

# WP 3\_Act. 3.2 Analysis of Legal Frameworks in the involved areas related to a sustainable exploitation of reefs

Deliverables: 3.2.1 Analysis of legal frameworks in order to verify requirements

3.2.2 Identification of reefs that can be used for economic scope and discussion of criteria to adopt in their identification

3.2.3 Report on the international, EU, Italian and Croatian legislation, including regional policies

Deliverables 3.2.1, 3.2.2, 3.2.3

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D. 3.2.1 – Analysis of legal frameworks in order to verify requirements

D3.2.2 – Identification of reefs that can be used for economic scope and discussion on the criteria to adopt in their identification

D3.2.3 – Report on international, EU, Italian and Croatian legislation, including regional policies.

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Name of Activity Leader: Ravenna Municipality

Contributors: Ravenna Municipality, University of Rijeka, Association Sunce, ARPAE Emilia-Romagna, CNR – IRBIM, ARPA Apulia, OGS

Authors: Damir Zec, Greta Tellarini, Ivana Krstulović Baković, Michela Soldati

Dissemination level:

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## 1 Introduction

The present document has been produced within Activity 3.2 “Analysis of legal frameworks in the involved areas related to sustainable exploitation of reefs” and it is comprehensive of the following deliverable required by the activity:

### **D.3.2.1 Analysis of legal frameworks in order to verify requirements**

### **D.3.2.2 Identification of reefs that can be used for economic scope and discussion on the criteria to adopt in their identification**

### **D.3.2.3 Report on the International, EU, Italian and Croatian legislation, including regional policies**

The document is structured in 7 sections, which consider the different levels of regulation.

The first section analyses the relevant international legal instruments (including international regulation on a regional basis) in defining a useful regulatory framework concerning natural and artificial reefs and their economic utilization (Ref. Chapter 2 International legal framework).

The second section considers the European legal framework, indicating the relevant regulatory instruments on the subject (Ref. Chapter 3 European Legal Framework).

The third section contains some international instruments, which can be defined as soft laws and guidelines not containing binding requirements or statements and can be useful to complete the international and European legal framework on one or more important aspects of the reef's utilization (Ref. Chapter 4 International soft laws and guidelines).

The fourth and fifth sections consider the national legal framework and the legal instrument adopted by Croatia (Ref. Chapter 5 National legal frameworks - Republic of Croatia) and by Italy (Ref. Chapter 6 National legal framework – Republic of Italy) with reference to the legislation that can have an impact on the natural and artificial reefs and their economic utilization.

The sixth section contains a selection of regulation instruments with different legal effects and different scopes, dealing with protection or utilization of artificial and natural reefs that may be considered as examples of good practice. These documents, although not being legal documents, are included in the analysis in order to reveal possible drawbacks or opportunities in developing economic use of such sea areas (Ref. Chapter 7 International examples of good practice).

The seventh section contains the criteria to adopt in identification of natural or artificial reefs which can be used for an economic utilization (Ref. Chapter 8 Criteria to adopt in identification of reefs that can be used for economic scope).

## 2 International legal framework

## 2.1 United Nations Convention on the Law of the Sea (UNCLOS)

### Originator

United Nations

### Year of adoption

1982

### Year of entry into force

1994

### Type

Convention

### Last revision

2013

### Level

International

### Target stakeholders

Signatories of the Convention and for which this Convention is in force. Presently there are 157 signatories.

### Short description

The United Nations Convention on the Law of the Sea is the most important international convention regulating various uses of oceans and their resources. The Convention consists of 17 parts, 320 articles, and 9 annexes, governing all aspects of ocean space, such as delimitation, environmental control, marine scientific research, economic and commercial activities, transfer of technology and the settlement of disputes relating to oceans. The Convention establishes freedom of activity in six spheres: navigation, overflight, laying of cables and pipelines, artificial islands and installations, fishing, and marine scientific research.

### Impact on environmental protection

Part XII of UNCLOS deals with *Protection and preservation of the marine environment*. Accordingly, contracting parties are obliged to protect and preserve the marine environment in general, to implement measures to prevent, control and reduce pollution of the ocean from any source, including vessels, dumping, seabed exploration, land-based sources and the air, and to ensure the maintenance of living resources within their jurisdiction.

### Impact on safety and security

The Convention provides several regulations dealing with safety of navigation and the maritime traffic. In particular, the Convention requires that any installation or structure not used, or abandoned, should be removed to ensure the safety of navigation. If necessary, States may establish reasonable large safety zones around such artificial islands or structures to protect those installations and structures as well as to ensure safety of navigation. Marine environment has to be protected from harmful effects. Measures provided include (but not limited to) fostering the safety of operations at sea and human life, and those aiming to prevent pollution of the marine environment, to prevent accidents at sea, to prevent and control damage, to protect the health of persons. The Convention provides

two regimes, which are fundamental to maritime safety, security and order on the seas: the regime of consecutive maritime zones, and the jurisdictional trinity of flag, coastal and port state control. In fact, the Convention is the only international convention, which stipulates a framework for state jurisdiction in maritime spaces.

### **Impact on exploitation**

The Convention defines the rights and responsibilities of nations with respect to their use of the world's oceans, establishing guidelines for exploitation of the oceans, the environment protection, and the management of marine natural resources. It has to be emphasized that reefs are mostly located within internal waters and as such, it is assumed that exploitation is under full sovereignty of the coastal state.

### **Relevance for artificial reefs**

According to the Convention articles, every coastal State has right to construct and to authorize and regulate the construction of artificial islands, installations and structures. Their presence must be clearly marked on the maps and be acceptable in respect of marine environment protection and safety of navigation. If it is convenient, States can establish safety zones around those structures. All ships must respect these safety zones, and behave in accordance with international standards and rules regulating navigation near artificial installations or structures.

### **Relevance for natural reefs**

Reefs (implicitly natural reefs) are specifically mentioned as one of the objects defining baselines (from which the breadth of the territorial sea is measured). Accordingly, it is the seaward low-water line of the reef, shown by the appropriate symbol on charts. The exploitation of the reefs should be acceptable for the environment. As a place of biodiversity, it must be protected from the pollution and consequences of the collisions at sea. Other specific uses of reefs are not regulated.

### **Anticipated evolvement**

Amendments to the Convention are not expected in a foreseeable future.

However, the clear definition of the reefs is missing. Inclusion of definition of reefs, either natural or artificial, would improve the clarity of the Convention regulations.

### **Web site**

[http://www.un.org/Depts/los/convention\\_agreements/texts/unclos/unclos\\_e.pdf](http://www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf)

## 2.2 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London 1996)

London Protocol 1996

### Originator

Inter-Governmental Maritime Consultative Organization – IMCO (presently IMO)

### Year of adoption

Convention – 1972

Protocol – 1996

### Year of entry into force

Convention – 1975

Protocol – 2006

### Type

Convention

### Last revision

2016

### Level

International

### Target stakeholders

Altogether 87 States are Contracting Parties to the Convention. Altogether 53 States are Contracting Parties to the Protocol.

### Short description

London Convention is one of the first global conventions to protect marine environment from human activities. Effective control of all sources of marine pollution as well as the practicable steps to prevent pollution of the sea by dumping of wastes has been promoted in this Convention. It regulates the various aspects of the dumping of various materials originating from the land into the sea. The London Convention consists of 22 Articles and three Annexes.

### Impact on environmental protection

The aim of the Convention is to control and prevent marine pollution in order to achieve continuous progress in keeping the oceans clean. Contracting Parties are expected to control effectively all sources of pollution of the marine environment and to prevent the pollution of the sea by dumping of waste and other matter that can cause hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea. The Organization (IMO) shall be informed if there are some actions, which can harm the marine environment.



### **Impact on safety and security**

Convention does not contain regulations directly dealing with safety and security. However, the regulations take into account that safety of human life or of vessels, aircraft, platforms or other man-made structures at sea in cases of force majeure caused by stress of weather might happen. Consequently, if the only way to avert danger or hazards to humans and vessel is to dump or if such dumping will minimize the likelihood of damage to human or marine life, it is a justified action.

### **Impact on exploitation**

The Convention deals primarily with land-generated waste. Consequently, disposals of wastes or other matter arising from or related to the exploration, exploitation and associated offshore processing of seabed mineral resources are not covered by this Convention.

### **Relevance for artificial reefs**

The Convention does not consider artificial reefs.

### **Relevance for natural reefs**

The Convention does not consider natural reefs.

### **Anticipated evolvement**

Contracting Parties adopted London Protocol to the Convention for further modernization of the Convention. The Protocol prohibits ocean dumping of any waste or other matter except for those that may be allowed (a "reverse list").

The Strategic Plan for the London Protocol/Convention was adopted on 18 October 2016 by the thirty-eighth Consultative Meeting of Contracting Parties to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972 (London Convention), and the eleventh Meeting of Contracting Parties to the 1996 Protocol to the London Convention. The Strategic Plan is developed to facilitate the implementation of the London Protocol and the London Convention and to advance the 2030 Agenda for Sustainable Development.

### **Web site**

<http://www.imo.org/en/OurWork/Environment/LCLP/Documents/LC1972.pdf>

## 2.3 International Convention for the Prevention of Pollution from Ships (MARPOL 73/78)

Protocol of 1978

### Originator

International Maritime Organization

### Year of adoption

Convention 1973

Protocol 1978

### Year of entry into force

1983

### Type

Convention

### Last revision

2018

### Level

International

### Target stakeholders

In total 158 states are Contracting Parties to this Convention.

### Short description

The International Convention for the Prevention of Pollution from Ships (MARPOL) is the main international legal instrument preventing pollution of the marine environment by ships from operational or accidental causes. It was developed to minimize pollution of the oceans and seas by oil, chemicals, harmful substances, sewage, garbage and air pollution substances. MARPOL currently includes six Annexes.

Although the Convention does not consider ships sailing in national waters, the standards set up in the Convention are widely used as a reference standard, where and if they are implementable.

### Impact on environmental protection

The Convention aims to prevent shipboard-generated pollution to reach marine environment. By setting the standards of shipboard equipment and operational requirements for ships, the Convention indirectly set up standards for other similar activities taking place at sea. The Convention has significantly improved environmental protection in all areas, in particular in those where intense maritime traffic takes place, and in special areas, as defined in the Convention.

### **Impact on safety and security**

The Convention imposes implementation of numerous measures that prevent accidents that may cause pollution of the marine environment, both constructive and operational. Consequently, these measures significantly improved safety records and minimized a number of pollutions.

### **Impact on exploitation**

The Convention does not consider exploitation of marine resources, except in respect of ships used in exploitation activities.

### **Relevance for artificial reefs**

The Convention does not directly address artificial reefs.

### **Relevance for natural reefs**

The Convention does not directly address natural reefs.

### **Anticipated evolvement**

Since 1984, the Convention has been amended 78 times. Considering the global need to improve environmental protection, in particular in lights of climate changes, the amendments of the MARPOL Convention in the future are highly probable.

### **Web site**

<http://www.mar.ist.utl.pt/mventura/Projecto-Navios-I/IMO-Conventions%20%28copies%29/MARPOL.pdf>

## 2.4 International Convention on Civil Liability for Bunker Oil Pollution (Bunker 2001)

### Originator

International Maritime Organization (IMO) – United Nations

### Year of adoption

2001

### Year of entry into force

2008

### Type

Convention

### Last revision

-

### Level

International

### Target stakeholders

Signatories of the Convention and for which this Convention is in force.<sup>1</sup>

### Short description

The Bunker Convention establishes the liability and compensation for damage and losses following oil spill damage from bunkers on board ships. The Convention applies exclusively to pollution damage caused in the territory, including the territorial sea, and in the exclusive economic zone of a State Party and to preventive measures to prevent or minimise such damage. This convention also follows the CLC 1992 model in that it establishes strict liability for the shipowner, but, unlike the CLC-Fund system, it is a single-tier regime and does not provide for a separate stand-alone limitation fund for additional compensation. It also does not contain an express limit of liability to the shipowner, but it preserves existing rights to limit liability, which the shipowner might have under national or international law. The Bunker Convention has taken into account the need to give adequate discipline also to situations of regulatory uncertainty relating to spills from ships not intended for the transport of hydrocarbons.

### Impact on environmental protection

The incidents caused by any bunker oil on board or originating from the ship are very frequent and equally serious compared to those caused by the transport of hydrocarbons. Having been observed that the damage by marine pollution related to bunker spill is even more serious, due to the physical characteristics particularly resistant to the

<sup>1</sup> See the status of IMO treaties in <http://www.imo.org/en/About/Conventions/StatusOfConventions/Documents/Status%20-%202019.pdf>.

depolluting treatments of hydrocarbons used as fuels with respect to crude oil, these incidents can impact very heavily on environmental protection.

#### **Impact on safety and security**

Convention does not contain regulations directly dealing with safety and security; however, pollution damages can be prevented or reduced also by actions or measures aimed at ensuring maritime safety/security.

#### **Impact on exploitation**

The Convention does not consider exploitation of marine resources.

#### **Relevance for artificial reefs**

The Convention does not consider artificial reefs.

#### **Relevance for natural reefs**

The Convention does not consider natural reefs.

#### **Anticipated evolvement**

Amendments to the Convention are not expected in a foreseeable future.

#### **Web site**

<https://almaesami.unibo.it/almaesami/personale/attivitaFormativaElenco-list.htm?execution=e1s1>

## 2.5 International Convention on Civil Liability for the Oil Pollution Damage (CLC 1969)

Protocol of 1976

Protocol of 1992

### Originator

International Maritime Organization (IMO) – United Nations

### Year of adoption

Convention – 1969

Protocol – 1976

Protocol – 1992

### Year of entry into force

Convention – 1975

Protocol (1976) – 1981

Protocol (1992) – 1996

### Type

Convention

### Last revision

2000 (Amendment to Protocol 1992)

### Level

International

### Target stakeholders

Signatories of the Convention (and of the Protocols) and for which this Convention (and these Protocols) is in force.<sup>2</sup>

### Short description

The International Convention on Civil Liability for Oil Pollution Damage (CLC) is completed by the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Fund), adopted in 1971, and they together constitute the CLC-Fund system. The CLC Convention applies exclusively to pollution damage caused on the territory including the territorial sea of a Contracting State and to preventive measures taken to prevent or minimize such damage. Pollution damage means loss or damage cause outside the ship carrying oil by contamination resulting from the escape or discharge of oil from the ship, wherever such escape or discharge may occur, and includes the costs of preventive measures and further loss or damage by preventive

<sup>2</sup> See the status of IMO treaties in <http://www.imo.org/en/About/Conventions/StatusOfConventions/Documents/Status%20-%202019.pdf>.

measures; preventive measures means any reasonable measures taken by any person after an incident has occurred to prevent or minimize pollution damage. The Convention establishes the owner's liability for any pollution damage caused by oil which has escaped or been discharged from the ship as a result of the incident (very few exceptions to this owner's liability). The Convention determines a maximum limit of owner's liability according to the tonnage of the ship. The aim of the Convention is to ensure an adequate compensation to persons who suffer oil pollution damage resulting from maritime casualties involving oil-carrying ships. Two Protocols to CLC Convention were adopted in 1976 and 1992.

#### **Impact on environmental protection**

The CLC Convention is a considerable stage in the inhibition of pollution and it was the first liability contract for pollution caused by oil. The CLC Convention compensates the spill-oil pollution harm, which is caused by the main tankers and is suffered by a State, which signed the Convention with the inclusion of territorial sea. Compensation must be paid for pollution of the sea or the environment.

#### **Impact on safety and security**

The CLC Convention and the Protocols do not contain regulations directly dealing with safety and security; however, pollution damages can be prevented or reduced also by actions or measures aimed at ensuring maritime safety/security.

#### **Impact on exploitation**

The Convention and the Protocols do not consider exploitation of marine resources.

#### **Relevance for artificial reefs**

The Convention and the Protocols do not consider artificial reefs.

#### **Relevance for natural reefs**

The Convention and the Protocols do not consider natural reefs.

#### **Anticipated evolvement**

Amendments to the Convention (or to the Protocols) are probably expected in a foreseeable future.

#### **Web site**

<http://www.admiraltylawguide.com/conven/civilpol1969.html>

## 2.6 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND 1971)

Protocol of 1976 (FUND PROT 1976)

Protocol of 1992 (FUND PROT 1992)

Protocol of 2000 (FUND PROT 2000)

Protocol of 2003 (FUND PROT 2003)

### Originator

International Maritime Organization (IMO) – United Nations

### Year of adoption

Convention – 1971 (Cessation in 2002)

Protocol – 1976

Protocol – 1992

Protocol – 2000

Protocol – 2003

### Year of entry into force

Convention – 1978

Protocol (1976) – 1994

Protocol (1992) – 1996

Protocol (2000) – 2001

Protocol (2003) – 2005

### Type

Convention

### Last revision

2003

### Level

International



### Target stakeholders

Signatories of the Convention and of the Protocols and for which these Convention and Protocols are in force.<sup>3</sup>

### Short description

Combined with the Civil Liability Convention (1969 CLC), the 1971 Fund Convention offered an international liability and compensation regime. The International Oil Pollution Compensation Fund was established with the aims to provide compensation for pollution damage to the extent that the protection afforded by the Liability Convention is inadequate; to give relief to shipowners in respect of the additional financial burden imposed on them by the Liability Convention; to give effect to the related purposes set out in this Convention. Protocols to the 1971 Convention were adopted in 1976 and 1984, but were superseded by the 1992 Protocol. The 1971 convention ceased to be in force from 24 May 2002. The Fund Convention, as amended by the Protocol of 1992 (Fund Convention 1992), which was supplementary to the CLC 1992, established a regime for compensating claimants when the compensation due under the 1992 CLC was inadequate or unavailable. The oil industry contributed to the fund with levies calculated on the basis of the imported quantity of qualifying oil. A Protocol to the Fund Convention 1992 was agreed in 2003 for the creation of a third tier of liability for oil pollution. This third tier, the Supplementary Fund, was agreed in recognition of the fact that the maximum compensation available under the CLC 1992/Fund Convention 1992 regime might be insufficient to meet compensation needs in certain circumstance in some Contracting States to that convention.

### Impact on environmental protection

The Convention and the Protocols primarily concerned with damage caused by oil carried as cargo in oil tankers, covering compensation for damage, including environmental damage, caused by ships.

### Impact on safety and security

The Convention and the Protocols do not contain regulations directly dealing with safety and security; however, pollution damages can be prevented or reduced also by actions or measures aimed at ensuring maritime safety/security.

### Impact on exploitation

The Convention and the Protocols do not consider exploitation of marine resources.

### Relevance for artificial reefs

The Convention and the Protocols do not consider artificial reefs.

### Relevance for natural reefs

The Convention and the Protocols do not consider natural reefs.

### Anticipated evolvement

Amendments to the Protocols are probably expected in a foreseeable future.

<sup>3</sup> See the status of IMO treaties in <http://www.imo.org/en/About/Conventions/StatusOfConventions/Documents/Status%20-%202019.pdf>.

**Web site**

[https://www.iopcfunds.org/fileadmin/IOPC\\_Upload/Downloads/English/DEC15E.pdf](https://www.iopcfunds.org/fileadmin/IOPC_Upload/Downloads/English/DEC15E.pdf)

## 2.7 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (Intervention 1969)

Protocol of 1973

### Originator

International Maritime Organization (IMO) – United Nations

### Year of adoption

Convention – 1969

Protocol – 1973

### Year of entry into force

Convention – 1975

Protocol – 1983

### Type

Convention

### Last revision

2007 (Amendments to Protocol)

### Level

International

### Target stakeholders

Signatories of the Convention and Protocol (with Amendments) and for which these Convention and Protocol are in force.<sup>4</sup>

### Short description

The Intervention Convention establishes the right of a Coastal State to take such measures on the high seas as may be necessary to prevent, mitigate or eliminate danger to its coastline or related interests from pollution by oil or the treat thereof, following upon a maritime casualty. The Coastal State is empowered to take only such action as it necessary, and after due consultations with appropriate interests including, in particular, the Flag States or States of the ship/ships involved, the owners of the ships or cargoes in question and, where circumstances permit, independent experts appointed to this purpose. In view of the increasing quantity of other substances, mainly chemical, carried by ships, some of which would, if released, cause serious hazard to the marine environment, the 1973 London Protocol relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil extended the regime of the 1969 Intervention Convention to these different substances.

<sup>4</sup> See the status of IMO treaties in <http://www.imo.org/en/About/Conventions/StatusOfConventions/Documents/Status%20-%202019.pdf>.

### **Impact on environmental protection**

The Contracting Parties may take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution of the sea. These measures shall be proportionate to the damage actual or threatened to it and in considering that, account shall be taken of the extent and probability of imminent damage if those measures are not taken; the likelihood of those measures being effective; the extent of the damage that may be caused by such measures.

### **Impact on safety and security**

Convention does not contain regulations directly dealing with safety and security; however, the adoption of actions or measures to ensure and improve maritime safety/security can contribute to reduce the marine pollution or simply the threat of pollution of the sea.

### **Impact on exploitation**

The Convention and Protocol do not consider exploitation of marine resources.

### **Relevance for artificial reefs**

The Convention and Protocol do not consider artificial reefs.

### **Relevance for natural reefs**

The Convention and Protocol do not consider natural reefs.

### **Anticipated evolvement**

Amendments to the Convention and Protocol are not expected in a foreseeable future.

### **Web site**

<https://sedac.ciesin.columbia.edu/entri/texts/intervention.high.seas.casualties.1969.html>

## 2.8 International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC 1990)

Protocol of 2000 (OPRC-HNS 2000)

### Originator

International Maritime Organization (IMO) – United Nations

### Year of adoption

Convention – 1990

Protocol – 2000

### Year of entry into force

Convention – 1995

Protocol – 2007

### Type

Convention

### Last revision

-

### Level

International

### Target stakeholders

Signatories of the Convention and Protocol and for which these Convention and Protocol are in force.<sup>5</sup>

### Short description

The Contracting Parties to the International Convention on Oil Pollution Preparedness, Response and Co-operation are required to establish measures for dealing with pollution incidents, either nationally or in co-operation with other countries. Ships are required to carry a shipboard oil pollution emergency plan. Operators of offshore units under the jurisdiction of Parties are also required to have oil pollution emergency plans or similar arrangements which must be co-ordinated with national systems for responding promptly and effectively to oil pollution incidents. Ships are required to report incidents of pollution to coastal authorities and the convention details the actions that are then to be taken. The Convention calls for the establishment of stockpiles of oil spill combating equipment, the holding of oil spill combating exercises and the development of detailed plans for dealing with pollution incidents. Parties to the convention are required to provide assistance to others in the event of a pollution emergency and provision is made for the reimbursement of any assistance provided. A Protocol to the OPRC relating to hazardous and noxious substances (OPRC-HNS Protocol) was adopted in 2000.

<sup>5</sup> See the status of IMO treaties in <http://www.imo.org/en/About/Conventions/StatusOfConventions/Documents/Status%20-%202019.pdf>.

### **Impact on environmental protection**

Considering the need to preserve the human environment in general and the marine environment and recognizing the serious threat posed to the marine environment by oil pollution incidents involving ships, offshore units, sea ports and oil handling facilities, the Contracting Parties shall undertake, individually or jointly, all appropriate measures in accordance with the provisions of this Convention and the Annex thereto to prepare for and respond to an oil pollution incident.

### **Impact on safety and security**

The OPRC Convention and related Protocol do not contain regulations directly dealing with safety and security; however, there may be connections between marine pollution protection and maritime safety/security.

### **Impact on exploitation**

The Convention and the Protocol do not consider exploitation of marine resources.

### **Relevance for artificial reefs**

The Convention and the Protocol do not consider artificial reefs.

### **Relevance for natural reefs**

The Convention and the Protocol do not consider natural reefs.

### **Anticipated evolvement**

Amendments to the Convention and Protocol are not expected in a foreseeable future.

### **Web site**

<https://treaties.un.org/doc/Publication/UNTS/Volume%201891/volume-1891-I-32194-English.pdf>

## 2.9 International Convention for the Safety of Life at Sea (SOLAS 1974)

Protocol of 1978

Protocol of 1988

### Originator

International Maritime Organization (IMO) – United Nations

### Year of adoption

Convention – 1974

Protocol – 1978

Protocol – 1988

### Year of entry into force

Convention – 1980

Protocol (1978) – 1981

Protocol (1988) – 2000

### Type

Convention

### Last revision

2019 (last amendments to Convention)

2015 (last amendment to the 1978 and 1988 Protocols)

### Level

International

### Target stakeholders

Signatories of the Convention and the Protocols and for which these Convention and Protocols are in force.<sup>6</sup>

### Short description

The SOLAS Convention in its successive forms is generally regarded as the most important of all international treaties concerning the safety of merchant ships. The main objective of the SOLAS Convention is to specify minimum standards for the construction, equipment and operation of ships, compatible with their safety. Flag States are responsible for ensuring that ships under their flag comply with its requirements, and a number of certificates are prescribed in the Convention as proof that this has been done. Control provisions also allow Contracting

<sup>6</sup> See the status of IMO treaties in <http://www.imo.org/en/About/Conventions/StatusOfConventions/Documents/Status%20-%202019.pdf>.

Governments to inspect ships of other Contracting States if there are clear grounds for believing that the ship and its equipment do not substantially comply with the requirements of the Convention - this procedure is known as port State control. The current SOLAS Convention includes Articles setting out general obligations, amendment procedure and so on, followed by an Annex divided into 14 Chapters. In particular, Chapter V (Safety of navigation) identifies certain navigation safety services that should be provided by Contracting Governments and sets forth provisions of an operational nature applicable in general to all ships on all voyages. This is in contrast to the Convention as a whole, which only applies to certain classes of ship engaged on international voyages. The 2002 Amendment introduced new measures to enhance maritime safety and security by the introduction of the Chapter XI-1 and the Chapter XI-2.

#### **Impact on environmental protection**

The SOLAS Convention specifies minimum standards for the construction, equipment and operation of ships, compatible with their safety, and imposes measures to improve maritime safety and security. The introduction of these standards and measures prevent and reduce accidents that may cause pollution of the marine environment.

#### **Impact on safety and security**

The SOLAS Convention specifies minimum standards for the construction, equipment and operation of ships, compatible with their safety and the 2002 Amendment to SOLAS Convention introduces measures to improve significantly maritime safety and security. In particular, the Chapter XI-1 (Special measures to enhance maritime safety) clarifies requirements relating to authorization of recognized organizations (responsible for carrying out surveys and inspections on Administrations' behalves); enhanced surveys; ship identification number scheme; and port State control on operational requirements. In the Chapter XI-2 (Special measures to enhance maritime security), Regulation XI-2/3 enshrines the International Ship and Port Facilities Security Code (ISPS Code). Part A of the Code is mandatory and part B contains guidance as to how to comply with the mandatory requirements.

#### **Impact on exploitation**

The SOLAS Convention and the Protocols do not consider exploitation of marine resources.

#### **Relevance for artificial reefs**

The SOLAS Convention and the Protocols do not consider artificial reefs.

#### **Relevance for natural reefs**

The SOLAS Convention and the Protocols do not consider natural reefs.

#### **Anticipated evolvement**

Amendments to the SOLAS Convention and to the Protocols are expected in a foreseeable future.

#### **Web site**

<http://www.imo.org/en/KnowledgeCentre/ReferencesAndArchives/HistoryofSOLAS/Pages/default.aspx>



## 2.10 Convention on Biological Diversity (CBD)

### Originator

United Nations

### Year of adoption

1992

### Year of entry into force

1993

### Type

Convention

### Last revision

2010

### Level

International

### Target stakeholders

In total 196 countries are parties to the Convention.

### Short description

The Convention on Biological Diversity is an international legally binding treaty with three main goals: conservation of biodiversity, sustainable use of biodiversity and fair and equitable sharing of the benefits arising from the use of genetic resources. Its overall objective is to encourage actions that will lead to a sustainable future. The governing body established by the Convention is the Conference of the Parties. They meet every two years to review progress, set priorities and commit to work plans. The Convention contains 42 Articles and 2 Annexes.

### Impact on environmental protection

The environmental protection is a substantial part of the Convention. According to the Convention, ecosystems, species and genetic resources should be used for the benefit of humans, but in a way that does not lead to the decline of biodiversity. Based on the precautionary principle, the Convention requires from the Parties 1) to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes and 2) to integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity. In that respect, the Parties are required to: 1) identify components of biological diversity important for its conservation and sustainable use, 2) monitor, through sampling and other techniques, the components of biological diversity, paying particular attention to those requiring urgent conservation measures and those which offer the greatest potential for sustainable use, 3) identify processes and categories of activities which have or are likely to have significant adverse impacts on the conservation and sustainable use of biological diversity, and monitor their effects, and 4) maintain and organize data, derived from identification and monitoring activities.

By requiring so, the Convention requires from the Parties to establish and maintain the system of protection of biodiversity, to cooperate with other Parties, and to improve consistently the environmental protection.

### **Impact on safety and security**

The Convention does not directly reference the safety and security issues.

### **Impact on exploitation**

The Convention regulates activities that may affect the biodiversity. In particular, it requires the Parties to implement environmental impact assessment for all activities that may influence biodiversity.

The requirement is, beyond any doubt, applicable to use and exploitation of marine resources. However, Parties have the sovereign right to exploit their own resources pursuant to their own environmental policies and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

### **Relevance for artificial reefs**

Although the Convention does not directly refer to artificial reefs, such structures may influence biodiversity on the site and consequently there is a need for environmental impact assessment before such structures are placed at the seabed. In that respect, decision to erect artificial reefs (implemented to improve local biodiversity or to increase its sustainability) is subject to environmental impact assessment. In principle, the sustainable use of biological diversity and marine environment, as well as the research and recreational use of the area, are welcome, as long as there are no harmful effects on the sea underwater and its inhabitants.

### **Relevance for natural reefs**

This Convention does not refer to natural reefs. Nevertheless, the activities that take place in the vicinity and may affect the natural reefs are subject to procedures required by the Convention to protect biodiversity in the area.

### **Anticipated evolvement**

During the meeting of the Conference of the Parties in 2010, State parties adopted a revised and updated Strategic Plan for Biodiversity for the 2011-2020 period. This plan provides an overarching framework on biodiversity, not only for the biodiversity-related conventions, but also for the entire United Nations system and all other partners engaged in biodiversity management and policy development. The fifteenth COP in 2020 is expected to update the Convention's strategic plan and adopt a post-2020 global biodiversity framework.

### **Web site**

<https://www.cbd.int/doc/legal/cbd-en.pdf>

## 2.11 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

### Originator

Government of Swiss Confederation (Depositary Government)

### Year of adoption

1963

### Year of entry into force

1975

### Type

Convention

### Last revision

2017

### Level

International

### Target stakeholders

The Convention has been signed by 183 Parties (182 countries and the European Union).

### Short description

The Convention presents an international agreement to ensure that international trade in specimens of wild animals and plants does not threaten their survival. It provides a framework for cooperation and collaboration among nations to prevent decline in wild populations of animals and plants. The Convention aims to reduce exploitation and regulate trade (import, export, re-export and introduction from the sea) of endangered species or those that might be endangered. It contains three appendices that are reviewed and can be changed at conferences of Contracting Parties. The Appendix I list species in which trade is banned in all but the most exceptional circumstances. Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to “avoid utilization incompatible with their survival”. Appendix III contains a list of species that are protected in at least one country, and who requested other Parties to assist in controlling the trade.

### Impact on environmental protection

The Convention aims to protect wild animals and plants from overexploitation. In the respect of marine environment, it particularly protects marine animals and plants that are living in areas where no states have jurisdiction (“introduction from the sea”). However, the Convention does not contain regulations requiring protective measures.

### Impact on safety and security

The Convention does not contain regulations dealing with safety and security issues.

### **Impact on exploitation**

The Convention directly regulates the trade of endangered species. Consequently, exploitation activities in any area where such species might be found or any activity involving species enlisted in one of Appendices of the Convention is affected by the Convention regulations.

### **Relevance for artificial reefs**

The Convention does not refer to natural reefs. Since artificial reefs are build up mostly to provide a habitat to endangered species or to provide nursery for marine life, implementation of the Convention regulations is most unlikely.

### **Relevance for natural reefs**

The Convention does not refer to natural reefs. Nevertheless, if artificial reefs are a habitat of species listed in one of the Appendices, the Convention regulations are applicable.

### **Anticipated evolvement**

New trade rules came into effect in 2017, when regulations for over 500 species entered into force, including high value marine and timber species. Parties adopted 51 proposals to change the listing status of over 500 species of wild animals and plants under Appendices, 39 resolutions (revised or new) and 351 decisions.

### **Web site**

<https://www.cites.org/sites/default/files/eng/disc/CITES-Convention-EN.pdf>

## 2.12 Convention on the Conservation of Migratory Species of Wild Animals (CMS)

### Originator

United Nations Environmental Programme (UNEP)

### Year of adoption

1979

### Year of entry into force

1983

### Type

Convention

### Last revision

-

### Level

International

### Target stakeholders

The Convention has been signed by 127 Parties

### Short description

This Convention aims to protect migratory species by providing strict protection for certain endangered migratory species and by seeking to connect states hosting certain migratory species to conclude agreements for their conservation and management. It provides a global platform for the conservation and sustainable use of migratory species and their habitats (the conservation and management of terrestrial, aquatic and avian migratory species throughout their range). The Convention consists of 20 Articles and 2 Appendix; Appendix I lists threatened migratory species and Appendix II contains migratory species requiring international cooperation.

### Impact on environmental protection

The Convention aims to protect migratory species of wild animals from overexploitation. Although the Convention does not provide protective measures directly, the measures are provided in agreements concluded between or among range states, i.e. states covering a habitat for particular migratory species. Particular protection is required for migratory species with the unfavourable conservation status.

### Impact on safety and security

The Convention does not contain regulations dealing with safety and security issues.

### **Impact on exploitation**

The Convention requires the protection of endangered migratory species or species that might be endangered. Consequently, exploitation activities in any area where such species might be found or any activity involving species enlisted in one of Appendices of the Convention is affected by the Convention regulations.

### **Relevance for artificial reefs**

The Convention does not regulate activities or status of artificial reefs. Consequently, there are no direct impacts of the Convention to artificial reefs, unless they are constructed in areas where significant migrations take place. In that case, adopted protective measures may influence activities taking place in the area.

### **Relevance for natural reefs**

The Convention does not refer to activities or status of the natural reef areas. Consequently, there are no implications for natural reefs, unless they are in areas where significant migrations take place. In that case, adopted protective measures may influence activities taking place in the area.

### **Anticipated evolvement**

The Conference of the Parties takes place every three years when amendments to the Convention, its Appendices and rules of procedure may be adopted. In addition, the provisions of the Convention do not affect the right of Parties to adopt stricter domestic measures concerning the conservation of migratory species listed in Appendix I and II.

### **Web site**

[https://www.cms.int/sites/default/files/instrument/CMS-text.en\\_.PDF](https://www.cms.int/sites/default/files/instrument/CMS-text.en_.PDF)

## 2.13 Convention on Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR)

### Originator

United Nations

### Year of adoption

1971

### Year of entry into force

1975

### Type

Convention

### Last revision

2015

### Level

International

### Target stakeholders

There are now 170 Contracting Parties to the Convention. Any member of the UN or of one of the specialized agencies or of the International Atomic Energy Agency or Party to the Statute of the International Court of Justice may become a Party to this Convention.

### Short description

The Convention is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. The aims are to halt the worldwide loss of wetlands and to conserve through wise use and management those that remain. The Convention uses a broad definition of the types of wetlands covered in its mission, including lakes and rivers, swamps and marshes, wet grasslands and peatlands, oases, estuaries, deltas and tidal flats, near-shore marine areas, mangroves and coral reefs, and human-made sites such as fish ponds, rice paddies, reservoirs, and salt pans. Original text has 12 Articles.

### Impact on environmental protection

The Convention encourages the designation of sites containing representative, rare, or unique wetlands, or wetlands that are important for conserving biological diversity. These sites are added to the Convention's List of Wetlands of International Importance and become known as Ramsar sites. Parties agree to establish and oversee a management framework aimed at conserving the wetland and ensuring its wise use. Wetlands can be included on the List of Wetlands of International Importance because of their ecological, botanical, zoological, limnological or hydrological importance. Consequently, the Convention provides mechanism for clear designation of the environmentally protected areas.

### **Impact on safety and security**

The Convention does not regulate safety or security issues. Consequently, there is no impact on the safety or security.

### **Impact on exploitation**

Wetlands are cradles of biological diversity, providing the water and primary productivity upon which countless species of plants and animals depend for survival. As wetlands are a resource of great economic, cultural, scientific, and recreational value, the loss of them may be irreparable. Conservation of wetlands and their flora and fauna can be ensured by combining far-sighted national policies with co-ordinated international action.

Consequently, the majority of exploitative activities are not acceptable within the Ramsar sites. Depending on features of the site and national policy, economic activities might be restricted even in neighbouring areas.

### **Relevance for artificial reefs**

Under the Convention, a wide variety of natural and human-made habitat types are recognized. Marine wetlands may be coastal wetlands including coastal lagoons, rocky shores, seagrass beds and coral reefs. However, it is required that wetlands are recognized by “their international significance in terms of ecology, botany, zoology, limnology or hydrology.” If marine wetland is recognized as such and is recognized as an area of international significance, it may be protected by appropriate measures. In addition, the indirect influence may be effective even in the neighbouring areas.

### **Relevance for natural reefs**

The Convention defines wetlands as “areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.” Consequently, natural reefs may be included on the list of wetlands and be protected accordingly. However, it is required that wetlands are recognized by “their international significance in terms of ecology, botany, zoology, limnology or hydrology.” If included on the List the area may be protected by appropriate measures.

### **Anticipated evolvement**

The Contracting Parties approved the Fourth Ramsar Strategic Plan for 2016-2024 at COP12. The Plan lays out a new vision under the Convention mission, four overall goals (addressing the drivers of wetland loss and degradation, effectively conserving, and managing the Ramsar Site Network, wisely using all wetlands, enhancing implementation) and 19 specific targets which are designed to support the efforts of Parties, partners, and other stakeholders in preventing, stopping, and reversing the global decline of wetlands.

### **Web site**

<https://www.un-documents.net/ramsar.htm>



## 2.14 United Nations Convention Concerning the Protection of the World Cultural and Natural Heritage

### Originator

United Nations Educational, Scientific and Cultural Organization (UNESCO)

### Year of adoption

1972

### Year of entry into force

1975

### Type

Convention

### Last revision

2015

### Level

International

### Target stakeholders

The Convention has 193 State Parties. It is open also for States not members of UNESCO.

### Short description

The World Heritage Convention is a global instrument for the protection of cultural and natural heritage. It promotes cooperation among nations to protect heritage around the world that is of such outstanding universal value that its conservation is important for current and future generations. States that parties to the Convention agree to identify, protect, conserve, and present World Heritage properties located in their territory. They agree to do all they can with their own resources to protect their World Heritage properties. The Convention establishes World Heritage List, a list of properties that have outstanding universal value. The Convention contains 38 articles divided into eight parts.

### Impact on environmental protection

Natural heritage, as a term, includes natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the point of view of science, conservation, or natural beauty. Each State Party to this Convention shall take appropriate legal, scientific, technical, administrative, and financial measures necessary for the identification, protection, conservation, presentation, and rehabilitation of this heritage. Therefore, the Convention directly imposes appropriate environmental protection measures within the areas declared as World Heritage sites.

### Impact on safety and security

In respect of sites included on the List of World Heritage in danger, it is assumed that appropriate safety and security measures will be in place in order to prevent or to minimize damage caused by human-made or natural disasters.

However, there is no regulations requiring safety and security measures (except those included in a comprehensive management plan that sets out adequate preservation measures and monitoring mechanisms).

### **Impact on exploitation**

Exploitation of the sites included on the List of World Heritage is generally restricted only to activities that are not detrimental to outstanding universal value that should be protected and conserved for current and future generations.

### **Relevance for artificial reefs**

In exceptional cases, an artificial reef of exceptional and universal value can be included in the List of World Heritage and as such will be protected. However, it will be the extreme case and therefore relevance of the Convention for artificial reefs is considered negligible.

### **Relevance for natural reefs**

In order to be considered as "natural heritage" the area has to be recognized due to: "1) natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view; 2) geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation; natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty."

If one or more previously mentioned features are recognized, a natural reef may be declared as a natural heritage site. If declared as such (in accordance with prescribed procedure), appropriate protective measures may be implemented.

### **Anticipated evolvement**

The adoption of the sustainable development policy in 2015 offers an opportunity for states parties and practitioners to use World Heritage as a platform to develop and test new approaches that demonstrate the relevance of heritage for sustainable development, thereby contributing towards the implementation of the United Nations' Agenda 2030 for Sustainable Development. The Convention also became a major global platform, bringing people together from both culture and nature disciplines, and aiming to set new standards for heritage conservation.

In July 2018, there were 1092 World Heritage Sites located in 167 States Parties (countries that have signed the Convention), of which 845 are cultural, 209 are natural and 38 are of mixed properties. It is expected that new sites will be added to the List. Some of the world's largest reefs (Australia's Great Barrier Reef, Cabo Pulmo), have been designated as the World Heritage Sites under the UNESCO World Heritage Convention. Consequently, it is probable that more reefs will be placed on the Lists in the coming period.

### **Web site**

<https://whc.unesco.org/archive/convention-en.pdf>

## 2.15 United Nations Framework Convention on Climate Change (UNFCCC)

### Originator

United Nations

### Year of adoption

1992

### Year of entry into force

1994

### Type

Convention

### Last revision

-

### Level

International

### Target stakeholders

In total 197 State Parties – all member states of the United Nations, as well as Palestine, Niue, Cook Islands and the European Union

### Short description

The ultimate objective of the Convention is to stabilize greenhouse gas concentrations "at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system." Such a level should be achieved within a period sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner. Convention has 26 Articles and 2 Annexes.

### Impact on environmental protection

The Convention mainly deals with prevention of the climate changes, i.e. human-induced changes to atmospheric processes. Adverse effects of climate change include changes in the physical environment or biota, which have significant deleterious effects on the composition, resilience, or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare.

### Impact on safety and security

The Convention does not refer to safety and security aspects.

### Impact on exploitation

Although State Parties have the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies, it is expected that such exploitation does not cause damage to the environment, to

other States or to areas beyond the limits of national jurisdiction. Consequently, national policies developed to tackle the goals defined in the Convention may, and as a rule does, influence exploitation of the areas under consideration.

#### **Relevance for artificial reefs**

The Convention does not deal with artificial reefs, unless there is such activity that releases substances with significant impact on climate changes. Even in that case, the assessment and subsequent actions will take place in accordance with national regulations.

#### **Relevance for natural reefs**

The Convention does not deal with natural reefs, unless there is such activity that releases substances with significant impact on climate changes. Even in that case, the assessment and subsequent actions will take place in accordance with national regulations.

#### **Anticipated evolvement**

Preventing dangerous human interference with the climate system is the ultimate aim of the UNFCCC. Industrialized countries have to report regularly on their climate change policies and measures, as well as submit an annual inventory of their greenhouse gas emissions. With these reports, it is much easier to address climate change and to adapt to its impacts for present and future generations. Action for Climate Empowerment is focusing on six priority areas: education, training, public awareness, public participation, public access to information, and international cooperation on these issues. The implementation of all six areas has been identified as the central factor for everyone to understand and participate in solving the complex challenges presented by climate change.

#### **Web site**

<https://unfccc.int/resource/docs/convkp/conveng.pdf>

## 2.16 Convention for Protection of the Mediterranean Sea against Pollution (Barcelona Convention)

### Originator

United Nations Environment Programme

### Year of adoption

1976

### Year of entry into force

1978

### Type

Convention

### Last revision

1995 (2004)

### Level

Regional – Mediterranean Sea area

### Target stakeholders

Parties are all countries of the Mediterranean Sea and European Union

### Short description

The Convention aims to prevent, abate, combat and to eliminate pollution of the Mediterranean Sea area caused by dumping from ships and aircrafts, or by incineration at sea, discharges from ships, exploration and exploitation of the continental shelf, and the seabed and its subsoil, land-based sources and transboundary movements and disposal of hazardous wastes. The Convention consists of 35 Articles and Annex A.

### Impact on environmental protection

The main goal of the Barcelona Convention is to protect from further pollution and to depollute the Mediterranean Sea, including measures to conserve and preserve the natural resources of the Mediterranean Sea Area. In order to reach the target goals, Contracting Parties adopted, beside the Convention, seven Protocols, each one covering the particular area of activity, and with appropriate set of measures and procedures. Protocols include Dumping Protocol (from ships and aircraft), Prevention and Emergency Protocol (pollution from ships and emergencies), Land-based Sources and Activities Protocol, Specially Protected Areas and Biological Diversity Protocol, Offshore Protocol (pollution from exploration and exploitation), Hazardous Wastes Protocol, and Protocol on Integrated Coastal Zone Management (ICZM).

### Impact on safety and security

In respect of safety and security issues, the Convention, and associated Protocols rely on agreed international standards, mostly those adopted under IMO patronage (SOLAS, MARPOL, and Dumping). Consequently,

measures adopted by Convention and protocols are mostly organizational and coordinative measures, aiming to ensure harmonized approach or action in case of pollution of the sea, or in respect of protective measures.

### **Impact on exploitation**

The Convention requires from Contracting Parties to take all appropriate measures to prevent, abate, combat, and fully eliminate pollution of the Mediterranean Sea Area resulting from exploration and exploitation of the Mediterranean Sea, its continental shelf and the seabed and its subsoil. By doing so, the Convention requires from Contracting Parties to act as uniform and in coordination as possible.

### **Relevance for artificial reefs**

The Convention does not contain specific requirements in respect of artificial reefs. Therefore, artificial reefs are considered as having the same protective status as any other sea areas. Nevertheless, a number of requirements indirectly relating to artificial reefs can be identified.

### **Relevance for natural reefs**

Like artificial reefs, the Convention does not specifically address natural reefs. They are considered as any other sea area in respect of protecting the marine environment and coastal regions. The prevention and reducing of pollution and, as far as possible, its elimination is carried out through harmonized actions.

### **Anticipated evolvement**

The Mediterranean Action Plan is the institutional framework for cooperation in addressing common challenges of marine environmental degradation. The components of the MAP are highly active within their scope of work. Consequently, the numerous activities are and will be taking pace in the future, ranging from regular meetings of the Contracting Parties to the Barcelona Convention to workshops and meetings at various levels and dealing with numerous issues. Significant amendments to the Barcelona Convention and its protocols are not expected.

### **Web site**

<http://www.ypeka.gr/LinkClick.aspx?fileticket=30r%2B7BeaSOo%3D&tabid=406&language=el-GR>

### 3 European Legal Framework

### 3.1 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - An Integrated Maritime Policy for the European Union

**Originator**

The EU Commission

**Year of adoption**

2007

**Year of entry into force**

-

**Type**

Communication (EU)

**Last revision**

-

**Level**

International - European Union

**Target stakeholders**

EU Member States, governments, agencies, organizations, individuals

**Short description**

The communication contains the Commission's vision for an integrated maritime policy that covers all aspects of our relationship with the oceans and seas. It is aimed to ensure that sea-related policies are developed in a joined-up way in order to allow the extraction of value from the sea and at the same time addressing the cumulated effect of conflicts of use and the deterioration of the marine environment.

**Impact on environmental protection**

The document addresses several issues dealing with environmental protection, in particular the following:

- An European network for maritime surveillance
- A Roadmap towards maritime spatial planning by Member States
- A Strategy to mitigate the effects of Climate Change on coastal regions
- Reduction of CO2 emissions and pollution by shipping
- Elimination of pirate fishing and destructive high seas bottom trawling



### **Impact on safety and security**

The document does not directly address safety and security issues. Nevertheless, several action items have significant effects on maritime safety and security (for example, maritime surveillance system as well as actions promoting maximising the sustainable use of the oceans and seas).

### **Impact on exploitation**

The document, as its primary goal, identifies creation of optimal conditions for the sustainable use of the oceans and seas, enabling the growth of maritime sectors and coastal regions. In addition, as one of the pillars the document emphasizes the importance of fisheries management. The document is a policy document and as such it does contain only general measures.

### **Relevance for artificial reefs**

The document does not contain references to artificial reefs.

### **Relevance for natural reefs**

The document does not contain references to natural reefs.

### **Anticipated evolvement**

Further development of the document is not expected. Nevertheless, the areas dealt with will be considered in the future policy document.

### **Web site**

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52007DC0575&from=EN>

### 3.2 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Blue Growth Opportunities for Marine and Maritime Sustainable Growth

**Originator**

The EU Commission

**Year of adoption**

2012

**Year of entry into force**

2012

**Type**

Communication (EU)

**Last revision**

-

**Level**

International - European Union

**Target stakeholders**

EU Member States, governments, agencies, organizations, individuals

**Short description**

The document contains the long-term strategy (Blue Growth) adopted by European Union in 2012 to support sustainable growth in the marine and maritime sectors as a whole, recognizing that seas and oceans are fundamental drivers for the European economy. It is the maritime contribution to achieving the goals of the Europe 2020 strategy for smart, sustainable and inclusive growth. The strategy consists of three components:

1. Develop sectors that have a high potential for sustainable jobs and growth, such as a. aquaculture; b. coastal tourism; c. marine biotechnology; d. ocean energy; e. seabed mining
2. Essential components to provide knowledge, legal certainty and security in the blue economy: a. marine knowledge to improve access to information about the sea; b. maritime spatial planning to ensure an efficient and sustainable management of activities at sea; c. integrated maritime surveillance to give authorities a better picture of what is happening at sea.
3. Sea basin strategies to ensure tailor-made measures and to foster cooperation between countries: a. Adriatic and Ionian Seas; b. Arctic Ocean; c. Atlantic Ocean; d. Baltic Sea; e. Black Sea; f. Mediterranean Sea; g. North Sea.

### **Impact on environmental protection**

The document does not contain direct references to environmental protection although wording clearly implies it as a mandatory component of all focus areas.

### **Impact on safety and security**

The document does not contain references to maritime safety and security.

### **Impact on exploitation**

The document extensively deals with exploitation of marine resources, the most prominent areas being: a) blue energy, b) aquaculture, c) maritime, coastal and cruise tourism, d) marine mineral resources, and e) blue biotechnology. As a policy document, it does not contain measures and actions to be carried out.

### **Relevance for artificial reefs**

Although artificial reefs are not directly mentioned, they are considered under several focus areas.

### **Relevance for natural reefs**

Although natural reefs are not directly mentioned, they are considered under several focus areas.

### **Anticipated evolvement**

Further development of the document is not expected. Nevertheless, the areas dealt with will be considered in the future policy document.

### **Web site**

<https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52012DC0494>

### 3.3 Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy

Amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC

#### Originator

The European Parliament and the Council

#### Year of adoption

2013

#### Year of entry into force

2013

#### Type

Regulation (EU)

#### Last revision

-

#### Level

International - European Union

#### Target stakeholders

EU Member States, governments, agencies, organizations, individuals

#### Short description

The scope of the CFP includes the conservation of marine biological resources and the management of fisheries targeting them. In addition, it includes, in relation to market measures and financial measures in support of its objectives, fresh water biological resources and aquaculture activities, as well as the processing and marketing of fishery and aquaculture products, where such activities take place on the territory of Member States or in Union waters, including by fishing vessels flying the flag of, and registered in, third countries by Union fishing vessels or by nationals of Member States. The CFP ensures that fishing and aquaculture activities contribute to long-term environmental, economic, and social sustainability. It includes rules that aim to ensure the traceability, security and quality of products marketed in the Union. The CFP aims to contribute to the Europe 2020 Strategy for smart, sustainable, and inclusive growth, and should help to achieve the objectives set out therein.

#### Impact on environmental protection

The principles of marine environmental protection are clearly enacted in the act. Part III of the act (the largest one) is entitled "Measures for the conservation and sustainable exploitation of marine biological resources", and contains measures and actions to ensure conservation and sustainable exploitation.

#### Impact on safety and security

The act does not contain measures dealing with safety and security.

### **Impact on exploitation**

The act lays down a framework and measures ensuring the sustainable exploitation of marine resources at the EU level. It aims to ensure that fishing and aquaculture are environmentally, economically and socially sustainable and that they provide a source of healthy food for EU citizens. Its goal is to foster a dynamic fishing industry and ensure a fair standard of living for fishing communities. The CFP has enormous potential to deliver the building blocks for sustainable fisheries that respect the ecosystem as well as providing high quality, healthy fish products for European citizens, thriving coastal communities, profitable industries producing and processing fish, and attractive and safer jobs.

### **Relevance for artificial reefs**

The act does not reference artificial reefs.

### **Relevance for natural reefs**

The act does not reference natural reefs.

### **Anticipated evolvement**

Further development of the document is not expected. Nevertheless, the areas dealt with will be considered in the future policy document.

### **Web site**

<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1566596244126&uri=CELEX:32013R1380>

### 3.4 Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund

And repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council

#### Originator

The European Parliament and the Council

#### Year of adoption

2014

#### Year of entry into force

-

#### Type

Regulation (EU)

#### Last revision

2017

#### Level

International - European Union

#### Target stakeholders

EU Member States, governments, agencies, organizations, individuals

#### Short description

The EMFF is the fund supporting the EU's maritime and fisheries policies for 2014-2020. It is one of the five European Structural and Investment (ESI) Funds which complement each other and seek to promote a growth and job based recovery. The fund aims to help fishermen in the transition to sustainable fishing, supports coastal communities in diversifying their economies, finances projects that create new jobs and improve quality of life along European coasts, provides financing for certain activities. The European Maritime and Fisheries Fund (EMFF) is established to contribute to the achievement of the following objectives:

- promoting competitive, environmentally sustainable, economically viable and socially responsible fisheries and aquaculture;
- fostering the implementation of the CFP;
- promoting a balanced and inclusive territorial development of fisheries and aquaculture areas;
- fostering the development and implementation of the Union's IMP in a manner complementary to cohesion policy and to the CFP.

For each of the mentioned objectives the more specific objectives are adopted. The pursuit of those objectives shall not result in an increase in fishing capacity.

### **Impact on environmental protection**

The Fund supports numerous activities and measures aiming to enhance environmental protection of the marine eco-system. The document contains detailed description of supported activities.

### **Impact on safety and security**

The Fund supports investments covering safety, working conditions, health and hygiene on board, provided that the investment supported goes beyond requirements under Union or national law.

### **Impact on exploitation**

The Fund extensively supports sustainable exploitation, i.e. exploitation carried out so to ensure long-term sustainability of marine resources. Consequently, the Fund does not support increase in fishing capacity but promotes aquaculture and related measures.

### **Relevance for artificial reefs**

The document does not reference artificial reefs.

### **Relevance for natural reefs**

The document does not reference natural reefs.

### **Anticipated evolvement**

The document is expected to be amended, if circumstances require so (through mechanism known as Commission delegated regulation).

### **Web site**

<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1566596244126&uri=CELEX:32014R0508>

### 3.5 Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive)

**Originator**

The European Parliament and of the Council

**Year of adoption**

2008

**Year of entry into force**

-

**Type**

Directive (EU)

**Last revision**

2017

**Level**

International - European Union

**Target stakeholders**

EU Member States, governments, agencies, organizations, individuals (Member States having marine waters)

**Short description**

The Directive establishes a framework within which Member States shall take the necessary measures to achieve or maintain good environmental status in the marine environment by the year 2020 at the latest. In that sense the Directive contributes to the fulfilment of the obligations and commitments of the Community and the Member States under several relevant international agreements relating to the protection of the marine environment from pollution: the Convention on the Protection of the Marine Environment of the Baltic Sea Area, approved by Council Decision 94/157/EC, the Convention for the Protection of the Marine Environment of the North-East Atlantic, approved by Council Decision 98/249/EC, the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean, as well as its Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources. This Directive should also contribute to the fulfilment of Member States' obligations under the Convention on the Protection of the Black Sea Against Pollution.

The Directive requires from Member States, in respect of each marine region or subregion concerned, to develop a marine strategy for its marine waters in accordance with the plan of action, using existing regional institutional cooperation structures, including those under Regional Sea Conventions, covering that marine region or subregion.

It contains, among other, qualitative descriptors for determining good environmental status, indicative lists of characteristics, pressures and impacts, and indicative list of characteristics to be taken into account for setting



environmental targets. In addition, it provides the overall descriptors of the monitoring programmes and program of measures.

#### **Impact on environmental protection**

The Directive provides a comprehensive and cohesive framework for environmental protection of the European waters, requiring Member States to consistently implement already agreed international agreements. Accordingly, it states that “the marine environment is a precious heritage that must be protected, preserved and, where practicable, restored with the ultimate aim of maintaining biodiversity and providing diverse and dynamic oceans and seas which are clean, healthy and productive. In that respect, this Directive should, inter alia, promote the integration of environmental considerations into all relevant policy areas and deliver the environmental pillar of the future maritime policy for the European Union.” Consequently, it may be considered as a top-level EU policy document in respect of the marine environmental protection.

#### **Impact on safety and security**

The Directive does not contain direct references to safety and security.

#### **Impact on exploitation**

The Directive does not contain requirements dealing with exploitation of marine resources. Nevertheless, its implementation significantly impacts exploitation activities requiring to be carried out in environmentally friendly manner.

#### **Relevance for artificial reefs**

The Directive does not reference artificial reefs.

#### **Relevance for natural reefs**

The Directive does not reference natural reefs.

#### **Anticipated evolvement**

Further development of the document is not expected. Nevertheless, if needs arise the directive might be amended by the Council Directive (as it has been done by the Commission Directive (EU) 2017/845 of 17 May 2017 amending Directive 2008/56/EC of the European Parliament and of the Council as regards the indicative lists of elements to be taken into account for the preparation of marine strategies).

#### **Web site**

<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1566913065390&uri=CELEX:32008L0056>

### 3.6 Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning

**Originator**

The European Parliament and of the Council

**Year of adoption**

2014

**Year of entry into force**

-

**Type**

Directive (EU)

**Last revision**

-

**Level**

International - European Union

**Target stakeholders**

EU Member States, governments, agencies, organizations, individuals

**Short description**

The Directive establishes a framework for maritime spatial planning, promoting the sustainable growth of maritime economies, the sustainable development of marine areas and the sustainable use of marine resources. When establishing and implementing maritime spatial planning, Member States shall consider economic, social and environmental aspects to support sustainable development and growth in the maritime sector, applying an ecosystem-based approach, and to promote the coexistence of relevant activities and uses. Through their maritime spatial plans, Member States shall aim to contribute to the sustainable development of energy sectors at sea, of maritime transport, and of the fisheries and aquaculture sectors, and to the preservation, protection and improvement of the environment, including resilience to climate change impacts. In addition, Member States may pursue other objectives such as the promotion of sustainable tourism and the sustainable extraction of raw materials.

**Impact on environmental protection**

The maritime planning framework aims to ensure sustainable development of all activities taking place in coastal areas. However, as a policy document it does not contain specific measures to ensure environmental protection.

**Impact on safety and security**

The document does not contain direct references to safety and security.

### **Impact on exploitation**

The document set up a basis for sustainable and coordinated use of maritime areas. However, as a policy document it does not contain measures regulating exploitation of marine resources.

### **Relevance for artificial reefs**

The document does not reference artificial reefs.

### **Relevance for natural reefs**

The document does not reference natural reefs.

### **Anticipated evolvement**

Further development of the document is not expected. Nevertheless, the areas dealt with may be considered in the future policy document.

### **Web site**

<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1566601381470&uri=CELEX:32014L0089>

### 3.7 Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment

As amended by Directive 2014/52/EU of the European Parliament and of the Council of 16 April 2014.

#### Originator

The European Parliament and European Council

#### Year of adoption

1985

#### Year of entry into force

1985

#### Type

Directive (EU)

#### Last revision

2014

#### Level

International - European Union

#### Target stakeholders

EU Member States, governments, agencies, organizations, individuals

#### Short description

This Directive sets out rules for procedures of assessment of the possible impact of public and private projects on the environment. In order to determine minimum requirements that have to be met in each Member State, this Directive contains a list of projects divided by their special features (such as capacity, size, etc..) and procedures that are obligatory for them (Environmental Impact Assessment - EIA or EIA Screening).

#### Impact on environmental protection

This Directive prescribes the standards for any activity or project that could have impact on the environment including biodiversity and natural resources. This is especially interesting in the light of exploitation of natural reefs and in the light of creating artificial reefs. All activities that could likely have an impact on the environment have to undergo administrative procedure called- Environmental Impact Assessment (EIA).

Environmental Impact Assessment is an assessment of the potential significant environmental impacts of the project determined by this Directive.

Environmental Impact Assessment assesses, describes and evaluates, in an appropriate manner, the impact of environmental interventions, to determine possible direct and indirect impacts of interventions on soil, water, sea, air, forest, climate, humans, plant and animal world, natural values, landscape, material assets, cultural heritage,

considering their interdependencies. The environmental impact assessment must ensure the implementation of the precautionary principle at the early stage of the project planning in order to minimize the impact of the project and to achieve the highest possible environmental quality preservation, achieved by harmonizing and adapting the intended environmental acceptability to a given area.

This directive stipulates that Member States shall adopt all measures necessary to ensure that, before development consent is given, projects likely to have significant effects on the environment by virtue, inter alia, of their nature, size or location are made subject to a requirement for development consent and an assessment with regard to their effects on the environment.

Public participation during EIA is mandatory according to this Directive and very much in line with spirit and intention of Aarhus Convention.

### **Impact on safety and security**

The Directive does not contain regulations dealing with safety and security.

### **Impact on exploitation**

The Directive prescribes obligatory administrative procedure that must be carried if certain project is planned. Since the introduction of artificial reef may be a project for which EIA screening procedure is prescribed in certain Member State (as it is in Croatia) this directive is relevant for any future activities of those reefs.

### **Relevance for artificial reefs**

See previous paragraph.

### **Relevance for natural reefs**

This Directive prescribes procedures and measures for protection of natural resources in case of development of new project in the certain location. Since natural reefs may be important natural resource to pay attention to in the stage of development of certain project, this Directive becomes relevant legal act in that case.

### **Anticipated evolvement**

Since this Directive contains basic legal requirements, mostly dependent on recent technological advances and especially improvement of environmental protection, the future amendments are expected.

### **Web site**

<http://data.europa.eu/eli/dir/2014/52/oj>

### 3.8 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

#### Originator

European Council

#### Year of adoption

1992

#### Year of entry into force

1992

#### Type

Directive (EU)

#### Last revision

2013

#### Level

International - European Union

#### Target stakeholders

Member States, Governments, agencies, organizations, individuals

#### Short description

Adopted in 1992, the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora aims to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements. It forms the cornerstone of Europe's nature conservation policy with the Birds Directive and establishes the EU wide Natura 2000 ecological network of protected areas, safeguarded against potentially damaging developments.

The Habitats Directive ensures the conservation of a wide range of rare, threatened or endemic animal and plant species. Some 200 rare and characteristic habitat types are also targeted for conservation in their own right.

#### Impact on environmental protection

Main goals of this Directive are to preserve EU biodiversity and to ensure sustainable use of natural resources. Therefore, this Directive as a cornerstone of EU nature conservation policies plays a key role in forming environmental protection policies as well. Good status of habitats and species in certain area is crucial precondition for efficient protection of its environment. This Directive was a foundation to designate special areas of conservation into one coherent European ecological network- Natura 2000 network with special rules set out for planning activities and projects on these sites. Since this Directive (in its scope) sets clear legal framework for land use through special assessment procedure (Appropriate Assessment - AA) it plays important role in environmental protection by offering another screening procedure for most sensitive areas (besides Environmental Impact Assessment).

### **Impact on safety and security**

The Directive does not contain regulations dealing with safety and security.

### **Impact on exploitation**

The Directive prescribes obligatory administrative procedure, Appropriate Assessment that must be carried if certain project is planned on Natura 2000 site. Since natural reefs are recognized and designated as Natura 2000 sites in many EU countries this means that in practice, any project that aims to exploit natural reefs has to be a subject to Appropriate Assessment accordingly to the Article 6 of the Directive. This Directive stipulates an obligation to every Member State to introduce these procedures in their legal systems.

### **Relevance for artificial reefs**

This directive has no relevance for artificial reefs.

### **Relevance for natural reefs**

This Directive sets clear rules for exploitation and management of natural reefs that are Natura2000 sites on the EU territory.

### **Anticipated evolvement**

No amendments in near future are expected.

### **Web site**

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:01992L0043-20130701&from=EN>

## 4 International soft laws and guidelines



## 4.1 Code of Conduct for Responsible Fisheries

### Originator

Food and Agricultural Organization of the United Nations Conference (FAO)

### Year of adoption

1995

### Year of entry into force

NA

### Type

Code

### Last revision

-

### Level

International

### Target stakeholders

It is directed toward members and non-members of the United Nations FAO, fishing entities, sub-regional, regional, and global organizations (governmental and nongovernmental), everyone concerned with conserving fishery resources, managing fisheries, and developing fisheries and other users of the aquatic environment related with fisheries.

### Short description

The Code is voluntary but certain parts of it are based on relevant rules of international law. It provides principles and standards applicable to the conservation, management and development of all fisheries. It also covers the capture, processing and trade of fish and fishery products, fishing operations, aquaculture, fisheries research and integration of fisheries into coastal area management. The objective of the Code is to establish principles, criteria and guidance to facilitate the exploitation and utilization of fisheries resources in a responsible and sustainable manner. The Code of Conduct for Responsible Fisheries consists of 12 Articles and two Annexes.

### Impact on environmental protection

The Code follows all relevant international conventions regulating environmental protection. Accordingly, States should introduce and enforce laws and regulations to ensure proper environmental protection standards, in particular in accordance with the International Convention for the Prevention of Pollution from Ships. In addition, States should adopt relevant standards and guidelines aiming to reduce emissions of polluting substances in exhaust gases. In addition, States are required to consider aquaculture, including culture-based fisheries, to promote diversification of income and diet. In doing so, the resources should be used responsibly, avoiding adverse impacts on the environment and on local communities.

### **Impact on safety and security**

The Code calls States to ensure safety of those on-board as well as safety of the consumer health. The standards of safety should be at least in accordance with the minimum requirements of relevant international agreements on conditions of work and service. Safety requirements for small vessels (not covered by international conventions) codes of practice or voluntary guidelines should be in place. In addition, States should ensure compliance with and enforcement of conservation and management measures and establish effective mechanisms, as appropriate, to monitor and control the activities of fishing vessels and fishing support vessels.

### **Impact on exploitation**

The Code promotes the effective conservation, management, and development of living aquatic resources, with respect for the ecosystem and biodiversity and recognises the nutritional, economic, social, environmental, and cultural importance of fisheries. By doing so, it requires that States to regulate exploitation of fishing resources and all related exploitative activities in order to ensure long-term sustainable development.

### **Relevance for artificial reefs**

According to the Code, States should, as appropriate, develop policies for increasing stock populations and enhancing fishing opportunities through the use of artificial structures, placed with due regard to the safety of navigation, on or above the seabed or at the surface. States should ensure that, when selecting the materials to be used in the creation of artificial reefs as well as when selecting the geographical location of such artificial reefs, the provisions of relevant international conventions concerning the environment and safety of navigation are observed. Within the framework of coastal area management plans, management systems for artificial reefs and fish aggregation devices shall be established.

### **Relevance for natural reefs**

The Code requires that all critical fisheries habitats in marine and fresh water ecosystems, such as wetlands, mangroves, reefs, lagoons, nursery and spawning areas, should be protected and rehabilitated as far as possible and where necessary. Particular effort should be made to protect such habitats from destruction, degradation, pollution and other significant impacts resulting from human activities that threaten the health and viability of the fishery resources.

### **Anticipated evolvement**

The Code is a live and dynamic document. The promotion and implementation of the Code is being addressed at all sessions of FAO regional fishery bodies (RFBs) as well as Committee on Fisheries (COFI). FAO regards the implementation of the Code and the strengthening of RFBs as being intrinsically linked.

### **Web site**

<http://www.fao.org/3/a-v9878e.htm>

## 4.2 Guidelines for the Establishment of the Natura 2000 Network in the Marine Environment

### Originator

European Commission

### Year of adoption

2007

### Year of entry into force

NA

### Type

Guidelines

### Last revision

-

### Level

EU level

### Target stakeholders

Member States, the European Commission, the European Environmental Agency, the European Topic Centre on Biological Diversity, the European Habitats Forum and the Natura 2000 Users Forum.

### Short description

The Guidelines responds to an immediate need to make progress in establishing Natura 2000 in the marine environment. Its primary focus is on marine species and habitat types that are covered by the site-based provisions of the Birds and Habitats Directives. These are the habitat types listed in Annex I and species listed in Annexes II of the Habitats Directive and bird species listed in Annex I as well as migratory bird species covered by the Birds Directive for which marine Natura 2000 sites need to be designated, protected and managed. The Guidelines aims to explain the relevant legal and technical concepts needed to underpin the establishment of Natura 2000 throughout the marine area of application of the Birds and Habitats Directives. It covers both the inshore and offshore marine environments. The Guidelines has six chapters and five Appendix.

### Impact on environmental protection

The conservation and the protection of the marine environment is a complex issue requiring a broad and multidimensional approach. The marine Natura 2000 is set up by the Commission to promote the exchange of experience, information and best practices in site designation and management, including addressing pressures from fisheries and other activities, and to promote synergies with the Marine Strategy Framework Directive. Consequently, the Guidelines offer numerous important clarifications, principles, and rationales, including examples, for the establishment of the Natura 2000 network in the marine environment.

### Impact on safety and security

In order to increase the level of the marine safety, a significant policy measures need to be taken. The particularly sensitive sea areas need special protection to preserve their valuable marine and coastal habitats and to improve maritime safety. The areas of potential conservation interest should be included on geological maps of the seabed, navigational charts as well as within oceanographic data resources.

### Impact on exploitation

The opinion of the Commission is that recognition by a coastal state of exclusive rights in a maritime zone brings not only rights but also obligations. Exclusive right to exploit natural resources implies a similar duty to preserve natural resources. Marine environment is under continuous pressure. Human impacts such as overfishing, extraction of resources, contamination, marine litter and climate change are driving the loss of marine biodiversity and decreasing the benefits that Europeans can derive from their seas. Over the years, the EU has established an increasingly robust policy framework to address the multiple challenges facing its marine environment and to ensure a more sustainable ecosystems-based approach to the use of its marine resources. The Habitats and Birds Directives, along with the Marine Strategy Framework Directive, are the environmental pillars of the wider Integrated Maritime Policy. The total coverage of the EU marine protected areas has more than doubled in the last years, primarily due to the expansion of the Natura 2000 network – the largest coordinated network of conservation areas in the world. The Habitats Directive lists 9 marine habitat types and 16 species for which marine site designation is required, whilst the Birds Directive lists a further 60 bird species whose conservation requires marine site protection.

### Relevance for artificial reefs

The Guidelines does not contain guiding principles dealing specifically with artificial reefs. Nevertheless, since the primary goal is to set up standards for the harmonized establishment of the Natura 2000 sites, all references to reefs seem equally applicable to artificial and natural reefs, if there are habitats that must be protected in accordance with Natura 2000 principles.

### Relevance for natural reefs

The Guidelines refers to reefs as they are defined in the Interpretation Manual of European Union Habitats - EUR28, as a scientific reference document. Accordingly, the reefs as a habitat are defined as follows:

*Reefs can be either biogenic concretions or of geogenic origin. They are hard compact substrata on solid and soft bottoms, which arise from the sea floor in the sublittoral and littoral zone. Reefs may support a zonation of benthic communities of algae and animal species as well as concretions and corallogenic concretions.*

Clarifications include:

*“Hard compact substrata” are rocks (including soft rock, e.g. chalk), boulders and cobbles (generally >64 mm in diameter).*

*“Biogenic concretions” are defined as concretions, encrustations, corallogenic concretions and bivalve mussel beds originating from dead or living animals, i.e. biogenic hard bottoms that supply habitats for epibiotic species.*

*“Geogenic origin” means reefs formed by non-biogenic substrata.*

*“Arise from the sea floor” means: the reef is topographically distinct from the surrounding seafloor.*

*“Sublittoral and littoral zone” means that reefs may extend from the sublittoral uninterrupted into the intertidal (littoral) zone or may only occur in the sublittoral zone, including deep-water areas such as the bathyal.*

*Such hard substrata that are covered by a thin and mobile veneer of sediment are classed as reefs if the associated biota is dependent on the hard substratum rather than the overlying sediment.*

*Where an uninterrupted zonation of sublittoral and littoral communities exists, the integrity of the ecological unit should be respected in the selection of sites.*

*A variety of subtidal topographic features are included in this habitat complex such as: Hydrothermal vent habitats, sea mounts, vertical rock walls, horizontal ledges, overhangs, pinnacles, gullies, ridges, sloping or flat bed rock, broken rock and boulder and cobble fields.*

The Guidelines contains extensive clarification on procedures to be used when reefs are considered as Natura 2000 sites.

### **Anticipated evolvement**

The Guidelines presents well-developed text with sound scientific foundation. As such, significant changes and amendments in the future are not expected. Nevertheless, minor amendments and adjustments are highly probable, depending on the experience acquired in the following years.

### **Web site**

[http://ec.europa.eu/environment/nature/natura2000/marine/docs/marine\\_guidelines.pdf](http://ec.europa.eu/environment/nature/natura2000/marine/docs/marine_guidelines.pdf)

## 4.3 Guidelines for Integrated Management of Coastal and Marine Areas

### Originator

United Nations Environment Programme (UNEP)

### Year of adoption

1995

### Year of entry into force

NA

### Type

Guidelines

### Last revision

-

### Level

International, with special reference to Mediterranean basin

### Target stakeholders

Coastal nations, the national agencies and ministries, local governments, research institutions, coastal stakeholders, and general public

### Short description

The aim of the Guidelines is to design procedure for sustainable development of coastal and marine areas, including exclusive economic zones, and to assist in development of national guidelines for integrated coastal area management by policy-makers, managers and professionals involved. This document is primarily based on the experience of the countries bordering the Mediterranean Sea. Proposed strategies and methods can be used to coordinate exploitation and protection of the natural resources. The Guidelines is divided into 4 parts and has seven Annexes.

### Impact on environmental protection

The Guidelines extensively deals with environmental protection as one of the pillars of the coastal zone management, and with sustainable development of the coastal areas. Particular attention is paid to environmental impact assessment as one of the cornerstones of the integrated coastal zone management.

### Impact on safety and security

The Guidelines combines management principles with environmental protection to ensure nature protection and biodiversity conservation. In that respect, risk-reducing methods are used. However, specific safety and security measures are not dealt with in the Guidelines.

### **Impact on exploitation**

The overall goal of the programme is to ensure optimum sustainable use of coastal natural resources, perpetual maintenance of high levels of biodiversity, and real conservation of critical habitats. Consequently, the Guidelines advocate sustainable exploitation, implying the wise use and careful management (conservation) of individual species and communities, together with the habitats and ecosystems on which they depend, so that their current or potential usefulness to people is not impaired.

### **Relevance for artificial reefs**

The Guidelines does not contain direct reference to artificial reefs, although the principles outlined in the Guidelines are fully implementable in case of artificial reefs, especially those build to mimic natural reefs.

### **Relevance for natural reefs**

The Guidelines does not contain direct reference to natural reefs, although the principles outlined in the Guidelines are fully implementable in case of natural reefs. In that respect, natural reefs are important crossroads where environmental and exploitation interests are meeting. The natural reefs support numerous exploitative activities (fisheries, snorkelers, divers, underwater photographers, sightseers) and at the same time are important habitats, natural protective barriers, minimizing beach erosion, protecting from storm waves, etc. As such, natural reefs require some form of integral management, either as a part of the large-scale integral management approach, or as limited integral coastal management plan.

### **Anticipated evolvement**

The Guidelines was one of the first publication advocating integrated coastal zone management. In the meantime, the presented approach has been significantly developed. Consequently, further development of the Guidelines is not expected.

### **Web site**

<http://wedocs.unep.org/bitstream/handle/20.500.11822/11793/rsrs161.pdf?sequence=1&isAllowed=y>

## 4.4 Guidelines for the placement at sea of matter for purpose other than the mere disposal

Construction of artificial reefs

### Originator

United Nation Environment Programme

### Year of adoption

2005

### Year of entry into force

NA

### Type

Guidelines

### Last revision

2017

### Level

International – Mediterranean Sea area

### Target stakeholders

The Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols

### Short description

The Guidelines for the placement at sea of matter for purpose other than the mere disposal (construction of artificial reefs) consists of three parts and Annex. Part A refers to the requirements of the Dumping Protocol and Barcelona Convention. Part B is entitled Assessment and management of placement operations at sea, and contains requirements for construction and placement as well as for the authorization of placement at sea of matter. Monitoring operations for placement at sea are described in part C. Annex I contains Clean-up guideline for the implementation of placement permits for vessels, ships and boats.

### Impact on environmental protection

The Guidelines mostly deals with environmental protection measures to be implemented in case of placement of material at sea other than the mere disposal. According to the Guidelines, construction of artificial reefs can have adverse effects to the marine environment and should be under the full control of appropriate national authorities. Artificial reefs should be built from inert materials. For The Guidelines, inert materials are those that do not cause pollution through leaching, physical or chemical weathering and/or biological activity. Physical or chemical weathering of structures may result in increased exposures for sensitive organisms to contaminants and lead to adverse environmental effects. Material, which constitute wastes, or other matter whose placement at sea is otherwise prohibited should not be used. The materials chosen for the construction of artificial reefs will need to be of sufficient engineering strength, both as individual units and as an overall structure to withstand the physical stresses of the



marine environment and not break up, potentially causing serious interference problems over a wide area of seabed. The assessment should be as comprehensive as possible. The primary potential impacts should be identified during the placement-site selection process, which are considered to pose the most serious threats to human health and the environment. Alterations to the physical environment, risks to human health, devaluation of marine resources and interference with other legitimate uses of the sea are often seen as primary concerns in this regard.

### **Impact on safety and security**

According to the Guidelines, placement of different objects, in particular large ones, may be hazardous operation. Therefore, it is necessary to take all possible steps to prevent and eliminate pollution and to protect the marine area against the adverse effects of human activities, to safeguard human health and to conserve marine ecosystems. Consequently, Parties should take all practical steps to mitigate the impact of the placement operation on the marine environment. For the purposes of assessing and regulating the environmental impacts of placement operations, monitoring is required. The monitoring programme should also be aimed at establishing and assessing the environmental impacts and/or conflicts of the artificial reef with other legitimate uses of the maritime area or parts thereof. Experience indicates that safety issues are not static and need constant attention over the life of the project. The competent authority should ensure that the position, depth, and dimensions of the artificial reef are indicated on nautical charts. In addition, the authority should ensure that advance notice is issued to advise mariners and hydrographic surveying services of the placement.

### **Impact on exploitation**

The placement of artificial reefs should consider any legitimate activity underway or foreseen in the area of interest, such as navigation, tourism, recreation, fishing, aquaculture, nature conservation or coastal zone management. Prior to placement of an artificial reef, all groups and individuals who may be affected or interested should be informed on the characteristics of the artificial reef as well as on its location and depth of placement. They should be given the opportunity to make their views known in due time prior to its placement. The location of a proposed artificial reef and the timing of its construction/placement should be carefully considered by the competent body at an early stage in the planning.

### **Relevance for artificial reefs**

The Guideline deals in a major part with the placement of artificial reefs on the seabed in order to have as many characteristics as corresponding natural reefs. Accordingly, artificial reefs are constructed for protecting, regenerating, and increasing the production of marine resources and biodiversity. This contributes to the enhancement of fishery resources as well as for the nature conservation and tourist attraction. While constructing artificial reefs, attention should be given to potential impacts on sensitive areas in the vicinity (natural reefs).

### **Relevance for natural reefs**

The Guidelines does not contain references to natural reefs.

### **Anticipated evolvement**

The further development of the Guidelines is not expected due to more advanced documents already existing

### **Web site**

<https://wedocs.unep.org/rest/bitstreams/8156/retrieve>

## 4.5 Practical Guidelines for Artificial Reefs in Mediterranean and Black Sea

### Originator

Food and agriculture organization of the United Nations (FAO)

### Year of adoption

2015

### Year of entry into force

NA

### Type

Guidelines

### Last revision

-

### Level

International – Mediterranean and Black Sea

### Target stakeholders

Resource managers, local authorities, planners, scientists, environmental groups

### Short description

The Guidelines contains comprehensive guidelines on management practices for the planning, siting, construction, anchoring and monitoring of artificial reefs in the Mediterranean and the Black Sea. It is intended to provide users, managers and planners with essential information and guidance on some of the most effective methods for enhancing and protecting natural resources while increasing fisheries and aquaculture opportunities. The main objectives of the Guidelines are to update the information reported in previous editions, assist countries in the planning and deployment of artificial reefs on the basis of scientific criteria, avoid the pollution or degradation of aquatic ecosystems due to the deployment of unsuitable materials and waste dumping, prevent possible negative impacts caused by the deployment of artificial reefs, provide information on the different scopes and types of artificial reefs, as well as on their potential effects, and provide technical information on the deployment, monitoring, management and socioeconomic effects of artificial reefs.

### Impact on environmental protection

The Guidelines presents the environmental factors to be considered during artificial reef deployment. The location of an artificial reef significantly influences its ecological features and can strongly influence the expected effects. When identifying the location of an artificial reef, ecological features, chemical and physical variables should be considered. Artificial reef deployment may have negative impacts on the environment (during construction, or when the reef has been deployed). These potential negative impacts should be considered during planning process. The document emphasizes a need that all materials used for artificial reefs should be inert to avoid pollution and bioaccumulation of contaminants in the environment and in aquatic organisms.

### **Impact on safety and security**

The document emphasizes a need to maintain the navigational safety during placement as well as while in position. The final location of the reefs and the safe navigational depths should be provided to the authorities to update navigational charts.

### **Impact on exploitation**

According to the Guidelines, the exploitative activities depend on the primary reef purpose. In most cases the primary reason for artificial reef deployment are human uses, like commercial and recreational fishing and scuba diving. By placing the artificial reefs, the recovery of depleted habitats and ecosystems of ecological relevance can be attained. If it is the solely purpose, access to the area should be restricted, except for research purposes. Unregulated or uncontrolled access can lead to overexploitation and to rapid depletion of the reef resources.

### **Relevance for artificial reefs**

The Guidelines is dedicated to deployment of artificial reefs. Accordingly, the artificial reefs can be used to recover or improve natural habitats, increase productivity, and manage aquatic resources. There are many other purposes, such as protecting sensitive habitats from fishing activities, restoring depleted habitats, mitigating habitat loss, enhancing biodiversity, improving populations of aquatic organisms by providing shelter and new substrates, enhancing professional and recreational fisheries, creating suitable areas for diving, research, and educational activities, and creating potential networks of marine protected areas to manage the life cycles of fish and connectivity. Most of these activities are discussed in depth in the Guidelines.

### **Relevance for natural reefs**

The Guidelines does not consider in depth the natural reefs. However, the relation between artificial and natural reefs is considered, with emphasize on potential impact of artificial reefs being deployed near natural reef(s).

### **Anticipated evolvement**

Use of the artificial reefs is expected to increase in the following years. Accordingly, the knowledge and experience regarding their use will expand. Therefore, it is reasonable to expect that Guidelines will follow the process, resulting with more elaborated versions to be produced.

### **Web site**

<http://www.fao.org/3/a-i4879e.pdf>

## 4.6 Strategic Plan for Biodiversity 2011 - 2020

### Originator

United Nations Environment Programme

### Year of adoption

2010

### Year of entry into force

NA

### Type

Strategic plan

### Last revision

-

### Level

International

### Target stakeholders

Parties to the Convention on Biological Diversity

### Short description

In 2010, Parties to the Convention on Biological Diversity adopted the Strategic Plan for Biodiversity 2011–2020, a ten-year framework for action by all countries and stakeholders to safeguard biodiversity and the benefits it provides to people. As a part of the Strategic Plan, twenty ambitious but realistic targets, known as the Aichi Biodiversity Targets, were adopted. The Plan provides an overarching framework on biodiversity for the entire United Nations system and other partners engaged in biodiversity management and policy development.

### Impact on environmental protection

The Plan contains the vision, the mission and twenty goals divided into five subject areas. Goals clearly describe the target status to be accomplished by 2020. All goals clearly aim to improve the level of environmental protection by minimizing pressures on biodiversity.

### Impact on safety and security

The Plan does not contain measures or actions dealing with safety and security.

### Impact on exploitation

Although the Plan does not refer to exploratory activities, it is anticipated that goals cannot be attained if effects of exploratory activities are not considered, and if exploratory activities are not regulated in a way to avoid negative impacts on the actual and future level of biodiversity.

### **Relevance for artificial reefs**

The Plan does not contain reference to artificial reefs.

### **Relevance for natural reefs**

The Plan does not refer to natural reefs, except request to minimize by 2015 the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification, in order to maintain their integrity and functioning.

### **Anticipated evolvement**

The vision of the Strategic Plan for Biodiversity 2011 – 2020 is that by 2050, biodiversity is “valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”. Considering that numerous goals will not be accomplished, or not on time, it is expected that Plan will be amended.

### **Web site**

<https://www.cbd.int/doc/strategic-plan/2011-2020/Aichi-Targets-EN.pdf>

## 5 National legal frameworks - Republic of Croatia

## 5.1 Law on Islands

### Originator

The Parliament of Republic of Croatia

### Year of adoption

2018

### Year of entry into force

2018

### Type

Act (NN 116/2018)

### Last revision

-

### Level

National – Republic of Croatia

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

This Act regulates the way of managing the development of Croatian islands, the protection of islands and islets in the Adriatic Sea and the Peljesac Peninsula (hereinafter referred to as the islands), specifying the policy of island development, the island development authority, island classification, and reporting on the implementation of the policy of island development in order to efficiently use the state budget funds, European Union funds and other sources of funding.

This Act is consisted of eleven chapters divided in 53 articles with one Annex- “List of islands and islets”.

### Impact on environmental protection

This Act equates reefs with islands in the sense of applying the provisions of the Act. In this regard, all provisions stipulating the need of applying the standards of sustainable development of the islands are applicable to the reefs as well. The impact on the environmental protection is especially shown in the Article 22 that reads:

*“Smart Island*

*Article 22*

*(1) This Act encourages and supports the sustainable development of the islands through projects carried out in accordance with one or more of the islands of the Smart Island, which are:*

*1. Active participation in adaptation and mitigation of climate change at the local level*

2. Introduction and use of advanced technologies to ensure optimal management and use of local resources and infrastructure through different business models
  3. Reducing the use of fossil fuels by increasing the sustainable use of renewable energy and energy efficiency
  4. Promoting sustainable mobility on the islands
  5. Reducing and finally removing water scarcity and scarcity by using unconventional and smart ways of managing water resources
  6. Creating areas without waste disposal by promoting the circular economy
  7. Preservation of the characteristic natural and cultural heritage of the island
  8. Diversify the island economy by exploiting the island's specialty in creating new and innovative local activities
  9. Strengthening and promoting social inclusion, education and citizen participation
  10. Switching to alternative, long-term, sustainable and responsible forms of tourism on the islands
- (2) Projects carried out in accordance with the provisions of paragraph 1 of this Article shall be considered as priority for funding the tenders submitted by the Ministry and other state administration bodies and other public bodies.
- (3) The projects referred to in paragraph 1 of this Article shall be in accordance with the spatial planning documents and spatial plans.”

#### Impact on safety and security

The Act does not contain regulations dealing with safety and security.

#### Impact on exploitation

This Act is not directly referring to the exploitation of the reefs. However, in Article 35 the Act brings the list of activities of importance for the economic development of the island that should be encouraged and promoted by Republic of Croatia. Amongst them are scuba diving activities that are considered as a potential form of exploitation of reefs.

“Article 35

(1) Activities that are important for the economic development of the island, supported by the state, are in particular: the production of plants on existing and new open and sheltered plantations (olive growing, viticulture, fruit growing, harvesting and processing of self-propagating plants, breeding and processing of aromatic and medicinal herbs, vegetables), extensively and semi-intensively sheep and goat breeding, and beekeeping, with special emphasis on production and processing of products within the quality system and ecological breeding; manufacture and processing of products labelled "Croatian island product"; shellfish, catch of blue fish, and in the area of an external fishing sea and white fish, flour, breeding and processing of fish and other marine organisms; traditional fishing; fresh and processed fish trade; **scuba diving**; breeding, selective and controlled extraction, processing and preparation of corals and sponges, taking into account the provisions adopted by special regulations in the field of nature protection and the environment and measures from relevant strategic documents; exploitation of mineral raw materials for the purposes of masonry and civil engineering; stone carving; exploitation of sea salt; sail making; production of fishing tools; pottery; production of special island souvenirs; preservation and restoration of material and immaterial cultural goods; Sustainable tourism in new and existing renewed and upgraded facilities; eco-tourism; cultural tourism and other selective forms of tourist offer, health tourism; traditional construction involving the use of stone as building material; small shipbuilding, shipbuilding and shipbuilding; activities involving scientific



*and technological research and the use of high technology; information technology; environmentally suitable industrial production of final grade of processing and production of finished industrial products; production and use of renewable energy sources on the islands and in the sea; maritime, island road and air transport; traditional crafts; art workshops, workshops for the restoration of cultural heritage; the activity of social welfare and health; the activities of humanitarian organizations and civil society organizations and all activities carried out under the terms of the Smart Island referred to in Article 22 paragraph 1 of this Act and other activities defined by the National Plan.*

*(2) The activities referred to in paragraph 1 of this Article shall be planned and implemented in accordance with the conditions and restrictions laid down in special regulations in the sphere of physical planning and environmental and nature protection and other regulations.”*

#### **Relevance for artificial reefs**

The Act does not refer to artificial reefs.

#### **Relevance for natural reefs**

This Act brings the definition of natural reef as “a naturally occurring part of the land surrounded by the sea, area less than 0.01 km<sup>2</sup>, occasionally submerged below sea surface” and the exact number of islands, islets and reefs. Croatian Islands is a unique island geographic unit consisting of 78 islands, 524 islets and 642 rocks and ridges. The islands, islets, reefs and reefs, a total of 1244, are an integral part of the territory of the Republic of Croatia

#### **Anticipated evolvement**

Since the Act contains basic legal requirements, mostly dependent on improvement of environmental protection, the future amendments are expected.

#### **Web site**

[https://narodne-novine.nn.hr/clanci/sluzbeni/2018\\_12\\_116\\_2287.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2018_12_116_2287.html)

## 5.2 Maritime Domain and Seaport Act

### Originator

The Parliament of Republic of Croatia

### Year of adoption

2003

### Year of entry into force

2003

### Type

Act (OG 158/03, 100/04, 141/06, 38/09, 123/11, 56/16)

### Last revision

2016

### Level

National – Republic of Croatia

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

The Act regulates the legal status of the maritime domain, the determination of its boundaries, the management and protection of the maritime domain, use and exploitation of it, the classification of the ports, the port area, the establishment of port authorities, port operations and their execution, construction and use of port superstructure and subdivisions, questions about the order in seaports.

This Act consists of eleven chapters divided in 53 articles with one Annex- “List of islands and islets”.

The definition of maritime domain is laid down by this Act in Article 3

“Article 3

- (1) *Maritime domain is a general good of interest to the Republic of Croatia, has its special protection, and is used or used under the conditions and in the manner prescribed by this Law.*
- (2) *Maritime domain are internal sea waters and territorial sea, their bottom and underworld, and part of land that is by its nature intended for general use or declared as such, as well as all that is permanently attached to or below the surface on this part of the land.*
- (3) *For the purposes of paragraph 2 of this Article, part of the land shall be considered as: coasts, harbours, embankments, shores, reefs, reefs, beaches, mouths of rivers flowing into the sea, canals connected with the sea and in the sea and underwater alive and inactive Natural riches.”*

### **Impact on environmental protection**

The Act, in Articles 88, 89, 90, and 91 prescribes behaviours that are not acceptable in the area of maritime domain from an environmental point of view.

The Act refers to other water regulations and environmental regulations regarding the protection of the seaside and the sea from pollution, other than pollution from floating and floating objects.

### **Impact on safety and security**

The Act contains regulations dealing with safety and security regarding port security under the jurisdiction of Port Authority mostly regarding environmental protection issues that can arise from port traffic.

### **Impact on exploitation**

This Act regulates the economic use (exploitation) of maritime domain, administrative procedures for permitting such exploitation as well as inspections. Since the definition of maritime domain includes the reefs, all the provisions prescribing the way of use of the reefs are applicable. This Act is defining the only possible legal way of economic use of reefs in Croatia as well as the definition of “economic use”. The economic use of the maritime domain is the use of a maritime asset for carrying out economic activities, with or without the use of existing buildings and other facilities on the sea, and with or without the construction of new buildings and other facilities on the sea. The legal way of exploitation is via granted concession as Article 7 stipulates:

*“For the special use or economic use of a part of a maritime domain, a concession may be granted to natural and legal persons in the prescribed procedure.*

*In order to carry out activities on a naval asset that does not exclude or limit the general use of the maritime domain, concession approval is granted to legal and natural persons.*

*Maritime domain can be given for special use or economic use in accordance with environmental and nature protection regulations.*

*Concession can be granted after the sea border has been determined and implemented in land registers”*

### **Relevance for artificial reefs**

The Act does not refer to artificial reefs.

### **Relevance for natural reefs**

This Act regulates the economic use of reefs as a part of maritime domain as described above.

### **Anticipated evolvement**

Since the Act contains basic legal requirements, dependent on improvement of environmental protection, the future amendments are expected.

### **Web site**

[https://narodne-novine.nn.hr/clanci/sluzbeni/2018\\_12\\_116\\_2287.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2018_12_116_2287.html)

### 5.3 The Law on Port Authorities

#### Originator

The Parliament of Republic of Croatia

#### Year of adoption

2018

#### Year of entry into force

2019

#### Type

Act (OG 118/18)

#### Last revision

/

#### Level

National – Republic of Croatia

#### Target stakeholders

Government, agencies, organizations, individuals

#### Short description

The Act regulates the territorial organization and organization of the work of the harbour master offices, determines the activities in respect to navigation and surveillance of the maritime domain and the manner of organization and performance, regulates the rights, obligations and responsibilities of officials and employees responsible to carry out these tasks, their place of work, inspection authority and other issues important for the work of the harbour master offices.

#### Impact on environmental protection

The impact on environmental protection is not elaborated or tackled by this Act, except those dealing with navigational safety issues or with misuse of economic exploitation.

#### Impact on safety and security

Chapter 1 of this Act lays down the provisions regulating navigation safety and surveillance of maritime domain.

#### Impact on exploitation

Although this Act does not refer to exploratory activities, it regulates the penalty system for the misuse of the economic exploitation of in Article 78.

*“Article 78*

*(1) A legal person shall be fined in the amount of HRK 100,000.00 to 500,000.00, despite the issuance of an oral injunction prohibiting it:*

...

*2 continue to use or pursue the economic exploitation of the maritime domain, carrying out activities in the maritime domain, building and / or carrying out works within the maritime domain or any other form of use or use of the maritime domain and its affiliation (Article 43, paragraph 4)”*

#### **Relevance for artificial reefs**

The Act does not refer to artificial reefs.

#### **Relevance for natural reefs**

Since the reefs are considered as a part of maritime domain, all provisions referring to it are applicable on natural reefs.

#### **Anticipated evolvement**

Since the Act is recently adopted, amendments are not expected.

#### **Web site**

[http://digured.srce.hr/arhiva/263/192306/narodne-novine.nn.hr/clanci/sluzbeni/full/2018\\_12\\_118\\_2338.html](http://digured.srce.hr/arhiva/263/192306/narodne-novine.nn.hr/clanci/sluzbeni/full/2018_12_118_2338.html)

## 5.4 Maritime development and integral maritime policies strategy of the Republic of Croatia for the period 2014 - 2020

### Originator

The Government of Republic of Croatia

### Year of adoption

2014

### Year of entry into force

2014

### Type

Strategy (OG 093/2014)

### Last revision

/

### Level

National – Republic of Croatia

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

The goal of this Strategy is to strengthen the role of maritime sector in the development and competitiveness of the Republic of Croatia through the policies and initiatives of sustainable growth of economic activity on the sea and in the coastal area, strengthening the influence of the Croatian maritime sector on the European and world markets, the evaluation of the exceptional geographic location of the Adriatic Sea and its ecological features as well as the development of high technologies; maritime services on the basis of traditional knowledge and abilities, taking particular care of the high availability of efficient and modern maritime services, marine environment and navigation safety.

### Impact on environmental protection

In the chapter 3.2 *Protection of Maritime Environment* the Strategy defines main threats to the marine ecosystems and the necessary steps to be taken in order to preserve the present status of those ecosystems. It defines Adriatic Sea as the most valuable and most sensitive natural system, alongside with its coasts and the islands in Croatia. Intensive sea transport in the Adriatic Sea basin implies a significant risk of accidents and thus potentially a powerful impact on the marine environment. Considering the geomorphological features of the Adriatic Sea as a semi-enclosed sea basin, the impact of an accident can be detrimental to the Croatian economy, which is essentially focused on coastal and offshore activities. Therefore, the Republic of Croatia's obligation as coastal states of the Adriatic Sea is to pay special attention, independently and in cooperation with other countries, to the protection of the Adriatic Sea in terms of its use, as well as preservation.

In accordance with the development of the Marine Management and Coastal Management Strategy of the Republic of Croatia to ensure the achievement and maintenance of the marine environment by 2020, special attention should be paid to the protection of the environment, the preservation and facilitation of the recovery of marine and coastal environmental systems and the protection of biodiversity and sustainable use of the sea and the coastal area. Attention should also be paid to the conservation of protected areas in the sea and ecologically important areas of the European Union NATURA 2000 and the reduction of pollution or loads in the marine and coastal environment in order to prevent adverse impacts and risks to human health and / or the health of ecosystems and / or use of the sea and the coast. Significant adverse effects of sea transport on the marine environment are those that cause sudden and operational pollution of the sea from marine facilities, particularly accidents in the transportation of oil and oil products, as well as the rejection of ship waste and cargo residues in the sea.

In order to mitigate these threats Strategy sets objectives to meet, as well as concrete measures that have to be taken in order to achieve set goals.

OBJECTIVE 3.2.1 Prevent environmental pollution and detrimental effects of marine facilities on the Adriatic Sea

Measure 3.2.1.1 To declare the Adriatic Sea a particularly sensitive sea area in cooperation with the coastal states of the Adriatic Sea in accordance with the guidelines of the International Maritime Organization (IMO)

Measure 3.2.1.2 To complete the operational implementation of the National and Sub regional Emergency Response Plan

Measure 3.2.1.3 To conduct training and equip inspection services in harbour master offices and other relevant ministry services to detect and prosecute offenders

Measure 3.2.1.4 To form joint inventory of emissions and common approaches to the evaluation of shipping and its impact on air pollution in countries in the Adriatic and Ionian waters

Measure 3.2.1.5 To provide conditions for a sustainable and accessible reception and disposal service for ship waste and cargo residues

Measure 3.2.1.6 To carry out training and organize exercises by applying prescribed procedures to a ship's place of refuge

OBJECTIVE 3.2.4 Ensure consistent application of international and European environmental standards in respect of pollution caused by ships flying Croatian flag

Measure 3.2.4.1 To improve the system of inspection of maritime vessels of Croatian flag in order to ensure the full application of the provisions of national legislation and international standards relating to the protection of the marine environment from pollution;

Measure 3.2.4.2 To encourage the development of new technologies and to continuously monitor and improve the rules, regulations and procedures for preventing, reducing and controlling pollution of the marine environment, which may be caused by drilling, dredging, digging, waste removal, pipeline installation and other activities in the underwater area

Measure 3.2.5 To establish the Adriatic Convention for the Protection of Marine Pollution based on the Agreement on Co-operation on the Protection of the Water of the Adriatic Sea and the Coastal Areas of Pollution from 14 February 1974 between the former Yugoslavia and the Italian Republic for multidisciplinary resolution of environmental problems in the Adriatic Sea;

Measure 3.2.6 To participate actively in the adoption of proactive international and EU policy measures with regard to the application of global standards in the prevention and protection of the marine environment

Measure 3.2.7 To ratify and apply the International Maritime Organization conventions in the field of environmental protection (International Convention on the Removal of Wrecks), the International Convention on Liability and Compensation for HNS Convention, Convention on Ship Recycling Convention)

Measure 3.2.8 To strengthen the instruments of international, regional and sub regional cooperation of coastal States of the Adriatic Sea in the field of navigation safety and sea protection.

#### **Impact on safety and security**

The Strategy contains numerous goals and measures dealing with safety and security.

#### **Impact on exploitation**

The numerous goals and measures in the Strategy refer to the sustainable growth and economic activities on the sea. In addition, the Strategy strictly follows the principles of economic use as an activity within the maritime domain. Consequently, it applies to natural reefs as well.

#### **Relevance for artificial reefs**

This Strategy does not define, nor does it refer to artificial reefs.

#### **Relevance for natural reefs**

All Strategy goals regarding the environmental protection and sustainable use of maritime domain are applicable on natural reefs.

#### **Anticipated evolvement**

Since this Strategy is adopted for defined period, the development of the new one is expected in year 2020.

#### **Web site**

[https://narodne-novine.nn.hr/clanci/sluzbeni/2014\\_07\\_93\\_1879.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2014_07_93_1879.html)



## 5.5 The Strategy for Sustainable Development of the Republic of Croatia

### Originator

The Parliament of Republic of Croatia

### Year of adoption

2009

### Year of entry into force

2009

### Type

Strategy (OG 030/2009)

### Last revision

/

### Level

National – Republic of Croatia

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

Sustainable development is a development that meets the needs of today, while not jeopardizing the needs of future generations. Sustainable development achieves a balance between the demands for quality of life (economic component), the achievement of social welfare and peace for all (social component), and the requirements for preserving environmental constituents as a natural asset that depend on present and future generations. Respect for the principles of democracy, gender equality, social justice and solidarity, lawfulness, respect for human rights and the preservation of natural resources, cultural heritage and human environment contribute to the preservation of the Earth to preserve life in all its diversity. In this way, sustainable development is achieved through a dynamic economy with full employment, economic, social and territorial cohesion, high level of citizen education, a high level of health protection and environmental protection.

Sea area is a major and important area of the Republic of Croatia (35.4% of the total area). It is particularly important in relation to the protection of nature and the environment and the preservation of biodiversity and ecosystem as well as in relation to a large number of diverse activities (maritime transport, construction of traffic and communal infrastructure, tourism and nautical tourism, economic activities related to fishing).

### Impact on environmental protection

Main goal of this Strategy is to promote sustainable management of the Adriatic Sea, coast and islands and preserve marine ecosystems by reducing inputs of waste and foreign microorganisms and pathogens into the sea from all sources of pollution, support to local communities, particularly islands, but with the constraining impact of economic activities, particularly tourism, on the environment.

### **Impact on safety and security**

The Strategy does not contain regulations dealing with safety and security, except it stated fact that The Republic of Croatia has adopted, in addition to the existing safeguards relating to navigation safety (Traffic Separation Systems and vessel reporting system), the Ordinance governing the management of ships' ballast water for ships flying to Croatian ports.

### **Impact on exploitation**

This Strategy does not cover the exploitation issues, except the emphasis placed on the need of sustainable management of economic activities to reduce their negative impact on the Adriatic Sea.

### **Relevance for artificial reefs**

This Strategy does not deal with artificial reefs.

### **Relevance for natural reefs**

This Strategy does not cover natural reefs per se, but it considers them as a part of the marine ecosystem of Adriatic Sea. Therefore, all objectives relevant for the whole ecosystem are also applicable on natural reefs.

### **Anticipated evolvement**

Since this is the Strategy developed 10 years ago, the new one is expected in the future.

### **Web site**

[http://digured.srce.hr/arhiva/263/44262/narodne-novine.nn.hr/clanci/sluzbeni/2009\\_03\\_30\\_658.html](http://digured.srce.hr/arhiva/263/44262/narodne-novine.nn.hr/clanci/sluzbeni/2009_03_30_658.html)

## 5.6 Strategy and Action Plan for the Nature Protection of the Republic of Croatia for the Period 2017-2025

### Originator

The Parliament of Republic of Croatia

### Year of adoption

2017

### Year of entry into force

2017

### Type

Strategy (OG 072/2017)

### Last revision

/

### Level

National – Republic of Croatia

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

Rich and diverse nature is one of the most valuable resources available to the Republic of Croatia. Preserved nature contributes to ensuring all the functionalities necessary for life and economic development. In the Republic of Croatia, as well as in the world, nature is under constant pressure from human activities. Although significant efforts are being made to preserve nature, some of its constituents are still endangered. Strategic planning aims to focus the available capacities on activities that will contribute to the conservation of nature to the most significant extent. The Strategy and Action Plan for Nature Protection of the Republic of Croatia for the period 2017-2025 (hereinafter: the Strategy) is the fundamental document of nature protection in the Republic of Croatia. The Strategy incorporates the guidelines of the Global Strategic Biodiversity Plan 2011-2020, adopted at the 10th Conference of the Parties to the Convention on Biological Diversity in Nagoya, Japan (hereinafter referred to as the Strategic Biodiversity Plan) (Law on Confirmation of the Convention on Biological Diversity Official Gazette - International Agreements, No. 6/96)). During the development of the Strategy, five strategic objectives have been developed, aligned with the stated global strategic plan and the EU Biodiversity Strategy by 2020. As required by the Convention on Biological Diversity, the Strategy is an instrument that ensures the implementation of the Convention's main objectives and ensures the incorporation of biodiversity conservation measures into relevant sectoral and inter-sectoral plans, programs and policies. In order to maintain long-term survival of wild species and habitats in a favourable state, and thus, in the forthcoming period, the Republic of Croatia fulfilled the obligations both globally and at European Union level, the Strategy includes the following strategic objectives, which include specific objectives and activities they arise. Five Strategic Goals are:

1. Increase the effectiveness of basic nature protection mechanisms

2. Reduce direct pressures on nature and encourage sustainable use of natural resources
3. Strengthen the capacity of the nature protection system
4. Increase knowledge and availability of nature data
5. Raise the level of knowledge, understanding and public support for nature protection.

### Impact on environmental protection

This Strategy is about nature protection, preservation of biodiversity and sustainable use of natural resources.

The basic principles outlined in the Strategy are:

- everyone has to act in such a way as to contribute to the preservation of biodiversity, landscape diversity and geodesy and the preservation of the universal role of nature
- non-renewable natural resources should be used rationally and renewable natural resources are sustainable
- the use of natural resources and the design of space must be subject to the principles of sustainable use
- the protection of the nature of the obligations of every natural and legal person and to this end are obliged to cooperate in order to avoid and prevent dangerous activities and the occurrence of damage, removal and remediation of damages and restoration of natural conditions that existed before the damage
- precautionary principles where there is a threat of serious or irreparable damage to nature
- the public has the right to free access to information on the state of nature.

The aims and tasks of nature protection are to:

- conserve and/or renew biodiversity, geodiversity and landscape diversity in a state of natural equilibrium and coordinated human relations
- establish and monitor the state of nature
- provide a system of nature protection for its permanent preservation
- ensure the sustainable use of natural resources without significant damage to the parts of nature and with the least distortion of the balance of its components
- contribute to the preservation of soil naturalness, the preservation of the quality, quantity and availability of water, sea, the preservation of the atmosphere and the production of oxygen and the preservation of the climate
- to prevent or mitigate harmful human intervention and disturbance in nature as a consequence of technological development and performance of activities.

Since the reefs are important part of marine ecosystems of Adriatic Sea, the Strategy advocates the need to decrease the pressures on those ecosystems in order to preserve and improve biodiversity. The Strategy defines the sustainable use of natural resources as the use of natural resources in a way to maintain their potential in order to meet the needs of fulfilling, now and in the future, appropriate ecological, economic and social functions at local, national and global levels. In order to meet this overall objective this Strategy sets specific objectives:

- 1 To improve the effectiveness of nature conservation procedures through cooperation and communication with sectors in the preparation / adoption of sectoral plans and spatial plans
- 2 To increase the number of targeted inspection inspections for the installation and implementation of nature protection requirements from targeted planning documents in relation to the current level
3. To improve the status of biodiversity through preservation of ecosystems, species and genetic diversity
4. To reduce direct pressures on biodiversity and promoting sustainable use

The result of activities that are planned by this Strategy should deal with at least 17% of land habitats and water and 10% of coastal and marine areas, particularly in respect of areas of particular importance for biodiversity and ecosystem services, preserved through efficient and equally managed, environmentally representative and well-connected protected area systems and through other efficient conservation measures of certain areas, and integrated in wider areas and marine landscapes by 2020.

#### **Impact on safety and security**

The Strategy does not contain provisions dealing with safety and security.

#### **Impact on exploitation**

The Strategy does not contain provision dealing with exploitation, except the need of reducing direct pressures on biodiversity.

#### **Relevance for artificial reefs**

The Strategy deals with natural resources in general.

#### **Relevance for natural reefs**

The Strategy deals with natural resources in general with special emphasis on coral reefs. It sets goal to minimize by 2015, multiple anthropogenic pressures on vulnerable ecosystems affected by climate change to maintain their integrity and function.

#### **Anticipated evolvement**

Since this Strategy is valid until 2025, no future amendments are expected soon.

#### **Web site**

[http://digured.srce.hr/arhiva/263/169977/narodne-novine.nn.hr/clanci/sluzbeni/full/2017\\_07\\_72\\_1712.html](http://digured.srce.hr/arhiva/263/169977/narodne-novine.nn.hr/clanci/sluzbeni/full/2017_07_72_1712.html)

## 5.7 Ordinance on the conduct of underwater activities

### Originator

Ministry of the Sea, Transport and Infrastructure

### Year of adoption

1999

### Year of entry into force

1999

### Type

Ordinance (OG 047/1999)

### Last revision

2003

### Level

National – Republic of Croatia

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

This Ordinance lays down the conditions for underwater activities (hereinafter: diving) for the purpose of recreation and sport in internal waters and territorial sea of the Republic of Croatia. According to paragraph (1) of this article, diving is considered any occupation of a person under the sea surface provided by the technical capabilities of a diving equipment for breathing under the surface (diving with diving equipment).

### Impact on environmental protection

The Ordinance does not deal with environmental protection issues directly.

### Impact on safety and security

The Ordinance does not contain regulations dealing with safety and security.

### Impact on exploitation

Since diving activities are one of the possible ways of exploitation of the reefs, this Ordinance is important since it regulates diving as an activity and the locations that are available for this activity in the Adriatic Sea.

The Ordinance requires a prior permission of the competent authority for diving in the certain zones of the internal waters and territorial sea of the Republic of Croatia. For others, only a general permit is required.

### Relevance for artificial reefs

The Ordinance has no relevance for artificial reefs.

### Relevance for natural reefs

The Ordinance is relevant for diving close to the certain natural reefs.

### Anticipated evolvement

Since the Ordinance contains basic legal requirements, mostly not bounded by technological systems, the future amendments are not expected.

### Web site

<http://digured.srce.hr/arhiva/263/18315/www.nn.hr/clanci/sluzbeno/1999/0918.htm>

## 5.8 Ordinance on the conduct of commercial fishing at sea by nets, traps, hooks and puncture fishing tools and special fishing methods

### Originator

Ministry of Agriculture

### Year of adoption

2015

### Year of entry into force

2015

### Type

Ordinance (NN 084/2015)

### Last revision

2017

### Level

National – Republic of Croatia

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

This Ordinance provides methods of carrying out commercial fishing at sea with different fishing tools, technical characteristics and the purpose of certain fishing gear as well as spatial, time and gear related limitations of fishing in certain parts of the sea, requirements in respect of fishing with certain fishing gear in particular areas of the sea, allowable quantities of catches on a vessel made in the waters of the Republic of Croatia.

### Impact on environmental protection

No environmental protection aspect was elaborated in this Ordinance.

### Impact on safety and security

The Ordinance does not contain regulations dealing with safety and security.

### Impact on exploitation

Reefs are listed as a location for fishing activities.

### Relevance for artificial reefs

Reefs are listed as a location for fishing activities.

### Relevance for natural reefs

Reefs are listed as a location for fishing activities.



### Anticipated evolvement

Since the Ordinance is recently adopted, the future amendments are not expected.

### Web site

[http://digured.srce.hr/arhiva/1571/138240/narodne-novine.nn.hr/clanci/sluzbeni/2015\\_07\\_84\\_1640.html](http://digured.srce.hr/arhiva/1571/138240/narodne-novine.nn.hr/clanci/sluzbeni/2015_07_84_1640.html)

## 5.9 Environmental Protection Act

### Originator

The Parliament of Republic of Croatia

### Year of adoption

2013

### Year of entry into force

2013

### Type

Act (OG 80/13)

### Last revision

2018

### Level

National – Republic of Croatia

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

This Act regulates: the principles of environmental protection within the concept of sustainable development, environmental protection and environmental protection from the impact of the loads, environmental protection subjects, sustainable development and environmental protection documents, environmental protection instruments, environmental monitoring, environmental information system, access to environmental information, public participation in environmental issues, access to justice, environmental damage liability, financing and general environmental policy instruments, administrative and inspection supervision, and other related issues.

### Impact on environmental protection

This Act prescribes the standards for any activity or project that could have impact on the environment including biodiversity and natural resources. This is especially interesting in the light of exploitation of natural reefs and in the light of creating artificial reefs. All activities that could likely have an impact on the environment have to undergo administrative procedure called Environmental Impact Assessment (EIA).

Environmental Impact Assessment is an assessment of the potential significant environmental impacts of the project determined by this Act and the Decree referred to in Article 78, paragraph 3 of this Act.

Environmental Impact Assessment assesses, describes and evaluates, in an appropriate manner, the impact of environmental interventions, to determine possible direct and indirect impacts of interventions on soil, water, sea, air, forest, climate, humans, plant and animal world, natural values, landscape, material assets, cultural heritage, considering their interdependencies. The environmental impact assessment must ensure the implementation of the precautionary principle at the early stage of the project planning in order to minimize the impact of the project and to achieve the highest possible environmental quality preservation, achieved by harmonizing and adapting the

intended environmental acceptability to a given area. The environmental impact assessment is carried out within the framework of the preparation of the intended operation, prior to issuing a location permit for the implementation of the project or another approval for a procedure for which the location permit is not mandatory. The environmental measures and / or environmental monitoring program established by the decision on the acceptability of the environmental project shall be subject to the contents of the permit for the implementation of the works issued under a special law.

#### **Impact on safety and security**

The Act does not contain regulations dealing with safety and security.

#### **Impact on exploitation**

The Act directly relates to any exploitation activity since this Act prescribes obligatory administrative procedure that must be carried if certain project is planned. Since the introduction of artificial reef is a project for which EIA screening procedure is prescribed, this Act is relevant for any future activities in respect of those reefs.

#### **Relevance for artificial reefs**

See previous paragraph.

#### **Relevance for natural reefs**

This Act prescribes procedures and measures for protection of reefs in case of development of new project in the location.

#### **Anticipated evolvement**

Since the Act contains basic legal requirements, mostly dependent on recent technological advances and especially improvement of environmental protection, the future amendments are expected.

#### **Web site**

[http://digured.srce.hr/arhiva/263/104486/narodne-novine.nn.hr/clanci/sluzbeni/2013\\_06\\_80\\_1659.html](http://digured.srce.hr/arhiva/263/104486/narodne-novine.nn.hr/clanci/sluzbeni/2013_06_80_1659.html)

## 5.10 Decree on Environmental Impact Assessment

### Originator

The Government of Republic of Croatia

### Year of adoption

2014

### Year of entry into force

2014

### Type

Decree (OG 061/2014)

### Last revision

2017

### Level

National – Republic of Croatia

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

This Decree specifies the requirement and criteria for environmental impact assessment, the content of the environmental impact assessment study if the content of the study is not specified by the instruction, the manner of participation of the authorized person who has prepared a study on the environmental impact assessment, the mode of individual examinations and the criteria on the basis of which it is decided to assess the impact of the environmental impact on the environment, the way of giving the assessment; a request to issue guidance on the content of the Environmental Impact Assessment Study and the manner of issuing this instruction; the mandatory content of the writs issued in connection with public information and participation of the public concerned in the procedures: environmental impact assessment, assessment of the need for environmental impact assessment and issuance of guidance on the content of the Environmental Impact Assessment study, and method of work and mandatory content opinions issued by the Commission participating in the environmental impact assessment process, the development of environmental impact studies, the content of the elaboration referred to in Article 82, paragraph 2, subparagraph 3 of the Law, and other related issues.

### Impact on environmental protection

See previous paragraph and the chapter before. This Decree elaborates further the procedure and requirements for EIA.

### Impact on safety and security

The Decree does not contain regulations dealing with safety and security.

### **Impact on exploitation**

See previous paragraph and the chapter before. This Decree elaborates further the procedure and requirements for EIA.

### **Relevance for artificial reefs**

This Decree regulates the procedure of building new artificial reef in Adriatic Sea. Namely, in the ANNEX II of this Decree “List of projects subject to the environmental impact assessment screening procedure for which the Ministry is competent authority” in the point 9.10 “All projects covering landing of the coast, drilling and drying of the seabed and covering construction in the sea longer than 50m” are mentioned. Since building artificial reef usually is the kind of project listed in this point, this Decree is relevant for artificial reefs.

### **Relevance for natural reefs**

See previous paragraph and the chapter before. This Decree elaborates further the procedure and requirements for EIA.

### **Anticipated evolvement**

Since the Decree contains basic legal requirements, mostly dependent on recent technological advances and especially improvement of environmental protection, the future amendments are expected.

### **Web site**

[http://digured.srce.hr/arhiva/263/119771/narodne-novine.nn.hr/clanci/sluzbeni/2014\\_05\\_61\\_1138.html](http://digured.srce.hr/arhiva/263/119771/narodne-novine.nn.hr/clanci/sluzbeni/2014_05_61_1138.html)

## 5.11 Nature Protection Act

### Originator

The Parliament of Republic of Croatia

### Year of adoption

2013

### Year of entry into force

2013

### Type

Act (OG 080/2013)

### Last revision

2019

### Level

National – Republic of Croatia

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

This Act regulates the system of protection and integral conservation of nature and its parts and other related issues. For the purposes of this Act, nature is an all-encompassing biodiversity, landscape diversity and geodiversity. Nature and parts of nature are of interest to the Republic of Croatia and enjoy its special protection. The aims and tasks of nature protection are:

- conserving and / or renewing biodiversity, landscape diversity and geodiversity in the state of natural balance and harmonized human relationships,
- establishing and monitoring the state of nature,
- providing a system of nature protection for its permanent preservation,
- ensuring the sustainable use of natural resources without significant damage to the parts of nature and with the least distortion of the balance of its components,
- contributing to the preservation of soil naturalness, the preservation of the quality, quantity and availability of water, sea, the preservation of the atmosphere and the production of oxygen and the preservation of the climate,
- preventing or mitigating harmful human intervention and disturbance in nature as a consequence of technological development and performance of activities.

### Impact on environmental protection

Besides previously mentioned impact on the environmental protection in the light of nature protection, this Act prescribes special administrative procedure, i.e. Appropriate Assessment (AA) for the projects that are planned to

be built on the Natura2000 sites. Since the reefs are one of the N2000 sites, (elaborated in next chapter) this administrative procedure is very important legal tool for preservation of these sites.

In this regard, Article 24, 25, and 28 of this Act read:

*“Article 24*

*Appropriate Assessment is a procedure for assessing the impact of a plan, program or project, on its own and with other plans, programs or interventions, on the goals of conservation and the integrity of the ecological network area. AA shall be carried out for the plan, program or operation, or parts of the plan, program or project which itself or with other plans, programs or interventions may have a significant negative impact on the conservation objectives and integrity of the ecological network area. AA shall also be applied to strategies for which a special regulation prescribes the obligation of strategic assessment. AA shall not be carried out for the plan, program or project, or parts of the plan, program or project directly related and necessary for the management of the ecological network area.*

*Article 25*

*The appropriate assessment consists of the previous appropriate assessment (hereinafter: the "Previous Assessment"), the main appropriate assessment (hereinafter: the "Main Score") and the determination of the prevailing public interest and the approval of the project with the compensation conditions.*

*Article 28*

*Appropriate assessment of the project shall be carried out, in accordance with the precautionary principle, in order to reach a reasonable measure of the impact of the project on the conservation objectives and the integrity of the ecological network.*

*Appropriate assessment of the project shall be carried out within the framework of the preparation of the intended operation, prior to issuing the location permit or issuing another necessary approval for the implementation of the project.”*

### **Impact on safety and security**

The Act does not contain regulations dealing with safety and security.

### **Impact on exploitation**

This is directly connected to the paragraph on environmental protection since this Act prescribes obligatory administrative procedure that must be carried out if certain project is planned. Since the natural reefs are N2000 sites protected with this administrative procedure, the exploitation needs to meet all the precautionary principles of this Act. In addition, since the introduction of artificial reef is a project for which AA procedure could be prescribed if planned on N2000 sites, this Act is relevant for any future activities of at those reefs.

### **Relevance for artificial reefs**

See previous paragraph. This Act regulates requirements for placing artificial reef in N2000 site.

### **Relevance for natural reefs**

This Act prescribes the protection measures for reefs as N2000 site. See previous paragraphs.

### Anticipated evolvement

Since the Act contains legal requirements, mostly dependent on improvement of environmental protection, the future amendments are expected.

### Web site

[http://digured.srce.hr/arhiva/263/104486/narodne-novine.nn.hr/clanci/sluzbeni/2013\\_06\\_80\\_1658.html](http://digured.srce.hr/arhiva/263/104486/narodne-novine.nn.hr/clanci/sluzbeni/2013_06_80_1658.html)



## 5.12 Ordinance on the list of habitat types, habitat map and vulnerable and rare habitat types

### Originator

Ministry of Environment and Nature Protection

### Year of adoption

2014

### Year of entry into force

2014

### Type

Ordinance (NN 088/2014)

### Last revision

/

### Level

National – Republic of Croatia

### Target stakeholder

Government, agencies, organizations, individuals

### Short description

This Ordinance contains a list of habitat types, habitat maps and endangered and rare habitat types, including priority habitat types of interest to the European Union, which need to be preserved in a favourable state.

### Impact on environmental protection

/

### Impact on safety and security

/

### Impact on exploitation

/

### Relevance for artificial reefs

/

### Relevance for natural reefs

Based on the Nature Protection Act (previous chapter), this Ordinance is regulating a list of N2000 habitats. Natural reefs are listed as N2000 site - habitat in Annex II under the number 1170.

### Anticipated evolvement

The future amendments are not expected since this list is in accordance with the EU requirements, and in case of changes, it will be brought before the EU Commission prior to any changes done on national level.

### Web site

[https://narodne-novine.nn.hr/clanci/sluzbeni/2014\\_07\\_88\\_1782.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2014_07_88_1782.html)

## 6 National legal framework – Republic of Italy

## 6.1 Royal Decree 30 March 1942, N. 327

### CODE OF NAVIGATION

#### Originator

Government of the Reign of Italy

#### Year of adoption

1942

#### Year of entry into force

1942

#### Type

Code

#### Last revision

2017

#### Level

National

#### Target stakeholders

Governments, agencies, organizations, individuals

#### Short description

The Code of Navigation regulates maritime, internal and air navigation in territorial waters and in airspace under the sovereignty of the Italian Republic.

In particular, the Code contains general provisions about the extension of the maritime spaces and the State sovereignty powers (internal sea waters and territorial sea), the administrative activities in the ports, the maritime public domain (identification of the goods and the use of maritime property) and the regulation of the marine property concessions; for example:

#### Art. 28

*They are part of the maritime public domain: a) the lido, the beach, the ports, the shaves; b) lagoons, the mouths of rivers that flow into the sea, the basins of brackish water that at least during part of the year communicate freely with the sea; c) the canals that can be used for public maritime use.*

#### Art. 30

*The administration regulates the use of maritime public domain and exercises the police.*

#### Art. 36

*The maritime administration, in accordance with the needs of the public use, can grant employment and the use, even exclusive, of state goods and territorial sea areas for a certain period of time.*

### **Impact on environmental protection**

The Code does not contain reference to the environmental protection with regard to the general provisions about territorial sea areas, ports and maritime public domain.

### **Impact on safety and security**

These general provisions about territorial sea areas, ports and maritime public domain do not refer to safety and security issues.

### **Impact on exploitation**

The above provisions regulate the exploitation of maritime public domain, prescribing the way of use of it for carrying out economic activities, with or without the use of existing buildings and other facilities on the sea, and with or without the construction of new buildings and other facilities on the sea. The economic use of the maritime public domain takes place with the release of the maritime property concession by the maritime administration.

### **Relevance for artificial reefs**

The Code does not expressly reference artificial reefs.

### **Relevance for natural reefs**

Since the reefs can be included in the definition of maritime public domain, all the provisions prescribing the way of use of the maritime public domain are applicable to the reefs.

### **Anticipated evolvement**

Further development of the act is not expected.

### **Web site**

<https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:regio.decreto:1942-03-30:327>

## 6.2 Legislative Decree 3 April 2006, n. 152

### ENVIRONMENTAL REGULATIONS

#### Originator

Government of Republic of Italy

#### Year of adoption

2006

#### Year of entry into force

2006

#### Type

Legislative Decree

#### Last revision

2018

#### Level

National – Republic of Italy

#### Target stakeholders

Governments, agencies, organizations, individuals

#### Short description

This Legislative Decree, divided in six parties (articles 1-138), has the primary objective of promoting the quality of human life, which must be achieved through the preservation and improvement of environmental conditions and the shrewd and rational use of natural resources. In particular, this Legislative Decree regulates in its second part the procedures for the Strategic Environmental Assessment - SEA (Valutazione ambientale strategica - VAS) and the Environmental Impact Assessment - EIA (Valutazione di impatto ambientale - VIA).

The Strategic Environmental Assessment is a process that assesses the effects of the development of territorial plans and programmes and is therefore adopted in the phase of territorial planning; it analyses the environmental effects that can occur with the implementation of plans and projects, predicting potential environmental responses.

The Environmental Impact Assessment is a procedure that is used for the evaluation of projects and individual works; it is adopted in the project phase, where it is easier to scientifically identify the potential environmental impacts and possible alterations of natural components. The Environmental Impact Assessment must ensure the implementation of the precautionary principle at the early stage of the project planning in order to minimize the impact of the project and to achieve the highest possible environmental quality preservation, achieved by harmonizing and adapting the intended environmental acceptability to a given area.

#### Impact on environmental protection

All activities that could likely have an impact on the environment have to undergo administrative procedures, as the Strategic Environmental Assessment and the Environmental Impact Assessment, which concern the potential

significant environmental impacts of the projects/plans determined by the Decree, regarding to soil, water, sea, air, forest, climate, humans, plant and animal world, natural values, landscape, material assets, cultural heritage.

#### **Impact on safety and security**

This second part of the Decree does not contain regulations dealing with safety and security.

#### **Impact on exploitation**

The Decree directly relates to any exploitation activity since the above provisions prescribe obligatory administrative procedure that must be carried if certain projects or programmes are planned.

#### **Relevance for artificial reefs**

The assessment of the impacts on the environment, including biodiversity and natural resources, is especially interesting in the light of creating artificial reefs; the procedures, established by Decree, are relevant for any future activity in respect of these reefs.

#### **Relevance for natural reefs**

The environmental assessment procedures, established by the Decree, are especially relevant in the cases of exploitation of natural reefs; when the development of new projects is planned within natural reefs, the Decree prescribes procedures to guarantee their protection.

#### **Anticipated evolvement**

Further developments/amendments of the act are expected.

#### **Web site**

<https://www.camera.it/parlam/leggi/deleghe/06152dl.htm#1>

## 6.3 Act 28 January 1994, N. 84

### REORDERING OF THE PORT LEGISLATION

#### Originator

Parliament of Republic of Italy

#### Year of adoption

1994

#### Year of entry into force

1994

#### Type

Act

#### Last revision

2018

#### Level

National – Republic of Italy

#### Target stakeholders

Government, agencies, organizations, individuals

#### Short description

The act provides the reordering of the port legislation, establishing provisions about the organization of the port authorities, the classification of the ports, the activities and the obligation of the maritime authority and the port authority, the port operations, the concession procedures for the use of areas and docks (as a part of the maritime public domain) and the regulation of labour issues.

#### Impact on environmental protection

The planning of the port system must be in accordance with the criteria for energy and environmental sustainability, in line with the policies promoted by the European directives on the subject. For this purpose, port system authorities promote the drafting of the port system's energy and environmental planning document with the aim of pursuing appropriate objectives, with particular focus on reducing CO2 emissions.

#### Impact on safety and security

With regard to the safety of navigation, the act intervenes to define the responsibilities of the port authority and maritime authority, specifying in particular that the maritime authority is responsible for the police and security functions provided by the Code of Navigation and the special laws, and the remaining administrative functions.

#### Impact on exploitation

The port authority and, where it is not established, the maritime authority give in concession areas and docks within the port area to the companies for the completion of port operations, except the use of property by public authorities



to carry out functions related to maritime and port activities. It is also subject to concession by the port authority, and where not established by the maritime authority, the construction and management of works related to maritime and port activities placed at sea.

#### **Relevance for artificial reefs**

The act does not expressly reference to artificial reefs.

#### **Relevance for natural reefs**

Since the reefs are considered as a part of maritime public domain, all provisions referring to it are applicable on natural reefs.

#### **Anticipated evolvement**

Further development of the act is expected.

#### **Web site**

<https://ancip.it/2018/06/22/legge-84-94/>

## 6.4 Act 31 December 1982, n. 979

### PROVISIONS FOR THE DEFENCE OF THE SEA

#### Originator

Parliament of Republic of Italy

#### Year of adoption

1982

#### Year of entry into force

1983

#### Type

Act

#### Last revision

2015

#### Level

National – Republic of Italy

#### Target stakeholders

Governments, agencies, organizations, individuals

#### Short description

The act entrusts the Ministry of Environment and Protection of the Territory and the Sea with the institutional task of the defence of the sea, which is understood not only as protection of the marine environment, the sea and coasts from pollution, but also as a promotion and exploitation of marine resources. This act is aimed at a broader environmental control and has among the main objectives of activate monitoring programs at sea; put in place emergency response plans against pollution caused by spills; establish marine reserves.

#### Impact on environmental protection

The act aims to establish a policy action aimed at real protection of the marine environment and to prevent harmful effects on marine resources and coasts arising from human activities and, in particular, marine pollution due to maritime navigation.

#### Impact on safety and security

The act does not contain expressly references to safety and security, but the protection of the sea and the marine environment can also be guaranteed by the safety of the navigation. The act contains some references to the control of the maritime transport in the marine reserves.

#### Impact on exploitation

The protection of marine reserves, established by law, is reflected in the management of the economic exploitation activities of the sea and maritime public domain.

### **Relevance for artificial reefs**

The act does not expressly reference to artificial reefs, but the localization and description of marine reserves or protected areas take on relevance in creating artificial reefs.

### **Relevance for natural reefs**

The act prescribes measures of protection of the marine reserves and control of the economic activities in those areas, which have relevance for natural reefs.

### **Anticipated evolvement**

The act has undergone many changes over the years, so further development and changes are probably expected.

### **Web site**

<https://www.minambiente.it/normative/l-31-dicembre-1982-n-979-disposizioni-la-difesa-del-mare-gu-18-gennaio-1983-n-16-so>

## 6.5 Act 6 December 1991, N. 394

### LAW ON PROTECTED AREAS

#### Originator

Parliament of Republic of Italy

#### Year of adoption

1991

#### Year of entry into force

1991

#### Type

Act

#### Last revision

2017

#### Level

National – Republic of Italy

#### Target stakeholders

Government, agencies, organizations, individuals

#### Short description

The act provides for the establishment of national protected natural areas by decree. The decree establishing state nature reserve, in addition to determining the boundaries of the reserve and its management body, specifies its main characteristics, institutional finalities and main constraints, providing other specific guidelines and criteria to which the reserve management plan and its implementation regulation must comply. The Minister for the Environment can establish marine protected areas by decree, which must contain the denomination and delimitation of the area, the protection's objectives to which the area is aimed and include, moreover, the concession of use of the maritime public domain and the sea areas. In the marine protected areas, activities that may compromise the environment's protection of the area are limited or prohibited. The act lists a number of prohibited activities in the marine protected area: a) the capture, collection and damage of animal and plant species as well as the removal of minerals and archaeological finds; b) the alteration of the geophysical environment and the chemical and hydrobiological characteristics of the waters; c) the conduct of advertising activities; d) the introduction of weapons, explosives and any other means of destruction and capture; e) motor navigation; f) any form of solid and liquid waste dump.

#### Impact on environmental protection

The act aims to ensure and promote the preservation and enhancement of the national natural heritage, which consists of physical, geological, geomorphological and biological formations, which have relevant natural and environmental value.

### **Impact on safety and security**

The act on the protected areas does not contain direct references to safety and security, but the protection of the marine protected areas and the marine environment can also be guaranteed by the safety of the navigation.

### **Impact on exploitation**

The protection of natural areas is reflected in the management of the economic exploitation activities of those protected areas; in the marine protected areas, the activities of natural resources' exploitation, which may compromise the environment's protection of the area, are limited or prohibited.

### **Relevance for artificial reefs**

The act does not expressly reference to artificial reefs, but the localization and description of marine protected areas take on relevance in creating artificial reefs.

### **Relevance for natural reefs**

The act prescribes measures of protection of the marine protected areas and duties of limitation or prohibition of the economic activities in those areas, which have relevance for natural reefs.

### **Anticipated evolvement**

Further developments of the act can be probably expected.

### **Web site**

<https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:legge:1991;394>

## 6.6 Legislative Decree 13 October 2010, n. 190

IMPLEMENTATION OF THE DIRECTIVE 2008/56/EC, WHICH ESTABLISHES A FRAMEWORK FOR COMMUNITY ACTION IN THE FIELD OF MARINE ENVIRONMENTAL POLICY

### Originator

Government of Republic of Italy

### Year of adoption

2010

### Year of entry into force

2010

### Type

Legislative Decree

### Last revision

/

### Level

National – Republic of Italy

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

As the Directive 2008/56/EC requires Member States, in respect of each marine region or subregion concerned, to develop a marine strategy for their marine waters in accordance with the plan of action, using existing regional institutional cooperation structures, including those under Regional Sea Conventions, covering that marine region or subregion, this Decree establishes a framework within which the Government shall take the necessary measures to achieve or maintain good environmental status in the marine environment by the year 2020 at the latest. Sustainable use of resources must be ensured and to that end the following strategies for marine environment must be implemented: (a) to apply an ecosystem-like approach to the management of human activities to ensure that the overall pressure of these activities is maintained within levels compatible with the achieving a good environmental status; b) safeguarding the ability of marine ecosystems to respond human-induced changes; c) consider cross-border effects on quality marine environment of third countries located in the same region or marine subregion; d) strengthen the conservation of environmental biodiversity through the expansion and integration of the marine network, marine protected areas under current legislation and all other protection measures; (e) to pursue the progressive elimination of pollution marine environment; (f) ensure that monitoring and research actions science on the sea are geared towards the acquisition of knowledge necessary for the rational use of its resources.

### Impact on environmental protection

As the Directive provides a comprehensive and cohesive framework for environmental protection of the European waters, this Decree contributes to the coherence between the different sectoral policies, agreements, legislative

measures, knowledges; the monitoring, planning and scheduling tools have an impact on the marine environment and aim to ensure the integration of environmental implications in the same policies.

#### **Impact on safety and security**

The Decree does not contain direct references to safety and security issues.

#### **Impact on exploitation**

The Decree does not consider exploitation of marine resources; nevertheless the implementation of the European Directive significantly impacts on the exploitation activities requiring to be carried out in environmentally friendly manner.

#### **Relevance for artificial reefs**

In the light of creating artificial reefs the marine strategy will be relevant.

#### **Relevance for natural reefs**

All the measures and tools defined within the marine strategy are applicable to the natural reefs.

#### **Anticipated evolvement**

Further development of the act is not expected; nevertheless, if new needs arise or other measures must be taken to improve the marine strategy, the actual European and national legislation might be amended.

#### **Web site**

[https://www.minambiente.it/sites/default/files/dlgs\\_13\\_10\\_2010\\_190.pdf](https://www.minambiente.it/sites/default/files/dlgs_13_10_2010_190.pdf)

## 6.7 Legislative Decree 17 October 2016, n. 201

### IMPLEMENTATION OF THE DIRECTIVE 2014/89/EU, WHICH ESTABLISHES A FRAMEWORK FOR MARITIME SPATIAL PLANNING

#### Originator

Government of the Republic of Italy

#### Year of adoption

2016

#### Year of entry into force

2016

#### Type

Legislative Decree

#### Last revision

/

#### Level

National – Republic of Italy

#### Target stakeholders

Government, agencies, organizations, individuals

#### Short description

As the Directive 2014/89/EC, the Legislative Decree establishes a framework for maritime spatial planning, promoting the sustainable growth of maritime economies, the sustainable development of marine areas and the sustainable use of marine resources. The maritime spatial planning means a process by which human activities in marine areas are analysed and organised in order to achieve ecological, economic and social goals. The maritime spatial planning aims to contribute to the sustainable development of the energy sectors of the sea, maritime transport, fisheries and aquaculture, for conservation, protection and improvement of the environment, including resilience to the impact of climate change, promoting and ensuring the coexistence of relevant activities and relevant uses.

The maritime spatial planning is implemented through the development of management plans, which identify the spatial and temporal distribution of the relevant activities and relevant seawater uses, present and future, which may include: (a) aquaculture areas; (b) fishing grounds; (c) plants and infrastructure for the exploration, exploitation and extraction of oil, gas and other energy resources, minerals and aggregates and the production of energy from renewable sources; (d) shipping routes and traffic flows; (e) military training zones; (f) natural conservation sites and natural species and protected areas; (g) areas of extraction of raw materials; (h) scientific research; (i) tracks for undersea cables and pipelines; (l) tourism; (m) underwater cultural heritage.

The Ministerial Decree of 13 November 2017, n. 529, as amended by the Ministerial Decree of 11 March 2019, n. 89 and the Ministerial Decree of 27 June 2019, n. 263, governs the organization and operation of the Technical Committee, set up for the maritime spatial planning; by decree of the President of the Council of Ministers on 1



December 2017, the guidelines containing the criteria for the preparation of maritime space management plans were approved.

#### **Impact on environmental protection**

The maritime spatial planning framework aims to ensure sustainable development of all activities taking place in coastal areas and indirectly the protection of the marine and coastal environment through the application of the ecosystem approach, taking into account land-sea interactions and strengthening cross-border cooperation.

#### **Impact on safety and security**

The Decree does not contain direct references to safety and security; nevertheless, in the maritime spatial planning with a view to sustainable development the safety/security aspects must be considered.

#### **Impact on exploitation**

The Decree references exploration, exploitation and extraction of marine resources, requiring to be carried out in an approach of sustainable development, but it does not contain measures regulating exploration, exploitation and extraction of marine resources.

#### **Relevance for artificial reefs**

In the light of creating artificial reefs it will be important to consider the principles defined by this Decree to promote the sustainable growth of maritime economies, the sustainable development of marine areas and the sustainable use of marine resources.

#### **Relevance for natural reefs**

The principles defined by this Decree to promote the sustainable growth of maritime economies, the sustainable development of marine areas and the sustainable use of marine resources have a relevant impact on the natural reefs.

#### **Anticipated evolvement**

Further development of the act is not expected.

#### **Web site**

<https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legislativo:2016;201>

## 6.8 Prime Minister Decree 1° December 2017

### GUIDELINES FOR THE DRAFTING OF THE MARITIME SPACE MANAGEMENT PLANS

#### Originator

Government of the Republic of Italy

#### Year of adoption

2017

#### Year of entry into force

2018

#### Type

Prime Minister Decree

#### Last revision

/

#### Level

National – Republic of Italy

#### Target stakeholders

Government, agencies, organizations, individuals

#### Short description

These guidelines contain the guide criteria for the preparation of the management plans of the maritime space and the identification of the maritime areas of reference, as well as those relevant for the land-sea interactions, attached to this decree of which they form an integral part. Maritime spatial planning is implemented through the development of management plans, which identify the spatial and temporal distribution of relevant activities and uses of present and future marine waters, which may include: aquaculture areas; fishing areas; infrastructures for the exploration, exploitation and extraction of oil, gas and other energy resources, minerals and the production of energy from renewable sources; shipping routes and traffic flows, including the port system; nature conservation sites and natural species and protected areas; raw material extraction areas; scientific research; tracks for submarine cables and pipelines; tourism; underwater cultural heritage; coastal landscapes.

Maritime space management plans will aim to develop proposals, directives and recommendations for an operational and cross-border maritime planning process that, in particular, allow the development of different maritime activities, preventing conflicts for the use of space and at the same time ensuring a good state of marine ecosystems and the provision of ecosystem services and increase confidence for investment in infrastructure and other economic activities, responding to the peculiarities of each area, ensuring predictability, transparency and clearer rules.

### **Impact on environmental protection**

The maritime spatial planning framework aims to ensure sustainable development of all activities taking place in coastal areas and indirectly the protection of the marine and coastal environment through the application of the ecosystem approach, taking into account land-sea interactions and strengthening cross-border cooperation.

### **Impact on safety and security**

The Guidelines contain direct references to safety and security of the civil and productive uses of the sea and the activities that take place there.

### **Impact on exploitation**

The Guidelines do reference to exploration, exploitation and extraction of marine resources, requiring to be carried out through the preparation of the management plans of the maritime space and following an approach of sustainable development.

### **Relevance for artificial reefs**

In the light of creating artificial reefs it will be important to consider the guide criteria defined by this act for the preparation of the management plans of the maritime space and the identification of the maritime areas of reference.

### **Relevance for natural reefs**

These guidelines, which define the maritime spatial planning framework, need to be taken into account in the management of the natural reefs.

### **Anticipated evolvement**

Further development of the act is not expected.

### **Web site**

[www.mit.gov.it/normativa/decreto-presidente-consiglio-ministri-del-1deg-dicembre-2017](http://www.mit.gov.it/normativa/decreto-presidente-consiglio-ministri-del-1deg-dicembre-2017).

## 6.9 Decree of the President of Republic 8 September 1997, n. 357

**REGULATION IMPLEMENTING DIRECTIVE 92/43/EEC RELATING TO THE CONSERVATION OF NATURAL AND SEMI-NATURAL HABITATS, AS WELL AS OF WILD FLORA AND FAUNA**

### Originator

Government of the Republic of Italy

### Year of adoption

1997

### Year of entry into force

1997

### Type

Decree of the President of the Republic

### Last revision

2003

### Level

National – Republic of Italy

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

The Decree governs the procedures for adopting the measures under Directive 92/43/CEE 'Habitat' on the conservation of natural and semi-natural habitats and wildlife, in order to protect the biodiversity through the conservation of natural habitats. The procedures established by this regulation are designed to ensure that natural habitats and wildlife species of European interest are maintained or restored to a satisfactory state of conservation.

The Decree does reference to the sites of European interest within the Nature 2000 network.

### Impact on environmental protection

The Decree aims to ensure and promote the protection of the biodiversity through the preservation of the status of conservation of natural habitats, in particular, of the habitats of European interest within the Natura 2000 network.

### Impact on safety and security

The Decree does not contain references to safety and security.

### Impact on exploitation

The Decree does not contain provisions dealing with exploitation, except the need to guarantee the status of conservation of the biodiversity.

#### Relevance for artificial reefs

The Decree does not expressly reference to artificial reefs, but the protection measures, prescribed by the Decree, could be applicable to the project to create artificial reefs planned within N2000 sites.

#### Relevance for natural reefs

The Decree is applicable to the natural reefs as habitat of European interest sites within the N2000 network.

#### Anticipated evolvement

Further development of the act can be expected.

#### Web site

<https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.del.presidente.della.repubblica:1997-09-08;357!vig=>

## 6.10 Ministry Decree 17 October 2007

### UNIFORM MINIMUM CRITERIA FOR DEFINING RETENTION MEASURES FOR SPECIAL ZONES OF CONSERVATION AND SPECIAL ZONES OF PROTECTION

#### Originator

Ministry of Environment, of Protection of the territory and of the sea – Republic of Italy

#### Year of adoption

2007

#### Year of entry into force

2007

#### Type

Ministry Decree

#### Last revision

/

#### Level

National – Republic of Italy

#### Target stakeholders

Government, agencies, organizations, individuals

#### Short description

This Decree complements the rules governing the sites that constitute the Natura 2000 network in implementation of Directives 79/409/CEE and 92/43/CEE, establishing the uniform minimum criteria on which autonomous regions adopt conservation measures or, if necessary, management plans for these areas. The uniform minimum criteria ensure the ecological consistency of the Natura 2000 network and the adequacy of its management on the national territory; they ensure that habitats of European interest sites are maintained or, if necessary, restored to a satisfactory state of conservation as well as establish measures to prevent the disturbance of the species for which the sites have been designated. The decree of designation of Special Conservation Zones (ZSC) provides the measures necessary to maintain habitats and species for which the site has been identified in a satisfactory state of conservation. Special Protection Zones (ZPS) are formally designated at the time of data transmission to the European Commission and the decree defines the uniform minimum criteria for the definition of conservation measures applicable to all types of Special Protection Zones.

#### Impact on environmental protection

The Decree aims to ensure and promote the preservation of the state of conservation of the habitats of the European interest sites within the Natura 2000 network.

#### Impact on safety and security

The Decree does not contain references to safety and security issues.

### **Impact on exploitation**

In the light of the provisions of the Decree, resource exploitation activities meet the limit of the minimum uniform criteria on which conservation measures and management plans are adopted to ensure the ecological consistency of the Nature 2000 network.

### **Relevance for artificial reefs**

The Decree does not expressly reference to artificial reefs, but the uniform criteria minimum, prescribed by the Decree and intended to ensure the ecological consistency of the Nature 2000 network, could be applicable to the project to create artificial reefs planned within Nature 2000 sites.

### **Relevance for natural reefs**

The uniform minimum criteria prescribed by the Decree to ensure the ecological consistency of the Nature 2000 network are applicable to the natural reefs as habitat of European interest sites within the Nature 2000 network.

### **Anticipated evolvement**

Further development of the Decree could be expected.

### **Web site**

[https://www.gazzettaufficiale.it/atto/serie\\_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2007-11-06&atto.codiceRedazionale=07A09363](https://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2007-11-06&atto.codiceRedazionale=07A09363)

## 6.11 Ministry Decree 3 September 2002

### GUIDELINES FOR THE MANAGEMENT OF THE SITES NATURA 2000

#### Originator

Ministry of Environment and Protection of the territory – Republic of Italy

#### Year of adoption

2002

#### Year of entry into force

2002

#### Type

Ministry Decree

#### Last revision

/

#### Level

National – Republic of Italy

#### Target stakeholders

Government, agencies, organizations, individuals

#### Short description

The aim of these guidelines is to implement the European and National Strategy for the Conservation of Natura and Biodiversity, which is the subject of the European Directives Habitat (Dir. 92/43/CEE) and Birds (Dir. 79/409/CEE). These Guidelines support technically and juridically the development of appropriate conservation measures, including management plans, for Natura 2000 network sites. The main goal proposed by these Guidelines is the need to integrate the whole of the conservation measures with the planning at the different levels of governance (international, national, local), as provided for by Habitat Directive.

#### Impact on environmental protection

The Guidelines aim to ensure and promote the preservation of the state of conservation of the habitats of the European interest within the Natura 2000 network.

#### Impact on safety and security

The Guidelines do not contain references to safety and security issues.

#### Impact on exploitation

Since the Guidelines support the development of appropriate conservation measures, including management plans, for Nature 2000 network sites, the exploitation needs to meet the whole integrated regulatory system for the management of the sites Nature 2000.



#### **Relevance for artificial reefs**

The Guidelines do not expressly reference to artificial reefs, but the integrated system of measures could be applicable to the project to create artificial reefs planned within N2000 sites.

#### **Relevance for natural reefs**

The Guidelines are applicable to the natural reef as habitat of European interest sites within the N2000 network.

#### **Anticipated evolvement**

Further development of the act is not expected.

#### **Web site**

[https://www.gazzettaufficiale.it/atto/serie\\_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2002-09-24&atto.codiceRedazionale=02A11532](https://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2002-09-24&atto.codiceRedazionale=02A11532)

## 6.12 Legislative Decree 9 January 2012, n. 4

### MEASURES TO REORGANIZE FISHERIES AND AQUACULTURE LEGISLATION

#### Originator

Government of Republic of Italy

#### Year of adoption

2012

#### Year of entry into force

2012

#### Type

Legislative Decree

#### Last revision

2016

#### Level

National – Republic of Italy

#### Target stakeholders

Governments, agencies, organizations, individuals

#### Short description

The Decree provides the reordering, coordination and integration of national fisheries and aquaculture legislation, in order to correctly implement the criteria and objectives set by the European legislation, establishing a regime to prevent, deter and eliminate illegal fishing, not declared and unregulated.

#### Impact on environmental protection

The Decree regulates fisheries and aquaculture and related activities with a view to the correct use of aquatic ecosystems of the fisheries and aquaculture resources and the enhancement of the productive and socio-cultural aspects of fisheries and aquaculture, the sustainable use of aquatic ecosystems and the protection of the coastal environment.

#### Impact on safety and security

The Decree does not contain regulations dealing with safety and security.

#### Impact on exploitation

The fishing or aquaculture activities represent one of the possible ways of exploitation of the reefs.

#### Relevance for artificial reefs

The reefs can be identified as location for fishing or aquaculture activities.

### Relevance for natural reefs

The reefs can be identified as location for fishing or aquaculture activities.

### Anticipated evolvement

Further development of the act may be expected, because the matter is evolving and a new reorganization of the matter is underway.

### Web site

<https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/4615>

## 6.13 Ministry Decree 3 November 2017, N. 21355

**DISCIPLINE FOR THE GRANTING OF AUTHORISATION FOR THE OPERATION OF AQUACULTURE FACILITIES AT SEA AT A DISTANCE OF MORE THAN ONE KILOMETRE FROM THE COAST**

### **Originator**

Ministry of Agriculture and Forestry – Republic of Italy

### **Year of adoption**

2017

### **Year of entry into force**

2017

### **Type**

Ministry Decree

### **Last revision**

/

### **Level**

National – Republic of Italy

### **Target stakeholders**

Government, agencies, organizations, individuals

### **Short description**

This Decree regulates the granting of authorisation to exercise offshore aquaculture plants more than one kilometre away from the coast in accordance with the current discipline. This authorization assumes the granting of a regular license for the use of the maritime public domain area. The authorisation is not required for installations which, as of the date when this Decree comes into force, are engaged in aquaculture; it must, instead, be required in the event of any structural changes to the system or the type of species bred.

### **Impact on environmental protection**

The Decree does not contain regulations dealing with environmental protection.

### **Impact on safety and security**

The Decree does not contain regulations dealing with safety and security.

### **Impact on exploitation**

The Decree contains expressly references to the aquaculture facilities at sea and the exercise of aquaculture activities.

### **Relevance for artificial reefs**

The reefs can be identified as location for aquaculture activities.

#### **Relevance for natural reefs**

The reefs can be identified as location for aquaculture activities.

#### **Anticipated evolvement**

Further development of the act is not expected.

#### **Web site**

<https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/11892>

## 6.14 Ministry Decree 15 February 2019

### NATIONAL GUIDELINES FOR THE MINING DECOMMISSIONING OF PLATFORMS FOR THE CULTIVATION OF HYDROCARBONS AT SEA AND RELATED INFRASTRUCTURE

#### Originator

Ministry for the Economic Development – Republic of Italy

#### Year of adoption

2019

#### Year of entry into force

2019

#### Type

Ministry Decree

#### Last revision

/

#### Level

National – Republic of Italy

#### Target stakeholders

Governments, agencies, organizations, individuals

#### Short description

These guidelines set out procedures for the mining disposal of platforms and related infrastructures already used for the cultivation of hydrocarbon deposits, whether they are depleted or unusable or unable to ensure further commercial production. The guidelines apply to production platforms, compression platforms, transit platforms and infrastructure related to the service of oilfield drilling facilities located in the territorial sea and continental shelf. The company that owns the concession submits the application to the competent authority for the removal of the disused platform, attaching the removal project; the companies or entities interested in the reuse of a platform or related infrastructures must submit an instance with the reuse project.

#### Impact on environmental protection

The projects to reuse the platform and related structures in disuse may be subject to an environmental impact assessment; the projects to remove related platforms and infrastructures are subject to an environmental assessment. The reuse project must include at least one analysis of potential conflicts of use (sea routes, protected areas, underwater archaeological heritage, etc.) and an analysis of the environmental effects in the construction, operation and disposal of the new installations/structures with reference to: any changes in weather conditions, water quality, seabed and marine ecosystems, natural resources, waste production and disposal, emissions and possible risks of serious accidents, underwater archaeological heritage, cultural heritage and the landscape of the coastal territories. In the case of authorisation for the removal of the platform and related infrastructure in disuse, it

is mandatory, at the end of the decommissioning work, to proceed with the environmental restoration of the state of the places affected by the removal of the platform and connected infrastructures.

#### **Impact on safety and security**

In the context of projects and activities aimed at both reuse and the removal of platforms and related infrastructures, the safety of operations must be guaranteed, including with regard to the Legislative Decree 18 August 2015, n. 145.

#### **Impact on exploitation**

The projects to remove platforms and their infrastructures must take into account the main socio-economic activities (fishing, leisure, maritime traffic), which take place near the removal area of the platform and related structures. In relation to the reuse projects of the platforms and their infrastructures, the analysis of the production capacities of the chosen site becomes relevant (e.g. fish farming, agriculture, energy, etc.).

#### **Relevance for artificial reefs**

The Decree provides the reuse of platforms and related infrastructures to realize socio-economic activities (for example: fish farming, agriculture, marine energy, etc.), considering environmental, social and economic impacts of the new activity.

#### **Relevance for natural reefs**

In relation to projects to reuse or to remove platforms and related infrastructures, the localization and description of marine protected areas, national parks, Natura 2000 network sites, areas affected by underwater archaeological cultural heritage, areas of biological protection, areas subject to environmental protection take on relevance.

#### **Anticipated evolution**

Since the Decree is recently adopted, future amendments are not expected.

#### **Web site**

<https://www.gazzettaufficiale.it/eli/id/2019/03/08/19A01522/sg>

## 6.15 Italian National Biodiversity Strategy 2010

### Originator

Government of Republic of Italy

### Year of adoption

2010

### Year of entry into force

2010

### Type

Strategy

### Last revision

2016

### Level

National – Republic of Italy

### Target stakeholders

Governments, agencies, organizations, individuals

### Short description

The development of a National Strategy for Biodiversity is part of the commitment undertaken by Italy after the ratification of the Convention on Biological Diversity, Rio de Janeiro 1992 by means of Law No. 124 of February 14, 1994. The Convention has the following three main objectives: a) the conservation of biological diversity, at the level of genes and species as well as communities and ecosystems; b) the long-term or sustainable use of its components; c) the fair and equitable sharing of the benefits arising out of the utilization of genetic resources and by appropriate transfer of relevant technologies.

The Strategy can be implemented through adequate regulatory support by working on the existing laws and eventually issuing a specific national policy framework for the preservation and enhancement of biodiversity. This policy should lay down the main principles and guidelines for regional laws impacting on biodiversity. In this context, the existing laws on the subject should be adapted with special reference to protected areas, the Natura 2000 network and other ecological networks while identifying appropriate financial resources.

### Impact on environmental protection

Main goal of this Strategy is to promote the conservation of the biodiversity. With regard to the marine environment, the threats to the marine resources result in significant loss or degradation of biodiversity and alterations in its structure, through contamination and destruction of species, habitats and ecosystems. These threats are strongly interconnected and therefore need tools to ensure real governance, through an effective integrated sea and coastal policy.



### **Impact on safety and security**

The Strategy does not contain direct references to safety and security, but the conservation of the biodiversity can also be guaranteed by the safety of the navigation.

### **Impact on exploitation**

The Strategy considers exploitation of marine resources with regard to the need of sustainable management of economic activities to reduce their negative impact on the biodiversity.

### **Relevance for artificial reefs**

This Strategy does not expressly reference to artificial reefs.

### **Relevance for natural reefs**

This Strategy does not expressly reference to natural reefs; therefore, since they are part of the marine ecosystem, all objectives relevant for the whole ecosystem are also applicable on natural reefs.

### **Anticipated evolvement**

Since this is the Strategy developed 10 years ago (2010-2020), the new one is expected in the future.

### **Web site**

<https://www.minambiente.it/pagina/strategia-nazionale-la-biodiversita>

## 6.16 Italian National Sustainable Development Strategy 2017

### Originator

Government of the Republic of Italy

### Year of adoption

2017

### Year of entry into force

2017

### Type

Strategy

### Last revision

/

### Level

National – Republic of Italy

### Target stakeholders

Governments, agencies, organizations, individuals

### Short description

The Strategy is based on the update of the previous "Environmental Action Strategy for Sustainable Development in Italy 2002-2010", but expands its scope, integrating the objectives contained in the UN 2030 Agenda. It is the main instrument for the creation of a new circular, low-carbon economic model that is resilient to climate change and other global changes. To steer the efforts of this economic-environmental transition in the right direction, the Sustainable Development Strategy defines 5 areas of intervention – People, Planet, Prosperity, Peace, Partnership - each of which is composed of a system of choices national targets.

There are many challenges to be faced in relation to the "Planet" area. We need to ensure the management of the country's natural, terrestrial, marine and eco-system resources to ensure an adequate flow of environmental services for current and future generations. To ensure the sustainability of natural resources, the challenges of conservation status and resource management policies must be addressed. In particular, the effort is aimed at: maintaining the vitality of the seas, preventing impacts on the marine and coastal environment, stopping land use and desertification, ensuring sustainable management and countering forest abandonment and degradation.

Sustainable development achieves a balance between the demands for quality of life (economic component), the achievement of social welfare and peace (social component), and the requirements for preserving environmental constituents (environmental component) as a natural asset that depend on present and future generations. Regarding to the seas it is particularly important in relation to the protection of nature and the environment and the preservation of biodiversity and ecosystem as well as in relation to a large number of different activities (maritime transport, infrastructures, tourism and nautical tourism, economic activities related to fishing).

### **Impact on environmental protection**

One of the strategic objectives to ensure sustainable management of natural resources is maintain the vitality of the seas, promote the conservation of the biodiversity and prevent impacts on the marine and coastal environment.

### **Impact on safety and security**

The Strategy does not contain regulations dealing with safety and security; therefore, the environment protection and the conservation of the biodiversity can also be guaranteed by the safety of the navigation.

### **Impact on exploitation**

The Strategy does not consider exploitation of marine resources, but it will need to be addressed by taking a sustainable management of economic activities to reduce their negative impact on the biodiversity.

### **Relevance for artificial reefs**

This Strategy does not expressly reference to artificial reefs.

### **Relevance for natural reefs**

This Strategy does not expressly reference to natural reefs; therefore, since they are part of the marine ecosystem, all objectives relevant for the whole ecosystem are also applicable on natural reefs.

### **Anticipated evolvement**

Since the strategy covers the period from 2017 to 2030, interim reviews are planned.

### **Web site**

[https://www.minambiente.it/sites/default/files/archivio\\_immagini/Galletti/Comunicati/snsvs\\_ottobre2017.pdf](https://www.minambiente.it/sites/default/files/archivio_immagini/Galletti/Comunicati/snsvs_ottobre2017.pdf)

## 7 International examples of good practice

## 7.1 The National Fishing Enhancement Act

### Originator

The United States Government

### Year of adoption

1984

### Year of entry into force

-

### Type

Act

### Last revision

-

### Level

National – United States of America

### Target stakeholders

Government, agencies, organizations, individuals

### Short description

The National Fishing Enhancement Act (NFEA) of 1984 was designed to promote and facilitate efforts to establish artificial reefs for enhancing fishery resources and commercial and recreational opportunities. Act was passed by Congress and signed into law by President Reagan. The NFEA consolidated several decades of localized and state laws to maximize the potential benefits of artificial reefs as fishery enhancement mechanisms.

The Act is included in the US Code Title 33 – Navigation and Navigable Waters, Chapter 35 – Artificial Reefs.

### Impact on environmental protection

The Act provides a foundation for the establishment of a national artificial reef program in order to minimize environmental risks, to prevent unreasonable obstruction to navigation, to follow principles of international law, to enhance fishery resources and facilitate access for recreational and commercial fishing as well as to lessen conflicts between different users of marine resources.

### Impact on safety and security

The Act does not contain regulations dealing with safety and security.

### Impact on exploitation

The Act deals with artificial reefs as a tool to control overfishing and degradation of vital fishery resources. Properly designed, constructed and located artificial reefs in waters can enhance the habitat and diversity of fishery resources, enhance US recreational and commercial fishing opportunities, increase the production of fishery products in US and contribute to the USA and coastal economies.

### Relevance for artificial reefs

According to the Act, the main purpose for construction and placement of artificial reefs is to enhance fishery resources as well as the commercial and recreational opportunities. It opens legal opportunity to use artificial materials as well as obsolete ships as artificial reefs.

### Relevance for natural reefs

The Act indirectly influences natural reefs by enhancing the marine habitats and fishery resources, as well as recreational and tourist purposes, by deploying artificial reefs, thus decreasing exploitation of natural reefs.

### Anticipated evolvement

Since the Act contains basic legal requirements, mostly not dependent on recent technological advances or improvement of environmental protection, the future amendments are not expected.

### Web site

<https://www.bsee.gov/sites/bsee.gov/files/reports/nationalfishingenhancementactof1984.pdf>

<http://uscode.house.gov/view.xhtml?path=/prelim@title33/chapter35&edition=prelim>

## 7.2 Guidelines for Marine Artificial Reef Materials

### Originator

Atlantic and Gulf States Marine Fisheries Commissions

### Year of adoption

2004

### Year of entry into force

-

### Type

Guidelines

### Last revision

-

### Level

National – United States of America

### Target stakeholders

State and Federal Agencies, organizations, individuals, general public

### Short description

The Guidelines contains a comprehensive discussion regarding a variety of materials that have been used in the development of marine and estuarine artificial reefs in the United States. The document provides background and experiences acquired by different companies since first deployment of artificial reefs. In addition, it provides numerous personal opinions and experiences of reef program managers. Based on the literature and personal communications, it summarizes benefits and drawbacks associated with selected materials as well as issues to be taken into account if certain materials are considered for use as artificial reef material. The intention is to give the state and federal agencies and the general public information related to the use of selected materials for development of marine artificial reefs.

### Impact on environmental protection

The Guidelines mostly deals with environmental compatibility of materials considered with the marine environment. In addition, the Guidelines emphasize durability and shape stability of each material as the most important factors determining effectiveness of artificial reefs as habitats. According to the Guidelines, when there are documented environmental risks associated with using a specific material, those risks should be known and steps should be taken to minimize such risks. If the risks outweigh the other criteria, or minimizing the risks becomes too expensive, alternative materials should be considered. In the case of new materials with unknown risks, it is important that an environmental assessment be accomplished before its use. Therefore, artificial reef materials should be selected for their resistance to the chemical and physical forces that will be in constant action in the marine environment. Apart from that, artificial reefs have to be designed in a way that does not create hazards to navigation (assuming that any navigational hazard is at the same time hazardous for marine environment).

### **Impact on safety and security**

The Guideline does not consider safety and security issues (apart from those inherent to deployment of artificial reefs).

### **Impact on exploitation**

The Guidelines considers artificial reefs as objects whose goal is primarily to enhance fishery resources to the maximum extent practicable, and to facilitate their access and utilization by recreational and commercial fishermen. In that respect, its goals are to provide artificial reef programs and prospective artificial reef developers with information that will increase the potential for successful habitat creation and enhancement. From that perspective, the features of particular material are analysed as to identify their benefits and drawbacks. In addition, certain engineering aspects are considered mostly because of their influence on the economic viability of the artificial reef project. It is worth to emphasize that other uses of artificial reefs are not considered in the Guidelines.

### **Relevance for artificial reefs**

The Guidelines is dedicated to one, probably the most important, factor of the artificial reef development, i.e. selection of material to be used. Consequently, it gives an overview of materials used for the construction or placement of artificial reefs, as well as their characteristics, impact on the marine environment and experience gained with these materials. Based on these data, the Guideline implies that properly constructed and strategically situated, artificial reefs can significantly enhance fish habitat, increase access to quality fishing grounds, benefit fishermen and the economies of shore communities, and increase total fish biomass. In other words, the Guidelines suggest that artificial reefs are a viable option for the conservation and management of fishery resources.

### **Relevance for natural reefs**

The Guidelines does not refer to natural reefs. However, since artificial reefs are a tool to mitigate for loss of natural reefs, their relevance for protection is significant (depending on location and season, some artificial reefs can have a higher biomass of fish species than nearby natural reefs).

### **Anticipated evolvement**

The Guidance is expected to be amended (“to be a living document”). The authors welcome anyone to report any materials known to be used in artificial reef development that are not yet included in this document. Such materials should be included in the next edition of these guidelines.

### **Web site**

[https://www.gsmfc.org/pubs/SFRP/Guidelines\\_for\\_Marine\\_Artificial\\_Reef\\_Materials\\_January\\_2004.pdf](https://www.gsmfc.org/pubs/SFRP/Guidelines_for_Marine_Artificial_Reef_Materials_January_2004.pdf)



### 7.3 Guidelines and management practises for artificial reef siting, use, construction and anchoring in Southeast Florida

**Originator**

Florida Department of Environmental Protection

**Year of adoption**

2011

**Year of entry into force**

NA

**Type**

Guidelines

**Last revision**

-

**Level**

National – United States of America

**Target stakeholders**

Stakeholders include recreational anglers and associated businesses, federal, state, and local governments, tourism and commercial development interests, recreational and commercial scuba divers, commercial fishermen, academia, volunteer reef research and monitoring groups, artificial reef module manufacturers, marine contractors, environmental organizations and the media.

**Short description**

The Guidelines is a comprehensive document dealing with all important aspects of the artificial reefs building and deployment. The document describes artificial reef technologies and some of the science behind it, as a means of assisting practitioners with backgrounds, skills and experience in achieving responsible and sustainable reef development. Its goal is to present best and acceptable guidelines and management practices for artificial reef planning, siting, construction, anchoring and monitoring, and thus provide essential information and guidance to resource users, managers and planners on the most effective methods for protecting natural reefs and other natural resources, habitats, during the establishment of artificial reefs and reef ecosystems. This Guideline is divided into 12 chapters.

**Impact on environmental protection**

The document deals with all important impacts artificial reefs may have to environment. It discusses building materials and different purposes, from protection of natural reefs to creation of independent habitats up to mitigation effects for nearby natural reefs. In addition, the document deals with administrative issues, unintended consequences, monitoring and promotion.

Although the document deals mostly with South Florida marine area, the majority of presented facts and experience is useful for any other marine area in the world.

### **Impact on safety and security**

The document refers in significant details to most important safety issues during development and deployment of artificial reefs. The document analyses liability risks, risks of the improper functions and risk connected with improper or inadequate use of artificial reefs.

### **Impact on exploitation**

The document extensively deals with use of artificial reefs. Different exploitative activities that may be carried out on the site or near an artificial reef are discussed in details. The document contains numerous suggestions on proper exploitation of artificial reefs, such as program planning (“business plan”), and considerations for the selection and establishment of permitted artificial reef areas. In addition, the document discusses construction issues in relation to intended goals and use of artificial reefs. It has to be emphasized that numerous considerations are based on the experience gained in last 30 years. There are no references dealing with other explorative activities.

### **Relevance for artificial reefs**

The document is in its entirety dedicated to construction, location, deployment and use of artificial reefs. It also contains references to legal and administrative procedures applicable in Southeast Florida. As such, it provides highly useful information on legal approach that may be used for regulating deployment, use and promotion of artificial reefs.

### **Relevance for natural reefs**

Among other uses of artificial reefs, the document deals also with artificial reefs as a tool to protect or mitigate natural reef resources of the area under considerations. Consequently, the Guidelines help to protect and sustain natural reefs. Depending on geographic location of a new artificial reef, it can actually reduce diver pressure on natural reefs nearby.

### **Anticipated evolvement**

As a first document of its kind in Florida, it is a valuable benchmark for future development. Although it contains a number of general considerations for deployment of artificial reefs, its primary purpose is use of artificial reefs in waters where coral reefs can be found. Therefore, it can be expected that future revisions will be issued.

### **Web site**

<http://edis.ifas.ufl.edu/pdf/files/sg/sg10100.pdf>

## 7.4 The Great Barrier Reef Marine Park Act

### Originator

Government of Australia, Great Barrier Reef Marine Park Authority

### Year of adoption

1975

### Year of entry into force

-

### Type

Act

### Last revision

2006

### Level

National - Australia

### Target stakeholders

Australian and Queensland governments, communities, Indigenous person, business and industry

### Short description

The Great Barrier Reef Marine Park Act provides for the long-term protection and conservation of the environment, biodiversity and heritage values of the Great Barrier Reef Region. It is an exemplar for marine management and conservation. An important part is a collaboration with the Queensland Government in managing and protecting the Marine Park. This Act has nine Parts and five Endnotes.

The definition of the reef used in the Act *includes bommie fields, reef slopes, moats and ramparts*.

### Impact on environmental protection

The Act provides legal framework for the environmental protection of the Great Barrier Reef. By the virtue of the Act, particular areas of the Marine Park are considered as nature conservation values, cultural and heritage values, or scientific values. Therefore, the Act provides rules and measures to reduce or eliminate the threats, to ensure management for the recovery and continued protection and conservation of species and ecological communities that are, or may become extinct or endangered, and to ensure that activities within areas of the Marine Park follow ecologically sustainable use, as it is defined in the Act.

### Impact on safety and security

The Act does not contain regulations dealing with safety and security issues. Nevertheless, it provides certain exemptions in cases when safety of the vessel and/or persons is jeopardized.

### Impact on exploitation

The Act defines ecologically sustainable use of the Great Barrier Reef Region as uses that include public enjoyment and appreciation, public education about the region, recreational, economic and cultural activities as well as the research in relation to the natural, social, economic and cultural systems and value of the Great Barrier Reef Region. The sustainable use of the Region and its natural resources is consistent with protecting and conserving the environment, biodiversity and heritage values of the Great Barrier Reef Region and ecosystem-based management. The principles of the ecologically sustainable use include decision-making processes (effectively integrating long-term and short-term environmental, economic, social and equitable considerations), the precautionary principle, the principle of inter-generational equity (the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations), the conservation of biodiversity and ecological integrity (as a fundamental consideration in decision-making) and improved valuation, pricing and incentive mechanisms.

### Relevance for artificial reefs

The Act does not contain regulations dealing with artificial reefs.

### Relevance for natural reefs

The Act deals entirely with environmental protection of the Great Barrier Reef as the world's largest coral reef, covering some 344.400 square kilometres. It is the unique ecosystem and it is recognised internationally as a World Heritage Area. Therefore, the Act is considered as a *lex specialis* for the particular purpose, and it does not contain general regulations dealing with natural reefs.

### Anticipated evolvement

The long-term protection and management of the Great Barrier Reef is a complex and intensive task requiring an objective and expertise-based approach. The Great Barrier Reef Marine Park Act 1975 has served its purpose and the legislation remains sound. It has been amended numerous times in order to keep it up to date. It is expected that future amendments will try to strengthen three areas. Firstly, the Act needs to be better aligned with the modern environment protection standards. Secondly, overlaps and gaps with other relevant legislation have to be addressed resulting with more consistent environmental impact assessment, approval and permit processes for business and the community. Thirdly, there is a need to ensure consistent compliance with the Environment Protection and Biodiversity Conservation Act 1999.

### Web site

<https://www.legislation.gov.au/Details/C2017C00279>

## 7.5 The Great Barrier Reef Marine Park Regulations

### Originator

Great Barrier Reef Marine Park Authority

### Year of adoption

1983

### Year of entry into force

-

### Type

Regulation

### Last revision

-

### Level

National - Australia

### Target stakeholders

Australian and Queensland governments, communities, Indigenous person, business and industry

### Short description

Great Barrier Reef Marine Park Regulations 1983 are the primary regulations in force under the Great Barrier Reef Marine Park Act 1975. It includes a number of detailed provisions, such as those on applications for and the granting of permissions, compulsory pilotage, environmental management charge, research activities, fishing, plans of management and review rights, offences, etc. Amendments to the Regulations came into force on 25 November 2009. The Regulations consists of 16 Parts.

### Impact on environmental protection

The Regulations deals in more details with implementation of the regulations adopted through GBRMP Act. The goal is to prevent any activity that may influence the environment of the Great Barrier Reef Marine Park. The activity is considered as such if it modifies, destroys, fragments, isolates or disturbs an important area of habitat or ecosystem, has a substantial adverse effect on a population of a species, results in a substantial change in air quality or water quality, results in pest species being introduced in the marine park or potentially harmful substances accumulating in the marine environment and has a substantial adverse impact on heritage values of the marine park.

### Impact on safety and security

The Regulations does not contain regulations dealing with safety and security issues. Nevertheless, it provides certain exemptions in cases when safety of the vessel and/or persons is jeopardized.

### Impact on exploitation

Activities that may have a significant impact on the environment of the Great Barrier Reef Marine Park include major new pontoons, jetties and port developments in or next to the marine park, aquaculture facilities, tourism developments, including marinas and floating hotels, coastal large-scale subdivisions with potential runoff affecting the marine park, major coast infill or spoil dumping, and new industry with significant marine discharges. Relevant impacts of permitted conduct refer to the environment, biodiversity, and heritage values of the Marine Park or a part of it, or the risk of the proposed conduct restricting reasonable use by the public. The Regulations prescribes the procedure to be followed for any of the mentioned explorative activities.

### Relevance for artificial reefs

The Great Barrier Reef Marine Park Authority<sup>7</sup> considers artificial reefs to be any structure that people build or put in place on the seafloor, in the water column or floating on the sea surface for the purpose of either creating a new attraction for divers or to concentrate or attract plants and animals for the purpose of fishing. The installation and operation of an artificial reef in the Marine Park requires the permission of the Authority.

### Relevance for natural reefs

The Act deals entirely with environmental protection of the Great Barrier Reef. Based on the Act, and taking into account the legal nature of the Act, it does not contain general regulations dealing with natural reefs.

### Anticipated evolvement

The last revision of the Great Barrier Reef Marine Park Regulations 2019 will come into effect on 1 April 2019, but will not result in any substantive change to the rules that already apply in the Marine Park. These new Regulations repeal and replace the Great Barrier Reef Marine Park Regulations 1983. New Regulations will reduce complexity and improve clarity of the policy intent. Further improvements may be expected, as it might be needed.

### Web site

<https://www.legislation.gov.au/Details/F2017C00960>

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<sup>7</sup> Guidelines for the management of artificial reefs in the Marine Park (<http://www.gbrmpa.gov.au/about-us/legislation-regulations-and-policies/policies-and-position-statements/guidelines-for-the-management-of-artificial-reefs-in-the-marine-park>)

## 7.6 Practical Guide to the Construction and Management of Artificial Reefs in North-western Australia

### Originator

MScience Pty Ltd, marine environmental consultancy

### Year of adoption

2013

### Year of entry into force

NA

### Type

Guidelines

### Last revision

-

### Level

Regional

### Target stakeholders

Western Australian Environmental Protection Authority, organizations, agencies, other inhabitants of Western Australia

### Short description

This Guide has been developed in order to share the experiences in planning, designing, permitting, constructing and monitoring an artificial reef within an active harbour area of the Port of Dampier, Western Australia. Its purpose is to inform companies or entities who may be considering constructing an artificial reef for the purpose of extending coral habitats. The manual describes in details the design, construction and management of the artificial reef.

### Impact on environmental protection

The document in its entirety deals with use of artificial reefs as an extension of the coral reef. In that respect, it presents guidelines for those who plan to build, deploy and monitor such structure. Consequently, social, economic, environmental and biological effects must be taken into consideration. In particular, the environmental conditions are important because improper location, configuration, materials or construction of an artificial reef, initially developed for mitigation purposes, may even endanger nearby coral reefs.

### Impact on safety and security

The document does not contains recommendations regarding safety and security issues.

### Impact on exploitation

As a rule, all feasible alternatives for natural reefs restoration should be explored before artificial reef construction is considered. Where an artificial reef is created to offset coral habitat lost to environmental degradation or land

reclamation, it is natural to consider transplanting coral colonies from the degraded area or the reclamation site to the artificial reef. If transplantation is successful, exploitation activities carried out in the nearby areas are the same as those approved in the area of the initial coral reef.

#### **Relevance for artificial reefs**

The document deals with design, construction and management of the artificial reefs aiming to mitigate deterioration of nearby coral reefs. The ultimate goal of an artificial reef, as considered in this document, is to develop a community that is similar in cover, composition and diversity to that of nearby natural reefs and is sustained indefinitely.

#### **Relevance for natural reefs**

Coral reefs are usually best developed at the front area, i.e. the edge facing the prevailing wave direction. It is so because corals and coralline algae tend to grow more in clear and well-oxygenated water. Therefore, the document deals with use of artificial reefs to rehabilitate the damaged natural coral reefs. Consequently, the importance of the document for the natural coral reefs is significant; however, the importance for other types of natural reefs may be reduced.

#### **Anticipated evolvement**

Although the document contains useful information dealing with deployment and use of artificial reefs, its primary purpose is use of artificial reefs as an extension of the coral habitat. Consequently, future extension of the document can be expected after additional knowledge and experience is acquired.

#### **Web site**

[http://www.msscience.net.au/wp-content/uploads/2015/06/AR-Guide-Current\\_online.pdf](http://www.msscience.net.au/wp-content/uploads/2015/06/AR-Guide-Current_online.pdf)



## 7.7 Environment Protection and Biodiversity Conservation Act

EPBC Act

### Originator

Parliament of Australia

### Year of adoption

1999

### Year of entry into force

-

### Type

Act

### Last revision

-

### Level

National

### Target stakeholders

Australian government, organisations, communities, agencies, individuals

### Short description

The Environment Protection and Biodiversity Conservation Act is the Australian foundation of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as matters of national environmental significance. The EPBC Act provides a national scheme of environment and heritage protection and biodiversity conservation. The Act is divided into five Chapters.

The Act is a comprehensive implementation of the major international conventions dealing with environmental protection, conservation of biodiversity and national and world heritage protection.

### Impact on environmental protection

The Act in its entirety deals with environmental protection and biodiversity conservation. EPBC Act aims are to provide the protection of the environment, to conserve Australia's biodiversity, to protect biodiversity internationally by controlling the international movement of wildlife, to provide a streamlined environmental assessment and approvals process where matters of national environmental significance are involved, to protect world and national heritage and to promote ecologically sustainable development. The nine matters of national environmental significance are: world heritage properties, national heritage places, wetlands of international importance, nationally threatened species and ecological communities, migratory species, Commonwealth marine areas, the Great Barrier Reef Marine Park, nuclear actions (including uranium mining) and a water resource, in relation to coal seam gas development and large coal mining development. Principles of ecologically sustainable development include (a) decision-making processes that effectively integrate long-term and short-term economic, environmental, social and

equitable considerations; (b) in case of threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation; (c) inter-generational equity - the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations; (d) the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making; (e) improved valuation, pricing and incentive mechanisms should be promoted.

#### **Impact on safety and security**

The Act does not contain regulations dealing with safety and security issues. Nevertheless, it provides certain exemptions in cases when safety of the vessel and/or persons is jeopardized.

#### **Impact on exploitation**

The Act contains a number of provisions that may prohibit or restrict certain explorative activities. The activities prohibited or restricted are those in connection with the conservation of biodiversity (including identification and monitoring of biodiversity and the preparation of bioregional plans, the listing of nationally threatened species and ecological communities, migratory species and marine species, the preparation of national recovery plans and wildlife conservation plans and additional protection for listed species), key threatening processes and the preparation of threat abatement plans for such processes, the establishment of the Australian Whale Sanctuary, access to biological resources in Commonwealth areas, invasive species, voluntary conservation agreements and the protection and management of protected areas including national parks, World Heritage properties, Ramsar wetlands and Biosphere reserves.

#### **Relevance for artificial reefs**

The Act does not contain regulations dealing with artificial reefs.

#### **Relevance for natural reefs**

The Act does not contain regulations dealing with natural reefs. Nevertheless, the regulations, particularly those dealing with biodiversity conservation, are generally applicable to natural reefs.

#### **Anticipated evolution**

With a range of processes to help protect and promote the recovery of threatened species and ecological communities and preserve significant places of the Australia, this document is of national environmental significance. Consequently, it has been amended numerous times in order to keep it up to date. It is expected that it will be amended in the future, as it might be needed.

#### **Web site**

<https://www.legislation.gov.au/Details/C2018C00440>

## 7.8 Artificial Reefs in Australia - A Guide to Developing Aquatic Habitat Enhancement Structures

Recfinshwest

### Originator

Fisheries Research and Development Corporation, Western Australian Department of Fisheries, Murdoch University and Ecotone Consulting

### Year of adoption

2017

### Year of entry into force

-

### Type

Guidelines

### Last revision

-

### Level

National - Australia

### Target stakeholders

Local government authorities, non-governmental organisations, local businesses, local interested groups, individuals, clubs and associations, groups with expertise in the area

### Short description

The purpose of the Guide is to assist organisations to develop habitat enhancement structures around Australia by detailing the major steps and considerations that are needed to deliver purpose-built artificial reefs. In the Guide, the process of habitat enhancement structures development is described in details. The Guide is divided into three parts; Background, Considerations and Habitat Enhancement Process.

### Impact on environmental protection

The Guide deals with important aspects of the ecologically friendly installation of the artificial reefs. Consequently, the location of artificial reefs needs to meet environmental standards. Current Australian artificial reef policy has shifted to purpose-built HES due to environmental responsibilities. In that respect, adequately cleaned and modified (re-purposed) types of materials of opportunity, including decommissioned oil and gas infrastructure, may be used. Some of the negative effects caused by the materials used are pollution from heavy metal leaching, asbestos and a range of hydrocarbons as well as destruction of natural habitat when unstable structures move on the ocean floor.

### Impact on safety and security

The Guide does not contain recommendations dealing with safety and security. However, it emphasizes a need to provide safe fishing location as well as the safety in general, accessibility and enjoyment. The placement of such

reefs should be at safe distance from shore, near populated coasts, in an area protected from wind and large seas. Artificial reefs need ongoing structural monitoring and ecological and social monitoring.

### **Impact on exploitation**

According to the Guide, habitat structures should not be deployed where they could significantly harm or damage any critically listed habitats or threatened species. While creating a habitat in the favourable area, it is possible to target species like fish or other organisms that will most effectively increase end user satisfaction by being present on it. Aspects that need to be considered include natural distribution and abundances of the target species in the area of the proposed reef location, seasonality, life history of target species and requirements and preferences of the species like habitat, shelter and food requirements.

### **Relevance for artificial reefs**

The Guide specifically deals with artificial reefs, and aims to assist organisations to develop Habitat Enhancement Structures around Australia, particularly artificial reefs. Those structures are constructions placed in the aquatic environment for the purpose of creating, restoring or enhancing habitat for fishing, commercial and recreational activities generally.

### **Relevance for natural reefs**

According to the Guide, one of the most important use of artificial reefs is to decrease pressure on natural reefs. With the increased deployment of artificial reefs, overexploitation of natural reefs and extinction of some species may be significantly reduces. This is especially important in case of coral reefs.

### **Anticipated evolvement**

The future development of the Guide is not possible to estimate.

### **Web site**

<https://recfishwest.org.au/wp-content/uploads/2015/08/Artificial-Reefs-in-Australia.pdf>

## 7.9 Guía metodológica para la instalación de arrecifes artificiales

### Originator

Ministerio de Medio Ambiente

### Year of adoption

2008

### Year of entry into force

-

### Type

Guidelines

### Last revision

-

### Level

National - Spain

### Target stakeholders

Local government, local ministries, institutions, organisations, individuals

### Short description

The Guide is a comprehensive guide describing and discussing development, deployment, use, and dismantling of artificial reefs. It consists of two parts. The first part *General framework* deals with normative framework, typology and classification of artificial reefs, and environmental impacts. It also includes the reference to the present status of use of artificial reefs in Spain. The second part deals with design, materials, environmental conditions, site selection, placement, anchoring and administrative issues. The Guidelines has also four annexes: I Legal Framework, II Inventory of reefs, III Protocol for the decontamination and conditioning of ships, platforms and other marine structures for the creation of artificial reefs, and IV Guidelines for the preparation of the contents of the environmental impact studies of artificial reefs.

### Impact on environmental protection

The Guidelines extensively discusses various environmental impacts (mostly in the Part 1) that might be expected during development, deployment and use of artificial reefs. In the Guidelines, a number of different impacts on the environment are discussed. In particular, for each identified environmental impact, the common effects and effects depending on type of the reef used are discussed. It is important to emphasize that Guidelines considers not only artificial reefs as a measure to enhance fishery resources, but also for other uses, such as coastal protection, or as a tool for illegal fishing prevention. Although the Guidelines are prepared by the Spanish Ministry of the Environment, the content is generally applicable for all States, members of the European Union, since the legal foundations are very comparable.

### Impact on safety and security

The Guidelines does not contain regulations or guidelines regarding safety and security measures.

### **Impact on exploitation**

The Guidelines mostly deals with artificial reefs from the environmental protection standpoint. The wording used implies that main goal in each case is clearly identified. If so, the Guidelines provide detailed framework to those who will handle project management, designing and deploying of the artificial reef. Other aspects of the reef exploitation are not dealt with extensively. It is the case especially with economic viability of the project.

### **Relevance for artificial reefs**

The Guidelines is dedicated to development of artificial reefs. All aspects of the processes to develop, design, build and deploy are considered (except those dealing with economic viability). It is worth to note that Guidelines also contains extensive legal framework (Annex I), detailed descriptions of procedures to prepare ships for deployment as artificial reefs (Annex III), and the detailed description of the environmental impact assessment, including outline of the monitoring program, designed in particular for artificial reefs development (Annex IV).

### **Relevance for natural reefs**

The Guideline does not contain regulations or recommendation dealing with natural reefs.

### **Anticipated evolvement**

Although in the Guidance there are no references to future update or refreshment of the Guideline, it is expected that Guidelines will be updated, as the need might be.

### **Web site**

[https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/Gu%C3%ADa%20metodo%C3%B3gica%20para%20la%20instalaci%C3%B3n%20de%20arrecifes%20artificiales\\_tcm30-157012.pdf](https://www.miteco.gob.es/es/costas/temas/proteccion-medio-marino/Gu%C3%ADa%20metodo%C3%B3gica%20para%20la%20instalaci%C3%B3n%20de%20arrecifes%20artificiales_tcm30-157012.pdf)

## 8 Criteria to adopt in identification of reefs that can be used for economic scope

## 8.1 Introduction

The analysis of the legal framework carried out outlined that several areas required additional regulatory framework to be developed. However, it is estimated that additional national regulatory framework may be developed in relatively short time and does not require significant efforts.

It is of the utmost importance that national regulatory frameworks are developed as a coordinated action carried out by neighbouring states in order to prevent regional misbalance.

In the following chapters the most important legal, environmental and infrastructure requirements in case of economic use of artificial and natural reefs are discussed.

Based on the legal documents considered it is quite clear that two sets of criteria are needed.

The first set contains criteria or requirements that must be fulfilled when selecting a natural reef for future economic activities or when selecting an area where an artificial reef might be located.

The second set of criteria consists of criteria (requirements) which shall be implemented (or used) when the future economic activity is known or when certain economic activities are excluded. Therefore, these criteria should be used when would-be activity is already known or when main characteristics of the permissible economic activities are known.



## 8.2 Analysis of legal framework outcomes

As a part of the project activities, the analysis of the existing legal framework has been carried out. The analysis, as its core part, included the following (areas) levels of regulation:

1. International legal instruments (in force), like the Convention on Biological Diversity (1992), affecting economic activities at natural or artificial reef sites, or like the Convention for Protection of the Mediterranean Sea against Pollution (Barcelona Convention, 1976), including international regulation on a regional basis;
2. European legal instruments, adopted under the auspice of the European Union;
3. National legal instruments primarily adopted in Italy and Croatia.

In addition, the analysis included guidelines and codes developed or adopted by bodies active in international arena (such as FAO) that influence or might influence use of artificial and/or natural reefs. It is considered that these documents, although not containing binding requirements or statements, outline the scope of utilization of natural and/or artificial reef in one or more aspects or might emphasize one or more important aspects of the reef's utilization.

Finally, the analysis covered selected regulation instruments with different legal effects and different scopes, dealing with protection or utilization of artificial and natural reefs that may be considered as examples of good practice. These documents, although not being legal documents, are included in the analysis in order to reveal possible drawbacks or opportunities in developing economic use of such sea areas.

The main outcomes of the analysis are as follows.

1. Existing legal framework, either international, European or national, does not include artificial reefs in a way that covers the entire spectrum of possible uses and purposes under which they can be conceived. Even more, although existing in numerous countries for years, artificial reefs are not recognized as the complex objects that can fulfil multitude goals. It seems that most valuable functions assigned to artificial reefs are those connected with environmental restoration and relaxation of tourist pressure on neighbouring natural reefs.
2. Existing legal framework, either international, European or national, does not include natural reefs nor recognize the importance the natural reefs deserve as natural habitats. Natural reefs are highly exposed parts of sea, and as such they deserve additional protection measures, particularly if significant economic activities or activities that may impact environmental balance take place in the vicinity.
3. Interactions between natural and artificial reefs, although recognized among scientists and practitioners, are not formally regulated or guided. Consequently, in case of development of artificial reefs or activities to be approved/carried out close to artificial reefs it is necessary to consider effects that may impact nearby natural reefs (no matter the impact being negative or positive).
4. Although the use of artificial reefs to enhance fishery resources will remain their main purpose, several other purposes have to be promoted and regulated. In that respect, the regulatory framework should include administrative procedures for reefs that serve those other purposes. Even more, regulatory framework should include measures promoting activities with low or no environmental impact, especially those relaxing environmental pressure on natural reefs.
5. The regulatory development should frame both artificial reefs and natural reefs correspondingly since their

main environmental and economic functions are similar. Regulatory framework should also interrelate artificial and natural reefs with other measures dedicated to protect or regenerate living marine resources (such as marine protection zones and similar).

6. The regulatory framework should include safety and security measures applicable for areas where artificial and natural reefs provide marine habitats, as the provision of safety/security measures contributes to the marine environment protection. Those measures should be commensurate with traits and scope of activities considered and should not restrict activities having no significant environmental impact.
7. The regulatory framework of neighbouring countries sharing the same sea areas should be compatible as much as convenient. The present legal framework provides such opportunities.
8. Regardless of its purpose, artificial reefs are facilities that permanently occupy public areas and therefore it is necessary to develop/to adopt appropriate legal procedure (a concession model or a similar one) to regulate legitimate use of the area and ensure required environmental protection. The same should be applied to those natural reefs where recognizable exploitative activities are taking place. The restriction of public use of areas devoted to exclusive use should be minimized.

### 8.3 Legal and administrative requirements

Legal and administrative requirements to respect while selecting a potential artificial or natural reef for economic activity are as follows:

- It is assumed that no restriction of use are in force in particular marine areas (reef sites and immediately surrounding areas) (for example, due to environmental protection reasons or for military purposes); the Italian legal system provides for and regulates the establishment of marine protected areas for the protection of particular natural habitats;
- There is no general prohibition or partial restriction of economic activities in areas under consideration (in accordance with maritime spatial plans in force); Italian regulation on the marine protected areas establishes some prohibitions or restrictions of economic activities in those areas in relation to the degree of protection of marine areas within the protected area. According to both countries legislation protected areas should have specific management plans that regulate allowed and not allowed activities;
- There is a clear and comprehensible legal framework set to ensure conduction of all required environmental procedures (EIA- environmental impact assessment, AA- appropriate assessment). Provisions authorizing a legal body to issue permission(s) as well as legal procedures regulating such authorization are in force
- There are no administrative litigations connected with implementation of activities in the marine areas under consideration.

It is assumed that before a particular economic activity is actually approved the following preconditions are satisfied:

- There is a clear and formal express of interests (officially accepted) from the interested legal entity or entities clearly outlining intended purpose and scope of the activity.
- The purpose of the foreseen economic activity is not contravening marine spatial plans in force.
- The economic activity must be carried out in accordance with the regulation on marine protected areas and the provisions of prohibitions and restrictions on economic activities.
- It is assumed that only those activities not jeopardizing activities in neighboring areas will be considered.
- Environmental Impact Assessment and/or Appropriate Assessment is carried out, as required by laws regulating environmental protection.

On both point of view (constrain criteria when selecting natural reefs or site where construct new artificial reefs and constrain criteria to set up economic activities) Marine Spatial Planning should be the first reference.

In particular from administrative requirements the following criteria should be checked:

- Regulated navigation areas;
- Restricted areas and safety zones;
- Fishing regulated areas;
- Nature protected areas and /or NATURA2000 sites;
- Heritage;
- Infrastructures (pipelines etc...).

With regard to the Italian legal framework, it is necessary to take into consideration in addition to the national legislation also the specific regulations of the individual regions pursuant to art. 117 of the Constitution, which attributes to the Italian regions the exclusive legislative power with regard to specific topics such as, for example, spatial planning and mobility, infrastructures, promotion of local development, promotion of environmental, cultural and landscape heritage, enhancement and organization of tourism and all issues not expressly reserved to the exclusive competence of the State. However, in the present report the detailed legislations at regional level have not been included because they specifically apply to each geographic area, detailing and implementing national and European regulations.

## 8.4 Environmental criteria

Environmental criteria to be considered in selecting a potential artificial or natural reef for economic scope are as follows:

- Biological and geological features of the area (reef) under consideration are known up to the level ensuring the satisfactory environmental impact assessment.
- Presence of habitats and species that fall under the protection of Natura 2000 legislation should be verified. There are no living or non-living resources in the area under consideration that might be endangered or made unavailable by the economic activity proposed or considered.

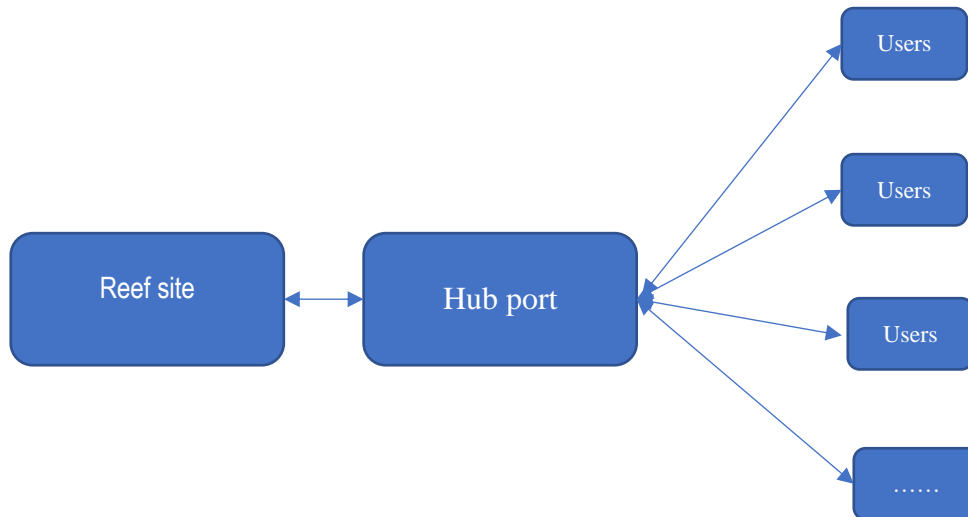
The following environmental criteria should be understood as minimal criteria for approval of a particular economic activity in the vicinity of artificial or natural reefs:

- It is assumed that EIA - Environmental Impact Assessment or EIA screening procedure, as it may be appropriate, will be required.
- It is assumed that AA- Appropriate Assessment or AA screening procedure, as it may be appropriate, will be required.
- It is assumed that the approved Contingency plan (or similar document), covering at least the area under consideration, is adopted. The Plan shall contain measures to be implemented in case of environmental, safety or security threats likely to be encountered in the area under consideration.

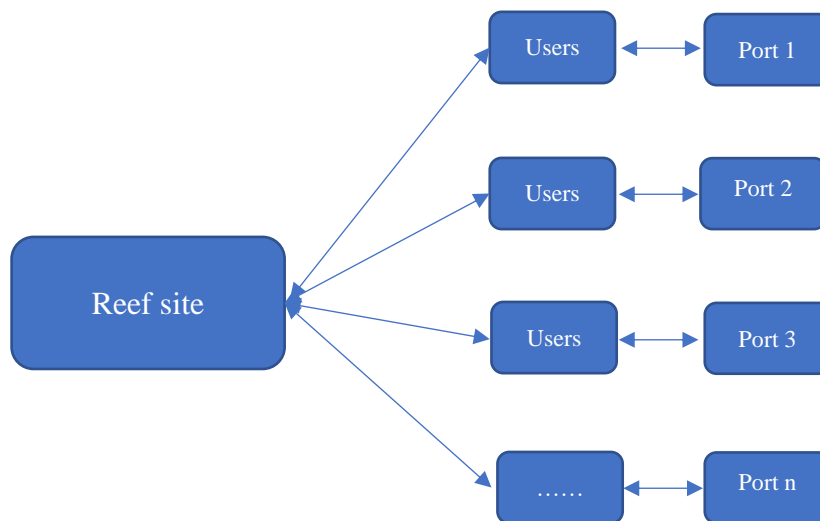
## 9 Transport and infrastructure

All economic activities require some kind of transport interconnections. Therefore, it is assumed that any activity at the reef site, either natural or artificial, requires some kind of connection with mainland transport network. Consequently, sites requiring demanding and/or expensive transport infrastructure will be less attractive for economic activity.

Economic activities carrying out at artificial or natural reefs mainly follows one of two possible configurations. In the first one all mainland activities are concentrated in one hub port and the reef site is connected with that port. The other option assumes that reef site is connected with many ports from where customers and supplies may depart or head to. In the first case the hub port is usually a dedicated port (for example, in case of fish farming) with more or less developed port facilities. In the second case, the port facilities are in most cases the general-purpose facilities (for example ports from which ships and boats with recreational divers are departing to the site).



*Transport network to the reef site using hub port*



*Transport network directly connected with multiple ports*

In respect of the functional constraints, two distinctive groups of requirements can be recognized. The first one refers mostly to coastal infrastructure (piers, waterways, etc). The second group consists of requirements mostly in respect of mainland infrastructure (roads, warehouses, etc). These requirements may vary significantly, depending on type and scope of economic activity under consideration.

In addition to minimum transport infrastructure it is expected that other communal infrastructure elements need to be present, such as electricity, water, waste management system, etc. The level of services required may be very different for different economic activity.

## 10 Conclusions

The main conclusions of the analyses of the present legal documents and guidelines are as follows:

1. Existing legal framework, either international, European or national, does not include artificial reefs in a way that covers the entire spectrum of possible uses and purposes under which they can be conceived.
2. Existing legal framework, either international, European or national, does not include natural reefs nor recognize the importance the natural reefs deserves as natural habitats.
3. It might be appropriate to evaluate the multitude goals that artificial reefs can fulfil and consider the additional protection measures that natural reefs deserve if significant economic activities or other activities that may impact the environment take place in the vicinity.
4. Interactions between natural and artificial reefs, although recognized among scientist and practitioners, are not considered, regulated or guided at legislative level.
5. Although the use of artificial reefs to enhance fishery resources will remain their main purpose, several other purposes have to be promoted and regulated. In that respect, the regulatory framework should include administrative procedures for reefs that serve those other purposes and measures promoting activities with low or no environmental impact.
6. The regulatory development should frame both artificial reefs and natural reefs correspondingly since their main environmental and economic functions are similar. The legal framework should also interrelate artificial and natural reefs with other measures dedicated to protect the environment and to preserve or regenerate living marine resources (such as marine protected areas and similar).
7. The regulatory framework should include safety and security measures applicable for areas where artificial and natural reefs provide marine habitats and commensurate to the nature, the scope and the area of the activities considered.
8. The regulatory framework of neighboring countries sharing the same sea areas should be compatible as much as convenient, as the present framework provides such opportunities.
9. Regardless of its purpose, artificial reefs are facilities that permanently occupy public areas and therefore it is necessary to have appropriate legal procedure (a concession or a similar one) to regulate legitimate use of the area and ensure required environmental protection. The same should be applied to those natural reefs where recognizable exploitative activities or other specific economic activities are taking place.
10. Additional national regulatory framework must be developed as a coordinated action carried out by neighboring states in order to prevent regional misbalance.