

**REGIONAL MARINE POLLUTION EMERGENCY
RESPONSE CENTRE FOR THE MEDITERRANEAN SEA
REMPEC**



IMO-OMI



MAP-PAM



UNEP-PNUE

**RECOMMENDATIONS
FOR THE PREVENTION OF POLLUTION &
ADVERSE ENVIRONMENTAL EFFECTS
FROM PLEASURE CRAFT
IN THE MEDITERRANEAN SEA**



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PREVENTION OF POLLUTION AND ADVERSE ENVIRONMENTAL EFFECTS FROM PLEASURE CRAFT IN THE MEDITERRANEAN SEA

INTRODUCTION

Environmentally Sound Development of Nautical Tourism in the Mediterranean

Countries of the Mediterranean have, in recent years, encouraged the use of their marine environment for the recreation of their peoples and for the enjoyment of visitors. Nautical tourism and pleasure craft operations in general represent a significant and expanding source of national revenue, but also pose a substantial threat to the environment if left unchecked.

Mindful of the importance of sea use and water activities in relation to the tourism product, and with a view that beaches remain clean and that the marine ecosystem will not sustain irreversible damage from this sector of society, as well as to ensure a holistic approach to the work of marine environment protection, the Eleventh Ordinary Meeting of the Contracting Parties to the Barcelona Convention (Malta, 27 - 30 October 1999, UNEP(OCA)/MED IG.12/9), within the context of sea-based pollution prevention and control activities approved the following two recommendations:

“To provide the necessary support to enable the secretariat to start the process of considering the issue of the prevention of pollution from non-commercial pleasure-craft activities)” *and*

“To request the Secretariat (REMPEC and MEDU) to endeavour to obtain the necessary external funds to start the process of considering the issue of the prevention of pollution from non-commercial pleasure-craft activities”.

The last Meeting of the Focal Points of the REMPEC (Malta, 25 – 28 October 2000, REMPEC/WG.18/14) furthermore agreed on the need to follow up work on the subject and to investigate the status and measures taken for the prevention of pollution from such type of sea-based activities in the Mediterranean region.

In order to assess the current situation, the Centre has conducted a Survey on National and Port Regulations applicable to pollution prevention and environmental adverse effects from pleasure craft in the Mediterranean sea.

On the basis of the results of this Survey and after an analysis of the international and regional rules and regulations related to the matter, the Centre has prepared a set of draft Recommendations. These Recommendations are based on the rules and regulations developed within as well as the relevant arrangements of the Barcelona Convention and its Protocols, applicable to the prevention of pollution from pleasure craft, avoiding the creation of a new legal framework.



Pollution & Adverse Environmental Effects of Pleasure Craft

A **pleasure craft** can be broadly defined as a vessel or boat, not registered in a shipping or commercial vessel register, used for the purpose of leisure or recreation both privately owned and on charter, propelled by an engine(s) or sails or both and includes yachts, power and sail boats, sport fishing boats, diving support boats and water-jet drives and other small craft. The spectrum of vessels therefore encompasses a wide range of craft from small craft used only to get out to the nearest fishing bank to the larger vessels that perform extensive movement.

There is a notion that during the past years, the pleasure craft fleet in the Mediterranean region has increased, with a concomitant increase in the engine power of these crafts. Furthermore, because some of these pleasure craft have overnight accommodation facilities, there is also the notion of an increase in the transboundary movement of such craft since they enter a country's national waters from neighbouring countries, as well as from outside the region.

Environmental problems from pleasure craft have been identified as arising from three main different sources :

From the **operation of the craft** itself :

- ⇒ discharges of pleasure craft generated wastes : mixed garbage, separated waste material, waste oil and oily garbage, chemicals and other hazardous substances...
- ⇒ discharges of raw or chemically treated sewage from pleasure craft, inducing mainly an eutrophying effect and causing bacterial pollution,
- ⇒ exhaust gas emissions from marine engines releasing hydrocarbon particulates, carbon, nitrogen and sulfur oxides, sulfur and lead compounds...
- ⇒ leaching of polluting anti-fouling paints such as TBT-based or copper-based paints,

From **pleasure craft navigation** :

- ⇒ causing physical damage and adverse impact to marine species and habitats as a result of the navigation itself, uncontrolled routing, anchorage, landing of boat, wave generation, jet propulsion, generation of high pitched noises...
- ⇒ introducing of non-indigenous species by using anchors and anchorage materials non cleaned in marine areas with different environmental characteristics,

From the **port for pleasure craft**:

- ⇒ causing physical damage to marine species and habitats as a result of construction of new ports, development, extension,
- ⇒ causing operational pollution as a result of releases and run-off from ports facilities : boats yards, shore fuelling facilities, car parks, non-treated rain water run-off and other aqueous drainage...

Since most use of non-commercial pleasure craft takes place during the summer season, it is reasonable to assume that the impacts from the environmental problems listed above will be greater during this period than if the impacts were to be considered over the four seasons of the year.



Survey

In order to assess the current state of anti-pollution regulations applicable to pleasure craft and related activities in the Mediterranean, the Centre prepared two questionnaires : one dealing with the National Regulations which was completed by the Operational Focal Point of REMPEC or, when appropriate, by another national authority considered competent to complete this questionnaire ; the other on Port Regulations was forward through the Operational Focal Point of the country to the relevant port authorities of three domestic ports of different sizes selected by the Operational Focal Points.

The three ports selected had to present different profiles to reflect a “small”, a “medium” and “large” port for pleasure craft which as a minimum is used by both sailboats and motorboats.

In order to bring this initiative to a successful conclusion, the Centre required the active participation of its Operational Focal Points for these questionnaires to be completed.

Related Legal Instruments

In addition to the survey, a review was carried out on the **international rules and comparative regional regulations** applicable to the prevention of pollution from pleasure craft.

It must be recalled that, according to the objective of integrating environment and development in the Mediterranean Action Plan Phase II :

- the **Barcelona Convention** in its Article 6,
- the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities (Land-Based Protocol) in its Articles 4 and 6 and
- the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (Specially Protected Areas) in its Article 6 and 17,

contain some legal arrangements concerning the prevention of pollution from pleasure craft, pleasure craft ports and pleasure craft navigation in environmentally sensitive areas.

As regard to the relevant international law, the **IMO International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978** (better know as MARPOL 73/78) and its Annexes is possibly the main legal instrument which can form the legal basis for the prevention of pollution from pleasure craft.

Annex V of the MARPOL 73/78 lays down the conditions to prevent pollution by garbage from ships. An important feature of this Annex is the prohibition of the disposal of plastics into the sea and severe restrictions on the discharge of garbage into coastal areas.

Annex IV of MARPOL 73/78 lays down the conditions to prevent discharge of sewage from ships. Under the provisions of Annex IV, the discharge of sewage into the sea is restricted. Although Annex IV has not yet entered into force, many port states have adopted local legislation to control the discharge of sewage from ships and entry into their ports is conditional to compliance with such legislation.

Annex I of MARPOL 73/78 lays down the conditions to prevent oil pollution from ships. This Annex contains measures to prohibit, prevent or reduce operational as well as accidental pollution.

To assist governments comply with the requirement for the provision of reception facilities in ports, IMO has published a Comprehensive Manual on Port Reception Facilities and one chapter is specifically focused on “Planning and executing reception facilities required for small ships”.

The new Annex VI, which is not yet in force, covers emissions to air of NO_x, SO_x, ozone depleting substances (ODS_s), volatile organic compounds (VOC_s).

As regard to **IMO Resolutions** applicable to the prevention of pollution from pleasure craft, IMO's Marine Environment Protection Committee (MEPC) has adopted Resolution MEPC 46 (30) on Measures to Control Adverse Impacts Associated with Use of Tributyl Tin Compounds in Anti-Fouling Paints. In 1999, the Assembly adopted Resolution A.895(21), urging rules to be developed to ensure a global prohibition on the application of organotin compounds in anti-fouling systems by 1 January 2003 and a complete prohibition on the presence of these compounds by 1 January 2008.

As regard to comparative regional rules, the European Union has adopted two Directives relevant to the prevention of pollution from pleasure craft : **Directive 94/25/EC** of the European Parliament and of the Council of 16 June 1994 on the approximation of the laws, regulations and administrative provisions of the Member States relating to recreational craft and **Directive 2000/59/EC** of the European Parliament and of the Council of 27 November 2000 on port reception facilities for ship-generated waste and cargo residues.

Noteworthy of mention are the numerous **Recommendations** adopted within the framework of the **1974/1992 Convention on the Protection of the Marine Environment in the Baltic Sea Area**, related to the prevention of pollution from ships, and which also includes from pleasure craft and also the **Code of Conduct for the Prevention of Pollution from Small Ships in Marinas and Anchorages in the Caribbean Region**, a voluntary Code of Conduct developed at the Conference on Prevention of Pollution from Small Ships held in the Port of Spain, Trinidad and Tobago (25 - 27 November 1997) and.

Draft Recommendations

On the basis of the results of the Survey on the state of the prevention of pollution from pleasure craft within the region and considering the regional and international law applicable to the matter, the Centre has prepared a set of Draft Recommendations covering priority fields of pollution prevention and protection of the marine environment from the adverse effect of pleasure craft and related activities.



RECOMMENDATIONS FOR THE PREVENTION OF POLLUTION & ADVERSE ENVIRONMENTAL EFFECTS FROM PLEASURE CRAFT IN THE MEDITERRANEAN SEA

INTRODUCTION

ACCEPTANCE OF INTERNATIONAL & REGIONAL LEGAL INSTRUMENTS

Part I **PREVENTION OF POLLUTION FROM DISCHARGES
OF PLEASURE CRAFT-GENERATED WASTES**

Part II **PREVENTION OF POLLUTION & ENVIRONMENTAL ADVERSE EFFECTS FROM
PLEASURE CRAFT USE & NAVIGATION**

Part III **PREVENTION OF POLLUTION FROM PLEASURE CRAFT PORTS**

Part IV **IMPLEMENTATION OF THE RECOMMENDATIONS**

ANNEXES **GUIDELINES FOR A MEDITERRANEAN STRATEGY FOR PORT RECEPTION
FACILITIES & WASTE MANAGEMENT PLANS**

**CREATION & DEVELOPMENT OF PLEASURE CRAFT PORTS: GUIDELINES
FOR ENVIRONMENTAL IMPACT ASSESSMENT**

**PLEASURE CRAFT USERS EDUCATION & INFORMATION:
GUIDELINES FOR A MEDITERRANEAN PUBLIC AWARENESS & INFORMATION
CAMPAIGN**





Definitions

For the purpose of the following Recommendations :

“Mediterranean Sea”

shall mean the maritime waters of the Mediterranean Sea proper, including its gulfs and seas, bounded to the west by the meridian passing through Cape Spartel lighthouse, at the entrance of the Straits of Gibraltar, and to the east by the southern limits of the Straits of Dardanelles between Mehmetcik and Kumkale lighthouse.

“special area”

shall mean a sea area where for recognised technical reasons in relation to its oceanographic and ecological condition and to the particular character of its traffic, the adoption of special mandatory methods for the prevention of sea pollution is required.

“nearest land”

shall mean from the baseline from which the territorial sea of the territory in question is established in accordance with international law.

“pleasure craft”

shall mean a vessel of any type whatsoever operating in the marine environment, not registered in a shipping or commercial vessel register, both privately owned and on charter, regardless the type of propulsion, intended for sports or leisure purposes and which is less than 400 Tons Gross Tonnage or without a measured gross tonnage. Also, MARPOL 73/78 regulations for ships less than 400 Tons Gross Tonnage are regarded to apply to pleasure craft.

“pleasure craft port”

shall mean a place or geographical area made up of such improvement works and equipment as to permit, principally, the reception of pleasure craft.

“Best Available Techniques”

shall mean the latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of a particular measures for limiting discharges, emissions and waste.

“Best Environmental Practice”

shall mean the application of the most appropriate combination of environmental control measures and strategies.



“waste”

shall mean useless, unneeded or superfluous matter which is to be discharged.

“pleasure craft generated wastes”

shall mean all wastes, including sewage, and residues which are generated during the operation of the craft and fall under the scope of the applicable Annexes to MARPOL 73/78.

“discharge”

shall mean any release howsoever caused from a craft and includes any escape, disposal, spilling, leaking, pumping, emitting or emptying.

“domestic waste”

shall mean all types of food wastes and wastes generated in the living spaces on board the boat.

“food waste”

shall mean spoiled or any unspoiled victual substances, such as fruits, vegetables, dairy products, poultry, meat products, food scraps, food particles, and all other materials contaminated by such wastes, generated aboard ship, principally in the galley and dining area.

“plastic”

shall mean a solid material which contains as an essential ingredient one or more synthetic organic high polymers and which is formed during either manufacture of the polymer or the fabrication into a finished product by heat and/or pressure. Plastics have material properties ranging from hard and brittle to soft and elastic.

“sewage”

shall mean drainage and other wastes from any form of toilets, urinals, and WC scuppers, or other waste waters when mixed with drainage defined above.

“port reception facility”

shall mean any facility, which is fixed, floating or mobile and capable of receiving pleasure craft-generated wastes.

“holding tank”

shall mean a tank on board used for the collection and storage of sewage.

“emissions”

shall mean any release of substances into the atmosphere or sea, subject to control from pleasure craft.



Preamble

The Secretariat,

Having regard to the two Recommendations of the Eleventh Ordinary Meeting of the Contracting Parties to the Barcelona Convention (Malta, 27-30 October 1999, UNEP(OCA)/MED IG.12/9), adopted within the context of sea-based pollution prevention and control activities, requiring :

“to provide the necessary support to enable the Secretariat to start the process of considering the issue of the prevention of pollution from non-commercial pleasure-craft activities” and

“To request the Secretariat (REMPEC and MEDU) to endeavour to obtain the necessary external funds to start the process of considering the issue of the prevention of pollution from non-commercial pleasure craft activities” ,

Having further regard to the conclusion of the Report of the Meeting of Focal Points of the REMPEC (Malta, 25-28 October 2000, REMPEC/WG.18/14) that work on the subject should be followed up and that the Centre shall study the current state of the art in the Mediterranean Sea,

Recognising that an increasing number of pleasure craft operate in the Mediterranean Sea, that Mediterranean coastal States have encouraged the use of their marine environment for the recreation of their people and for the enjoyment of visitors,

Bearing in mind that nautical tourism and pleasure craft operations represent a significant and expanding source of national revenue,

Being convinced of the importance of promoting sustainable development in the field of nautical tourism,

Being also convinced of the importance of the early initiation of counter pollution measures regarding pleasure craft, and in particular of national measures implementing international standards and standards agreed within the framework of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean,

Following the lines of the Mediterranean Action Plan (MAP Phase II) on sustainable development in the Mediterranean and on the prevention of the pollution of the marine environment from ships, which underlines concerning this latter issue, inadequate implementation and insufficient enforcement of international standards,

Recalling that Article 6 of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean on the Pollution from Ships encompassing pollution from pleasure craft, and asks for the elimination of discharges from ships and the implementation of the rules generally recognised at the international level,



Recalling also that the international rules addressing the pollution from ships are to be found in the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78) and its subsequent Annexes I to VI,

Noting that these rules are applicable to vessels of any type whatsoever operating in the marine environment,

Noting further that the relevant rules concerning pleasure craft of the said Convention and its Annexes, are to be found in particular in Annex I on Regulations for the Prevention of Pollution by Oil, Annex IV on Regulations for the Prevention of Pollution by Sewage from Ships, Annex V on Regulations for the Prevention of Pollution from Garbage from Ships and Annex VI on Regulations for the Prevention of Air Pollution from Ships,

Recalling also Article 211 of Part XII on the Protection and Preservation of the Marine Environment of the United Nations Convention on the Law of the Sea, on Pollution from Vessels, promoting the establishment of international rules and standards to prevent, reduce and control pollution of marine environment from vessels,

Recalling further that the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities may have some implications on the environmental impact of ports for pleasure craft, and that the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean might have some implications on the routing, on the landing, on the anchorage as well as on landing places of such vessels,

Requests that Contracting Parties to the Barcelona Convention, when elaborating national counter measures regarding pollution from pleasure craft, take into consideration the following Recommendations.



ACCEPTANCE OF INTERNATIONAL AND REGIONAL LEGAL INSTRUMENTS

RECOMMENDATION 1

RECOMMENDATION ON THE ACCEPTANCE OF INTERNATIONAL INSTRUMENTS AND OF THE BARCELONA CONVENTION AND ITS RELATED PROTOCOLS

The Secretariat,

Noting the adoption, by diplomatic conferences, of the following international instruments :

- 1) the **International Convention for the Prevention of Pollution from Ships**, 1973, as modified by the Protocol of 1978 (MARPOL 73/78);
- 2) its **Annex I** on Regulations for the Prevention of Pollution by Oil (Annex I of MARPOL 73/78);
- 3) its **Annex IV** on Regulations for the Prevention of Pollution by Sewage (Annex IV of MARPOL 73/78);
- 4) its **Annex V** on Regulations for the Prevention of Pollution by Garbage from Ships (Annex V of MARPOL 73/78);
- 5) its **Annex VI** on Regulations for the Prevention of Air Pollution from Ships (Annex VI of MARPOL 73/78).

Noting furthermore, the adoption by Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) at Conferences of Plenipotentiaries, of the following amendments and new protocols :

- 6) the **Amendments to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean** (Barcelona Convention) adopted in Barcelona from 9 to 10 June 1995;
- 7) the **Amendments to the Protocol for the Protection of the Mediterranean Sea against Pollution from Land-Based Sources and Activities** (Land-Based Sources Protocol) adopted in Syracuse from 6 to 7 March 1996;
- 8) the new **Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean** (Specially Protected Areas Protocol) adopted in Barcelona from 9 to 10 June 1995, and its annexes adopted in Monaco on 24 November 1996.



Recognises the importance of these instruments being adhered to and implemented by all Contracting parties for furthering the aims of the Mediterranean Action Plan – Phase II (MAP-Phase II) and of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its related Protocols, with a view to preventing pollution from pleasure crafts in the Mediterranean,

RECOMMENDATION 1

ACCEPTANCE OF INTERNATIONAL AND REGIONAL LEGAL INSTRUMENTS

RECOMMENDS to Contracting Parties to the Barcelona Convention, which have not yet done so, to ratify, approve, accept or accede, as soon as possible, the instruments referred to under 1) to 9).



PART I

PREVENTION OF POLLUTION FROM DISCHARGES OF PLEASURE CRAFT-GENERATED WASTE

- **REGULATIONS ON DISCHARGES OF WASTE AT SEA**
- **MEDITERRANEAN STRATEGY FOR PORT RECEPTION FACILITIES & WASTE MANAGEMENT PLANS**
- **REGULATIONS FOR ON BOARD EQUIPMENT**





DISCHARGES OF PLEASURE CRAFT-GENERATED WASTE AT SEA

RECOMMENDATION 2

RECOMMENDATION ON THE DISCHARGE OF OIL, OILY MIXTURES, CHEMICALS AND OTHER HAZARDOUS SUBSTANCES AT SEA

The Secretariat,

Recalling Paragraphs (1)(a),(2)(b) and (4) of Regulation 10 of **Annex I on Regulations for the Prevention of Pollution by Oil** of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78) on the methods of prevention of oil pollution from ships while operating in Special Areas, specially

Recommends that Contracting Parties to the Barcelona Convention should implement by way of national regulations the following provisions with respect to pleasure craft sailing in the Mediterranean sea defined as a special area, irrespective of their flag state :

RECOMMENDATION 2

DISCHARGE OF OIL, OILY MIXTURES, CHEMICALS AND OTHER HAZARDOUS SUBSTANCES

- 1) Any discharge into the sea of oily or oily mixtures from pleasure craft shall be prohibited while in the Mediterranean sea.
- 2) No discharge into the sea shall contain chemicals or other substances in concentration or in quantities which are hazardous to the marine environment or chemicals or other substances introduced for the purpose of circumventing the conditions of discharge specified in this regulation.



RECOMMENDATION 3

RECOMMENDATION ON DISCHARGE OF SEWAGE AT SEA

The Secretariat,

Recalling the provisions of Regulation 8 of **Annex IV on Regulations for the Prevention of Pollution from Sewage** of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78) on the Discharge of sewage,

Recommends that Contracting Parties to the Barcelona Convention should implement by way of national regulations the following provisions with respect to pleasure craft sailing in the Mediterranean sea defined as a special area, irrespective of their flag state :

RECOMMENDATION 3

DISCHARGE OF SEWAGE AT SEA

- 1) The discharge of sewage into the sea is prohibited, except when :
 - the boat is discharging comminuted and disinfected sewage using an approved system at a distance of more than 4 nautical miles from the nearest land, or
 - sewage which is not comminuted, or disinfected at a distance of more than 12 nautical miles from the nearest land, provided that in any case, the sewage that has been stored in holding tanks shall not be discharge instantaneously but at a moderate rate when the boat is *en route* and proceeding at not less than 4 knots, in order that the effluent shall not produce visible floating solids, nor cause discoloration of the surrounding waters;
 - 2) When the sewage is mixed with wastes or waste water having different discharges requirements, the more stringent requirements shall apply.
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RECOMMENDATION 4

RECOMMENDATION ON DISPOSAL OF GARBAGE AT SEA

The Secretariat,

Recalling the provisions of Regulation 5 of **Annex V on Regulations for the Prevention of Pollution by Garbage** of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78) on the Disposal of garbage within Special Areas,

Recalling also the provisions of Regulation 9 of **Annex V** of the MARPOL 73/78 on Placards, garbage management plans and garbage record-keeping,

Recommends that Contracting Parties to the Barcelona Convention should implement by way of national regulations the following provisions with respect to pleasure craft sailing in the Mediterranean sea defined as a special area, irrespective of their flag state :

RECOMMENDATION 4

DISPOSAL OF GARBAGE AT SEA

- 1) Disposal into the sea of the following is prohibited :
 - all plastics, including but not limited to synthetic ropes, synthetic fishing nets and plastic garbage bags; and
 - all other garbage, including paper products, rags, glass, metal, bottles, crockery, dunnage, lining and packing materials;
- 2) Disposal into the sea of food wastes shall be made as far as possible practicable from land, but in any case not less than 12 nautical miles from the nearest land;
- 3) when garbage is mixed with other discharges having different disposal or discharge requirements the more stringent requirements shall apply.

PLACARDS

- 4) Every ship of 12m overall length and above shall display placards which notify the crew and passengers of the disposal requirements as applicable.
 - 5) The placards shall be written in the official language of the State whose flag the ship is entitled to fly, for ships engaged in voyages to ports under the jurisdiction of other Parties to the Convention, in English or French.
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MEDITERRANEAN STRATEGY FOR PORT RECEPTION FACILITIES AND WASTE MANAGEMENT PLANS FOR PLEASURE CRAFT-GENERATED WASTES

RECOMMENDATION 5

MEDITERRANEAN STRATEGY FOR PORT RECEPTION FACILITIES AND WASTE MANAGEMENT PLANS FOR PLEASURE CRAFT-GENERATED WASTES

The Secretariat,

Recalling the provisions of Regulation 10(7) and Regulation 12 of **Annex I on Regulations for the Prevention of Pollution by Oil** to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78) respectively on the Methods of Prevention of Oil Pollution from Ships while operating in special areas and on Reception Facilities,

Recalling also the provisions of Regulation 10 of **Annex IV on Regulations for the Prevention of Pollution from Sewage** to MARPOL 73/78 on Reception Facilities,

Recalling further the provisions of Regulation 5(4) and Regulation 7 of **Annex V on Regulations for the Prevention of Pollution by Garbage** to MARPOL 73/78 respectively on Disposal of Garbage within Special Areas and on Reception Facilities,

Noting that Chapter 14 of the **Comprehensive Manual on Port Facilities** issued by the International Maritime Organisation (IMO), is applicable for planning and executing reception facilities required for small ships,

Noting further that the Marine Environment Committee (MEPC) of the IMO has adopted **guidelines on the provisions of adequate reception facilities in ports for oily wastes, residues and mixtures containing liquid substances, sewage, and garbage** to assist Governments in implementing the requirements of the MARPOL 73/78.



Recommends to Contracting Parties to the Barcelona Convention, as riverain State bordering a special area, to ensure by way of national regulations that :

RECOMMENDATION 5

PORT RECEPTION FACILITIES FOR PLEASURE CRAFT-GENERATED WASTES

- 1) All pleasure craft ports in the Mediterranean Sea are provided with adequate reception facilities for wasted oil, oily mixtures, chemicals and other hazardous substances to the marine environment.
- 2) All pleasure craft ports within the Mediterranean Sea are provided with adequate reception facilities for sewage, which included appropriate pumping system and discharge pipes conforming to international standards.
- 3) All pleasure craft ports within the Mediterranean Sea are provided with adequate reception facilities for garbage.
- 4) Such facilities have adequate capacity to meet the needs of the ships using them without causing undue delay.

DEVELOPMENT OF A WASTE MANAGEMENT PLAN FOR PLEASURE CRAFT PORTS

- 5) An appropriate Waste Management Plan is developed for each pleasure craft port and implemented following consultations with the relevant parties in order to meet the requirements 1) to 4) as well as to ensure an environmentally sound treatment of pleasure craft-generated wastes.
 - 6) Appropriate national authorities are designated which are in charge of evaluating, approving, monitoring their implementation and periodically reviewing the Plans particularly after significant changes in the operation of the port.
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ON BOARD PLEASURE CRAFT EQUIPMENT FOR THE PREVENTION OF DISCHARGES AT SEA

RECOMMENDATION 6

RECOMMENDATION FOR HOLDING TANK, WATER SEPARATING OR FILTERING EQUIPMENT ON BOARD PLEASURE CRAFT

The Secretariat,

Recalling Regulation 10 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 73/78) concerning Methods for the prevention of oil pollution from ships while operating in Special Areas and specifically Paragraphs (2)(a), (3)(b) and (4)(b) related to machinery spaces of ships less than 400 gross tonnage,

Recalling also Regulation 16 of **Annex I of MARPOL 73/78** concerning Control system and oil filtering equipment, specifically Paragraphs (3)(b) which requires the Administration to ensure that ships less than 400 gross tonnage are equipped, as far as practicable, to retain on board oil and oily mixture or discharge them in accordance with the requirements of Paragraph (1)(b) of Regulation 9 of Annex I of MARPOL 73/78,

Recognising the need for guidelines to the above mentioned MARPOL 73/78 Regulations in order to achieve uniform provisions for the Prevention of Pollution by machinery spaces from Pleasure Craft,

Recommends to Contracting Parties to the Barcelona Convention to ensure by way of national regulations that for pleasure craft flying their flags :

RECOMMENDATION 6

HOLDING TANK, OILY WATER SEPARATING OR FILTERING EQUIPMENT

- 1) Pleasure craft of more than 24 meters in length shall be fitted with approved tank capacity for oily residues and sufficient oily-water separating or oil-filtering equipment,
- 2) Such pleasure craft shall be equipped with holding tank(s) to retain generated oily bilge water and other generated oily residues on board for subsequent discharge to port reception facilities,
- 3) Tanks required by paragraphs 1) and 2) should be equipped with pumping facilities and standard discharge connection to enable pipes or hoses of port reception facilities to be connected,
- 4) For pleasure craft of less than 24 meters in length, other arrangements than those stated in paragraphs 1) to 3) may be allowed.



RECOMMENDATION 7

RECOMMENDATION FOR TOILET RETENTION SYSTEM & STANDARD DISCHARGE CONNECTIONS ON BOARD PLEASURE CRAFT

The Secretariat,

Recalling the provisions of Regulations 2 to 7 of **Annex IV on Regulations for the Prevention of Sewage** of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78) concerning Surveys and Issue of an International Sewage Pollution Prevention Certificate specifically for ships of 200 Gross Tonnage and above, and ships which are certified to carry more than 10 persons,

Recalling also the provisions of Regulation 11 of **Annex IV** of MARPOL 73/78 concerning Standard discharge connections enabling pipes of reception facilities to be connected with the ship's discharge pipeline,

Recognising that, for pleasure craft up to 24 meters, the performance requirements and details on toilet waste retention systems and pump-out deck fitting are described in the latest version of ISO Standard 8099,

Recommends to Contracting Parties to the Barcelona Convention to ensure by way of national regulations for pleasure craft flying their flags, that:

RECOMMENDATION 7

TOILET RETENTION SYSTEM & STANDARD DISCHARGE CONNECTIONS

- 1) Pleasure craft of 200 tons gross tonnage and above,

Pleasure craft of less than 200 tons gross tonnage which are certified to carry more than 10 persons,

Pleasure craft which do not have a measured gross tonnage and are certified to carry more than 10 persons,
 - (a) are fitted with sewage treatment plans,
 - (b) are fitted with systems to comminute and disinfect the sewage,
 - (c) are equipped with holding tanks, the capacity of such tank shall satisfy the retention of all sewage having regard to the operation of the ship, the number of persons on board and other relevant factors,
 - (d) are equipped with a pipeline leading to the exterior, convenient for the discharge of sewage to a reception facility and that such pipeline is fitted with a standard shore connection,

in compliance with the international standards set by Annex IV of MARPOL 73/78 on Surveys, Issue, Form and Duration of an International Sewage Pollution Prevention Certificate and Standard Discharge Connections;



- 2) Pleasure craft of less than 200 Tons Gross Tonnage and which are certified to carry less than 10 persons,
- (a) are fitted with holding tank(s) or have provision to fit holding tank(s) on a temporary basis where discharge of sewage is restricted and,
 - (b) are equipped with a pipeline leading to the exterior convenient for the discharge of sewage to a reception facility and that such pipeline is fitted with a standard shore connection,
- in compliance with the latest version ISO Standard 8099 as appropriate for toilet waste retention systems of small craft.



PART II

PREVENTION OF POLLUTION & ADVERSE ENVIRONMENTAL EFFECTS FROM PLEASURE CRAFT USE & NAVIGATION

- **ENVIRONMENTAL PLEASURE CRAFT NAVIGATION SYSTEM**
- **USE OF NON-POLLUTING ANTI-FOULING SYSTEMS**
- **PREVENTION OF POLLUTION FROM EXHAUST GAS EMISSIONS OF PLEASURE CRAFT**





PREVENTION OF ADVERSE ENVIRONMENTAL EFFECTS FROM PLEASURE CRAFT NAVIGATION

RECOMMENDATION 8

RECOMMENDATION FOR AN ENVIRONMENTAL PLEASURE CRAFT NAVIGATION SYSTEM

The Secretariat,

Noting that in the Mediterranean sea, pleasure craft' navigation contribute to the continuing deterioration of certain marine and coastal biotopes and biotope complexes, often important for rare or threatened species,

Noting in particular that the economic exploitation of natural resources through nautical tourism shall be carried out taking account of the need to protect the natural richness and biological diversity of the Mediterranean Sea,

Recalling Paragraphs (c) and (h) of Article 6 of the Protocol concerning Specially Protected Areas and Biological Diversity (Specially Protected Areas Protocol) on protection measures which states that the Contracting Parties, in conformity with international law and taking account the characteristics of each Specially Protected Area, shall take the protection measures required and, in particular, the regulation of the passage of ships and any stopping and anchoring, and the regulation and if necessary, the prohibition of any activity or act likely to harm or disturb the species or that might endanger the state of conservation of the ecosystems or species or might impair the natural or cultural characteristics of the specially protected area,

Recalling paragraph (2) of Article 19 of the said Protocol which states that Parties shall endeavour to inform the public of the interest and the value of specially protected areas and species,

Recognising that the major impact of such environmental adverse effects can be mitigated through the implementation of environmental navigation system for pleasure craft,

Recognising also that for the development of a sound and homogenous navigation system, co-ordination shall be sought between international and regional environmental conventions and agreements under which Mediterranean species and habitats are protected,



Recommends to Contracting Parties to the Barcelona Convention to ensure by way of effective national measures to :

RECOMMENDATION 8

MEDITERRANEAN ENVIRONMENTAL NAVIGATION SYSTEM

- 1) Implement a *MEDITERRANEAN ENVIRONMENTAL NAVIGATION SYSTEM*, in order to protect through special routing measures, specially protected areas with :
 - high biodiversity,
 - habitats of endemic rare or threatened species and communities of fauna and flora,
 - habitats of migratory species,
 - nursery and spawning areas,
 - rare, unique or representative geological or geomorphological structures or processes,

- 2) Include in such an navigation system, the development of a *MEDITERRANEAN SYSTEM OF NAVIGATION SIGNS*, using existing universal non-verbal symbols and other appropriate symbols, to indicate :
 - important wildlife sites,
 - where, what, when and how to take pre-emptive and positive action to minimise environmental impact of pleasure craft activities,
 - prohibited anchoring zones and alternative mooring buoys,
 - formal landing places,
 - what habitat damage could occur at informal locations and the action to minimize stress or damage when arriving there,
 - operational wastes reception facilities,

- 3) Include the development of an *ENVIRONMENTAL PILOT*, in the form of a book and chartlets, that shall provide pleasure craft users with necessary information, on the sustainable use of the Mediterranean Sea for nautical tourism purposes¹,

¹ necessary information shall include all the aspects of pleasure craft navigation to be regulated, using in particular the symbols developed under *the Mediterranean System of Navigation Signs*.



PROMOTION OF NON-POLLUTING ANTI-FOULING SYSTEMS

RECOMMENDATION 9

RECOMMENDATION FOR THE LIMITATION OF THE USE OF POLLUTING ANTI-FOULING SYSTEMS & THE DEVELOPMENT OF NON-POLLUTING ANTI-FOULING SYSTEMS

The Secretariat,

Noting that scientific studies and investigations by countries and competent international organizations have shown that some anti-fouling systems, pose a substantial risk of toxicity and other chronic impacts to ecologically and economically important marine organisms as well as consequences to human health that may occur through the consumption of contaminated seafood,

Noting in particular the serious concern regarding anti-fouling systems that use organotin compounds acting as biocides and being convinced that the introduction of such organotin compounds into the marine environment must be phased-out,

Recalling that **Agenda 21**, Chapter 17 of the Rio Declaration on Environment and Development calls upon States to take measures to reduce pollution caused by organotin compounds used in anti-fouling systems,

Recalling also that the **IMO Assembly resolution A.895(21)**, urges the Marine Environment Committee to work towards the expeditious development of a global legally binding instrument to address the harmful effects of anti-fouling systems used on ships as a matter of urgency,

Recalling further that the MAP Technical Report Series No. 33 on the Assessment of Organotin Compounds as Marine Pollutants in the Mediterranean recognised as a first priority the control of the use of triorganotin in anti-fouling paints and as a first step to undertake the ban on the use of triorganotin anti-fouling for small boats less than 25 meters in length,

Recognising the importance of protecting the marine environment from adverse effects from anti-fouling paints used on ships, and that regulations to curtail the use of such organotin compounds containing anti-fouling systems for pleasure craft will reduce consequently such adverse effects on the marine environment,

Recognising also that the use of anti-fouling systems to prevent the build-up of organisms on the surface of ships is of critical importance to efficient commerce,

Recognising further the need to continue to develop anti-fouling systems which are effective and environmentally safe,

Noting the precautionary approach set out in **Article 4 of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean** (Barcelona Convention) and in **Principle 15 of the Rio Declaration**,



Recommends to Contracting Parties to the Barcelona Convention to ensure by way of effective national regulations to :

RECOMMENDATION 9

LIMITATION OF THE USE OF POLLUTING ANTI-FOULING SYSTEMS

- 1) Prohibit, in particular, the retail sale of and the use on pleasure craft that are entitled to fly their flag, of anti-fouling systems containing biocidal organotin compounds,
- 2) Prohibit and/or restrict, in general, the retail sale of and the use on pleasure craft that are entitled to fly their flag, of harmful and polluting anti-fouling systems other than anti-fouling systems containing biocidal organotin compounds,
- 3) Develop sound management practice guidance applicable to pleasure craft maintenance and construction facilities to eliminate the introduction of organotin compounds into marine environment such as a result of painting, paint removal, cleaning, sandblasting or waste disposal operations, or run-off from such facilities,

DEVELOPMENT OF NON-POLLUTING ANTI-FOULING SYSTEMS

- 4) Encourage development of alternatives to anti-fouling systems containing organotin compounds and to other harmful and polluting anti-fouling systems, giving due regard to any potential environmental hazards which may be posed by such alternatives formulations.
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PREVENTION OF POLLUTION FROM EXHAUST GAS EMISSIONS OF PLEASURE CRAFT

RECOMMENDATION 10

RECOMMENDATION FOR THE DEVELOPMENT OF ENVIRONMENTALLY SOUND QUALITY STANDARDS FOR MARINE FUELS

The Secretariat,

Being aware of the impact of polluted air on the marine environment of the Mediterranean Sea,

Noting that polluting exhaust gas emissions from pleasure craft engines are directly related to the quality of fuels used,

Noting in particular that the sulphur in marine fuels will result in the emissions of sulphur oxides in exhausts, from diesels engines, which are directly proportional to the sulphur content in the fuel oil, and that similarly, the importance of lead emissions from petrol engines will depend on the lead content in the gasoline used,

Recalling Regulation 14 of **Annex VI on Regulations for the Prevention of Air Pollution from Ships** of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78), specifically Paragraphs (1) et (2),

Recognising the need for the development of environmental standards for marine and automotive fuels that are both being used by pleasure craft,

Recommends to Contracting Parties to the Barcelona Convention to ensure to limit to an environmentally acceptable level the emissions of harmful components in exhaust gases from pleasure craft by way of effective national regulations :

RECOMMENDATION 10

DEVELOPMENT OF QUALITY STANDARDS FOR MARINE FUELS

- 1) Developing, as soon as possible, suitable quality standards for fuels, in particular concerning the content of sulphur,
- 2) Assuring that as a minimum requirement for an initial regulation, the sulphur content of any fuel oil shall not exceed 4.5 % m/m,
- 3) Providing as soon as possible lead-free gasoline as an alternative in parallel to the reduction of lead content, for marine engines that can use this type of fuel.



RECOMMENDATION 11

RECOMMENDATION FOR ENVIRONMENTALLY SOUND MARINE ENGINE TECHNOLOGY

The Secretariat,

Being aware of the impact of polluted air on the marine environment of the Mediterranean Sea,

Noting that number of pleasure craft equipped with two-stroke engines is quite comprehensive and that the extensive use of this type of engines contributes to a large extent to the loading of hydrocarbons in the marine environment,

Noting nonetheless that four-stroke engines and diesel engines are also being used on pleasure craft, and are respectively responsible for hydrocarbons and nitrogen oxides emissions,

Recognising that polluting exhaust gas emissions can be reduced by engine improvements and exhaust gas treatment, such as the use of catalytic converters,

Recalling Regulation 13 of **Annex VI on Regulations for the Prevention of Air Pollution from Ships** of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 (MARPOL 73/78) on Nitrogen oxides, particularly Paragraphs (1) et (3),

Recalling also Paragraph (4)(b) of **Article 4 of the Convention for the Protection of the Marine Environment and the Coastal Region of Mediterranean** (Barcelona Convention) which calls for the use of the best available techniques in implementing the Convention and its related Protocols,

Recommends to Contracting Parties to the Barcelona Convention to ensure to limit to an environmentally acceptable level the emissions of harmful components in exhaust gases by way of effective national regulations :

RECOMMENDATION 11

ENVIRONMENTALLY SOUND MARINE ENGINE TECHNOLOGY

- 1) Applying the best available technology, encouraging development, improvement, use and retail sale of environmentally sound technology for both petrol and diesel marine engines and exhaust gas cleaning systems, such as catalytic converters,
- 2) Prohibiting the operation of new diesel engines with a power output of more than 130 kW or diesel engines with a power output more than 130 kW which undergoes a major conversion, except when the emissions of nitrogen oxides, calculated as the total weight emission of NO₂, from the engine is within the following limits :
 - (a) 17.0 g/kW when n is less than 130 rpm,
 - (b) $45.0 \times n^{(-0.2)}$ g/kW when n is 130 rpm or more but less than 2000 rpm,
 - (c) 9.8 g/kW when n is 2000 rpm or more

where n = rate of engine speed expressed as crankshaft revolutions per minute,

However, permitting the operation of such diesel engines when an exhaust gas cleaning system or equivalent is applied to reduce on board nitrogen oxide emissions to the above specified limits as a minimum.



PART III

PREVENTION OF POLLUTION & ADVERSE ENVIRONMENTAL EFFECTS FROM PLEASURE CRAFT PORTS

- **PREVENTION OF ADVERSE ENVIRONMENTAL EFFECTS FROM PLEASURE CRAFT PORTS ESTABLISHMENT & DEVELOPMENT**
- **PREVENTION OF OPERATIONAL POLLUTION IN PLEASURE CRAFT PORTS**





PREVENTION OF ADVERSE ENVIRONMENTAL EFFECTS FROM PLEASURE CRAFT PORTS ESTABLISHMENT & DEVELOPMENT

RECOMMENDATION 12

RECOMMENDATION FOR ESTABLISHMENT & DEVELOPMENT OF PLEASURE CRAFT PORTS

The Secretariat,

Recalling that Paragraph (c) of **Article 4 of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean** (Barcelona Convention) states that Contracting Parties shall undertake environmental impact assessment for proposed activities that are likely to cause a significant adverse impact on the marine environment and are subject to an authorization by competent national authorities,

Recalling also that **Article 17 of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean** (Specially Protected Areas Protocols) states in the planning process leading to decisions on industrial and other projects and activities that could significantly affect protected areas and species and their habitats, the Contracting Parties shall evaluate and take into consideration the possible or indirect, immediate or long-term, impact, including the cumulative impact of the projects being contemplated, and that Article 6 of the said Protocol states that the Contracting Parties[...] shall take the protection measures required, in particular, the regulation and if necessary the prohibition of any other activity or act likely to harm or disturb the species or that might endanger the state of conservation of the ecosystems or species or might impair the natural or cultural characteristics of the specially protected area,

Recalling further that the **Recommendations and Proposals for action on the theme of "Tourism and Sustainable Development"** as proposed by the Mediterranean Commission on Sustainable Development and as adopted by the Contracting Parties (Malta, 27-30 October 1999), expressing that the handsomest locations in the Mediterranean coastline are the prime sites desired by domestic and international tourism, that uncontrolled development of infrastructures and tourism related urbanisation, especially yacht harbours [...] can lead to irreversible deterioration of ecosystems and coastal landscapes, states that Mediterranean countries and local authorities are urged to acquire the instruments needed to evaluate the environment impact of tourism programmes and large-scale projects and to take the necessary steps so that new leisure forms likely to affect the environment, especially protected species only be authorised once their impact has been assessed and are shown to conform to the tourist strategies of the concerned areas,

Recalling lastly that the **Strategic Action Programme to Address Pollution from Land-Based Activities** as approved by the Contracting Parties (Tunis, 18-21 November 1997) noting that the increase of populations and economic activities in coastal areas is leading to an expansion of construction and physical alterations to coastal areas and waters, that the building of ports and marinas [...] are giving rise to alterations of wetlands, shore lands, beachfronts and seafloors, that important areas are being destroyed, proposes, at the national level, to undertake studies on the potential effects on the environment and Environmental Impact Assessment according to the importance of the physical alterations and destruction of habitats related to management projects



and to establish a system of previous authorization by competent national authorities for works which cause physical alterations of the natural state of the coastline or the destruction of coastal habitats,

Recognising that the establishment and development of pleasure craft ports and marinas significantly affect the marine environment, especially protected species, their habitats, and coastal areas,

Recommends to Contracting Parties to the Barcelona Convention to ensure by way of effective national regulations that :

RECOMMENDATION 12

ESTABLISHMENT AND DEVELOPMENT OF PLEASURE CRAFT PORTS

- 1) An Environmental Impact Assessment is carried out prior to the establishment and major development of pleasure craft ports, taking into consideration the possible direct or indirect, immediate or long-term, impact, including the cumulative impact of the projects and activities being contemplated, as well as to a authorisation system involving competent national authorities,
- 2) The establishment and major development of pleasure craft ports close to a Specially Protected Areas are specifically regulated and when necessary prohibited, if projects and contemplated activities are likely to harm or disturb the species or that might endanger the state of conservation of the ecosystems or species or might impair the natural or cultural characteristics of the specially protected area ; as a minimum requirement, they should be subject to the regulations of Paragraph 1).



PREVENTION OF OPERATIONAL POLLUTION FROM PLEASURE CRAFT PORTS

RECOMMENDATION 13

RECOMMENDATION FOR PREVENTION OF OPERATIONAL POLLUTION FROM PLEASURE CRAFT PORTS

The Secretariat,

Noting that the operations and activities in pleasure craft ports are an important source of pollution in the Mediterranean Sea, mainly through run-off of rain water and other aqueous washings,

Noting in particular that the operation of boats yards through maintenance and other refitting activities, generates significant amounts of wastes, including hazardous substances,

Noting lastly that the operation of other ports facilities, such as shore fuelling facilities, car parks or waste reception facilities, are likely to be a source of pollution of the port waters,

Recalling that Paragraph (1)(a) of **Article 4 of the Protocol for the Protection of the Mediterranean Sea against Pollution from Landed-Based Sources and Activities** (Land-Based Sources Protocol) apply to discharges originating from landed-based point and diffuse sources and activities within the territories of the Contracting Parties that may affect directly or indirectly the Mediterranean Sea Area, including discharges which reach the Mediterranean Area through coastal disposals, rivers, outfalls, canals, or other watercourses, including ground water flow, or through run-off and disposal under the seabed with access from land,

Recalling also that under Paragraph (1) of **Article 5 of the Protocol for the Protection of the Mediterranean Sea against Pollution from Landed-Based Sources and Activities** (Land-Based Sources Protocol) the Contracting Parties undertake, as a general obligation, to eliminate pollution deriving from landed-based sources and activities, in particular to phase out inputs of the substances that are toxic, persistent and liable to bioaccumulate, and to this end, they shall elaborate and implement, individually or jointly, as appropriate, national and regional action plans and programmes, containing measures and timetables for their implementation and taking into account the best available techniques and the best environmental practise,

Recalling further that Paragraph (1) and (2) of **Article 6 of the Protocol for the Protection of the Mediterranean Sea against Pollution from Landed-Based Sources and Activities** (Land-Based Sources) states that point source discharges shall be strictly subject to authorisation or regulation, and to a system of inspections by competent national authorities, and that **Article 8 of the said Protocol** (Land-Based Sources Protocol) calls for Contracting Parties to carry out monitoring activities on the level of pollution along their coasts and a evaluate the effectiveness of the measures implemented under the Protocol to eliminate to the fullest possible extent pollution of marine environment,



Recognising that these obligations are applicable to pleasure craft ports as a land-based source of pollution and that this form of pollution requires the adoption of the relevant measures under the Land-Based Sources Protocol,

Recommends to Contracting Parties to the Barcelona Convention to ensure by way of effective national regulations that :

RECOMMENDATION 13

OPERATIONAL POLLUTION FROM PLEASURE CRAFT PORTS

- 1) Regular monitoring activities of pollution levels in ports waters are carried out and the findings are made accessible to the public,
 - 2) Measures are undertaken to eliminate operational pollution in pleasure crafts ports and from their facilities, such as shore fuelling facilities, car parks or waste reception facilities, and in particular to treat rain waters run-off and other aqueous washings before release into port waters, taking into account the best environmental technology and the best environmental practice,
 - 3) Specific measures are undertaken to eliminate pollution from the operation of boat yards and their related wastes in particular to treat rain water run-off and other aqueous washings before release into adjacent waters and to separate and dispose wastes in a environmentally sound way, taking into account the best environmental technology and the best environmental practise.
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PART IV

IMPLEMENTATION OF THE RECOMMENDATIONS FOR THE PREVENTION OF POLLUTION AND ADVERSE ENVIRONMENTAL EFFECTS FROM PLEASURE CRAFT IN THE MEDITERRANEAN SEA

- **MEDITERRANEAN PUBLIC AWARENESS & INFORMATION CAMPAIGN**
- **HARMONISED SYSTEM OF SANCTIONS & REPORTING SYSTEM**





IMPLEMENTATION OF THE RECOMMENDATIONS

RECOMMENDATION 14

RECOMMENDATION FOR MEDITERRANEAN PUBLIC AWARENESS & INFORMATION CAMPAIGN

The Secretariat,

Noting that the sustainable use of the marine environment for recreational navigation and nautical tourism requires informed decisions to be made at every stage of the activity,

Noting further that since pleasure craft activities are principally self-managed, the pleasure craft users, skippers or owners, are ultimately responsible for ensuring that their boat and the persons on board act responsibly towards the marine environment and respect the environmental regulations developed for the protection of the marine environment,

Noting in particular that without public information and support, the application of marine environmental regulations would not achieve results commensurate with the challenges looming over the Mediterranean Sea,

Recalling paragraph (1) of Article 15 of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) on Public Information and Participation, stating that the Contracting Parties shall ensure that their competent authorities shall give to the public appropriate access to information on the environmental state in the field of application of the Convention and the Protocols, on activities or measures adversely affecting or likely to affect it and on activities carried out or measures taken in accordance with the Convention and the Protocols,

Recalling paragraph (2) of Article 19 of the Protocol concerning Specially Protected Areas and Biological Diversity (Specially Protected Areas Protocol) on Publicity, Information, Public awareness and Education, declaring that Parties shall give appropriate publicity to the establishment of specially protected areas, their boundaries, applicable regulations, and to the designation of protected species, their habitats and applicable regulations, and shall endeavour to inform the public of the interest and the value of specially protected areas and species [...]. Such information should have an appropriate place in education programmes,

Recognising the need for informing and inculcating pleasure craft users in particular and the general public as potential pleasure craft users, of the need to protect the Mediterranean marine environment, and for this purpose to respect regulations aimed at preventing pollution and adverse environmental effects related to pleasure craft,



Recommends to Contracting Parties to the Barcelona Convention to ensure by way of effective national regulations to :

RECOMMENDATION 14

MEDITERRANEAN PUBLIC AWARENESS AND INFORMATION CAMPAIGN

- 2) Inform, inculcate, promote public awareness and information on the need to protect the Mediterranean marine environment and to respect regulations for the prevention of pollution and environmental adverse effects from pleasure craft, in particular regarding the following aspects of pleasure craft and their related environmental impact :
 - discharges regulations for pleasure craft-generated wastes,
 - access and utilisation of port reception facilities,
 - on board equipment for the holding of generated wastes,
 - regulations for the promotion and use of non-polluting anti-fouling systems,
 - utilisation of environmentally sound quality fuels for marine engines,
 - utilisation of environmentally sound marine engines' technology,
 - prevention of introduction of non-indigenous species,
 - navigation and other navigational aspects regulations,

- 3) Endeavour to develop access to such information in co-ordination with a *MEDITERRANEAN ENVIRONMENTAL NAVIGATION SYSTEM* and through a sound development of an *MEDITERRANEAN SYSTEM OF NAVIGATION SIGNS*, based on existing universal non-verbal symbols and other appropriate symbols.



RECOMMENDATION 15

RECOMMENDATION FOR A HARMONISED SYSTEM OF SANCTIONS IN CASE OF ANTI-POLLUTION REGULATIONS VIOLATIONS & REPORTING SYSTEM

The Secretariat,

Recalling Article 4 of the **International Convention for the Prevention of Pollution from Ships, 1973**, as modified by the Protocol of 1978 relating thereto (MARPOL 1973/1978) concerning prohibition of violations of the requirements of the Convention and sanctions to be established thereof,

Recalling also that one goal of the **Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean** (Barcelona Convention) and its **related Protocols** is prevent pollution and adverse environmental effects from ships,

Recalling further that these **Recommendations for the Prevention of Pollution and Adverse Environmental Effects from Pleasure Craft in the Mediterranean** are aimed at substantially decreasing operational discharges and illegal disposal of pleasure craft-generated wastes in violation of MARPOL 73/78, as well as the minimising the adverse environmental impact of pleasure craft on the Mediterranean marine environment, in violation of the Barcelona Convention and its related Protocols,

Being aware that the implementation of these Recommendations is one of the prerequisites for efficient protection of the Mediterranean marine environment,

Conscious of the importance of introducing an effective harmonised penal system in cases of conviction of violations of anti-pollution, and of implementing protective regulations having deterrent effect on the illegal behaviours thereby encouraging protective ones, such as the use of port reception facilities,

Recommends to Contracting Parties to the Barcelona Convention to ensure by way of effective national regulations to :

RECOMMENDATION 15

HARMONISED SYSTEM OF SANCTIONS & REPORTING SYSTEM

- 4) Endeavour to harmonise and introduce an effective penal system in cases of conviction of violations of anti-polluting and of environmental protection regulations :
 - by pleasure craft users, in particular, violations of discharges regulations for pleasure craft-generated wastes, in contravention to MARPOL 73/78 provisions, as well as violation of navigational regulations and other regulations,
 - by pleasure craft port authorities, notably in cases of operational pollution from port facilities,
- 5) Report on the implementation of these Recommendations for the prevention of Pollution and Environmental adverse Effects from Pleasure Craft in the Mediterranean.





ANNEXES

MEDITERRANEAN STRATEGY FOR PORT RECEPTION FACILITIES
GUIDELINES FOR THE DEVELOPMENT OF
WASTE MANAGEMENT PLANS

GUIDELINES FOR PLEASURE CRAFT PORTS ESTABLISHMENT
& DEVELOPMENT

GUIDELINES FOR A MEDITERRANEAN AWARENESS
& INFORMATION CAMPAIGN





ANNEX I

MEDITERRANEAN STRATEGY FOR PORT RECEPTION FACILITIES & WASTE MANAGEMENT PLANS

GUIDELINES FOR THE DEVELOPMENT OF WASTE MANAGEMENT PLANS FOR PLEASURE CRAFT PORTS

Recommendation 5 refers to the provision of port reception facilities for pleasure craft-generated wastes and the development of Waste Management Plans for pleasure craft ports. In order to assist coastal States in the implementation of the Recommendation, the following guidelines have been developed for drawing-up a Waste Management Plan for pleasure craft ports.

General Principles

Applicable to Waste Management Plans

- A Waste Management Plan should follow the **principles** of:

Source reduction: avoidance and minimisation of waste generation

Recycling: re-use of material and energy recovery from waste

Disposal: environmentally sound and safe disposal

Waste minimisation is an important way of reducing the environmental burden. An effective means of achieving this is through **recycling**. Glass bottles, metal cans, paper, waste oil and plastics can be turned into a saleable resource if collected in a segregated manner.

However, the volume of waste from pleasure craft alone is unlikely to be viable for a comprehensive recycling programme and therefore should only be considered as part of a properly organised and co-ordinated system with the local community ashore. Similarly, **treatment and final disposal** of pleasure craft-generated wastes should generally be integrated with other waste treatment in order to achieve a better degree of environmental protection.

Nonetheless some waste items can be **reused** such as empty plastic or metal containers to receive liquid waste i.e. dirty sump oil from boats and items which appear to offer this option should be saved.

- Waste reduction, recycling and final disposal should be firmly based on:

Best Available Techniques (BAT) shall mean the latest stage of development (state of the art) of processes, of facilities or of methods of operation which indicate the practical suitability of particular measures for limiting discharges, emissions and waste.

Best Environmental Practice (BEP) shall mean the application of the most appropriate combination of environmental control measures and strategies.



How to Develop a Waste Management Plan for Pleasure Craft Port Authorities

It is for each pleasure craft port to determine what kind of facilities and how pleasure craft-generated wastes should be managed. Waste management planning should not attempt to force uniform solutions for all ports.

Start by thinking what kind of waste facilities will be needed by those who use the port. The key is to tailor the plan to the requirements of users. The following procedure may appear onerous but, rather than impose extra burdens, it should give the port a chance to formalise what should be done to manage wastes.

Step 1 Designation of the Appropriate Authorities

- Appropriate port authorities shall be designated for the design of the Plan and its implementation.

Waste treatment should be carried out in a planned, consistent, and systematic manner, licensed or otherwise formally approved and supervised by competent authorities.

Step 2 Consultation

- Consultation with the relevant parties, as well as boat users and their representatives should be an ongoing process in the different steps of the design of the Waste Management Plan.

Step 3 Assessment and Analysis of the Need for Port Reception Facilities

Considering the Type and Quantities of Pleasure Craft generated Wastes.

- **Quantities of waste**
The quantities of waste that could potentially be collected shall be assessed in the light of the needs of the boats normally visiting the port. This assessment shall take into account the increase of wastes generated during the high tourist season and shall be carried out for each type of waste.
- **Type of waste**
By far the largest volume of waste to arrive ashore from pleasure craft will be **garbage**, mainly of a **domestic** type.
Oily waste from pleasure craft are likely to arise from machinery space and dirty engine sump oil.

The more likely **toxic chemical materials** to be brought ashore will consist in items such as unwanted lead batteries, zinc/carbon and cadmium batteries, discarded anti-fouling paints, discarded receptacles for degreasing or scouring agents and other solvents.

Furthermore, as long as the discharge of raw sewage is prohibited, the need for sewage collection facilities and sanitary installations should be evaluated.

Step 4 Considering the Adequate Port Reception Facilities and Waste Treatment

Type, Capacity, Location, Use of the facilities and Ashore Handling of Waste

- **Adequacy**
As a minimum, the capacity of the reception facilities at pleasure craft ports shall be capable of receiving all wastes which are handled within that port and which must be discharged to



reception facilities. The receiving capability shall be at least appropriate in terms of time and availability, in order to respond the continuing needs of the boats using the port.

Arrangements needed to facilitate discharges of waste shall be made between the boat and the reception facility.

Governments shall ensure that the formalities for the use of reception facilities are as simple and expeditious as possible.

- **Treatment of Waste in the Port**

Oil and Noxious substances Treatment

Oily and other hazardous wastes must be recovered, finally treated or disposed of in accordance with the requirements of the competent authorities.

Domestic Garbage Separation and Treatment

Ports should provide reception of separated waste fractions from pleasure craft in so far as the local/regional waste management system can accept. Where boats are charged for the reception of waste, the separation of wastes, as opposed to non-separation, shall be strongly encourage by economic incentives.

Sewage

Sewage from ships should be discharged or transported to a municipal sewage treatment plant.

Treatment and Final Disposal

Treatment and final disposal of pleasure craft-generated wastes should be integrated with other waste treatment. Separate treatment or recovery of ships-generated wastes is justified only in special cases such as noxious substances endangering treatment of other wastes. Treatment and facilities for final disposal must be designed so as to have sufficient capacity to receive such wastes without any operational disturbances whatsoever.

Step 5 Cost Recovery System for Waste Management

- The **Polluter Pays Principle** shall apply. Thereby, the costs of waste management should be met by the boat users.
- Considering that wastes generated by pleasure craft are mostly in the form of domestic wastes, the preferred option will usually be **indirect charging**, by which the costs of the wastes management system are recovered through general mooring and berthing charges, but are free at the point of use. Such a “no-special-fee” system shall serve the purpose of encouraging boats to deliver wastes ashore and not discourage pleasure craft to discharge their wastes into the sea.



Step 6 Provisions of Information for Seafarers

All the users should be told where the waste reception facilities are, how to use them and, where applicable, how any additional charges are levied.

There are a number of ways in which this can be done, e.g.

- some kind of notice board at the facilities themselves,
- directions to enable users to find the facilities - if this is not obvious at the point where they come ashore,
- information leaflets.

If the port regularly attracts visitors from overseas it would be helpful to provide this information in the relevant languages.

Step 7 Approval and Periodic Updating of the Plan

- The national competent authorities shall examine and approve the Port Waste Management Plan. Ports should keep a **record** of the amount of different categories of wastes received.
- As long as the requirements for Waste Management may change over a period of time, e.g. the size of the facilities may have to be increased or there may be changes in regulations affecting waste disposal, the Plan shall be reviewed periodically and after significant changes in the operation of the port. The national competent authorities shall ensure its periodical re-approval.



ANNEX II

ESTABLISHMENT & DEVELOPMENT OF PLEASURE CRAFT PORTS

GUIDELINES FOR ENVIRONMENTAL IMPACT ASSESSMENT

When planning a pleasure craft port creation and development, the **precautionary approach** should apply if sustainable development objectives are to be achieved. This means that the environment is given the benefit of the doubt over what effects human activity will have on the natural physical processes and organisms.

The impact of the necessary infrastructures for nautical tourism will have an effect at local, sub-regional and regional level. In order to evaluate this impact, the project will need to be placed within an environmental context. In this regard, an Environmental Impact Assessment, as referred to in Recommendation 12, will assist this evaluation.

General Principles

Applicable to Environmental Impact Assessment

Objective

Of an Environmental Impact Assessment

The **objective** of an Environmental Impact Assessment is to ensure the long-term environmental sustainability of human projects and activities being contemplated, such as nautical tourism and development of pleasure craft infrastructures. It thus contributes to the overall objective of sustainable development.

Requirement

For an Environmental Impact Assessment

An **Environmental Impact Assessment** should be undertaken for proposed activities that are likely to cause a significant adverse impact on the environment and are subject to an authorisation by competent national authorities.

1. Organizational Procedures

Pleasure craft port creation and development proposals should be submitted to the competent authorities at the conceptual stage, so that all environmental sustainability parameters can be determined and established.

This would assist in providing the project document for an Environment Impact Assessment and advising at the design stage for the port.



2. Content of an Environmental Impact Assessment

As a **scope**, an Environment Impact Assessment should evaluate and take into consideration the possible or indirect, immediate or long-term impact, including the cumulative impact of the projects being contemplated.

Environmental Impact Assessments should rely on adequate **scientific baseline data**. Such data should include :

- natural coastal physical, chemical and biological processes,
- inventories of marine plant and animal species of nature conservation importance,
- priority habitats for the maintenance and protection of biodiversity,
- sociological values of indigenous populations.

Consequently, the national competent administrations will need to **establish inventories of species and habitats** of the zone affected by the project, the likely effects on them and the mitigation requirements to be included in the permit to operate. The inventories are likely to include the following, which could be used as an *aide mémoire* for the Environmental Impact Assessment :

- benthic habitat type (fine sediments, corals, ...) and species at risk from disturbance,
- species affected in the water column,
- species and habitats affected at the surface such as sea bird feeding areas,
- species and habitats in the intertidal zone, in particular shorebirds and their feeding areas, invertebrates resident in the upper layers of sediment and high tide roosting areas for birds,
- species and habitats affected in the adjacent terrestrial fringe including nesting sites for birds and mammals, turtles and other reptiles, plants and natural geomorphological processes which may be modified by the expected wave generation from pleasure craft,
- migration routes, breeding and feeding areas of sea mammals,
- areas used for bathing and small craft activity,
- ecological stability and the protection of biodiversity criteria,
- water quality affected by the re-suspension of fine benthic sediment.

Environmental Impact Assessment should evaluate the **port proposal characteristics**.

- In considering the choice of the site, **sites** which offer the most favourable opportunities for sustainable development should be prioritised and protected by planning control procedures, including the necessary landward access, when planning nautical tourism at national and regional level, within the overall plan for integrated coastal zone management.

- **Coastal geomorphological effects** of breakwaters, slipways and jetties, which project seaward of high water mark, especially around highly mobile shorelines should notably be taken into consideration. Where sedimentation processes are interrupted, designs should be formulated which mitigate this effect, such as an open structure which allows current patterns to continue largely unchanged.

- **Low environmental impact facilities** which maintain and where possible, restore natural habitats would be preferable. These may interfere within areas of high nature conservation interest and consequently require soft engineering solutions, such as providing simple staging jetties and mooring piles which allow the natural evolution of the habitat to continue unimpeded.



- **Disposal and environmental burden of wastes** generated by the port and its users should be carefully planned. Where a port is the dominant element of small coastal communities, the scale of the project should be carefully considered in relation to the capabilities for properly handling the environmental pressure ashore, especially seasonal surges in demand.

- A clear and sound **financial plan** should be presented in order to ensure that the costs of pollution prevention are accounted for, even to the point of placing an environmental bond with the competent authorities to pay for any cleaning up costs should a business fail or if the owner or operator does not properly undertake environmental protection measures for the port. The polluter-payer principle should prevail.

- Finally, proposals for ports, which would be locally owned or locally managed and which can become an integral **part of the local environment and community** are preferable with the income from nautical tourism injected into the economy at level suitable to support local business and culture. This is more likely to ensure long-term commitment to environmental sustainability.

Considering the **possible or indirect, long-term impact** of a port project, an Environmental Impact Assessment should take into account the **downstream effects** of development when facilities for nautical tourism are being proposed. Ports expand and extend cruising range. When established, they become a magnet for users who then disperse to anchorages and remote places which may be of high nature conservation interest creating “honeypot” destinations. These may be uninhabited islands or small communities which are incapable of accommodating the resulting environmental stress.

The resulting **navigational activities** should also be assessed. The following aspects of such activities should for example be examined:

- wave generation, identification of the maximum wave, at critical speed/water depths with the zone of influence of such waves,
- jet propulsion disturbance, depth of water to the sea where disturbance from water jet propulsion system will occur,
- noise level, noise output both in terms of volume and frequency spectrum,
- exhaust gasses, fuel consumption, chemical content, and volume of exhaust gasses at the point of discharge in the atmosphere or below water level as condensate,
- intended routing, anchorage and landing.





ANNEX III

PLEASURE CRAFT USERS EDUCATION & INFORMATION GUIDELINES FOR A MEDITERRANEAN PUBLIC AWARENESS & INFORMATION CAMPAIGN

As referred to **Recommendation 8**, the good implementation of regulations for the prevention of pollution and other adverse environmental effects from pleasure craft requires awareness of pleasure craft users on the need to protect the Mediterranean marine environment.

A public awareness and information campaign combining both sensibilisation to marine environmental matters and information on the applicable regulations would be an essential means to minimise environmentally unfriendly practices from pleasure craft users, and therefore achieving results commensurate with the challenges looming over the Mediterranean sea.

For reasons of efficiency, such a campaign should be developed on the Mediterranean regional basis with the involvement of the competent national authorities and the appropriate pleasure craft port authorities.

General Principles

Applicable to a Mediterranean Public Awareness & Information Campaign

Objectives

Of a Public Awareness & Information Campaign

- To increase awareness of the public and more particularly of pleasure craft users on the need to protect the Mediterranean marine environment, and on the **adverse impact** of pollution and other environmental nuisance from pleasure craft.
- To inform the public and more particularly pleasure craft users on the **contents of regulations** to be followed for an efficient prevention of pollution and environmental adverse effects from pleasure craft in the Mediterranean sea.

Co-ordination

with other Mediterranean Environmental Instruments

- Consistency should be sought between the Mediterranean Campaign for Awareness and Information, the Mediterranean Environmental Navigational System and the Mediterranean System of Navigational Signs, in particular with regard to the exact contents of the regulations to be promoted and the use of a similar system of symbols.



Topics To Be Treated

By a Mediterranean Awareness & Information Campaign

1. Waste Management

- **Awareness of the adverse environmental effects of illegal discharges**
For example, a range of impacts has also been associated with the discharge of wastes, such as :
 - ⇒ entanglement with plastic debris by marine organisms such as marine mammals, sea birds and fish,
 - ⇒ ingestion of plastic debris by marine organisms,
 - ⇒ smothering of fauna and flora

Sewage can mainly have two negative consequences which should be distinguished. It can have a eutrophying effect and it can cause bacteriological pollution.
- **Information on discharge regulations for pleasure craft-generated wastes**
See Recommendations 2 to 4.
- **Incentives for on board holding facilities and use of adequate port reception facilities**
Wastes should be held on board and brought ashore for disposal in appropriate reception facilities as referred to in Recommendations 5 to 7. Such port facilities should be indicated by universal non-verbal symbols.

2. Use of Non-polluting Anti-fouling System

- **Awareness of the Polluting Effects of TBT and Copper-Based Anti-fouling Paints**
These types of paints present a substantial risk of toxicity and other chronic impact on environmentally and economically important marine organisms as well as consequences to human health through consumption.
- **Information of Regulations on the Use of TBT-Based Paints and other Polluting Systems and Incentives for Use of Environmentally Friendly Anti-fouling Systems**
As requested by Recommendations 8 of this document.

3. Reduction of Exhaust Gas Emissions & Engines Pollution

- **Awareness of the Polluting Effects of Exhaust Gas from Marine Engines**
Impact of polluted air on the marine environment, directly and via the atmosphere, condensation of gas in the marine environment, negative impact on the living resources such as disruption of normal biological and physiological functions as well as disruption of reproduction,
Greenhouse gases effects.
- **Promotion of Environmentally Sound Marine Engine Technology & Use of Environmentally Sound Quality Standards of Fuels**
The use of cleaner marine engines and fuels should be promoted, as well as the need for good and regular maintenance of the engines.



- ***Incentives for the Retention of Oil and Oily Wastes from Marine Engines***
Pleasure craft users should be aware of the importance of keeping on board any oil or oily residues from the marine engines and of not discharging these at sea, in order to discharge these ashore to adequate reception facilities.

4. Mediterranean Pleasure Craft Navigation System

- ***Awareness of the damages that can be caused by pleasure craft to marine environment***

Through: wave generation,
jet propulsion disturbance,
noise level,
exhaust gasses,
intended routing, anchorage
and landing.

- ***Information on the actions to be taken in order to avoid or minimise such damages***
Restrictions on the above mentioned aspects of pleasure craft navigation.

This information should be available on marine charts as well as on site using non-verbal symbols

Indicating important wildlife sites,
where, what, when and how to take pre-emptive and positive action to minimise environmental impact of pleasure craft activities,
prohibited anchoring zones and alternative mooring buoys,
formal landing places,
what habitat damage could occur at informal locations and the action to minimize stress or damage when arriving there,
operational waste reception facilities.





**DATA ON
NATIONAL & PORT REGULATIONS
FOR THE PREVENTION OF POLLUTION &
ADVERSE ENVIRONMENTAL EFFECTS
FROM PLEASURE CRAFT
IN THE MEDITERRANEAN SEA**

INTRODUCTION

**PART I NATIONAL REGULATIONS FOR THE PREVENTION OF
POLLUTION & ADVERSE ENVIRONMENTAL EFFECTS
FROM PLEASURE CRAFT**

**PART II PORT REGULATIONS FOR THE PREVENTION OF
POLLUTION & ADVERSE ENVIRONMENTAL EFFECTS
FROM PLEASURE CRAFT**





NATIONAL & PORT REGULATIONS FOR THE PREVENTION OF POLLUTION & ADVERSE ENVIRONMENTAL EFFECTS FROM PLEASURE CRAFT IN THE MEDITERRANEAN

INTRODUCTION

Within the context of the Contracting Parties recommendations on the need to consider the issue of prevention of pollution from non-commercial pleasure craft activities and according to the conclusions of the last meeting of the Focal Points of the REMPEC (Malta, 25 – 28 October 2000, REMPEC/WG.18/14) agreeing on the need to follow up work on the subject, the Centre has prepared two questionnaires that were respectively aimed at carrying out a survey on the national regulations for the prevention of pollution and adverse environmental effects from pleasure craft in the Mediterranean Sea and at achieving, at a local level, an assessment of the situation in some Mediterranean ports concerning the prevention of pollution from pleasure craft.

With regard to the **questionnaire on national regulations**, they had to be completed by the Operational Focal Point of REMPEC or, as appropriate, by another national authority considered competent to complete this questionnaire. The Centre has received **12 questionnaires** on national regulations completed by twelve different countries.

With regard to the second **questionnaire specially concerning ports for pleasure craft**, the questionnaires were forwarded to the relevant port authorities of three domestic ports of different size.

“Ports” meaning any kind of landing places such as marinas, important and small ports, small harbours, which can provide a minimum service to meet the needs of pleasure craft. The three ports selected had different profiles to reflect a “small”, a “medium” and “large” port for pleasure craft which are used as a minimum by both sailboats and motorboats.
























































































The Centre has received **14 questionnaires from “large pleasure craft port”** completed by 6 different countries, **10 questionnaires from “medium size pleasure ports”** completed by 6 different countries and **5 questionnaires from “small pleasure craft ports”** completed by 4 different countries.

Considering the numbers of questionnaires received by the REMPEC, the following data should be regarded as presenting an indicative profile of ports and national regulations for the prevention of pollution and adverse environmental effects from pleasure craft in the Mediterranean, rather than constituting a comprehensive statistical survey of the said regulations.



Table 1 - Survey Results

 : Questionnaire completed
 : No Questionnaire received

Country	National Regulations Questionnaire	Large Port Questionnaire	Medium Size Port Questionnaire	Small Port Questionnaire
Albania				
Algeria				
Bosnia-Herz				
Croatia		 		
Chyprus				
Egypt				
Europ Union	EU Directives			
France				
Greece				
Israel				
Italy				
Lebanon				
GSP Libyan				
Malta				
Monaco		 		
Morocco				
Slovenia		 	  	
Spain		    	  	 
Syria				
Tunisia				
Turkey				
Total	12	14	10	5



PART I

**NATIONAL REGULATIONS
FOR THE PREVENTION OF POLLUTION
AND ADVERSE ENVIRONMENTAL EFFECTS
FROM PLEASURE CRAFT**

**DESCRIPTIVE INFORMATION
ON THE MEDITERRANEAN CONTEXT**

- A. NATIONAL REGULATIONS ON PLEASURE CRAFT PORT ENVIRONMENT**
- B. NATIONAL REGULATIONS ON PLEASURE CRAFT USE & NAVIGATION**





INTRODUCTION

DESCRIPTIVE INFORMATION ON THE MEDITERRANEAN CONTEXT

National and Foreign Fleet Characteristics

The data obtained on **national pleasure craft fleet** are those available for the most recent year and indicate the total number of domestic pleasure craft registered even if not entering a domestic port. A distinction was made concerning the type of craft between sailboats, motorboats and other type of craft, such as jet-skies, dinghies...

The data obtained on **foreign pleasure craft fleet** are those available for the most recent year and indicate the total number of all foreign registered boats that entered a domestic ports, and when possible data for high and low seasons are given.

Table 2 - Domestic & Foreign Fleets in the Mediterranean Countries

Country	Sail-boats	Motor-boats	Other*	Domestic Fleet	Low Season	High Season	Average Fgn Fleet
Albania	2	78		80	.	.	.
Bosnia-Herz	400	n.a.	30	430	n.a.	n.a.	n.a.
Croatia	.	.	.	100 168	.	.	39 552
Greece	.	.	.		1025	352	688.5
Israel	.	.	.		.	.	.
Lebanon	75	3500	500		2000	50	
Malta	1300	850	.	2150	223	857	540
Monaco	191	802	55		2913	415	
Slovenia	917		7986	8903	.	.	.
Spain	.	.	.		.	.	.
Turkey				2004			1080

*for example, small craft, dinghies, jet-skies, small traditional fishing boats.

A part from the fact that we can note that the Mediterranean sea is a common destination for foreign pleasure craft, these results raises the question of third parties to the Barcelona Convention and its Protocols, the information received does not allow to draw general characteristics and trends of the Mediterranean pleasure craft ports. Nonetheless, specific country profiles can be relevantly refer to.



Pleasure Craft Ports in the Mediterranean

In this survey, a **Port** means any kind of landing places for pleasure craft such as a marina, small harbour, small port...that can provide a minimum of service to meet the needs of pleasure craft. Coastal States were required to indicate the number of each type of landing place in their country.

Table 3 - Pleasure Craft Ports in the Mediterranean

Country	Large Marinas	Medium Size Marinas	Small Marinas	Small Ports	Small Harbours	Other	Total
Albania	0	0	0	1	0	0	1
Bosnia-Herz	.	.	.	.	.	.	.
Croatia	.	45	.	289	400	.	734
Greece	.	.	.	.	.	.	.
Israel	3	4	.	.	.	.	7
Lebanon	10	3	.	24	.	.	37
Malta	1	1	.	.	.	.	2
Monaco	.	1	1	.	.	.	2
Slovenia	2	1	.	3	.	.	6
Spain	.	.	.	.	.	.	.
Turkey	.	5	3	4	3	.	15

Pleasure Craft Users in the Mediterranean

Coastal States were requested to indicate, for the most recent year that data were available, the total number of boats users for each day of the year, and when possible include data for high and low season.

Table 4 - Pleasure Craft Users

Country	Low Season	High Season	Total
Albania	.	78	78
Bosnia-Herz	n.a.	n.a.	n.a.
Croatia	.	.	.
Greece	.	.	.
Israel	.	.	.
Lebanon	5000	1000	6000
Malta	.	.	.
Monaco	.	.	6522
Slovenia	.	.	.
Spain	.	.	.
Turkey	.	.	.

The above data on both pleasure craft ports and pleasure craft users in the Mediterranean do not allow any statistical approach. It should illustrate different scale of nautical activities in between the Mediterranean countries.



A. NATIONAL REGULATIONS ON PLEASURE CRAFT PORT ENVIRONMENT

1. ENVIRONMENTAL IMPACT ASSESSMENT FOR PORTS & MARINE SPECIES AND HABITATS INVENTORIES



The handsomest locations in the Mediterranean coastline are the prime sites desired by domestic and international tourism. However the uncontrolled development of infrastructure to sustain tourism and related urbanisation, can lead to irreversible deterioration of ecosystems and coastal landscapes. Establishment of pleasure craft ports and marinas can give rise to alterations of wetlands, shore lands, beachfronts and seafloors.








































Mediterranean coastal States require the necessary tools to evaluate the environmental impact of tourism and associated large-scale projects, as well as to take the necessary steps so that new leisure forms likely to affect the environment, especially protected species are only authorised after their impact has been assessed. A system of previous authorisation by competent national authorities for work which can cause physical alterations of the natural state of the coastline or the destruction of coastal habitats, would therefore be suitable.

Collection of Data

Coastal States were requested to indicate if they had national regulations in place for carrying out an Environmental Impact Assessment before a pleasure craft port is established or developed, and before such a port is extended or further developed.

Table 5 - EIAs for Port Creation & Extension

-  : National regulations for EIAs
 : No regulations for EIAs

Country	Port Creation		Port Extension & Development	
	Compulsory EIA	Voluntary EIA	Compulsory EIA	Voluntary EIA
Albania				
Bosnia-Herz				
Croatia				
Greece				
Israel				
Lebanon				
Malta				
Monaco				
Slovenia				
Spain				
Turkey				
Total	 9-8/11	1-0/11	9-8/11	1-0/11
Percentage	82%	9%	82%	9%

It seems that the large majority of the Mediterranean States that had provide information, have compulsory national regulations.



2. NATIONAL REGULATIONS ON WASTE & SEWAGE DISCHARGES

Pleasure craft generate a whole range of types of wastes. By far the largest volume of waste to be produced will be garbage, mainly of a domestic type. Oily wastes from pleasure craft are likely to arise from machinery space and dirty engine sump oil. The most likely hazardous products to be generated will consist of items such as unwanted lead batteries, discarded receptacles for degreasing agents and other solvents. Production of sewage from any drainage and other waste from any form of on board sanitary facilities, is another consideration.

The discharge of such wastes from pleasure craft is becoming a concern and attention has increasingly focused on the effects of plastics and other persistent materials. Coastal areas such as beaches and underwater seascapes such as coral reefs can be spoiled aesthetically by the presence of garbage in general.

A range of impacts has also been associated with the discharge of plastic wastes, such as:



- ⇒ entanglement with plastic debris by marine organisms such as marine mammals, sea birds and fish,
- ⇒ ingestion of plastic debris by marine organisms,
- ⇒ smothering of fauna and fauna,
- ⇒ contamination of the sea floor by micro plastic litter contaminated by heavy metals,
- ⇒ colonization of drifting plastics and synthetics by epiphytic biota, e.g. algae, bryozoans, bacteria, sponges, etc., promoting the long distance transfer of organisms creating the potential for infecting areas with non-indigenous species,
- ⇒ aesthetic spoiling of beaches and underwater features.

Sewage can mainly have two negative consequences. It can have a eutrophying effect (causing over-enrichment of the sea with nutrients) and it can cause bacteriological pollution resulting in a sanitary nuisance, posing a risk of infection through coliform bacteria.

Collection of Data

Coastal states were requested to indicate if they had national regulations in place controlling discharge of certain types of waste and of sewage at sea, and to specify where this was allowed. States were also requested to provide insight to the situation whereby illegal, discharge was a common practise even when not allowed.

Table 6 - Discharge Regulations & Seafarers' Practice

 : Discharge
 : No Discharge
 "MARPOL I" : Regulation Content

Country	Garbage		Oil and oily Waste		Hazardous Prod.		Raw Sewage		Treated Sewage	
	National Regulation	Common Practise	National Regulation	Common Practise	National Regulation	Common Practise	National Regulation	Common Practise	National Regulation	Common Practise
Albania										
Bosnia-Herz										
Croatia										
Greece	MARPOL V		MARPOL I		MARPOL II		12 mm		MARPOL IV	
Israel							12 mm		12 mm	
Lebanon										
Malta									open seas	
Monaco	MARPOL V						MARPOL IV			
Slovenia										
Spain	MARPOL V		MARPOL I		MARPOL II					
Turkey										
Total	10/11	1/11	10/11	0/11	11/11	1/11	8/11	0/11	9/11	1/11
Percentage	91%	9%	91%	0%	100%	9%	73%	0%	82%	9%



3. NATIONAL REGULATIONS ON PORT WASTE MANAGEMENT




In the absence of adequate reception facilities, pleasure craft will discharge garbage, separated waste material, waste oil and oily garbage, chemicals and other hazardous and polluting products to the marine environment. There is therefore a need to provide reception facilities in marinas, anchorages and related facilities for recreational craft. It is however important to tailor any reception facility to the requirements of the users. The effort expended in setting up waste management facilities and plans should also be proportional to the number and types of boats that are expected to use the facilities.

Collection of Data



Coastal States were requested to indicate if they had national regulations in place for setting up waste management, waste recycling programmes for pleasure craft-generated wastes and to specify if these were compulsory-based or voluntary-based regulations.























































Table 7 - Port Waste Management & Recycling Programme




Waste Management Programme - WMP



-  : Compulsory National Regulations
-  : Voluntary National Regulations
-  : No Regulation or Programme

Recycling Programme - RP

-  : Compulsory Recycling Programme
-  : Voluntary Recycling Programme

Country	Domestic garbage	Separated Waste	Waste Oil	Oily Garbage	Hazardous Waste
Albania	 			 	 
Bosnia-Herz					
Croatia					
Greece	 		 	 	 
Israel			 		
Italy					
Lebanon	 	 	 	 	 
Malta					
Slovenia					
Spain	art.60 of Ports Law, Residues/Waste law 10/1988, local & regional authorities, Directive 2000/59/CE, MARPOL 73/78				
Turkey	 	 	 	 	 

Total 	4	3	4	4	5
Percentage	36%	27%	36%	36%	45%
Total 	1	2	2	1	1
Percentage	9%	18%	18%	9%	9%
Total WMP	5	5	6	5	6
Percentage	45%	45%	55% 	45%	55%

Total 	2	1	1	2	2
Percentage	18%	9%	9%	18%	18%
Total 	2	1	2	2	2
Percentage	18%	9%	18%	18%	18%
Total RP	4	2	3	4	4
Percentage	36%	18%	27%	36%	36%



4. NATIONAL REGULATIONS ON SEWAGE MANAGEMENT & OTHER PORT FACILITIES

Where sewage discharge into the sea is prohibited, sewage collection facilities, such as a pump-out system and related reception facilities, would have to be available in port. Consequently, the use of sewage reception facilities implies sanitary equipment on board, such as a holding system and discharges connections to connect craft tank to port reception facilities.

There are, in principle, two sanitation systems for recreational boats: a portable and a permanent system. Related to the issue of the discharge of sewage is the environmental impact of disinfectant liquids used, in particular, on pleasure craft with portable toilets. Boats that have toilets with built-in holding tanks should not require disinfectant liquids since there is no odour problem although these products are still sometimes used. The active ingredients of these disinfectants are not usually persistent but could be harmful to the marine environment if the foul water containing the disinfectants is discharged in areas of high biodiversity and poor water circulation




Furthermore, boat users need to be provided with adequate port sanitary facilities ashore if they are allowed to the facility on board their boats and release sewage into the port waters.






























































Collection of Data

Coastal States were requested to indicate if they had national regulations for the following specific aspects of a Port Sewage Management and other Port Facilities and to specify if such regulations were compulsory or voluntary-based :

- ⇒ establishment of adequate port sanitary facilities,
- ⇒ establishment of adequate port pump-out system,
- ⇒ boat sanitary equipment concerning requirement for holding tank and requirement for discharges connections.

Table 8 - Sewage Management & Other Port Facilities

-  : Compulsory National Regulation
-  : Voluntary National Regulation
-  : No Regulation

Country	Sewage Management				Other Port Facilities	
	Adequate Sanitary Facilities	Reception & Pump-out System	Onboard Holding Tank	On board Discharge Connections	Waste Management Plan in Boat Yards	Safety Requirements at Fuelling Facilities
Albania						
Bosnia-Herz						
Croatia						
Greece						
Israel			Under preparation	Under preparation		
Lebanon						
Malta						 
Monaco						
Slovenia						
Spain						
Turkey		 			 	
Total 	5	6-5	3	3	5-4	8-7
Percentage 	45%	55%	27%	27%	45%	73%
Total 	0	1	3	1	2-1	1-0
Percentage 	0%	9%	27%	9%	18%	9%



B. NATIONAL REGULATIONS ON PLEASURE CRAFT USE & NAVIGATION

1. NATIONAL REGULATIONS ON ANTI-FOULING SYSTEMS

Use of Antifouling Paints and Related Environmental Effects

Anti-fouling paints are used to protect the hulls of vessels from the settlement and growth of marine organisms. Anti-fouling paints work by releasing, in a controlled way, small quantities of a substance which is toxic to fouling organisms. Free from such fouling organisms, a vessel travels faster through water, consuming less fuel and saves on maintenance costs. Many anti-fouling formulations marketed today contain tributyl tin as the active ingredient, which is chemically bonded to the polymer base (self-polishing co-polymers). There are also other formulations on the market containing other substances as the active ingredients, e.g. copper-based coatings and silicon-based systems, however there is still a preference for tin-containing anti-fouling paints since their performance is well-proven.



Notwithstanding the attributes of organotin-based anti-fouling paints, in leaching from the paint film, the tributyl tin escapes to the environment where it can build up to dangerous levels, particularly in areas where water circulation is restricted. At these concentrations, it has been found to be toxic to marine species at low concentrations. Inevitably, areas at risk from pollution from anti-fouling paints are estuaries and port areas with high densities of shipping, including pleasure craft. In the 1980s, high concentrations of tributyl tin were reported in coastal areas around the world, including the Atlantic coast of France, the Mediterranean Sea, the coasts of Bahrain, the North Sea off the United Kingdom, Canada, the United States and Australia. As a result, a number of countries, including some Mediterranean states, introduced controls to limit the use of tributyl tin-based paint on small vessels. It is customary that in these countries the use of these anti-fouling paints is usually prohibited on vessels of less than 25 metres length.
































Collection of Data

Coastal States were requested to indicate if they had compulsory national regulations concerning the use of TBT-based, copper-based and other types of antifouling paints and to specify under which conditions could this paints been used and when the use of such paints were regulated.



Table 9 - Regulations on the Use of Polluting Antifouling Paints

 : Compulsory National Regulations
 "aluminium hull > 25 m" : Regulation Content
 : No Regulation

Country	Use of TBT-based Antifouling Paints	Use of Copper-based Antifouling Paints	Use of other Type of Antifouling Paints
Albania			
Croatia			
Bosnia-Herz			
Greece	 alluminum hull > 25m		
Israel			
Lebanon			
Malta			
Monaco			
Slovenia			
Spain	 until the International Convention of Anti-fouling Paints		
Turkey			
Total	1	0	0
Percentage	9%	0%	0%

2. NATIONAL REGULATIONS ON EXHAUST GAS EMISSIONS & MARINE FUEL QUALITY STANDARDS

Gas Exhaust Emissions from Pleasure Craft

In non-commercial pleasure craft, the engine output ranges from small outboard motors to the more elaborate diesel engines.

Two factors which will have a bearing on the impact of exhaust emissions will be the type of fuel used and the degree of utilisation. These will vary since some will only utilise their boat a few hours a week while others would use their boat for longer periods.

Pleasure craft are usually equipped with either high revving diesel engines or with two- or four-stroke petrol (gasoline) engines. For the most part, inboard petrol engines can be regarded as four-stroke engines, while two-stroke engines dominate the outboard type of engine, although four-stroke engines do exist in this category. The reason for the dominance of two-stroke engines when it comes to outboards is their low weight and small dimensions. This is usually considered to outweigh their comparatively higher fuel consumption. Boats with overnight accommodations can also have heating systems in the form of petrol or diesel heaters and their use would contribute to the overall environmental impact from exhaust gases. In theory, gas turbine engines can also be used, but vessels using this type of engine probably represent a very small portion of the total vessel stock.

Non-commercial pleasure craft would utilise fuel that is usually bunkered at ordinary filling stations or marinas and although larger vessels may get their fuel from bunker boats, it is possibly the same grade of fuel as that found at filling stations and marinas.



Exhaust emissions are directly proportional to fuel consumption whilst it is reasonable to assume that the emission profile will depend on the type of fuel used. This will consist of varying ratios of nitrogen oxides, hydrocarbon particulates, carbon oxides, lead and sulphur dioxide. Possibly the most significant air pollutants emitted by a two-stroke petrol engine are hydrocarbon particulates and carbon oxides. The levels of nitrogen oxide emissions are much smaller owing to the low combustion temperature which is associated with poor combustion efficiency of this type of engine. Hydrocarbon particulates, carbon oxides and other emissions from a two-stroke engine are largely due to the addition of oil in the fuel. A four-stroke engine does not need oil in the fuel and therefore has lower emissions of these types of substances. Reduction of exhaust emissions, as far as carbon oxides, hydrocarbon particulates and nitrogen oxides are concerned, can be obtained by using a catalytic converter. On the other hand, the diesel engine has an entirely different emission profile than the petrol engine. Owing to its high efficiency, and thereby high combustion temperature, hydrocarbon particulates and carbon oxides are small and it is the nitrogen oxide emissions which are usually of concern.

































As with other exhaust gases, with regard to the sulphur and lead emissions, it can be reasonably assumed that since many owners of pleasure craft obtain their own fuel from ordinary filling stations or marinas, the sulphur and lead content of the emissions will depend on the origin of the fuel.

Collection of Data

Coastal States were requested to indicate if they have national regulations for exhaust gas emissions from marine engines, and if so precise if these regulations are compulsory or voluntary-based. Coastal States were required to indicate if they have requirements for a maximum cap of sulphur content of the fuel used for pleasure craft and requirements for use unleaded fuel or some other requirement regarding fuel.

Table 10 - Exhaust Gas Emissions & Fuel Regulations

 : Compulsory National Regulations
 EU Directive 1999/32/EK : Regulation Content
 : No Regulation

Country	Exhaust Gaz Emissions from Marine Engines	Maximum Cap for Sulphur Content	Requirement to Use Unleaded Fuel	Other Regulations on Fuel Quality
Albania				
Bosnia-Herz				
Croatia		 1% max.		
Europ Union		 EU Directive 1999/32/EK		
Greece		 EU Directive 1999/32/EK		
Israel				
Lebanon				
Malta				
Monaco				
Slovenia				
Spain		EC Law 0.2% max.- ISO 8217		Mg - Zn - Ca - P
Turkey		 0.7% max.	 0.013gr/lt	EU Legislation
Total	0	2	0	2
Percentage	0%	18%	0%	18%

3. NATIONAL REGULATIONS ON PLEASURE CRAFT NAVIGATION

Physical Damage to Marine Species and Habitats

Pleasure craft individually can represent limited environmental impact when on the high seas. However, in a semi-enclosed sea as the Mediterranean, in particular when closer to land or at anchor or when boat users come ashore, the environmental impact can be quite significant. Because the major impact of nautical tourism will occur within the coastal marine zone, an environmental navigation system can be useful to mitigate the adverse impact on marine species and habitats.

Some of the physical damage that can occur to marine species and habitats as a result of pleasure craft activities includes:

- ⇒ disturbing habitats in the adjacent territorial fringe, including nesting sites because of flapping of sails or flags, engine noises, hull/wake wash due to excessive changes in course at high speed from close navigation to these sites,
- ⇒ damage to coral reefs, sea-grass beds from groundings or keel impact,
- ⇒ scouring of the seabed or destruction of underwater features of nature conservation due to anchor dragging in poor holding grounds or use of inadequately sized anchors,
- ⇒ trampling of plants which may be important components of the coastal ecosystem and assist in stabilising sand dunes and beaches.




Collection of Data

































































Coastal States were requested to indicate if they had carried out an Environmental Impact Assessment (EIA) and an Inventory of Marine Species and Habitats at a national level and for some specific areas. They were also specify to precise if they had compulsory national regulations for various aspects of pleasure craft' navigation, such as :

- ⇒ wave generation, identification of the maximum wave, at critical speed/water depths with the zone of influence of such waves,
- ⇒ jet propulsion disturbance, depth of water to the sea where disturbance from water jet propulsion system will occur,
- ⇒ noise level, noise output both in terms of volume and frequency range,
- ⇒ exhaust gas, fuel consumption, chemical content, and volume of exhaust gas at the point of discharge to atmosphere or below water level at condensate,
- ⇒ intended routing, anchorage and landing.



Table 11 - Pleasure Craft' Navigation Impact & Regulations

-  : Compulsory National Regulations
-  : EIA or Inventory carried out
- Littoral : Zones concerned
-  : No Regulation

Country	EIA of Pleasure Craft' Navigation		Inventory of Marine Species & Habitats		Regulation Aspects of Pleasure Craft Navigation							
	National	Zones	National	Zones	Generation Wave	Jet Propulsion Disturbance	Noise Level	Exhausted Gases	Routing	Landing	Anchorage	Other
Albania												
Bosnia-Herz												
Croatia												
Greece												
Israel												
Lebanon												
Malta												
Monaco												
Slovenia												
Spain												
Turkey												
Total 	3	3	8	8	4	2	2	1	2	3	4	0
Percentage	27%	27%	73%	73%	36%	18%	18%	9%	18%	27%	36%	0%

4. NATIONAL EDUCATIONAL CAMPAIGN FOR PLEASURE CRAFT USERS

The sustainable use of the marine environment by pleasure craft requires informed decisions to be made at every stage of the activity. Since pleasure craft activities are principally self-managed, boat users are ultimately responsible for ensuring that the vessel and those on board act responsibly towards the marine environment. Importantly to note that freedom of navigation does not include freedom of behaviour.

An environmentally friendly nautical tourism implies boat users to be aware of the need to protect the marine environment. This can be achieved through the dissemination of appropriate information on the regulations and environmental impact of sewage and wastes discharges, marine engines, antifouling paints, cleaning materials and other potentially polluting aspects of pleasure craft. For navigation, this would include where to go and what to do when one gets there and how to behave on the way.










































Collection of Data

Coastal States were requested to indicate if an educational campaign had been carried out to increase pleasure craft users' awareness for the need to protect marine environment and, to indicate if the following topics were included in the campaign :

- ⇒ discharge of garbage,
- ⇒ discharge of oil and oily wastes,
- ⇒ discharge of sewage,
- ⇒ exhaust gas emissions,
- ⇒ physical damage to marine species and habitats,
- ⇒ introduction of non-indigenous species,
- ⇒ use of non-polluting cleaning materials,
- ⇒ use of anti-fouling paints.

Table 12 - Educational Campaign & Topics for Pleasure Craft' Users

 : Campaign & Campaign Topic
 : No Campaign

Country	Educational Campaign	Sewage Discharge	Garbage Discharge	Oil & Oily Waste Discharge	Exhaust Emissions	Damages to Marine Habitats	Introduction of Non-indigenous Species	Non-polluting Cleaning Materials	Use of Antifouling Paints
Albania									
Bosnia-Herz									
Croatia									
Greece									
Israel									
Lebanon									
Malta									
Monaco									
Slovenia									
Spain									
Turkey									
Total	6	6	6	6		3	2	3	0
Percentage	55%	55%	55%	55%	0%	27%	18%	27%	0%

PART II

**PORT REGULATIONS
FOR THE PREVENTION OF POLLUTION
AND ADVERSE ENVIRONMENTAL EFFECTS
FROM PLEASURE CRAFT
IN THE MEDITERRANEAN SEA**

INTRODUCTION

- A. PORT REGULATIONS ON PLEASURE CRAFT USE & NAVIGATION**
- B. PORT REGULATIONS ON WASTE & SEWAGE MANAGEMENT**
- C. REGULATIONS ON OTHER PORT FACILITIES**





INTRODUCTION

DESCRIPTIVE INFORMATION

ON MEDITERRANEAN PLEASURE CRAFT PORTS

So as to collect information on the characteristics of Mediterranean pleasure craft ports and to obtain a profiles of the different types of ports utilized by pleasure craft, the port authorities were required to specify the **type of landing place** they administer, and whether these would be classified as **small, large or medium size**.

They also had to indicate, for the most recent year that data were available :

- ⇒ the total number of all **boats** using their port as well as average number for the last three years,
- ⇒ the total number of visits of **boat users** using their port, and when possible, including numbers for high and low season,
- ⇒ the total number of **overnight stays** for persons on boats calling or using their landing place, and when possible, including numbers for high and low seasons, when such data are not available, the total number of overnight stays for boats calling or using their landing place, and when possible, including numbers for high and low seasons.

Table 13 - Pleasure Craft Ports' Characteristics

Port Characteristics																
	Type		Size		Boats		Berths	Users		Overnight Stays						
					Last year	Average		Year	High Season	Year	High Season					
Small Port	Marinas	5	Moorings	1	Small	3	Sailboats	26	Sailboats	29	Permanent	55	Year	551	Year	1000
	Small Ports		Berthings	1	Medium size		Motorboats	46	Motorboat	43	Visitors	102	High Season	203	High Season	375
	Small Harbours		Other		Large		Other	9	Other	8			Low Season	155	Low Season	160
Medium Size Port	Marinas	5	Moorings	4	Small	6	Sailboats	170	Sailboats	95	Permanent	310	Year	5,469	Year	2,499
	Small Ports	2	Berthings	1	Medium size	1	Motorboats	152	Motorboat	140	Visitors	44	High Season	3,809	High Season	1,991
	Small Harbours	1	Other		Large	1	Other	72	Other	43			Low Season	878	Low Season	635
Large Port	Marinas	10	Moorings		Small	1	Sailboats	532	Sailboats	558	Permanent	584	Year	74,928	Year	5,977
	Small Ports	1	Berthings		Medium size	4	Motorboats	489	Motorboat	465	Visitors	306	High Season	52,393	High Season	4,486
	Small Harbours		Other		Large	6	Other	82	Other	129			Low Season	46,780	Low Season	1,706
Total Average	Marinas	20	Moorings	5	Small	10	Sailboats	242	Sailboats	227	Permanent	316	Year	26,982	Year	3,158
	Small Ports	3	Berthings	2	Medium size	5	Motorboats	215	Motorboat	216	Visitors	150	High Season	18,801	High Season	2,284
	Small Harbours	1	Other		Large	7	Other	54	Other	60			Low Season	15,937	Low Season	833




A. PORT REGULATIONS ON PLEASURE CRAFT USE & NAVIGATION

1. ENVIRONMENTAL IMPACT ASSESSMENT FOR PORTS & MARINE SPECIES & HABITATS INVENTORIES

The port authorities were requested to specify if an Environmental Impact Assessment has been carried out before the port was established or developed, if an Environmental Impact Assessment would be carried out if the port has to be extended or further developed. Furthermore, they were requested to provide information on whether an Environmental Impact Assessment of navigation of pleasure craft as well as an inventory of the marine species and habitats were carried out for the port zone and its adjacent waters.

Table 14 - Environmental Impact Assessments & Inventories related to Pleasure Craft Port


	EIA for Port Creation	EIA for Port Extension & Develop	EIA of Pleasure Craft' Navigation	Inventory of Marine Species & Habitats
Small Ports	0/3	0/3	0/3	0/3
Medium Ports	2/9	3/9	2/9	1/9
Large Ports	3/10	5/10	4/10	4/10
Total 	5/22	8/22	6/22	5/22
Percentage	23%	36%	27%	23%

2. ENVIRONMENTAL REGULATIONS FOR PLEASURE CRAFT PORTS

Ports were requested to provide information on whether had regulations concerning the prevention of pollution of the **port waters**, as well as concerning various aspects of **navigation in the ports and its adjacent areas**, that can adversely affect marine environment and life.



Table 15 - Pleasure Craft Ports and Adjacent Areas' Regulations


	Port Waters				Regulation Aspects of Pleasure Craft Navigation							
	Rain Water Treatment	Polluting Detergents Regulation	Polluting Detergents Use	Non-indigenous Species	Wave Generation	Jet Propulsion	Noise Level	Exhausted Gases	Routing	Landing	Anchorage	Other
Small Ports	1/3	0/3	0/3	0/3	3/3	1/3	0/3	1/3	0/3	0/3	2/3	0/3
Medium Ports	3/7	1/7	2/7	5/7	6/7	5/7	3/7	3/7	4/7	5/7	5/7	1/7
Large Ports	4/9	2/9	1/9	3/9	5/9	4/9	5/9	1/9	1/9	2/9	3/9	0/9
Total 	7/19	3/19	3/19	8/19	14/19	10/19	8/19	5/19	5/19	7/19	10/19	1/19
Percentage	37%	16%	16%	42%	74%	53%	42%	26%	26%	37%	53%	5%

3. EDUCATIONAL CAMPAIGN FOR PLEASURE CRAFT USERS

AT THE PORT LEVEL

It was considered of interest to know if pleasure craft ports of the Mediterranean carrying out **educational campaigns**, at a local level, so as to increase the awareness of pleasure craft users for the prevention of marine pollution and the protection of the marine environment.

Table 16 - Pleasure Craft Ports' Educational Campaigns

	Educational Campaign	Sewage Discharge	Garbage Discharge	Dil & Oily Waste Discharge	Non-Indigenous Species	Antifouling Paints	Physical Damages	Exhaust Emissions	Other
Small Ports	2/5	2/5	2/5	2/5	0/5	1/5	1/5	1/5	0/5
Medium Ports	7/9	5/9	6/9	7/9	0/9	3/9	1/9	2/9	0/9
Large Ports	7/9	7/9	7/9	7/9	2/9	5/9	2/9	2/9	0/9
Total 	16/23	14/23	15/23	16/23	2/23	8/23	4/23	5/23	0/23
Percentage	70%	61%	65%	70%	9%	35%	17%	22%	0%











B. PORT REGULATIONS ON WASTE & SEWAGE MANAGEMENT AND PORT FACILITIES

1. PORT WASTE & SEWAGE DISCHARGE REGULATIONS

As regard to wastes generated by pleasure craft and sewage discharge regulations, the Mediterranean ports were requested to report if such discharges were allowed in the port waters and its adjacent areas and, when such discharges were not allowed, if they considered that these discharges were nonetheless a common practice by pleasure craft' users.

Table 17 - Port Regulations on Waste and Sewage Discharges

		Garbage		Oil and oily Waste		Hazardous Prod.		Raw Sewage		Treated Sewage	
		Discharge Allowed	Common Practise	Discharge Allowed	Common Practise	Discharge Allowed	Common Practise	Discharge Allowed	Common Practise	Discharge Allowed	Common Practise
Small Ports	 	5/5	3/5	5/5	4/5	5/5	4/5	5/5	3/5	3/5	1/5
Medium Size Ports	 	9/9	5/9 1/9	9/9	2/9 1/9	9/9	4/9 2/9	9/9	2/9 2/9	5/9 1/9	3/9
Large Ports	 	10/10	5/10 2/10	9/10 1/10	4/10 3/10	9/10 1/10	7/10	5/10	6/10 3/10	9/10 1/10	4/10 2/10
Total		24/24	13/24	24/24	10/24	24/24	15/24	19/24	11/24	14/24	8/24
Percentage		100%	54%	100%	42%	100%	63%	79%	46%	58%	33%
Total			3/24	1/24	4/24	1/24	2/24		5/24	3/24	2/24
Percentage			13%	4%	17%	4%	8%		21%		8%

2. PORT REGULATIONS ON WASTE & SEWAGE MANAGEMENT

Directly related to the prevention of wastes and sewage discharges at sea is the existence of adequate port reception facilities for wastes and sewage. An aspect of the survey was aimed at identifying the types of wastes received by pleasure craft ports to subsequently evaluate if the ports were supplying the adequate facilities to receive such wastes. Further information was required on the functioning modalities of such facilities.



The different types of pleasure craft generated wastes and related facilities inquired were mixed garbage, separated waste materials, waste oil and oily garbage, hazardous chemicals, raw and treated sewage.

Table X18 - Mixed Garbage Port Management


	Reception	Facility	Type of Facility	Authority in Charge	Cost
Small Ports	2/5	2/5		Public Private 1	0/5
Medium Ports	5/9	5/9		Public 4 Private	0/9
Large Ports	10/10	10/10	containers	Public 5 Private 2	4/10
Total 	17/24	17/24	containers	Public 6/24 Private 6/24	4/24
Percentage	71%	71%		Public 25% Private 25%	17%

Table 19 - Separated Waste Materials' Ports Management


	Reception	Type of Waste	Facility	Type	Recycling Programme	Authority	Cost
Small Ports	3/5	Paper 3 Metal 3 Plastic 2 Food 3 Glass 3 Other 0	3/5		3/5	Public Private 1	1/5
Medium Ports	3/9	Paper 3 Metal 0 Plastic 1 Food 3 Glass 3 Other 0	3/9	Separate Containers	0/9	Public Private	0/9
Large Ports	5/10	Paper 2 Metal 2 Plastic 2 Food 3 Glass 3 Other 0	5/10		2/10	Public Private	0/10
Total 	11/24	Paper 8/2 Metal 5/2 Plastic 5/3 Food 9/2 Glass 9/3 Other 0/24	11/24	Separate Containers	5/24	Public Private 1	1/24
Percentage	46%	Paper Plastic Glass Other	46%		21%	Public Private	4%

Table 20 - Waste oil and Oily garbage' Ports Management


	Reception of Waste Oil	Reception of Oily Waste	Facility	Type of Facilities	Authority in Charge	Required Notice	Cost for Use
Small Ports	2/5	1/5	2/5	Containers	Public Private 1	1/5	1/5
Medium Ports	6/7	4/7	6/7	Container	Public 2 Private 1	0/7	0/7
Large Ports	11/11	6/11	11/11		Public 1 Private 8	3/11	2/11
Total 	19/23	11/23	19/23	Container	Public 3/23 Private 10/23	4/23	3/23
Percentage	83%	48%	83%		Public 13% Private 43%	17%	13%



Table 21 - Hazardous Chemicals' Ports Management


	Reception	Facility	Type of Facilities	Authority in Charge	Notice	Cost for Use
Small Ports	0/5	1/5	Containers	Public Private	0/5	0/5
Medium Ports	1/9	2/9	Containers	Public Private 1	0/9	0/9
Large Ports	6/11	5/11		Public 1 Private 2	1/11	2/11
Total 	7/24	8/24	Containers	Public 1 Private 3	1/24	2/24
Percentage	29%	33%	Containers	Public 4% Private 13%	4%	8%

Table 22 - Sanitary Facilities in Pleasure Craft Ports



	Sanitary Facilities	Average Number	Open at Night	Authority in Charge	Cost for Use
Small Ports	3/5	5	3/5	Public 0 Private 3	1/5
Medium Ports	7/10	7	5/10	Public 4 Private 2	1/10
Large Ports	8/8	37	6/8	Public 2 Private 3	0/8
Total 	18/23	15	14/23	Public 6/23 Private 8/23	2/23
Percentage	78%		61%	Public 26% Private 35%	9%

Table 23 - Sewage' Ports Management

	Pump-out & Reception	Authority in Charge	Number of Boats	Notice Required	Cost for Use
Small Ports	1/5	Public Private 1		0/5	0/5
Medium Ports	2/9	Public Private		1/9	1/9
Large Ports	3/11	Public 1 Private 2	52	1/11	1/11
Total 	6/25	Public 1/25 Private 3/25	.	2/25	2/25
Percentage	24%	Public 4% Private 12%	.	8%	8%


C. REGULATIONS ON OTHER PORTS FACILITIES

1. PORT REGULATIONS ON BOAT YARDS FOR PLEASURE CRAFT

Boat yards constitute a significant source of pollution for port waters and adjacent areas. They generate various types of wastes, such as hazardous chemicals, chemicals and hazardous. Specifically wastes from antifouling paint usage, which required environmentally sound treatment and disposal. Furthermore, the operations performed are likely to caused damages to the port waters and its environs, if rain water run-off and other aqueous washing are not treated before release.

Consequently, information was requested from Mediterranean ports on the presence of boat yards, their administration, their capacity, the operations performed, the antifouling paints allowed, waste production and disposal.

Table 24 - Boat Yards' Antifouling Profiles & Waste Management

	Boat Yard	Authority in Charge	Annual Capacity	Type of Operations	TBT-Based Paints	Copper-Based Paints	Other type of Paints	Specific wastes	Separate Disposal
Small Ports	3/5	Public 1 Private 1	50	paintings - repairs	0/3	1/3	1/3	oil - diesel oil	3/3
Medium Ports	4/9	Public 0 Private 2	15	all	1/2	2/2	2/2	Dust-Oil-Paints	1/9
Large Ports	8/11	Public 2 Private 4	340	all - paintings	5/6	6/6	2/6	oil- batteries	3/11
Total 	15/25	Public 2/25 Private 7/25	135	all - paintings repairs	6/11	9/11	5/11	oil - batteries dust	7/23
Percentage		Public Private							


2. PORT REGULATIONS ON SHORE FUELLING FACILITIES & CAR PARKING

Facilities such as shore fuelling facilities and car parks can represent a source of pollution for the port marine environment and its adjacent areas, especially without a plan for the treatment of rain water and other aqueous run-off through these types of port facilities. Furthermore, shore fuelling facilities involve a potential risk of pollution in case of an accidental spill of fuel. Mediterranean ports were requested to provide information on these two **types of facilities, their respective capacities**, and for the fuelling capacity, and specify if they had an **Emergency plan** for fuel spills at sea and/or on land.

Finally, as the fuel delivered by such fuelling capacities would be mainly for pleasure craft use and subsequently generate exhaust gas emissions which would be directly proportional to the quality of the fuel sold, Mediterranean ports were requested to specify, when a **maximum cap for the sulphur content** was set of the fuel supplied by the fuelling facility and to indicate if **lead fuel** was also sold to boats.



Table 25 - Shore Fuelling Facilities & Car Parks

	Shore Fuelling Facilities							Car Park	
	Shore Fuelling	Authority	Annual Quantity	Emergency Plan	Max. Cap for Sulphur	Leaded Fuel	Other Regulation	Car Park	Capacity
Small Ports	3/5	Public 0 Private 2		3/5	1/5	0/5	0/5	5/5	93
Medium Ports	4/9	Public 0 Private 2		4/9	1/9	2/9	0/9	5/9	76
Large Ports	7/11	Public 1 Private 4	1,733,331	5/11	1/11	4/11	0/11	8/11	450
Total 	13/25	Public 1/25 Private 8/25	.	12/25	3/25	6/25	0/25	18/25	206
Percentage	52%	Public 4% Private 32%		48%	12%	24%	0%	72%	



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