of heavy grade oil (HGO) on ships in the Antarctic area	2010	completed		Resolution MEPC.189(60)
7.2.2.4	Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments	continuous	ongoing	ongoing	

Planned output number in the High-level Action Plan for 2010-2011 [a]	Description	Target completion year [b]	Status of output for Year 1 [c]	Status of output for Year 2 [c]	References [d]
7.2.2.5	Application of requirements for the carriage of biofuels and biofuel blends	2011	In progress	completed	Approved at MEPC 62
7.2.3.1	Increased activities within the ITCP regarding the OPRC Convention and the OPRC-HNS Protocol	continuous	ongoing	ongoing	
7.3.1.1	Review of non-mandatory instruments as a consequence of the revised MARPOL Annex VI	2011	In progress	In progress	
7.3.1.2	Amendments to MARPOL Annex VI introducing a North American ECA	2010	completed		Resolution MEPC.190(60)
7.3.2.1	Completed work plan to identify and develop mechanisms needed to achieve the limitation or reduction of CO_2 emissions from international shipping	continuous	ongoing	ongoing	
7.4.1.1	Follow up to the updated Action Plan on the Organization's strategy to address human element (MSC-MEPC.7/Circ.4)	continuous	ongoing	ongoing	
9.0.1.3	Provision of reception facilities under MARPOL in SIDS	2011	In progress	In progress	
11.1.1.1	Permanent analysis, demonstration and promotion of the linkage between a safe, secure, efficient and environmentally friendly maritime transport infrastructure, the development of global trade and the world economy and the achievement of the MDGs	continuous	ongoing	ongoing	
11.1.1.6	Measures to promote the "IMO Children's Ambassador" concept, in collaboration with junior marine environment protection associations worldwide	continuous	ongoing	ongoing	
12.1.1.1	Revised FSA Guidelines, including on environmental risk criteria	2011	In progress	completed	Approved at MEPC 62. See MEPC 62/24/Add.1, annex 31
12.3.1.3	Reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas	2011	In progress	In progress	

Planned output number in the High-level Action Plan for 2010-2011 [a]	Description	Target completion year [b]	Status of output for Year 1 [c]	Status of output for Year 2 [c]	References [d]
12.4.1.1	Guidelines and MEPC circulars regarding raising awareness of the "chain of responsibility" concept among all stakeholders through organizations that have consultative status	continuous	ongoing	ongoing	
13.0.2.1	Guidance for the Secretariat on the development of GISIS and on access to information	continuous	ongoing	ongoing	
13.0.2.2	Databases as part of GISIS and other means, including electronic ones	continuous	ongoing	ongoing	
13.0.2.3	Inventory of information, R&D and best practices related to HNS preparedness and response	continuous	ongoing	ongoing	
13.0.2.4	Web platform for OPRC/HNS-related information	continuous	ongoing	ongoing	
13.0.3.1	Improved and new technologies approved for ballast water management systems and reduction of atmospheric pollution	continuous	ongoing	ongoing	
13.0.3.2	Holding of the third BWM R&D symposium	2011	completed		See 7.1.2.8 above

NOTES:

a When individual output contains multiple deliverables, the format should be to report on each individual deliverable.

b The target completion date should not be not indicated by the number of sessions. It should be specified by year, or indicate that the item is continuous.

c The entries under the "Status of output" columns are categorized as follows:

- "completed" if it signifies that the output in question has been duly finalized;
- "in progress" if it signifies that the expected output has been progressed, often with interim outputs (for example, draft amendments or guidelines) which is expected to be finalized and approved within the same biennium;
- "ongoing" if it signifies that the output relate to work of the respective IO organs that is a permanent or continuous task; and
- "postponed" if it signifies that the respective IMO organ has decided to defer the production of relevant outputs to another time (for example, until the receipt of corresponding submissions).

d If the output consists of the adoption/approval of an instrument (e.g., resolution, circular, etc.), that instrument should be clearly referenced in this column.

***

ANNEX 36

PROPOSALS BY THE COMMITTEE FOR THE HIGH-LEVEL ACTION PLAN OF THE ORGANIZATION AND PRIORITIES FOR THE 2012-2013 BIENNIUM*

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
Broad category: Enhancing the status and effectiveness of IMO			
1.1.1	Take the lead and actively promote its role as the primary international forum on matters within its purview	1.1.1.1	Note: POs of the Organization meeting this high-level action are tabulated in this annex against the most relevant HLAs
			Permanent analysis, demonstration and promotion of the linkage between a safe, secure, efficient and environmentally friendly maritime transport infrastructure, the development of global trade and the world economy and the achievement of the MDGs (Assembly, Council, all committees and Secretariat)
1.1.2	Cooperate with the United Nations and other international bodies on matters of mutual interest	1.1.2.1R	Cooperation with FAO: preparation and holding of the third meeting of the Joint IMO/FAO Working Group on IUU fishing and related matters, including the adoption of a new treaty to facilitate the implementation of the technical provisions to the 1993 Torremolinos Protocol (MSC/MEPC)
		1.1.2.2R	Cooperation with IACS: consideration of unified interpretations (MSC/MEPC)
		1.1.2.3	Cooperation with IAEA: formalized emergency arrangements for response to nuclear/ radiological emergencies from ships, including IMO contribution to the next version of the "Joint Radiation Emergency Management Plan of the International Organizations" (MSC/MEPC)
		1.1.2.4	Cooperation with ILO: development of PSC guidelines on seafarers' hours of rest taking into account the Maritime Labour Convention, 2006 (MSC)
		1.1.2.5	Cooperation with ILO and others: approved recommendations based on the work, if any, of the Joint IMO/ILO *Ad Hoc* Expert Working Group on Fair Treatment of Seafarers in the Event of a Maritime Accident, CMI, and others concerning the application of the joint IMO/ILO Guidelines on the fair treatment of seafarers and consequential further actions as necessary (LEG)
		1.1.2.6	Cooperation with IHO: hydrographic issues (MSC)

* Strike-outs indicate proposed deletions and underlined text indicates proposed additions/revisions (R = revised) to the annex of resolution A.1012(26).

** New numbers will be assigned by the Council, in due course, for the High-level Action Plan and planned outputs for the 2012-2013 biennium. New planned outputs which currently have no numbers are marked as NEW.

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		1.1.2.7	Cooperation with data providers: protocols on data exchange with international, regional and national entities (Committees, as appropriate/Secretariat)
		1.1.2.8	Cooperation with donor institutions: resource mobilization for ITCP (Secretariat)
		1.1.2.9	Cooperation with ICAO: annual meeting of the Joint ICAO/IMO Working Group on the Harmonization of Aeronautical and Maritime Search and Rescue (monitoring of SAR developments, continuous review of the IAMSAR Manual and developing recommendations for consideration by the COMSAR Sub-Committee); review of provisions for helicopters in SOLAS by the DE Sub-Committee (MSC)
		1.1.2.10	Cooperation with ITU: consideration of matters related to the Radiocommunication ITU-R Study Group and ITU World Radiocommunication Conference (MSC)
		1.1.2.11R	Cooperation with UNEP: joint initiatives with its regional seas programme and its partner programmes (Secretariat)
		1.1.2.12	Cooperation with the Joint Inspection Unit (Secretariat)
		1.1.2.13	Liaison statements to/from IALA: VTS, aids to navigation, e-navigation and AIS matters (MSC)
		1.1.2.14	Liaison statements to/from IEC: radiocommunications and safety of navigation (MSC)
		1.1.2.15	Liaison statements to/from IHO: hydrographic matters and promotion of ENCs covering various parts of the globe (MSC)
		1.1.2.16	Liaison statements to/from ILO: seafarers' issues (MSC)
		1.1.2.17	Liaison statements to/from ITU: radiocommunications (MSC)
		1.1.2.18	Liaison statements to/from UNHCR: persons rescued at sea (MSC)
		1.1.2.19	Liaison statements to/from WMO: meteorological issues (MSC)
		1.1.2.20	Policy input/guidance to IAEA: development of carriage requirements for class 7 radioactive material and development of guidance for coastal states on emergencies at sea involving radioactive material (MSC)
		1.1.2.21	Policy input/guidance to ILO: development of PSC guidelines in the context of the Maritime Labour Convention (MLC), 2006 (MSC)
		1.1.2.22	Policy input/guidance to ILO/FAO: approval of the Guidelines to assist competent authorities in the implementation of Part B of the Code of Safety for fishermen and fishing vessels, the Voluntary Guidelines for the design, construction and equipment of small fishing vessels and the Safety Recommendations for decked fishing vessels of less than 12 metres in length and undecked fishing vessels (MSC)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		1.1.2.23	Policy input/guidance to ISO TC 8: development of industry consensus standards (MSC)
		1.1.2.24R	Policy input/guidance to PSC regimes: related IMO developments (MSC/MEPC)
		1.1.2.25	Policy input/guidance to UN Sub-Committee on Dangerous Goods: harmonization of multimodal transport of dangerous goods (MSC)
		1.1.2.26	Policy input/guidance to Environment Management Group (established by UN General Assembly resolution A/53/463UN): inter-agency sharing of information and agreement on priorities (MEPC/Secretariat)
		1.1.2.27	Policy input/guidance on GESAMP-related IMO developments (MEPC)
		1.1.2.28	Policy input/guidance to GESAMP-BW Working Group: evaluation of active substances used by ballast water management systems (MEPC)
		1.1.2.29	Policy input/guidance to GESAMP-EHS Working Group: evaluation of bulk chemicals (MEPC)
		1.1.2.30	Policy input/guidance to UNFCCC: greenhouse gas emissions from ships (MEPC)
		1.1.2.31	Policy input/guidance to UN Globally Harmonized System: classification and labelling of products (MEPC)
		1.1.2.32	Policy input/guidance to UN-Oceans: inter-agency coordination on oceans and coastal issues (MEPC/Secretariat)
		1.1.2.33	Policy input/guidance to UN Regular Process: assessment of the state of the marine environment (MEPC/Secretariat)
		1.1.2.34	Policy input/guidance to IAEA: facilitation of the shipment of class 7 radioactive materials, including delays and denials (FAL)
		1.1.2.35	Policy input/guidance to UNECE/UNCEFACT: trade facilitation and electronic transmission of information-related matters (FAL)
		1.1.2.36	Policy input/guidance to UNODC/WCO: prevention and control of illicit drug trafficking (FAL)
		1.1.2.37	Policy/input guidance to WCO: clearance of ships, persons and cargoes; and security of the supply chain (FAL)
		1.1.2.38	Policy and strategy input to CTITF and any of its 30 entities for the implementation of the IMO-related aspects of the UN Global Counter-Terrorism Strategy (MSC/LEG/TCC/FAL)
		1.1.2.39	Monitor the progress of the amendments to ILO MLC 2006 and address the issue of financial security in case of abandonment of seafarers, and shipowners' responsibilities in respect of contractual claims for personal injury to or death of seafarers, should it be necessary (LEG)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		1.1.2.40	Advice and guidance on issues, as may be requested, in connection with implementation of SUA 1988/2005 in the context of international efforts to combat terrorism and proliferation of weapons of mass destruction and related materials (LEG)
		1.1.2.41	Meetings and/or consultations on "Delivering as One: UN collaboration on technical cooperation in the maritime sector" in response to the "Delivering as One" report of the Secretary General's High-level Panel on UN System-wide coherence in the areas of development, humanitarian assistance and environment (Secretariat)
		1.1.2.42	Follow-up to the 3rd meeting of the Joint ILO/IMO/BC Working Group on Ship Scrapping (MEPC)
1.2.1	Further encourage the active participation of all stakeholders to achieve the Organization's mission objectives through consultation and liaison	1.2.1.1	Protocol to the HNS Convention adopted as soon as possible (LEG)
		1.2.1.2	Joint programmes, meetings and press conferences with UN and other international organizations, as well as industry and civil society interests (Secretariat)
		1.2.1.3	Agreements of cooperation with IGOs and approved consultative status for NGOs (Assembly, Council, Secretariat)
		1.2.1.4	Coordination and management of the multi-agency GESAMP Office (Secretariat)
		1.2.1.5	Revised Guidelines on implementation of the HNS Protocol to facilitate ratifications and harmonized interpretation (LEG)
		1.2.1.6	Strategies developed to facilitate entry into force of the 2002 Athens Protocol, the 2005 SUA Protocols and the 2007 Nairobi Wreck Removal Convention (LEG)
1.3.1	Consider issues under the United Nations Law of the Sea Convention relevant to the role of the Organization	1.3.1.1	Advice and guidance provided following referrals from other IMO organs and Member States (LEG)
		1.3.1.2	Circular on implications of UNCLOS for IMO (Secretariat)
		1.3.1.3	Identification of PSSAs, taking into account article 211 and other related articles of UNCLOS (MEPC)
1.3.2	Participate in UNCSD 2012 (Rio +20) to showcase IMO's contribution to sustainable development through its environmental and technical co-operation activities	1.3.2.1R	Contributions to UNCSD 2012 (Rio +20) and its preparatory meetings to show case relevant work and follow-up to decisions of the Conference (MEPC/Secretariat)
		1.3.2.2R	Capacity-building follow-up action reflected in the ITCP (TCC/MEPC)
1.3.3	Monitor developments within GESAMP and make full use of the knowledge available and gained	1.3.3.1	Hazard profiles and evaluation of newly submitted substances to be incorporated into the IBC Code (MEPC)
		1.3.3.2	Approval of active substances used by ballast water management systems (MEPC)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
1.3.4	Promote facilitation measures	1.3.4.1	Participation in relevant international forums (Secretariat)
		1.3.4.2	FAL module incorporated in the programme of maritime security training activities (Secretariat)
		1.3.4.3	Finalized Explanatory Manual to the FAL Convention (FAL)
1.3.5	Harmonize IMO instruments with other relevant international instruments, as necessary	1.3.5.1R	Harmonized provisions relating to the safe, secure and efficient carriage of dangerous goods following participation in the activities of UNCOE TDG, GHS and IAEA (MSC/MEPC/Secretariat)
		1.3.5.2	Development of amendments to the IAMSAR Manual (MSC)
		1.3.5.3	Harmonization of SOLAS helicopter provisions with ICAO Convention (MSC)
2.0.1	Monitor and improve conventions, etc., and provide interpretation thereof if requested by Member States	2.0.1.1	Proposed for deletion (MSC 89)
		2.0.1.2R	Refinement of the current MARPOL: Annexes I to VI (MEPC)
		2.0.1.3	Mandatory instruments: means for recharging air bottles for air breathing apparatus (MSC)
		2.0.1.4	Non-mandatory instruments: development of guidelines for verification of damage stability requirements for tankers (MSC)
		2.0.1.5	Non-mandatory instruments: development of guidelines for verification of damage stability requirements for bulk carriers (MSC)
		2.0.1.6	Proposed for deletion (MSC 89)
		2.0.1.7	Proposed for deletion (MSC 89
		2.0.1.8	Non-mandatory instruments: Development of provisions to ensure the integrity and uniform implementation of the 1969 TM Convention (MSC)
		2.0.1.9	Non-mandatory instruments: development of revised performance testing and approval standards for fire safety systems (MSC)
		2.0.1.10	Proposed for deletion (MSC 89)
		2.0.1.11	Non-mandatory instruments: clarified boundaries between MARPOL and the London Convention 1972 (MEPC)
		2.0.1.12	Non-mandatory instruments: guidelines for enforcement of MARPOL Annex I (MEPC)
		2.0.1.13	Non-mandatory instruments: additional guidelines for implementation of the BWM Convention, including port State control (MEPC)
		2.0.1.14	Non-mandatory instruments: guidelines for replacement engines not required to meet the Tier III limit (MARPOL Annex VI) (MEPC)
		NEW	Revision of the standard specification for shipboard incinerators (resolution MEPC.76(40))

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		2.0.1.16	Non-mandatory instruments: other relevant guidelines pertaining to equivalents set forth in regulation 4 of MARPOL Annex VI and not covered by other guidelines (MEPC)
		2.0.1.17	Non-mandatory instruments: guidelines called for under paragraph 2.2.5.6 of the NO_x Technical Code (MEPC)
		2.0.1.18	Development of a Code for Recognized Organizations (MSC/MEPC)
		2.0.1.19	Protocol to the HNS Convention adopted as soon as possible (LEG)
		2.0.1.20	Revised Guidelines on implementation of the HNS Protocol to facilitate ratifications and harmonized interpretation (LEG)
		2.0.1.21	Strategies developed to facilitate entry into force of the 2002 Athens Protocol, the 2005 SUA Protocols, and the 2007 Nairobi Wreck Removal Convention (LEG)
		2.0.1.22	Advice and guidance on issues brought to the Committee in connection with implementation of IMO instruments (LEG)
		2.0.1.23	Consideration of proposal to amend the limits of liability of the Protocol of 1996 to the Convention on Limitation of Liability for Maritime Claims, 1976 (LLMC 96), in accordance with article 8 of LLMC 96 (LEG)
		2.0.1.24	Unified interpretations of the MARPOL regulations (MEPC)
		2.0.1.25	Comprehensive review of issues related to the responsibilities of Governments and development of measures to encourage flag State compliance (MSC/MEPC)
		2.0.1.26	Reports on the average sulphur content of residual fuel oil supplied for use on board ships (MEPC/Secretariat)
		2.0.1.27	Summary reports and analyses of mandatory reports under MARPOL (MEPC/Secretariat)
		2.0.1.28	GISIS module on mandatory and non-mandatory requirements (Secretariat)
		2.0.1.30	Non-mandatory instrument: development of unified interpretations for chapter 7 of the 2000 HSC Code (MSC)
		2.0.1.31	Mandatory instruments: development of amendments to SOLAS regulation II-1/40.2 concerning general requirements on electrical installations (MSC)
		2.0.1.32	Revision of the provisions for helicopter facilities in SOLAS and the MODU Code (MSC)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
2.0.2	Encourage and support implementation of the Voluntary IMO Member State Audit Scheme	2.0.2.1	Input related to marine environment protection to the Voluntary IMO Member State Audit Scheme and to the Code for the implementation of mandatory IMO instruments (MEPC)
		2.0.2.2	Review of the Code for the Implementation of Mandatory IMO Instruments and consolidated audit summary reports, adoption of the new IMO Instruments Implementation (III) Code and making the III Code and auditing mandatory (Assembly, Council, MSC and MEPC)
		2.0.2.3	Implementation of approved proposals for the further development of the Audit Scheme (Assembly, Council, committees (as appropriate), Secretariat)
		2.0.2.4	Organization, delivery and reporting of State audits (Secretariat)
		2.0.2.5	Up to 60 auditors trained per year (Secretariat)
		2.0.2.6	Capacity-building aspects of the Scheme reflected in the ITCP (TCC)
		2.0.2.7	Implementation of pre- and post-audit technical assistance activities (Secretariat)
		2.0.2.8	Methodology for the analysis of consolidated audit summary reports (Secretariat)
2.0.3	Encourage the worldwide provision of maritime search and rescue services	2.0.3.1	Technical guidance for the establishment of regional MRCCs and MRSCs in Africa, supported by the ISAR Fund (MSC)
		2.0.3.2	Further development of the Global SAR Plan for the provision of maritime SAR services, including procedures for routeing distress information in the GMDSS (MSC)
		2.0.3.3	ITCP programme implemented to contribute to the worldwide provision of maritime SAR services (Secretariat)
		2.0.3.4	Proposed for deletion (MSC 89)
		2.0.3.5	Reports on the Cospas-Sarsat System monitored and the list of IMO documents and publications which should be held by MRCCs updated (MSC)
		2.0.3.6	Development of guidelines on harmonized aeronautical and maritime search and rescue procedures, including SAR training matters (MSC)
3.1.1	Participate in environmental programmes with UNDP, UNEP, World Bank, etc.	3.1.1.1R	Guidance for the Secretariat concerning the environmental programmes and projects to which the Organization contributes or executes, such as GEF, UNDP, UNEP and World Bank projects or programmes, and the IMO/UNEP forum on regional cooperation to address marine pollution (MEPC)
		3.1.1.2	Reports on resource mobilization for, and on implementation of, environmental programmes (MEPC/TCC/Secretariat)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
3.1.2	Establish partnerships with governments, organizations and industry to enhance the delivery of IMO's capacity-building programmes	3.1.2.1	Guidance for the Secretariat concerning partnerships with the industry (Global Initiative) aiming at promoting implementation of the OPRC Convention and the OPRC-HNS Protocol (MEPC)
		3.1.2.2	Reports on implementation of resolution A.965(23) on Development and improvement of partnership arrangements for technical cooperation (TCC/Secretariat)
3.1.3	Promote and strengthen partnerships with global maritime training institutions and training programmes	3.1.3.1	ITCP programme implemented on the enhancement of maritime training capacities (Secretariat)
3.2.1	Mobilize and allocate financial or in-kind resources including the promotion of technical and economic cooperation among developing countries (TCDC and ECDC)	3.2.1.1	TCDC reflected in the ITCP and partnerships (TCC/Secretariat)
		3.2.1.2	Reports on the TC Fund, voluntary trust funds, cash contributions and in-kind support under the ITCP (TCC/Secretariat)
3.2.2	Implement the approved mechanism to ensure the sustainable financing of the ITCP	3.2.2.1	Review of the implementation of the approved mechanism on sustainable financing of the ITCP (TCC/Secretariat)
3.3.1	Establish, maintain and promote the linkage between the ITCP and the MDGs	3.3.1.1	Reports on the promotion and implementation of resolution A.1006(25) on The Linkage between the Integrated Technical Co-operation Programme and the Millennium Development Goals (TCC/Secretariat)
3.4.1	Implement the arrangements to identify the emerging needs of developing States in general and the developmental needs of SIDS and LDCs in particular (see HLA 9-1.1)	3.4.1.1	Guidance on identifying the emerging needs of developing States, in particular SIDS and LDCs (MEPC)
		3.4.1.2	Review of the implementation of the arrangements made for the identified emerging needs of developing States in general and the developmental needs of SIDS and LDCs in particular (TCC/Secretariat)
		3.4.1.3	Approved ITCP for 2012-2013 reflecting the emerging needs of developing countries, SIDS and LDCs (TCC)
3.5.1	Consider, prioritize and implement technical cooperation programmes	3.5.1.1	Manage the delivery of IMO- and donor-funded programmes during 2010-2011 (Secretariat)
		3.5.1.2	Input to the ITCP on maritime safety and security (MSC)
		3.5.1.3	Input to the ITCP on marine environment protection (MEPC)
		3.5.1.4	Input to the ITCP on maritime legislation (LEG)
		3.5.1.5	Input to the ITCP on facilitation of international maritime traffic (FAL)
		3.5.1.6	Input to the ITCP on sustainable development and achievement of the MDGs (TCC)
		3.5.1.7	Enhanced prioritization of the ITCP for 2012-2013 (TCC/Secretariat)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
3.5.2	Strengthen the role of women in the maritime sector	3.5.2.1	Reports on the implementation of the enhanced global programme for the integration of women in the maritime sector, including a review of the regional associations for women in the maritime and port sectors (TCC/Secretariat)
3.5.3	Develop new measures to improve the delivery of technical assistance	3.5.3.1	Reports on new and cost-effective measures to deliver technical assistance (TCC/Secretariat)
3.5.4	Undertake regular TC impact assessments	3.5.4.1	Agreed parameters for the ITCP Impact Assessment Exercise covering 2008-2011 (TCC)
4.0.1	Ensure that the Organization, within agreed appropriations, uses its resources efficiently and effectively	4.0.1.1	Approved accounts and audited financial reports (Assembly/Council)
		4.0.1.2	Strengthened budgetary and financial management and control (Secretariat)
		4.0.1.3	Implementation of the results-based budget 2010-2011 and further development of results-based management (Secretariat)
		4.0.1.4	Establishment of a Trading Fund (Secretariat)
		4.0.1.5	Effective implementation of human resources policies, rules and regulations (Secretariat)
		4.0.1.6	Policies and practices implemented to further align the Secretariat's operations, including management of the Headquarters building, with the "Climate Neutral UN" initiative (Secretariat)
		4.0.1.7	Approved report on ITCP implementation during 2008-2009 (TCC)
		4.0.1.8	Internal systems, rules and procedures developed for introduction of IPSAS as of 2010 (Secretariat)
		4.0.1.9	Continued upgrade of SAP and introduction of SAP Human Resources and Payroll modules (Secretariat)
4.0.2	Create a knowledge and information-based Organization through improved management and dissemination of information making use of appropriate technology	4.0.2.1	Guidance on the establishment or further development of information systems (databases, websites, etc.) as part of the Global Integrated Shipping Information System (GISIS) platform, as appropriate (all committees, as appropriate)
		4.0.2.2	Development and management of mandatory IMO number schemes (MSC)
		4.0.2.3	Protocols on data exchange with other international, regional and national data providers (all committees, as appropriate/Secretariat)
		4.0.2.4	Improved IMO, IMODOCS and Intranet websites (Secretariat)
		4.0.2.5	Increased number of electronic publications (Secretariat)
		NEW	Electronic publications on preparedness for and response to accidental marine pollution produced jointly with the oil industry (MEPC/Secretariat)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		NEW	Quarterly electronic updates of the SOPEP/SMPEP list under MARPOL Annexes I and II (Secretariat)
		4.0.2.6	Further development of the Maritime Knowledge Centre and its information services (Secretariat)
		4.0.2.7	Further development of IMO Data providing shipping/maritime sector information (Secretariat)
		4.0.2.8	Provision of ICT services to agreed availability targets (Secretariat)
4.0.3	Enhance transparency in the Organization's operations	4.0.3.1	Comprehensive, transparent, deliverable and approved Strategic Plan, High-level Action Plan and results-based budget for 2012-2013 (Assembly/Council/Secretariat)
		4.0.3.2	Further development of a database on the Strategic Plan's performance indicators (Secretariat)
		4.0.3.3	Development of a database on the High-level Action Plan (Secretariat)
4.0.4	Maintain a risk management framework	4.0.4.1R	Third iteration of the risk management process (Secretariat)
		4.0.4.2	Proposals on applying the Risk Management Framework to all elements of the Strategic and High-level Action Plans (Council)
4.0.5	Keep under review working methods and processes	4.0.5.1	Revised guidelines on organization and method of work, as appropriate (Council and all committees)
4.0.6	Provide independent and effective internal oversight and evaluation functions	4.0.6.1	Annual internal audit programme implemented (Secretariat)
		4.0.6.2	Independent reports on the evaluation of training activities (Secretariat)
4.0.7	Coordinate and monitor the delivery of the Organization's work plans	4.0.7.1	Work plans monitored by the Secretary-General and the Senior Management Committee and follow-up action implemented (Secretariat)
		4.0.7.2	Establishment of knowledge management and knowledge sharing mechanisms, in particular to support monitoring of work plan targets (Secretariat)
		4.0.7.3	Secretary-General's activities coordinated, organized and implemented (Secretariat)
		4.0.7.4	Depositary and accreditation functions carried out expeditiously (Secretariat)
		4.0.7.5	Meetings programme delivered through interpretation, translation, word processing, document production and dissemination (Secretariat)
Broad category: Developing and maintaining a comprehensive framework for safe, secure, efficient and environmentally sound shipping			
5.1.1	Review the adequacy of passenger ship safety provisions	5.1.1.1	Mandatory instruments: development of performance standards for recovery systems for all types of ship (MSC)
		5.1.1.2	Proposed for deletion (MSC 89)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		5.1.1.3	Mandatory instruments: development of guidelines on safe return to port for passenger ships (MSC)
		5.1.1.4	Mandatory instruments: review of fire protection requirements for on-deck cargo areas (MSC)
		5.1.1.5	Mandatory instruments: review of damage stability regulations for ro-ro passenger ships (MSC)
		5.1.1.6	Proposed for deletion (MSC 89)
		5.1.1.7	Proposed for deletion (MSC 89)
		5.1.1.8	Proposed for deletion (MSC 89)
		5.1.1.9	Non-mandatory instruments: development of training standards for recovery systems (MSC)
		5.1.1.10	Proposed for deletion (MSC 89)
		5.1.1.11	Recommendation on evacuation analysis for new and existing passenger ships (MSC)
5.1.2	Development and review of safe evacuation, survival, recovery and treatment of people following maritime casualties or in case of distress	5.1.2.1	Mandatory instrument: making the provisions of MSC.1/Circ.1206/Rev.1 mandatory (MSC)
		5.1.2.2	Non-mandatory instrument: guidelines for standardization of lifeboat control arrangements (MSC)
		5.1.2.3	Development of measures to protect the safety of persons rescued at sea (MSC)
		5.1.2.4	Development of a new framework of requirements for life-saving appliances (MSC)
5.1.3	Enhance the safety of navigation in vital shipping lanes	5.1.3.1	IMO participation in the Co-operative Mechanism for the Straits of Malacca and Singapore (Secretariat)
		5.1.3.2	ITCP support for the implementation of the Djibouti Code of Conduct concerning the repression of piracy and armed robbery against ships in the western Indian Ocean and the Gulf of Aden (TCC/Secretariat)
5.2.1	Keep under review the technical and operational safety aspects of all types of ships, including fishing vessels	5.2.1.1	Mandatory instruments: development of amendments to the criterion for maximum angle of heel in turns of the 2008 IS Code (MSC)
		5.2.1.2	Mandatory instruments: amendments to SOLAS related to the fire resistance of ventilation ducts (MSC)
		5.2.1.3	Mandatory instruments: development of international code of safety for ships using gases or other low flashpoint fuels (MSC)
		5.2.1.4	Mandatory instruments: development of revised IGC Code (MSC)
		5.2.1.5	Mandatory instruments: development of amendments to SOLAS regulation II-1/4 concerning subdivision standards for cargo ships (MSC)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		5.2.1.6	Mandatory instruments: amendments for means of escape from machinery spaces (MSC)
		5.2.1.7	review of general cargo ship safety (MSC)
		5.2.1.8	Proposed for deletion (MSC 89)
		5.2.1.9	Mandatory instruments: harmonized requirements for the location of entrances, air inlets and openings in the superstructures of tankers (MSC)
		5.2.1.10	Mandatory instruments: review of fire protection requirements for on-deck cargo areas (MSC)
		5.2.1.11	Proposed for deletion (MSC 89)
		5.2.1.12	Mandatory instruments: requirements for ships carrying hydrogen and compressed natural gas vehicles (MSC)
		5.2.1.13	Mandatory instruments: development of safety objectives and functional requirements of the Guidelines on alternative design and arrangements for SOLAS chapters II-1 and III (MSC)
		5.2.1.14	Mandatory instruments: development of amendments to the LSA Code for thermal performance of immersion suits (MSC)
		5.2.1.15	Mandatory instruments: development of amendments to the LSA Code for free-fall lifeboats with float-free capabilities (MSC)
		5.2.1.16	Mandatory instruments: development of second generation intact stability criteria (MSC)
		5.2.1.17	Mandatory instruments: revision of SOLAS chapter II-1 subdivision and damage stability regulations (MSC)
		5.2.1.18	Mandatory instruments: development of amendments to SOLAS chapter II-1 subdivision standards for cargo ships (MSC)
		5.2.1.19R	Mandatory instruments: development of a mandatory Code of ships operating in polar waters (MSC/MEPC)
		5.2.1.20	Proposed for deletion (MSC 89)
		5.2.1.21	Proposed for deletion (MSC 89)
		5.2.1.22	Non-mandatory instruments: development of a non-mandatory instrument on regulations for non-convention ships (MSC)
		5.2.1.23	Non-mandatory instruments: review and update of the Survey Guidelines under the Harmonized System of Survey and Certification and the annexes to the Code for the Implementation of Mandatory IMO Instruments (MSC/MEPC)
		5.2.1.24	Proposed for deletion (MSC 89)
		5.2.1.25	Proposed for deletion (MSC 89)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		5.2.1.26	Non-mandatory instruments: protection against noise on board ships (MSC)
		5.2.1.27	Proposed for deletion (MSC 89)
		5.2.1.28	Non-mandatory instruments: classification of offshore industry vessels and consideration of the need for a code for offshore construction support vessels (MSC)
		5.2.1.29	Promotion of the implementation of resolution A.925(22) on Entry into force of the 1995 STCW-F Convention (MSC)
		5.2.1.30	Proposed for deletion (MSC 89)
		5.2.1.31	Proposed for deletion (MSC 89)
		5.2.1.32	Non-mandatory instrument: development of guidelines for use of Fibre Reinforced Plastic (FRP) within ship structures (MSC)
		5.2.1.33	Development of guidelines for wing-in-ground craft (MSC)
		5.2.1.34	Non-mandatory instruments: development of amendments to Part B of the 2008 IS Code on towing and anchor handling operations (MSC)
		5.2.1.35	Mandatory instruments: revision of testing requirements for lifejacket RTDs in resolution MSC.81(70) (MSC)
		5.2.1.36	Revision of the Recommendation on conditions for the approval of servicing stations for inflatable life-rafts (resolution A.761(18)) (MSC)
		5.2.1.37	Amendments to SOLAS regulation II-1/11 and development of associated Guidelines to ensure the adequacy of testing arrangements for watertight compartments (MSC)
5.2.2	Development and review of training and watchkeeping standards and operational procedures for maritime personnel	5.2.2.1	Non-mandatory instruments: development of guidance for the implementation of the 2010 Manila Amendments (MSC)
		5.2.2.2	Mandatory instruments: input regarding MARPOL, BWM and other environmental conventions (MEPC)
		5.2.2.3	Proposed for deletion (MSC 89)
		5.2.2.4	Proposed for deletion (MSC 89)
		5.2.2.5	Validated model training courses (MSC)
		5.2.2.6	Proposed for deletion (MSC 89)
		5.2.2.7	Reports on unlawful practices associated with certificates of competency (Secretariat)
		5.2.2.8	Reports to the MSC on information communicated by STCW Parties (Secretariat)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		5.2.2.9	Mandatory instrument: development of amendment to SOLAS to mandate enclosed space entry and rescue drills (MSC)
		5.2.2.10	Mandatory instrument: development of amendments to the FSS Code for communication equipment for fire-fighting teams (MSC)
		5.2.2.11	Preparation of guidelines for the implementation of the medical standards of the Manila amendments (MSC)
5.2.3	Keep under review standards for safe handling and carriage by sea of solid and liquid cargoes carried in bulk and packaged form	5.2.3.1	Mandatory instruments: development of amendments to CSC 1972 and associated circulars (MSC)
		5.2.3.2	Mandatory instruments: Development of measures to prevent loss of containers (MSC)
		5.2.3.3R	Mandatory instruments: development of amendments to the IMSBC Code, including evaluation of properties of solid bulk cargoes (MSC/MEPC)
		5.2.3.4	Mandatory instruments: development of amendments to the IMDG Code and supplements (MSC)
		5.2.3.5	Mandatory instruments: harmonization of the IMDG Code with the UN Recommendations on the Transport of Dangerous Goods (MSC)
		5.2.3.6	Mandatory instruments: review of fire protection arrangements for the stowage of water-reactive materials (MSC)
		5.2.3.7	Proposed for deletion (MSC 89)
		5.2.3.8	Proposed for deletion (MSC 89)
		5.2.3.9	Proposed for deletion (MSC 89)
		5.2.3.10	Mandatory instruments: input regarding MARPOL Annexes I and II and the IBC Code (MEPC)
		5.2.3.11R	Mandatory instruments: amendments to MARPOL Annex III as required (MEPC)
		5.2.3.12	Proposed for deletion (MSC 89)
		5.2.3.13	Proposed for deletion (MSC 89)
		5.2.3.14	Non-mandatory instruments: revised Guidelines for packing of cargo transport units (MSC)
		5.2.3.15	Non-mandatory instruments: Measures to prevent fires and explosions on chemical tankers and product tankers under 20,000 deadweight tonnes operating without inert gas systems (MSC)
		5.2.3.16	Provisions for the installation of equipment for detection of radioactive sources or radioactive contaminated objects (MSC)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
5.2.4	Keep under review measures to improve navigational safety, ships' routeing, ship reporting and monitoring systems, vessel traffic services, requirements and standards for shipborne navigational aids and systems and long-range tracking and identification (LRIT).	5.2.4.1	Mandatory instruments: new routeing measures and mandatory ship reporting systems, including associated protective measures for PSSAs (MSC)
		5.2.4.2	Non-mandatory instruments: revision of the Recommendation for the protection of the AIS VHF Data Link (resolution MSC.140(76)) (MSC)
		5.2.4.3	Mandatory instruments: amendments to the General Provisions on Ships' Routeing (resolution A.572(14), as amended) (MSC)
		5.2.4.4	Non-mandatory instruments: implementation of LRIT system (Secretariat) (MSC)
		5.2.4.5	Non-mandatory instruments: guidance on interpretation of UNCLOS provisions *vis-à-vis* IMO instruments (LEG)
		5.2.4.6	Non-mandatory instruments: consideration of LRIT matters (MSC)
		5.2.4.7	Proposed for deletion (MSC 89)
		5.2.4.8	Proposed for deletion (MSC 89)
		5.2.4.9	Proposed for deletion (MSC 89)
		5.2.4.10	Proposed for deletion (MSC 89)
		5.2.4.11	Non-mandatory instruments: amendments to the Performance standards for VDR and S-VDR (MSC)
		5.2.4.12	Proposed for deletion (MSC 89)
		5.2.4.13	Non-mandatory instruments: development of policy and new symbols for AIS Aids to Navigation (MSC)
		5.2.4.14	Development of performance standards for inclinometers (MSC)
		5.2.4.15	Proposed for deletion (MSC 89)
5.2.5	Monitor and evaluate the operation of the Global Maritime Distress and Safety System (GMDSS)	5.2.5.1	Proposed for deletion (MSC 89)
		5.2.5.2	Non-mandatory instruments: consideration of operational and technical coordination provisions of maritime safety information (MSI) services, including development and review of related documents (MSC)
		5.2.5.3	Non-mandatory instruments: guidelines on emergency radiocommunications, including false alerts (MSC)
		5.2.5.4	Further development of the GMDSS master plan on shore-based facilities (MSC)
		5.2.5.5	Consideration and developments in Inmarsat and Copsas-Sarsat (MSC)
		5.2.5.6	Proposed for deletion (MSC 89)
		5.2.5.7	Developments in maritime radiocommunication systems and technology (MSC)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		5.2.5.8	Proposed for deletion (MSC 89)
		5.2.5.9	Proposed for deletion (MSC 89)
		5.2.5.10	Development of measures to avoid false distress alerts (MSC)
		5.2.5.11	Scoping exercise to establish the need for a review of the elements and procedures of the GMDSS (MSC)
5.2.6	Development and implementation of the e-navigation strategy	5.2.6.1	Non-mandatory instruments: Development of an e-navigation strategy implementation plan (MSC)
5.3.1	Keep under review and support flag State, port State and coastal State implementation for enhancing and monitoring compliance	5.3.1.1	Development of amendments to the 2011 ESP Code (MSC)
		5.3.1.2	Non-mandatory instruments: revised Guidelines on control and compliance measures to enhance maritime security, if necessary (MSC)
		5.3.1.3	Non-mandatory instruments: revised procedures for port State control (resolution A.787(19), as amended by resolution A.882(21)) (MSC)
		5.3.1.4	Non-mandatory instruments: consideration of the efficacy of the Container Inspection Programme (MSC)
		5.3.1.6	Promote the harmonization of port State control activities and collect PSC data (MSC)
		5.3.1.7	Methodology for the in-depth analysis of annual PSC report (MSC)
		5.3.1.8	A risk assessment comparison between marine casualties and incidents and PSC inspections (MSC)
		5.3.1.9	Non-mandatory instrument: Development of guidance for Approved Continuous Examination Programmes (ACEP) (MSC)
5.4.1	Develop a strategy for the work related to the role of the human element including the chain of responsibility in maritime safety	5.4.1.1	Proposed for deletion (MSC 89)
		5.4.1.2	Non-mandatory instruments: guidelines on how to present relevant information to seafarers (MSC)
6.1.1	Keep under review measures (e.g., ISPS Code) to enhance security for ship and port facilities including the ship/port interface and shipping lanes of strategic importance	6.1.1.1	Non-mandatory instruments: guidelines and guidance on the implementation and interpretation of SOLAS chapter XI-2 and the ISPS Code (MSC)
		6.1.1.2	Non-mandatory instruments: measures to enhance the security of closed cargo transport units and of freight containers (MSC/FAL)
		6.1.1.3	Proposed for deletion (MSC 89)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
6.1.2	Keep under review the adequacy of the legal framework to suppress unlawful acts against ships and fixed platforms through the SUA Convention and its Protocol	6.1.2.1	Advice and guidance on issues, as may be requested, in connection with implementation of SUA 1988/2005 in the context of international efforts to combat terrorism and proliferation of weapons of mass destruction and related materials (LEG)
6.2.1	Promulgate information on prevention and suppression of acts of piracy and armed robbery against ships	6.2.1.1	Monthly and annual reports (MSC)
		6.2.1.2	Revised guidance relating to the prevention of piracy and armed robbery to reflect emerging trends and behaviour patterns (MSC/LEG)
		6.2.1.3	Advice and guidance to support the review of IMO instruments on combating piracy and armed robbery (LEG)
		6.2.1.4	Advice and guidance to support international efforts to ensure effective prosecution of perpetrators (LEG)
		6.2.1.5	Advice and guidance to support availability of information on comprehensive national legislation and judicial capacity-building (LEG)
6.2.2	Assist developing regions in their introduction and implementation of effective security measures and measures against piracy and armed robbery against ships	6.2.2.1	Implementation of related ITCP activities (Secretariat)
		6.2.2.2	Model legislation on maritime security (Secretariat)
		6.2.2.3	Advice and guidance to support the review of IMO instruments on combating piracy and armed robbery (LEG)
		6.2.2.4	Advice and guidance to support international efforts to ensure effective prosecution of perpetrators (LEG)
		6.2.2.5	Advice and guidance to support availability of information on comprehensive national legislation and judicial capacity-building (LEG)
6.3.1	Actively participate in work of the Joint IMO/ILO *Ad Hoc* expert working groups on issues related to safeguarding the human rights of seafarers	6.3.1.1	Approved recommendations based on the work, if any, of the Joint IMO/ILO *Ad Hoc* Expert Working Group on Fair Treatment of Seafarers in the Event of a Maritime Accident, CMI, and others concerning the application of the joint IMO/ILO Guidelines on the fair treatment of seafarers and consequential further actions as necessary (LEG)
		6.3.1.2	Monitor the progress of the amendments to ILO MLC 2006 and address the issue of financial security in case of abandonment of seafarers, and shipowners' responsibilities in respect of contractual claims for personal injury to or death of seafarers, should it be necessary (LEG)
6.3.2	Proposed for deletion (MSC 89)	6.3.2.1	Proposed for deletion (MSC 89)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
7.1.1	Monitor pollution and adverse impact on the marine environment caused by ships and their cargoes	7.1.1.1	Follow-up to the GESAMP study on "Estimates of Oil Entering the Marine Environment from Sea Based Activities" (MEPC)
		7.1.1.2	Technical guidance for the Secretariat for the development, on the basis of reporting requirements under MARPOL, OPRC and the OPRC-HNS Protocol, as well as other relevant sources of information, of a pollution incident information structure for regular reporting to the FSI and BLG Sub-Committees, and/or the MEPC (MEPC)
7.1.2	Keep under review measures to reduce adverse impact on the marine environment by ships	7.1.2.1	Mandatory instruments: follow-up to the Hong Kong Convention on Ship Recycling, including development and adoption of associated guidelines (MEPC)
		7.1.2.2	Mandatory instruments: designation of Special Areas and PSSAs and adoption of their associated protective measures (MEPC)
		7.1.2.4	Provisions for the reduction of noise from commercial shipping and its adverse impacts on marine life (MEPC)
		7.1.2.5	Approved ballast water management systems (MEPC)
		7.1.2.7	Production of a manual entitled "Ballast Water Management – How to do it" (MEPC)
		7.1.2.10	Measures to promote the AFS Convention (MEPC)
		7.1.2.11	Manual on chemical pollution to address legal and administrative aspects of HNS incidents (MEPC)
		7.1.2.13	Guidance on the carriage of biofuels and biofuel blends as cargo (MEPC)
		7.1.2.14	Guidance on bio-fouling for recreational craft less than 24 metres (MEPC)
		7.1.2.16	Technical guidelines on sunken oil assessment and removal techniques (MEPC)
		7.1.2.19	Guide on Oil Spill Response in Ice and Snow Conditions (MEPC)
		7.1.2.20	Updated IMO Dispersant Guidelines (MEPC)
		7.1.2.21	Guideline for oil spill response – offshore *in situ* burning (MEPC)
		7.1.2.26	Guidance on obligations and actions required by States to prepare for implementation of the OPRC-HNS Protocol (MEPC)
		NEW	Development of guidance for International Offers of Assistance in response to a marine oil pollution incident (MEPC)
		NEW	Guidance on the safe operation and performance standards of oil combating equipment (MEPC)
		NEW	Method to undertake environmental risk and response benefit assessments (MEPC)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		7.1.2.31	Revision of the revised guidelines on implementation of effluent standards and performance tests for sewage treatment plan (resolution MEPC.159(55)) (MEPC)
		7.1.2.32	Development of a Code for the transport and handling of limited amounts of hazardous and noxious liquids substances in bulk on offshore support vessels (MEPC)
		NEW	Development of criteria for the evaluation of environmentally hazardous solid bulk cargoes in relation to the revised MARPOL Annex V (MEPC)
7.1.3	Monitor and keep under review the provision of reception facilities in ports and their adequacy	7.1.3.1	Reports on inadequacy of port reception facilities (MEPC)
		7.1.3.2	Follow-up to the implementation of the Action Plan on port reception facilities (MEPC)
7.1.4	Consider the need for the development of measures to prevent and control marine pollution from small craft	7.1.4.1	Action Plan, as required, on prevention and control of marine pollution from small craft, including development of appropriate measures (MEPC)
7.2.1	Keep under review the Guidelines on the identification of places of refuge	7.2.1.1	Bi-annual MSC circulars on designation of maritime assistance services (MAS) (MSC)
		7.2.1.2	Input to the review of the Guidelines on the identification of places of refuge with regard to marine environment protection (MEPC)
7.2.2	Keep under review the adequacy of the legal framework	7.2.2.1	Safety aspects of alternative tanker designs assessed (MSC)
		7.2.2.2	Environmental aspects of alternative tanker designs (MEPC)
		7.2.2.4	Evaluation of safety and pollution hazards of chemicals and preparation of consequential amendments (MEPC)
7.2.3	Foster cooperation and mutual assistance between Member States under the provisions of the OPRC Convention and OPRC-HNS Protocol	7.2.3.1	Increased activities within the ITCP regarding the OPRC Convention and the OPRC-HNS Protocol (MEPC/TCC/Secretariat)
		7.2.3.2R	Oversight of IMO regional emergency response centres (REMPEC, REMPEITC) (Secretariat)
7.3.1	Keep under review IMO measures to reduce atmospheric pollution	7.3.1.1	Review of relevant non-mandatory instruments as a consequence of the amended MARPOL Annex VI and the NO_x Technical Code (MEPC)
7.3.2	Continue to develop appropriate measures to address climate change and global warming	7.3.2.1	Further development of mechanisms needed to achieve the limitation or reduction of CO_2 emissions from international shipping (MEPC)
		NEW	Keep under review IMO measures and contributions to international climate mitigation initiatives and agreements (including CO_2 sequestration and ocean fertilization) (MEPC)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
7.4.1	Develop a strategy for the work related to the role of the human element including the chain of responsibility in marine environment protection	7.4.1.1	Follow up to the updated Action Plan on the Organization's strategy to address human element (MSC-MEPC.7/Circ.4) (MEPC)
8.0.1	Promote wider acceptance of the FAL Convention and adoption of measures contained therein, to assist the FAL Committee's effort and work towards the universal implementation of measures to facilitate international maritime traffic	8.0.1.1	Reports on the status of the FAL Convention (FAL)
		8.0.1.2	Comprehensive review of the FAL Convention (FAL)
		8.0.1.3	Review of the role, mission, strategic direction and work of the Facilitation Committee (FAL)
		8.0.1.4	Finalized Explanatory Manual to the FAL Convention (FAL)
8.0.2	Ensure that an appropriate balance is maintained between measures to enhance maritime security and measures to facilitate maritime international traffic	8.0.2.1	Access procedures at the ship/port interface for public officers and service providers visiting a vessel (FAL)
		8.0.2.2	Procedures to facilitate seafarers' access in and out of a port facility during shore leave, if necessary (FAL)
		8.0.2.3	Guidance on documentation required by passengers, particularly transit cruise passengers, to ensure their smooth flow through ports (FAL)
		8.0.2.4	Procedures for cargo and baggage clearance through a port facility (FAL)
		8.0.2.5	Proposed for deletion (MSC 89)
		8.0.2.6	Reports and information on illegal migrants (FAL)
		8.0.2.7	Proposed for deletion (MSC 89)
8.0.3	Encourage the use of information and communication technology to drive continuous improvement and innovation in the facilitation of maritime traffic	8.0.3.1	Finalized Guidelines for the use of Single Window (FAL)
		8.0.3.2	Finalized IMO Compendium of Facilitation and Electronic Business (FAL)
		8.0.3.3	Information technology solutions (e.g., electronic signature) developed to facilitate the process of clearing the ship, its cargo, passengers and crew (FAL)
8.0.4	Consider ways of systematically reducing the administrative burden deriving from the legislative process	8.0.4.1	No PO
9.0.1	Identify and address the special shipping needs of SIDS and LDCs	9.0.1.1	Report on the implementation of the global ITCP programme on support to SIDS and LDCs for their special shipping needs (TCC/Secretariat)
		9.0.1.2	Report to the Council on the committees' consideration of the special shipping needs of SIDS and LDCs *vis-à-vis* new IMO standards (Secretariat)
		9.0.1.3	Provision of reception facilities under MARPOL in SIDS (MEPC)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
10.0.1	Further develop measures to apply goal-based standards for maritime safety	10.0.1.1	Mandatory instruments: implementation of goal-based new ship construction standards for tankers and bulk carriers (MSC)
		10.0.1.2	Mandatory instruments: development of goal-based ship construction standards for all types of ships, including security and protection of the marine environment (MSC)
Broad category: Enhancing the profile of shipping, quality culture and environmental conscience			
11.1.1	Raise awareness of the role of international shipping in world trade and the global economy and the importance of the Organization's role	11.1.1.1	Permanent analysis, demonstration and promotion of the linkage between a safe, secure, efficient and environmentally friendly maritime transport infrastructure, the development of global trade and the world economy and the achievement of the MDGs (Assembly, Council, all committees and Secretariat)
		11.1.1.2	Speeches, messages, interviews and articles delivered and published in all media on the work and advances of IMO and the shipping industry (Secretariat)
		11.1.1.3	Other outreach activities delivered (including some 50 press releases annually) to enhance the image of IMO and the industry, and promote IMO's work and the effective implementation of its standards (Secretariat)
		11.1.1.4	Two World Maritime Day celebrations and two Parallel Events organized, and consequential action plans implemented to promote and publicize the respective World Maritime Day themes (Secretariat)
		11.1.1.5	Winners elected for two International Maritime Prizes and two IMO Awards for Exceptional Bravery at Sea (Council)
		11.1.1.6	Measures to promote the "IMO Children's Ambassador" concept, in collaboration with junior marine environment protection associations worldwide (MEPC)
11.1.2	Enhance the image of the role of the human element in the context of the shipping industry	11.1.2.1	Promotion of the "Go to Sea!" campaign (Secretariat)
11.2.1	Actively promote and encourage the development of community relations programmes	11.2.1.1	No PO
12.1.1	Use formal safety assessment techniques in the development of technical standards	12.1.1.2	FSA Experts' Group established to review FSA studies (MSC)
12.1.2	Use risk-based tools that take account of costs and the human element in the development of operational standards	12.1.2.1	Collection and analysis of casualty data to identify trends and develop knowledge and risk-based recommendations (MSC)

No.**	High-level Actions (HLAs)	No.**	Planned outputs (POs) for 2012-2013
		12.1.2.2	Proposed for deletion (MSC 89)
		12.1.2.3	Proposed for deletion (MSC 89)
12.2.1	Keep under review the effectiveness of the ISM Code with regard to safety and protection of the marine environment	12.2.1.1	Non-mandatory instruments: guidelines and associated training to assist companies and seafarers in improving the implementation of the ISM Code (MSC/MEPC)
		12.2.1.2	Non-mandatory instruments: revised guidelines for Administrations (resolution A.913(22)) to make them more effective and user-friendly (MSC/MEPC)
		12.2.1.3	Mandatory instrument: enhancing the efficiency and user-friendliness of ISM Code (MSC/MEPC)
12.3.1	Undertake wider collection and dissemination of information, analyses and decisions, taking account of the financial and governance issues	12.3.1.1	Guidance on the development of GISIS and on access to information (MSC/MEPC)
		12.3.1.2	PSC-related data collected and disseminated in cooperation with PSC regimes (MSC)
		12.3.1.3	Consideration of reports of incidents involving dangerous goods or marine pollutants in packaged form on board ships or in port areas (MSC/MEPC)
12.4.1	Raise awareness of the "chain of responsibility" concept among all stakeholders through organizations that have consultative status	12.4.1.1	Guidelines and MEPC circulars (MEPC)
12.5.1	Proposed for deletion (MSC 89)	12.5.1.1	Proposed for deletion (MSC 89)
13.0.1	Strengthen awareness of the need for a continuous reduction of the adverse impact of shipping on the environment		
13.0.2	Promote and enhance the availability of, and access to, information relating to environmental protection (i.e. transparency) and, in particular, consider the wider dissemination of information, analyses and decisions, taking account of the financial implications	13.0.2.1	Guidance for the Secretariat on the development of GISIS and on access to information (MEPC)
		13.0.2.2	Databases as part of GISIS and other means, including electronic ones (all committees, as appropriate/Secretariat)
		13.0.2.3	Maintain an updated web-based inventory of OPRC/HNS related information, including R&D projects and best practices (MEPC)
13.0.3	Encouraging the use in shipping of the best available environmental technology not entailing excessive costs, in line with the goal of sustainable development	13.0.3.1	Improved and new technologies approved for ballast water management systems and reduction of atmospheric pollution (MEPC)

***

ANNEX 37

ITEMS TO BE INCLUDED IN THE AGENDAS FOR MEPC 63, MEPC 64 AND MEPC 65

No.	Item	MEPC 63 February/ March 2012	MEPC 64 October 2012	MEPC 65 2013
1	Harmful aquatic organisms in ballast water	RG X	[RG] X	X
2	Recycling of ships	WG X	WG X	[WG] X
3	Air pollution and energy efficiency	WG X	WG X	[WG] X
4	Reduction of GHG emissions from ships	X	X	X
5	Consideration and adoption of amendments to mandatory instruments	DG X	X	[X]
6	Interpretations of, and amendments to, MARPOL and related instruments	X	X	X
7	Implementation of the OPRC Convention and the OPRC-HNS Protocol and relevant Conference resolutions	X	X	X
8	Identification and protection of Special Areas and PSSAs	X	X	X
9	Inadequacy of reception facilities	X	X	X
10	Reports of sub-committees	X	X	X
11	Work of other bodies	X	X	X

No.	Item	MEPC 63 February/ March 2012	MEPC 64 October 2012	MEPC 65 2013
12	Status of conventions	X	X	X
13	Harmful anti-fouling systems for ships	X	X	X
14	Promotion of implementation and enforcement of MARPOL and related instruments	X	X	X
15	Technical Co-operation for the Protection of the Marine Environment	X	X	X
16	Role of the human element	X	[X]	[X]
17	Noise from commercial shipping and its adverse impacts on marine life	X	[X]	[X]
18	Work programme of the Committee and subsidiary bodies	X	X	X
19	Application of the Committees' Guidelines	X	X	X
20	Election of the Chairman and Vice-Chairman	X[1]	X	X
21	Any other business	X	X	X

[1] Election of the Vice-Chairman.