

ECOLOGICAL observing System in the Adriatic Sea: oceanographic observations for biodiversity  
Priority Axis 3: Environment and cultural heritage  
Specific Objective 3.2: Contribute to protect and restore biodiversity

# D4.1.1 Report on the characterization of the selected Natura 2000 sites

WP4 – Establishing the Ecological Observing System in the Adriatic Sea (ECOAdS)  
A4.1.– Characterization of the Natura 2000 study sites

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Other involved partners: PP1, PP4, PP5, PP6 and PP7

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## INTRODUCTION

Stretching over 18 % of the EU's land area and almost 9,5% % of its marine territory, NATURA2000 is the largest coordinated network of protected areas in the world. It offers a haven to Europe's most valuable and threatened species and habitats.<sup>1</sup> Natura 2000 is not a system of strict nature reserves from which all human activities would be excluded. While it includes strictly protected nature reserves, most of the land remains privately owned. The approach to conservation and sustainable use of the Natura 2000 areas is much wider, largely centered on people working with nature rather than against it. However, Member States must ensure that the sites are managed in a sustainable manner, both ecologically and economically.

Natura 2000 is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. The aim of the network is to ensure the long-term survival of Europe's most valuable and threatened species and habitats, listed under both the [Birds Directive](#) (79/409/EEC; 2009/147/EC) and the [Habitats Directive](#) (92/43/EEC). Under NATURA2000 Member States designate Special Protection Areas (SPAs) under the Birds Directive and Sites of Community Importance (SCIs) under Habitat Directive (Member States must designate them as Special Areas of Conservation (SACs), as soon as possible and within six years at most).

Article 6 is one of the most important articles in the Habitats Directive as it defines how Natura 2000 sites are managed and protected. Paragraphs 6(1) and 6(2) require that, within Natura 2000, Member States:

- Take appropriate conservation measures to maintain and restore the habitats and species for which the site has been designated to a favourable conservation status;
- Avoid damaging activities that could significantly disturb these species or deteriorate the habitats of the protected species or habitat types.

Prerequisite for implementation of above-mention paragraphs and therefore efficient management of NATURA2000 sites is detailed database of biological, ecological and other relevant information about targeted species/habitats and ecosystem in general with their key ecological processes and pressures/threats. Furthermore, management plan with conservation goals need to be clearly defined and its achievement monitored by relevant/adequate monitoring parameters.

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<sup>1</sup> [http://ec.europa.eu/environment/nature/natura2000/index\\_en.htm](http://ec.europa.eu/environment/nature/natura2000/index_en.htm)

In this Report, characterization of the seven selected Adriatic Natura 2000 sites has been done: 4 SCIs - HR3000469 Viški arhipelag, HR3000161 Cres-Lošinj, HR4000015 Malostonski zaljev, IT3330009 Trezze San Pietro e Bardelli, 2 SACs - IT3250047 Tegnue di Chioggia and IT 3270017 Delta del Po: tratto terminale e delta Veneto and 1 SPA IT3270023 Delta del Po.

Analysis of the ongoing monitoring activities and conservation strategies was done as well as the analysis of habitats, key ecological processes, the target species and other relevant species of these sites.

The Report was developed by using information from questionnaires shared among project partners, Standard Data Forms for selected NATURA2000 sites, other scientific sources and online portals. Some data were collected by direct communication with project partners and relevant scientist.

Detail description of each of selected sites as well as SWOT analysis were done. At the end, conclusions and recommendations were done.

**Note:**

There are some discrepancy between information collected via questionnaires and those found on internet sites regarding conservation measures for those NATURA2000 sites which were designated as SACs (IT3250047 Tegnùe di Chioggia, IT3270017 Delta del Po: tratto terminale e delta Veneto).

To fulfill requirement to become SAC, conservation measures need to be applied for the maintenance or restoration, at a favourable conservation status, of the natural habitats and/or the populations of the species for which the site is designated).

## CHARACTERIZATION OF THE SELECTED NATURA2000 SITES

### 2.1. HR3000469 Viški arhipelag

SITE DISPLAY



#### 2.1.1. Information about the site

SITE IDENTIFICATION	
TYPE	B
FIRST COMPILATION	12/1/2012
RESPONDENT	<b>Ministry of Environment Protection and Energy, Directorate for Nature Protection</b> , Radnička cesta 80/VII, Zagreb  <i>Ex: Croatian Agency for the Environment and Nature, Radnička cesta 80/VII, Zagreb</i>
DATE SITE PROPOSED AS SCI	7/1/2013
DATE CONFIRMED AS SCI	12/1/2014
National legal reference of SAC designation:	no
SITE LOCATION	
SITE CENTRE LOCATION (decimal degrees)	
Longitude	16,19338531
Latitude	43,00452649

AREA (HA)	51876,6486
MARINE AREA (%)	100
SITE LENGTH (km)	0
ADMINISTRATIVE REGION CODE AND NAME	
Nuts level II code	HRZZ
Region Name	Extra-Regio
BIOGEOGRAPHICAL REGION(S)	
Region Code	16
Region Name	Marine Mediterranean
<b>SITE DESCRIPTION</b>	
General site character	This large marine site covers a wider marine area around the Island of Vis and the Island of Biševo, except the marine areas surround the same islands in a buffer 500 m from the coast, which make other NATURA 2000 sites. This marine site has an area of 51.888,50 hectares.
Habitat class	<b>NO1</b> Marine areas, Sea inlets (100%)
Threats, pressures and activities with impacts on site	<b>D03.02</b> Shipping lanes (N/L) <b>E03</b> Discharges (N/L) <b>F01</b> Marine and Freshwater Aquaculture (N/L/i) <b>F02</b> Fishing and harvesting aquatic resources (N/M) <b>G01.01.01</b> motorized nautical sports (N/M) <b>H03.03</b> marine macro-pollution (i.e. plastic bags, styrofoam) (N/M) <b>H05.01</b> Garbage and solid waste (N/M) <b>H06.01</b> Noise nuisance, noise pollution (N/M)
<b>SITE PROTECTION STATUS</b>	
Designation types at national and regional level	
Code/Cover	-
Relation of the described site with other sites	
Designated at national and regional level	
Type code/Site name	-
Designated at international level	In 2003, the international ecological organization World Wildlife Fund has declared the Vis archipelago one of the 10 „last paradise oases of the Mediterranean“ thus including it, together with the islands of Mljet and Lastovo, in the „Adriatic Blue Corridor“, based on scientific research which revealed that this maritime zone has the largest biodiversity in the

	<p>Mediterranean.</p> <p>In 2019, due to significant geological and geomorphological importance of Vis archipelago, it has been designated officially as a UNESCO Global Geopark.</p>
<b>SITE MANAGEMENT</b>	
Managing authority	<b>Public Institution „More i Krš“/“Sea and Karst“</b> <a href="http://www.dalmatian-nature.hr">www.dalmatian-nature.hr</a>
Management plan	no
Monitoring activities /run by Managing authority or other entity	Research on bottlenose dolphins started in 2007 and has been conducted in summer seasons. The research effort is highest within the Viški akvatorij (HR3000469) site, and surrounding area is also covered with less intensity (Figure 2). Primary method is collection of photo-identification data from small research vessels. The database contains reference dorsal fin catalogue, information on capture histories of identified individuals and research effort data. From these, spatio-temporal distribution maps are created and demographic parameters are estimated, as basic information on the status of the local bottlenose dolphin community. Based on the results, the Viški akvatorij Natura 2000 site is a part of the home range of around 400 bottlenose dolphins, smaller proportion of which show long-term residency to this area.
Ecological parameters monitored	Population dynamics, Population structure, Habitat use, Spatial distribution, Foraging, Underwater noise
Target goals at the NATURA 2000 site	preservation of favourable state of natural habitat for the common bottlenose dolphins
Key ecological processes	Not known
Key management issues/goals at the NATURA 2000	Key management issue is the lack of management plan
Institutions engaged in the monitoring activities of target species	<b>Plavi svijet – institut za istraživanje i zaštitu mora/Blue World - Institute of Marine Research and Conservation</b> Kaštel ul. 24, 51551, Veli Lošinj <a href="http://www.blue-world.org">www.blue-world.org</a>



Institutions engaged in the monitoring activities of other species/habitats and other indicators	<b>Institut za oceanografiju i ribarstvo/Institute for Oceanography and Fisheries</b> Šetalište I. Meštrovića 63, 21000 Split <a href="http://www.izor.hr">www.izor.hr</a>
Web page with description of the NATURA 2000 site and monitoring activities	<a href="http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=HR3000469">http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=HR3000469</a>
Are the monitored data in the NATURA 2000 site available and under which conditions	Blue World Institute is the owner of data. Data is not publicly shared, but available for cooperative research projects.
List and describe performance indicators monitored at the NATURA 2000 site	Not defined
Equipment needed that would improve the monitoring activities at the NATURA 2000 site:	
Conservation strategies at the NATURA 2000 site	The conservation strategy should be generally focused on minimizing negative impacts or preventing potential impacts, as listed in Natura 2000 Standard Data Form. Fortunately, none is estimated “high”. Public Institution „Sea and Karst” generally has small possibilities for active management of this site, due to its own capacities, as well as legal authorities. Besides, some of potential threats are far beyond any local level, such as marine macro-pollution. Under above conditions, PI sees its main role in awareness raising activities among local population and tourist agencies aimed on minimizing disturbance of dolphins by boat traffic, either intentionally (dolphin watching for tourists) or unintentionally due to heavy traffic. Intentional killing of dolphins by fishermen is not listed in official list of threats, although that possibility should not be neglected. In any possible activity PI should closely collaborate with “Blue World”, an organisation specialised for dolphin conservation.

Other NATURA2000 site(s)	<p>In the submarine zone of the Vis archipelago there are 8 more Natura 2000 areas included in NATURA2000 network: HR3000096 - the south-eastern side of the island of Vis; HR3000097-The island of Vis-submarine zone; HR3000098-Biševo the marine zone; HR3000099-Brusnik and Svetac; HR3000100-The islet of Jabuka-submarine zone; HR3000121-Palagruža submarine zone; HR3000122-The islet of Galijula; HR3000477-Reefs in the submarine valley of the island of Jabuka.</p> <p><a href="https://geopark-vis.com/en/heritage/naturale-heritage/natura-2000">https://geopark-vis.com/en/heritage/naturale-heritage/natura-2000</a></p>
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### 2.1.2. Information about the target species



Photo: Blue World Institute

The target species of the site is **bottlenosed dolphin (*Tursiops truncatus*)**. The site evaluation for its population is listed in following table.

Species		Population on site					Site assessment						
G	Code	Scientific name	NP	T	Size		Unit	Cat	D.qual	A/B/C/D		A/B/C	
					Min	Max				Pop.	Con.	Iso.	Global
M	1349	<i>Tursiops truncatus</i>	0	p	250	477	i		M	B	A	C	B

**Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles  
**NP:** Value "1" indicated that a species is no longer present in the site  
**Type:** p = permanent, r = reproducing, c = concentration, w = wintering  
**Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))  
**Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - information is provided if data are deficient (DD) or in addition to population size information  
**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); "DD" = Data deficient (category used when not even a rough estimation of the population size can be made; "Abundance categories" is used instead of population size)  
**Population** (Size and density of the population of the species present on the site in relation to the populations present within national territory): A = >15%, B = 2-15%, C = <2%, D = non-significant population  
**Conservation** (Degree of conservation of the features of the habitat which are important for the species concerned and possibilities for restoration): A = excellent conservation, B = good conservation, C = average or reduced conservation  
**Isolation** (Degree of isolation of the population present on the site in relation to natural range of the species): A = population (almost) isolated, B = population not-isolated, but on the margins of area of distribution, C = population not-isolated within extended distribution range  
**Global** (Global assessment of the value of the site for conservation of the species concerned): A = excellent value, B = good value, C = significant value

Due to continuous research effort by Blue World Institute, there are more recent data on target population.

By analysis of data collected in a period 2007 – 2014 it is concluded that the population is stable during the study period. Based on data collected in 2014, the population abundance estimate is 278 (95% CI=208-413) bottlenose dolphins (Miočić et al., 2014<sup>2</sup>).

<sup>2</sup> Miočić-Stošić, J., Pleslić, G., Rako Gospić, N., Fortuna, C. M., Holcer, D. 2015. Procjena brojnosti zajednice dobrih dupina (*Tursiops truncatus*) Viškog akvatorija. U: Zbornik sažetaka priopćenja Dvanaestog hrvatskog biološkog kongresa. Hrvatsko biološko društvo, Sv. Martin na Muri, str. 207-208.

### 2.1.3. Other important species

In the area of the Vis Archipelago some other Cetacean species are seen: the striped dolphin (*Stenella coeruleoalba*), Fin whale (*Balaenoptera physalus*) and Risso's dolphin (*Grampus griseus*). It is area of high underwater biodiversity importance (Žuljević et al., 2009)<sup>3</sup>.

During Blue World's research<sup>4</sup>, several other species were seen: giant devil rays (*Mobula mobular*), blue-fin tuna (*Thunnus thynnus*), swordfish (*Xiphias gladius*), Eleonora's falcons (*Falco eleonora*), Mediterranean flying fish (*Cheilopogon heterurus*), Yelkouan shearwater (*Puffinus yelkouan*) and Scopoli's shearwaters (*Calonectris diomedea*), and European shags (*Phalacrocorax aristotelis*) among others. There are also occasional reports of sightings of monk seal (*Monachus monachus*), great white shark (*Carcharodon carcharias*) and other endangered animals.

### 2.1.4. SWOT analysis

STRENGTHS	WEAKNESSES
<p>Monitoring system for target species established</p> <p>Conservation of target species defined as "Excellent"</p> <p>Great knowledge on target species population and its trends</p>	<p>No management plan</p> <p>No official conservation strategy</p> <p>Key ecological processes not known</p> <p>Performance indicators not defined</p> <p>No proper surveillance system</p> <p>No database of other species/habitats</p> <p>High seasonal pressure (tourism)</p>
OPPORTUNITIES	THREATS
<p>EU funding for human and technical resources</p> <p>Better networking/data exchange within Adriatic-Ionian basin</p> <p>Coordination of Management with newly established GEOPARK</p>	<p>Climate change (increase of temperature may lead to disbalance)</p> <p>Additional tourism pressure due to attractiveness of newly established GEOPARK</p> <p>Threats, pressures and activities with impacts on site – see 2.1.1.</p>

<sup>3</sup> Žuljević, A., Despalatović M., Antolić B., Cvitković I., Nikolić V., Dadić V., Vidjak O., Skejić S., Muslim S., Holcer D. (2009) Morska bioraznolikost otoka Biševa i jugoistočne strane otoka Visa - Stručna podloga za održivo upravljanje ([https://issuu.com/undphr/docs/morska\\_bioraznolikost](https://issuu.com/undphr/docs/morska_bioraznolikost))

<sup>4</sup> <https://www.blue-world.org/what-we-do/where-we-operate/vis-archipelago/>

## 2.2. HR3000161 Cres-Lošinj

SITE DISPLAY



### 2.2.1. Information about the site

SITE IDENTIFICATION	
TYPE	B
FIRST COMPILATION DATE	12/1/2012
RESPONDENT	<b>Ministry of Environment Protection and Energy, Directorate for Nature Protection</b> , Radnička cesta 80/VII, Zagreb Ex: <i>Croatian Agency for the Environment and Nature</i> , Radnička cesta 80/VII, Zagreb
DATE SITE PROPOSED AS SCI	7/1/2013
DATE CONFIRMED AS SCI	12/1/2014
National legal reference of SAC designation:	no
SITE LOCATION	
SITE CENTRE LOCATION (decimal degrees)	
Longitude	14,56751043

Latitude	44,59979562
AREA (HA)	52574,6384
MARINE AREA (%)	100
SITE LENGTH (km)	0
ADMINISTRATIVE REGION CODE AND NAME	
Nuts level II code	HRZZ
Region Name	Extra-Regio
BIOGEOGRAPHICAL REGION(S)	
Region Code	16
Region Name	Marine Mediterranean
<b>SITE DESCRIPTION</b>	
General site character	<p>Large marine site located in the Kvarnerić area, around the sheltered coast and waters of the eastern part of the Lošinj and Cres archipelago. It is one of the most important feeding and breeding areas for bottlenose dolphins (<i>Tursiops truncatus</i>) in the Eastern Adriatic.</p> <p>Lithostratigraphic units represented on the coast are dolomites and post sedimentary diagenetic breccia (upper albian, lower cenomanian - K16, K12), rudist limestones (cenomanian-maastricht - K21-6). Soils on the coast are rockyground, anthropogenic soil on karst. The area was created after the transgression of the sea after the last glaciation; marine shelf; highly indented coastline.</p> <p>In July 2006 of <u>preventive protection</u> of a part of the Kvarnerić region <u>for 3 years</u> as a Special Marine Reserve (Cres-Lošinj Special Marine Reserve – CLSMR has been declared.</p>
Habitat class	<b>NO1</b> Marine areas, Sea inlets (100%)

Threats, pressures and activities with impacts on site	<b>D03</b> Shipping lanes, ports, marine constructions (N/H/b) <b>E03.01</b> Disposal of household / recreational facility waste (N/M/o) <b>E03.04</b> Other discharges (N/L/b) <b>F01</b> Marine and Freshwater Aquaculture (N/L/i) <b>F02</b> Fishing and harvesting aquatic resources (N/H/b) <b>F05</b> Illegal taking/ removal of marine fauna (N/M/i) <b>F05.01</b> Dynamite (N/H/b) <b>G01.01.01</b> Motorized nautical sports (N/H/b) <b>H03.03</b> Marine macro-pollution (i.e. plastic bags, styrofoam) (N/H/b) <b>H06.01</b> Noise nuisance, noise pollution (N/M/i)
<b>SITE PROTECTION STATUS</b>	
Designation types at national and regional level	
Code/Cover	
Designated at national nad regional level	
Type code/Site name	
Designated at international level	
<b>SITE MANAGEMENT</b>	
Management authority	Public Institution of Primorsko-goranska County „Priroda“/ Javna ustanova za upravljanje zaštićenim dijelovima prirode Primorsko-goranske županije <a href="https://ju-priroda.hr/">https://ju-priroda.hr/</a>
Management plan	no

Monitoring activities /run by Managing authority or other entity	Research on bottlenose dolphins started in 1987 and has been ongoing since. Until 2004 field work was conducted in summer seasons only, since 2005 it is done year-round. The field work is mostly concentrated within the Cres-Lošinj site (HR3000161), with significant parts of surrounding areas also covered, albeit with less intensity. Primary method is collection of photo-identification data from small research vessels. The database contains reference dorsal fin catalogue, information on capture histories of identified individuals and research effort data. From these, spatio-temporal distribution maps are created and demographic parameters are estimated, as basic information on the status of the local bottlenose dolphin community. Based on the results, the Cres-Lošinj Natura 2000 site is habitat for around 200 bottlenose dolphins which show long-term residency to this area. Besides this, other data were collected with various durations: data on behaviour of dolphin groups, underwater acoustics, tissue and stomach content samples from stranded carcasses, UAV based data on dolphins' morphometry, and marine traffic and fisheries intensity.
Ecological parameters monitored	Population dynamics, Population structure, Habitat use, Spatial distribution, Foraging, Physical, Underwater noise
Target goals at the NATURA 2000 site	preservation of favourable state of natural habitat for the common bottlenose dolphins
Key ecological processes	Not known.
Key management issues/goals at the NATURA 2000	Key management issue is the lack of management plan
Institutions engaged in the monitoring activities	<b>Plavi svijet – institut za istraživanje i zaštitu mora/Blue World - Institute of Marine Research and Conservation</b> Kaštel ul. 24, 51551, Veli Lošinj <a href="http://www.blue-world.org">www.blue-world.org</a>
Web page with description of the NATURA 2000 site and monitoring activities	<a href="http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=HR3000161">http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=HR3000161</a>
Are the monitored data in the NATURA 2000 site available and under which conditions	Blue World Institute is the owner of data. Data is not publicly shared, but available for cooperative research projects.



List and describe performance indicators monitored at the NATURA 2000 site	Not defined
Equipment needed that would improve the monitoring activities at the NATURA 2000 site	Theodolite for monitoring marine traffic in relation to bottlenose dolphin spatial distribution and behaviour.
Conservation strategies at the NATURA 2000 site	No official strategy defined
Other NATURA2000 site(s)	HR3000014 Ilovik i Sv. Petar <a href="http://natura2000.dzzp.hr/reportpublish/reportproxy.aspx?paramSITECODE=HR3000014">http://natura2000.dzzp.hr/reportpublish/reportproxy.aspx?paramSITECODE=HR3000014</a> HR3000026 Dolfin i otoci <a href="http://natura2000.dzzp.hr/reportpublish/reportproxy.aspx?paramSITECODE=HR3000026">http://natura2000.dzzp.hr/reportpublish/reportproxy.aspx?paramSITECODE=HR3000026</a>

### 2.2.2. Information about the target species

The target species of the site is **bottlenosed dolphin (*Tursiops truncatus*)**. The site evaluation for its population is listed in following table.

Species			Population on site						Site assessment				
G	Code	Scientific name	NP	T	Size		Unit	Cat	D.qual	A/B/C/D			
					Min	Max				Pop.	Con.	Iso.	Global
M	1349	<i>Tursiops truncatus</i>	0	p	100	209	i		P	B	B	C	B

**Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles  
**NP:** Value "1" indicated that a species is no longer present in the site  
**Type:** p = permanent, r = reproducing, c = concentration, w = wintering  
**Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))  
**Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - information is provided if data are deficient (DD) or in addition to population size information  
**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); "DD" = Data deficient (category used when not even a rough estimation of the population size can be made; "Abundance categories" is used instead of population size)  
**Population** (Size and density of the population of the species present on the site in relation to the populations present within national territory): A = >15%, B = 2-15%, C = <2%, D = non-significant population  
**Conservation** (Degree of conservation of the features of the habitat which are important for the species concerned and possibilities for restoration): A = excellent conservation, B = good conservation, C = average or reduced conservation  
**Isolation** (Degree of isolation of the population present on the site in relation to natural range of the species): A = population (almost) isolated, B = population not-isolated, but on the margins of area of distribution, C = population not-isolated within extended distribution range  
**Global** (Global assessment of the value of the site for conservation of the species concerned): A = excellent value, B = good value, C = significant value

Due to continuous research effort by Blue World Institute, there are more recent data on target population suggesting that Kvarnerić hosts a discrete, resident bottlenose dolphin population of around 200 individuals. It is important to emphasize that presence of mother–calf pairs in all years indicates the importance of this area for all stages of this species life cycle.<sup>5</sup>

<sup>5</sup> Pleslić G, Rako Gospić N, Mackelworth P, Wiemann A, Holcer D, Fortuna C (2015) The abundance of common bottlenose dolphins (*Tursiops truncatus*) in the former special marine reserve of the Cres-Lošinj Archipelago, Croatia. Aquatic Conserv: Mar. Freshw. Ecosyst. 25: 125–137

### 2.2.3. Other important species

This area is an important site for the Mediterranean population of the loggerhead sea turtle (*Caretta caretta*), the Mediterranean endemic seagrass (*Posidonia oceanica*), coral biocenoses, and nesting sites of the common European Shag (*Phalacrocorax aristotelis*). Surveys in this region have identified 152 species of marine flora, 303 species of marine invertebrates (7 strictly protected, 9 protected) and 112 species of fish (19 endangered species in Croatia) within the area<sup>6</sup>.

### 2.2.4. SWOT analysis

STRENGTHS	WEAKNESSES
Monitoring system for target species established Great knowledge on target species population and its trends Conservation of target species defined as „good“ Awareness raising activities carrying on	No management plan No official conservation strategy Performance indicators not defined No proper surveillance system No database of other species/habitats High seasonal pressure (tourism) Key ecological processes not known Collision of tourism and fishing with conservation objectives
OPPORTUNITIES	THREATS
EU funding for human and technical resources Better networking/data exchange within Adriatic-Ionian basin	Climate change (increase of temperature may lead to disbalance - fishery) Additional tourism pressure Plastic pollution of the Adriatic Threats, pressures and activities with impacts on site – see 2.2.1.

<sup>6</sup> <https://www.blue-world.org/what-we-do/our-projects/683-2/>

## 2.3. HR4000015 Malostonski zaljev

SITE DISPLAY



### 2.3.1. Information about the site

SITE IDENTIFICATION	
TYPE	B
FIRST COMPILATION DATE	12/1/2012
RESPONDENT	<b>Ministry of Environment Protection and Energy, Directorate for Nature Protection</b> , Radnička cesta 80/VII, Zagreb Ex: <i>Croatian Agency for the Environment and Nature</i> , Radnička cesta 80/VII, Zagreb
DATE SITE PROPOSED AS SCI	7/1/2013
DATE CONFIRMED AS SCI	12/1/2014
National legal reference of SAC designation:	no
SITE LOCATION	
SITE CENTRE LOCATION (decimal degrees)	
Longitude	17,54327831
Latitude	42,92067479
AREA (HA)	5717,2405
MARINE AREA (%)	100
SITE LENGTH (km)	0

ADMINISTRATIVE REGION CODE AND NAME	
Nuts level II code	HRZZ
Region Name	Extra-Regio
BIOGEOGRAPHICAL REGION(S)	
Region Code	16
Region Name	Marine Mediterranean
SITE DESCRIPTION	
General site character	<p>Malostonski zaljev includes the sea area of Dubrovnik-Neretva County southeast of the line Sreser-Duba to the Kuta bay. The area is located at the end of the Neretva channel in which the Neretva river influences. Ecological conditions in the bay depend mostly on influences from the mainland and partly from the open sea. External and middle part of the bay are occasionally under stronger effect of the Neretva freshwater and its inner part is less affected by freshwater Delta. Strong underwater freshwater springs in the inner part of the bay have a great impact on hydro-physical and ecological relationships in the bay. According to the concentration of nutrients and the amount of phytoplankton, the bay may qualify as a natural moderate eutrophication system.</p> <p>Thanks to the specific environmental conditions, the living world in a bay is extremely rich. From antique times people have been cultivating shellfish (mussels and oysters) in a bay and today it is the most important place for the cultivation of oysters in Croatia (especially European flat oyster <i>Ostrea edulis</i>). The majority of the benthic algal flora consists of <i>Cystoseira</i> settlements that grow on the rocky bottom to 5 m of depth. Complete absence of <i>Posidonia oceanica</i> indicates very poor flora of the deeper settlements. For the inner part of Malostonski zaljev Bay characteristic are dense populations of organisms that feed on plankton by filtering seawater (especially corals).</p> <p>The area is part of a <i>Special reserve in the sea Malostonski zaljev Bay</i> declared in 1983.</p> <p>Lithostratigraphic units represented around this area are cretaceous rudist limestones. It was created after the transgression of the sea after the last glaciation. Presence of abrasion processes. Characteristic for Malostonski zaljev is low coast with several coves.</p>

	<b>NOTE:</b> Part of the Bay belongs to the City of Neum (Bosnia and Hercegovina). Neum is the only coastal part of BH and very attractive tourist area!!!
Habitat class	<b>NO1</b> Marine areas, Sea inlets (99,38%) <b>NO8</b> Heath, Scrub, Maquis and Garrigue, Phygrana (0,06%) <b>N16</b> Broad-leaved deciduous woodland (0,49%) <b>N23</b> Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites) (0,07%)
Threats, pressures and activities with impacts on site	<b>D03</b> Shipping lanes, ports, marine constructions (N/H/i) <b>E01</b> Urbanised areas, human habitation (N/H/i) <b>E02</b> Industrial or commercial areas (N/M/i) <b>F01</b> Marine and Freshwater Aquaculture (N/H/i) <b>F05</b> Illegal taking/ removal of marine fauna (N/M/i) <b>H01.08</b> Diffuse pollution to surface waters due to household sewage and waste waters (N/H/i) <b>H03</b> Marine water pollution (N/H/i)
<b>SITE PROTECTION STATUS</b>	
Designation types at national and regional level	
Code/Cover	Special Marine Reserve /14898.97 ha
Designated at national nad regional level	
Type code/Site name	Bay of Mali Ston - Special Marine Reserve (1983)
Designated at international level	
<b>SITE MANAGEMENT</b>	
Managing authority	<b>Public Institution for Management of Protected Natural Areas of the Dubrovnik-Neretva County/ Javna ustanova za upravljanje zaštićenim dijelovima prirode Dubrovačko-neretvanske županije</b> <a href="https://zastita-prirode-dnz.hr/">https://zastita-prirode-dnz.hr/</a>
Management plan	No. Expected in 2020. <sup>7</sup>
Monitoring activities /run by Managing authority or other entity	Institut za more i priobalje/Institute for Marine and Coastal Research is conducting research of water column (4 time per year on 4 stations). <a href="http://www.imp-du.com/en">http://www.imp-du.com/en</a>

<sup>7</sup> Open tender: <https://ted.europa.eu/TED/notice/udl?uri=TED:NOTICE:291975-2019:TEXT:HR:HTML>

Ecological parameters monitored	Water column parameters measured: temperature, salinity, oxygen, nutrients, phytoplankton and zooplankton
Target goals at the NATURA 2000 site	Preservation of the favourable state of the key habitats in the present surface.
Key ecological processes	Ecological conditions in the bay depend mostly on influences from the mainland and partly from the open sea. External and middle part of the bay are occasionally under stronger effect of the Neretva freshwater and its inner part is less affected by freshwater Delta. Strong underwater freshwater springs in the inner part of the bay have a great impact on hydro-physical and ecological relationships in the bay. According to the concentration of nutrients and the amount of phytoplankton, the bay may qualify as a natural moderate eutrophication system. Thanks to the specific environmental conditions, the living world in a bay is extremely rich. From antique times people have been cultivating shellfish (mussels and oysters) in a bay and today it is the most important place for the cultivation of oysters in Croatia (especially European flat oyster <i>Ostrea edulis</i> ). The majority of the benthic algal flora consists of <i>Cystoseira</i> settlements that grow on the rocky bottom to 5 m of depth. For the inner part of Malostonski Bay characteristic are dense populations of organisms that feed on plankton by filtering seawater (especially corals).
Key management issues/goals at the NATURA 2000	The most important is to create a knowledge base of the overall ecological present state of the Natura 2000 site that would make a foundation for a quality management plan for the area. Through the management plan key management goals will be tackled, such as collision of aquaculture, tourism and fishing with conservation objectives.
Institutions engaged in the monitoring activities	<b>Institut za more i priobalje/Institute for Marine and Coastal Research</b> Kneza Damjana Jude 12, pp 83, 20000 Dubrovnik <a href="http://www.imp-du.com/en">http://www.imp-du.com/en</a>
Web page with description of the NATURA 2000 site and monitoring activities	<a href="http://natura2000.dzrp.hr/reportpublish/reportproxy.aspx?paramSITECODE=HR4000015">http://natura2000.dzrp.hr/reportpublish/reportproxy.aspx?paramSITECODE=HR4000015</a>

Are the monitored data in the NATURA 2000 site available and under which conditions: (data sharing policy?)	Dubrovnik-Neretva County – owner of the data
List and describe performance indicators monitored at the NATURA 2000 site	<i>not defined</i>
Equipment needed that would improve the monitoring activities at the NATURA 2000 site:	Cameras
Conservation strategies at the NATURA 2000 site	Conservation strategies are not defined at the moment. It is planned to define them through the management plan in the next couple of years.
Other NATURA2000 site(s)	HR5000031 Delta Neretve <a href="http://natura2000.dzrp.hr/reportpublish/reportproxy.aspx?paramSITECODE=HR5000031">http://natura2000.dzrp.hr/reportpublish/reportproxy.aspx?paramSITECODE=HR5000031</a> HR2001364 JI dio Pelješca <a href="http://natura2000.dzrp.hr/reportpublish/reportproxy.aspx?paramSITECODE=HR2001364">http://natura2000.dzrp.hr/reportpublish/reportproxy.aspx?paramSITECODE=HR2001364</a>



### 2.3.2. Habitat types on the site

ANNEX I HABITAT TYPES							SITE ASSESSMENT			
CODE	NAME	PF	NP	COVER (ha)	CAVES (number)	DATA QUALITY	A   B   C   D	A   B   C		
							Representativity	Relative surface	Conservation	Global
1160	<a href="#">Large shallow inlets and bays</a>	0	0	5718,76		G	B	C	B	B
1170	<a href="#">Reefs</a>	0	0	325		P	B	C	C	C

**PF:** Value "1" indicates the priority form for habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430)  
**NP:** Value "1" indicates a habitat type that no longer exists in the site  
**Caves:** for habitat types 8310, 8330 (caves) the number of caves is entered if estimated surface is not available.  
**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)  
**Representativity** (Degree of representativity of the habitat type on the site): A= excellent, B=good, C=significant, D=non-significant  
**Relative surface** (Area of the site covered by the natural habitat type in relation to the total area covered by that natural habitat type within the national territory): A = >15%, B = 2-15%, C = <2%  
**Conservation** (Degree of conservation of the structure and functions of the natural habitat type): A = excellent conservation, B = good conservation, C = average or reduced conservation  
**Global assessment** (Global assessment of the value of the site for conservation of the natural habitat concerned): A = excellent value, B = good value, C = significant value

### 2.3.3. Other important species

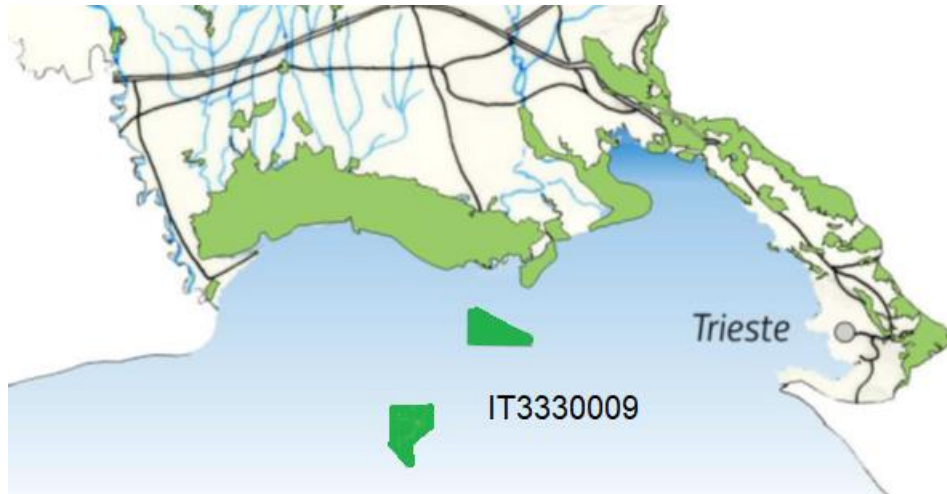
Total of 81 fish species, 67 invertebrates (*Pinna nobilis* - annex IV), 3 mammals and 2 plant species (*Posidonia oceanica*, *Cymodocea nodosa*) have been identified in the Malostonski Bay.

Full list of species is listed in Annex I.

### 2.3.4. SWOT analysis

STRENGTHS	WEAKNESSES
<p>Monitoring system of water column established  Management plan is expected in 2020  Other important species listed  Good data quality for Large shallow inlets and bays (status of conservation = Good")</p>	<p>No official management plan nor conservation strategy  Conservation of target habitats assessed as „average or reduced conservation“  Performance indicators not defined  No proper surveillance system  Data quality for “Reefs” = Poor  Not adequate database of target and other species/habitats  High aquaculture intensity  Collision of aquaculture, tourism and fishing with conservation objectives</p>
OPPORTUNITIES	THREATS
<p>EU funding for human and technical resources  Better networking/data exchange within Adriatic-Ionian basin  Cooperation with BH authorities toward better management of the area</p>	<p>Climate change (increase of temperature may lead to disbalance of ecosystem)  Threats, pressures and activities with impacts on site listed under 2.3.1.</p>

## 2.4. IT3330009 Trezze San Pietro e Bardelli



### 2.4.1. Information about the site

SITE IDENTIFICATION	
TYPE	B
FIRST COMPILATION DATE	09/2013
UPDATE DATE	01/2017
RESPONDENT	Regione Autonoma Friuli Venezia Giulia - Direzione Centrale Infrastrutture e Territorio - Servizio Paesaggio e Biodiversità
DATE SITE PROPOSED AS SCI	09/2013
DATE CONFIRMED AS SCI	12/2014 <sup>8</sup>
National legal reference of SAC designation:	no
SITE LOCATION	
SITE CENTRE LOCATION (decimal degrees)	
Longitude	13.410000
Latitude	45.630000
AREA (HA)	2380

<sup>8</sup> <https://www.regione.fvg.it/rafvfg/cms/RAFVG/ambiente-territorio/tutela-ambiente-gestione-risorse-naturali/FOGLIA203/FOGLIA118/>

MARINE AREA (%)	100
SITE LENGTH (km)	0
ADMINISTRATIVE REGION CODE AND NAME	
Nuts level II code	ITD4
Region Name	Friuli Venezia Giulia
BIOGEOGRAPHICAL REGION(S)	
Region Code	
Region Name	Continental
<b>SITE DESCRIPTION</b>	
General site character	The rocky outcrops known locally as <i>trezze</i> are characterized by substrates of various origins (clastic sedimentary, sedimentary sediments, organogenic) and with extensions ranging from a few to several hundred meters. The geological nature of the outcrops reveals that not all of them can be assimilated to bioconstructions, but there are also slabs deriving from the cementation of sand or rocks by methane gas. From recent investigations about 250 outcrops have been identified only in the Gulf of Trieste between Punta Sdobba and Punta Tagliamento; the most widespread range of these outcrops is on the seabed in front of the lagoons of Grado and Marano at a distance from the coastline of between 2 and 17 km, and a depth varying between 8.3 and 21.5 m. From the bibliography it emerges that the areas involved in rocky outcrops extend from the Gulf of Trieste to the coast of Ancona, along the entire north-western and western coast of the North Adriatic. The calcareous concretions are attributable to Corallinaceous algae and secondly to Briozoa, Molluscs ( <i>Arca noae</i> , <i>Chama gryphoides</i> ), Anthozoans ( <i>Cladocora caespitosa</i> ), Serpulids ( <i>Serpula concharum</i> , <i>Serpula vermicularis</i> , <i>Pomatoceros triqueter</i> , <i>Rotula</i> sp.plur.). The typology of the San Pietro and Bardelli <i>trezze</i> is of the Tabular type consisting of a fractioned set of many outcrops of the same type, however there are some major elements of larger dimensions.
Habitat class	<b>NO1</b> Marine areas, Sea inlets (100%)

Threats, pressures and activities with impacts on site	<b>D03.01</b> Port areas/M/o <b>F02.02</b> Professional active fishing /M/o <b>F02.03</b> Leisure fishing /L/o <b>F03.02.03</b> Trapping, poisoning, poaching /L/i <b>G01</b> Outdoor sports and leisure activities, recreational activities /L/i <b>G01.01</b> Nautical sports /M/o <b>H01.04</b> Diffuse pollution to surface waters via storm overflows or urban run-off/M/o
<b>SITE PROTECTION STATUS</b>	
Designation types at national and regional level	
Code/Cover	IT00 (100%)
Designated at national and regional level	
Type code/Site name	
Designated at international level	
<b>SITE MANAGEMENT</b>	
Managing authority	Regione Autonoma Friuli Venezia Giulia - Direzione Centrale Infrastrutture e Territorio - Servizio Paesaggio e Biodiversità <a href="https://www.regione.fvg.it/rafvfg/cms/RAFVG/ambiente-territorio/tutela-ambiente-gestione-risorse-naturali/FOGLIA203/">https://www.regione.fvg.it/rafvfg/cms/RAFVG/ambiente-territorio/tutela-ambiente-gestione-risorse-naturali/FOGLIA203/</a>
Management plan	no
Monitoring activities /run by Managing authority or other entity	occasional monitoring activities are performed at the site
Ecological parameters monitored	Coralligenous outcrops: species spatial distribution, richness, density, coverage, community structure and dynamic (see <i>Ponti et al., 2010; Curiel et al., 2012; Falace et al., 2015</i> )
Target goals at the NATURA 2000 site	lack a management authority as well as a conservation and management plan. The rationale for their establishment is the protection and conservation of these unique North Adriatic habitats. They represent a biodiversity hotspot in a generally flat, sandy or muddy sea bottom. The coralligenous reefs have great importance for several pelagic and demersal species, both as spawning areas and nurseries, and as refugia for adult specimens.

Key ecological processes	Reproduction and settlement of several benthic, pelagic and demersal species
Key management issues/goals at the NATURA 2000	lack a management authority as well as a conservation and management plan: this is at present the main management issue that needs to be solved before shifting the attention to other management issues/goals
Institutions engaged in the monitoring activities	OGS, UNITS, ARPA-FVG
Web page with description of the NATURA 2000 site and monitoring activities	<a href="https://www.regione.fvg.it/rafvfg/cms/RAFVG/ambiente-territorio/tutela-ambiente-gestione-risorse-naturali/FOGLIA203/FOGLIA118/">https://www.regione.fvg.it/rafvfg/cms/RAFVG/ambiente-territorio/tutela-ambiente-gestione-risorse-naturali/FOGLIA203/FOGLIA118/</a>
Are the monitored data in the NATURA 2000 site available and under which conditions:	Data is not publicly shared, but available for cooperative research projects.
List and describe performance indicators monitored at the NATURA 2000 site	None
Equipment needed that would improve the monitoring activities at the NATURA 2000 site	Underwater photcamera, ROV, CTD.
Conservation strategies at the NATURA 2000 site	lack a management authority as well as a conservation and management plan, thus no conservation strategy is enacted at present.
Other NATURA2000 site(s)	-

### 2.4.2. Habitat types on the site

It protects 2 habitat types of the Habitats Directive.

ANNEX I HABITAT TYPES							SITE ASSESSMENT			
CODE	NAME	PF	NP	COVER (ha)	CAVES (number)	DATA QUALITY	A   B   C   D	A   B   C		
							Representativity	Relative surface	Conservation	Global
1170	<a href="#">Reefs</a>			80		M	A	C	A	A
1110	<a href="#">Sandbanks which are slightly covered by sea water all the time</a>			20		M	B	C	B	B

**PF:** Value "1" indicates the priority form for habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430)  
**NP:** Value "1" indicates a habitat type that no longer exists in the site  
**Caves:** for habitat types 8310, 8330 (caves) the number of caves is entered if estimated surface is not available.  
**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)  
**Representativity** (Degree of representativity of the habitat type on the site): A= excellent, B=good, C=significant, D=non-significant  
**Relative surface** (Area of the site covered by the natural habitat type in relation to the total area covered by that natural habitat type within the national territory): A = >15%, B = 2-15%, C = <2%  
**Conservation** (Degree of conservation of the structure and functions of the natural habitat type): A = excellent conservation, B = good conservation, C = average or reduced conservation  
**Global assessment** (Global assessment of the value of the site for conservation of the natural habitat concerned): A = excellent value, B = good value, C = significant value

### 2.4.3. Information about the target species

The target species (6) of the site are listed in a table below.

Species				Population on site					Site assessment				
G	Code	Scientific name	NP	T	Size		Unit	Cat	D.qual	A/B/C/D	A/B/C		
					Min	Max				Pop.	Con.	Iso.	Global
B	A176	<i>Larus melanocephalus</i>		c				C		B	B	C	B
B	A176	<i>Larus melanocephalus</i>		w				C		B	B	C	B
B	A392	<i>Phalacrocorax aristotelis desmarestii</i>		w				C		B	B	C	B
B	A392	<i>Phalacrocorax aristotelis desmarestii</i>		c				C		B	B	C	B
B	A464	<i>Puffinus yelkouan</i>		c				P		C	B	C	C
F	1103	<i>Alosa fallax</i>		c				P		D			
M	1349	<i>Tursiops truncatus</i>		c				P		C	B	C	C
R	1224	<i>Caretta caretta</i>		c				P		C	B	C	C

**Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles  
**NP:** Value "1" indicated that a species is no longer present in the site  
**Type:** p = permanent, r = reproducing, c = concentration, w = wintering  
**Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))  
**Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - information is provided if data are deficient (DD) or in addition to population size information  
**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); "DD" = Data deficient (category used when not even a rough estimation of the population size can be made; "Abundance categories" is used instead of population size)  
**Population** (Size and density of the population of the species present on the site in relation to the populations present within national territory): A = >15%, B = 2-15%, C = <2%, D = non-significant population  
**Conservation** (Degree of conservation of the features of the habitat which are important for the species concerned and possibilities for restoration): A = excellent conservation, B = good conservation, C = average or reduced conservation  
**Isolation** (Degree of isolation of the population present on the site in relation to natural range of the species): A = population (almost) isolated, B = population not-isolated, but on the margins of area of distribution, C = population not-isolated within extended distribution range  
**Global** (Global assessment of the value of the site for conservation of the species concerned): A = excellent value, B = good value, C = significant value





Photo: *Phalacrocorax aristotelis desmarestii* (1), *Larus melanocephalus* (2) and *Puffinus yelkouan* (3)

#### 2.4.4. Other important species

Total of 54 species are listed: 18 plants/algae species, 23 invertebrates and 13 fish species.

Full list of species is listed in Annex II.

#### 2.4.5. SWOT analysis

STRENGTHS	WEAKNESSES
Valuable coralligenous habitats Occasional monitoring activities performed at the site Database of coralligenous outcrops (Reefs): species spatial distribution, richness, density, coverage, community structure and dynamic Conservation of target species and habitats asses as „excellent“ and „good“ Other important species listed	No management plan No official conservation strategy Performance indicators monitored at the NATURA 2000 site not defined More detailed database on target species missing (size of population, data quality,..)
OPPORTUNITIES	THREATS
EU funding for human and technical resources Better networking/data exchange within Adriatic-Ionian basin	Climate change (increase of temperature may lead to disbalance) Threats are listed in 2.4.1.

## 2.5. IT3250047 Tegnùe di Chioggia



### 2.5.1. Information about the site

SITE IDENTIFICATION	
TYPE	B
FIRST COMPILATION DATE	09/2010
UPDATE DATE	10/2013
RESPONDENT	Regione Veneto Segreteria Regionale per il Bilancio - Unità di Progetto Foreste e Parchi
DATE SITE PROPOSED AS SCI	10/2010
National legal reference of SAC	08/2018 <sup>9</sup>

9

[https://www.gazzettaufficiale.it/atto/serie\\_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2018-08-17&atto.codiceRedazionale=18A05429&elenco30giorni=true](https://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2018-08-17&atto.codiceRedazionale=18A05429&elenco30giorni=true)

designation:	
<b>SITE LOCATION</b>	
SITE CENTRE LOCATION (decimal degrees)	
Longitude	12.410000
Latitude	45.202500
AREA (HA)	2655.0000
MARINE AREA (%)	100
SITE LENGTH (km)	35
ADMINISTRATIVE REGION CODE AND NAME	
Nuts level II code	
Region Name	
BIOGEOGRAPHICAL REGION(S)	
Region Code	
Region Name	Continental
<b>SITE DESCRIPTION</b>	
General site character	<p>Marine environment consisting of Coralligenous outcrops of variable extension (from the few square meters of the smallest outcrops up to over a thousand square meters) locally called <i>tegnùe</i> or <i>tresse</i>. It is possible to identify outcrops of great extension and discrete elevation that constitute the only hard substrates of natural origin in a mainly sandy-silty bottom. The presence of these structures provides a support on which sessile organisms can be installed. The occasional presence of <i>Chelonia mydas</i> has been found, although with non-significant populations.</p> <p>On 3 August 2002, Zona di Tutela Biologica - ZTB was established by Ministerial Decree. Both professional and sport fishing are prohibited and recreational diving is regulated, allowing anchoring exclusively to special buoys upon notice to the association that manages it.</p>
Habitat class	<b>NO1</b> Marine areas, Sea inlets (100%)
Threats, pressures and activities with impacts on site	Not available
<b>SITE PROTECTION STATUS</b>	
Designation types at national and regional level	
Code/Cover	IT07 (100%)
Designated at national and regional level	

Type code/Site name	Biological Protection Zone / <i>Zona di Tutela Biologica</i> (GU n. 193 19.08.2002)
Designated at international level	
<b>SITE MANAGEMENT</b>	
Managing authority	Regione Veneto Segreteria Regionale per il Bilancio - Unità di Progetto Foreste e Parchi <a href="https://www.regione.veneto.it/web/agricoltura-e-foreste/parchi-biodiversita-e-foreste">https://www.regione.veneto.it/web/agricoltura-e-foreste/parchi-biodiversita-e-foreste</a>
Management plan	no
Monitoring activities /run by Managing authority or other entity	Occasional monitoring activities are performed at the site
Ecological parameters monitored	Species spatial distribution, richness, density, coverage, community structure and dynamic (see <i>Ponti et al., 2010; Curiel et al., 2012; Falace et al., 2015</i> )
Target goals at the NATURA 2000 site	lack a management authority as well as a conservation and management plan. The rationale for their establishment is the protection and conservation of these unique North Adriatic habitats. They represent a biodiversity hotspot in a generally flat, sandy or muddy sea bottom. The reefs have great importance for several pelagic and demersal species, both as spawning areas and nurseries, and as refugia for adult specimens.
Key ecological processes	Reproduction and settlement of several benthic, pelagic and demersal species
Key management issues/goals at the NATURA 2000	lack a management authority as well as a conservation and management plan: this is at present the main management issue that needs to be solved before shifting the attention to other management issues/goals
Institutions engaged in the monitoring activities	OGS, UNITS, ARPA-FVG

Web page with description of the NATURA 2000 site and monitoring activities	<a href="http://www.arpa.veneto.it/temi-ambientali/acqua/acque-marino-costiere/approfondimenti/tegnue-alto-adriatico">http://www.arpa.veneto.it/temi-ambientali/acqua/acque-marino-costiere/approfondimenti/tegnue-alto-adriatico</a>
Are the monitored data in the NATURA 2000 site available and under which conditions:	Data is not publicly shared, but available for cooperative research projects.
List and describe performance indicators monitored at the NATURA 2000 site	None
Equipment needed that would improve the monitoring activities at the NATURA 2000 site	Underwater photcamera, ROV, CTD.
Conservation strategies at the NATURA 2000 site	Lack a management authority as well as a conservation and management plan, thus no conservation strategy is enacted at present Some activities are forbidden/regulated: Both professional and sport fishing are prohibited and recreational diving is regulated, allowing anchoring exclusively to special buoys upon notice to the association that manages it (Ordinance 32/06 of the Coast Guard of Chioggia).

### 2.5.2. Habitat types on the site

It protects 1 habitat type of the Habitats Directive.

ANNEX I HABITAT TYPES							SITE ASSESSMENT			
CODE	NAME	PF	NP	COVER (ha)	CAVES (number)	DATA QUALITY	A   B   C   D			
							Representativity	Relative surface	Conservation	Global
1170	<a href="#">Reefs</a>			138,11		M	B	C	B	B

**PF:** Value "1" indicates the priority form for habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430)  
**NP:** Value "1" indicates a habitat type that no longer exists in the site  
**Caves:** for habitat types 8310, 8330 (caves) the number of caves is entered if estimated surface is not available.  
**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)  
**Representativity** (Degree of representativity of the habitat type on the site): A= excellent, B=good, C=significant, D=non-significant  
**Relative surface** (Area of the site covered by the natural habitat type in relation to the total area covered by that natural habitat type within the national territory): A = >15%, B = 2-15%, C = <2%  
**Conservation** (Degree of conservation of the structure and functions of the natural habitat type): A = excellent conservation, B = good conservation, C = average or reduced conservation  
**Global assessment** (Global assessment of the value of the site for conservation of the natural habitat concerned): A = excellent value, B = good value, C = significant value



Photo: <http://de.turismovenezia.it/Chioggia/TEGNUE-DI-CHIOGGIA-38307.html>

### 2.5.3. Information about the target species

The target species (2) of the site are listed in a table below.

Species				Population on site						Site assessment			
G	Code	Scientific name	NP	T	Size		Unit	Cat	D.qual	A/B/C/D		A/B/C	
					Min	Max				Pop.	Con.	Iso.	Global
M	1349	<i>Tursiops truncatus</i>		c				P		D			
R	1224	<i>Caretta caretta</i>		c				P		D			

**Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles  
**NP:** Value "1" indicated that a species is no longer present in the site  
**Type:** p = permanent, r = reproducing, c = concentration, w = wintering  
**Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))  
**Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - information is provided if data are deficient (DD) or in addition to population size information  
**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); "DD" = Data deficient (category used when not even a rough estimation of the population size can be made; "Abundance categories" is used instead of population size)  
**Population** (Size and density of the population of the species present on the site in relation to the populations present within national territory): A = >15%, B = 2-15%, C = <2%, D = non-significant population  
**Conservation** (Degree of conservation of the features of the habitat which are important for the species concerned and possibilities for restoration): A = excellent conservation, B = good conservation, C = average or reduced conservation  
**Isolation** (Degree of isolation of the population present on the site in relation to natural range of the species): A = population (almost) isolated, B = population not-isolated, but on the margins of area of distribution, C = population not-isolated within extended distribution range  
**Global** (Global assessment of the value of the site for conservation of the species concerned): A = excellent value, B = good value, C = significant value

### 2.5.4. Other important species

Total of 27 species are listed: 12 fish species and invertebrates (1028 *Pinna nobilis* and 1027 *Lithophaga lithophaga* – Anex IV).

Full list of species is listed in Annex III.

### 2.5.5. SWOT analysis

STRENGTHS	WEAKNESSES
<p>Biological Protection Zone - ZTB from 2002</p> <p>Some activities are forbidden/regulated</p> <p>Monitoring system for Corraligeneous habitat established</p> <p>Knowledge base of coralligenous habitat: species spatial distribution, richness, density, coverage, community structure and dynamic</p> <p>Conservation of habitat assessed as „good“</p> <p>Other important species listed</p>	<p>No management plan</p> <p>No official conservation strategy<sup>10</sup></p> <p>Performance indicators not defined</p> <p>No proper surveillance system?</p> <p>Detailed data of target species <i>Tursiops</i> and <i>Caretta missing</i></p> <p>Threats, pressures and activities with impacts on site - Not available</p>
OPPORTUNITIES	THREATS
<p>EU funding for human and technical resources</p> <p>Better networking/data exchange within Adriatic-Ionian basin</p>	<p>Climate change (increase of temperature may lead to disbalance)</p>

<sup>10</sup> Some conservation measures need to be prescribed since it become SAC



## 2.6. IT3270023 Delta del Po



### 2.6.1. Information about the site

SITE IDENTIFICATION	
TYPE	A
FIRST COMPILATION DATE	02/2005
UPDATE DATE	10/2013
RESPONDENT	Regione Veneto Segreteria Regionale per il Bilancio - Unità di Progetto Foreste e Parchi
DATE SITE CLASSIFIED AS SPA	02/2005
SITE LOCATION	
SITE CENTRE LOCATION (decimal degrees)	
Longitude	12.2676856476
Latitude	44.9417754829
AREA (HA)	25012.0
MARINE AREA (%)	1
SITE LENGTH (km)	0
ADMINISTRATIVE REGION CODE AND NAME	
Nuts level II code	ITD3
Region Name	Veneto
BIOGEOGRAPHICAL REGION(S)	
Region Code	
Region Name	Continental

SITE DESCRIPTION	
General site character	<p>River set characterized by a stretch of river of considerable size and flow, with delta system, coastal dune systems, valley wetlands, sandy formations (stalls) and river islands with floodplains and lakes, with associations typically belonging to the psammophilic series and, limited to some areas, relict flaps of forests. The area constituted by the fluvial branches of the Po hosts hygrophilous woods of <i>Salix</i> sp.pl. and <i>Populus alba</i>. In the floodplains there are floating meadows of <i>Trapa natans</i>. The unique sandy formations are colonized by psammophilous and halophile vegetation. The valley part is characterized from the presence of a complex system of reeds, sandbanks, canals and marshes with large portions used mainly for fish farming. The natural landscape is characterized by free water spaces with submerged macrophytic vegetation and large, flat islets housing types and halophilic genus. Important site for nesting, migration and wintering of water birds. The area represents an important site for the nesting of some species of Caradriformes. Some floodplain areas with vast reeds and tree cover allow the nesting of Ardeidae, Rallidae and Passerines. Presence of complex vegetational associations, with extensive reeds and psammophilous and halophilic series. Forest flaps contains thermophilic and hygrophilous vegetation. Presence of rare or phytogeographically interesting plant species, many of them reported in the "Red Book of Italian Plants".</p>
Habitat class	<p><b>NO2</b> Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins) (65%)</p> <p><b>NO3</b> Salt marshes, Salt pastures, Salt steppes (1%)</p> <p><b>NO4</b> Coastal sand dunes, Sand beaches, Machair (2%)</p> <p><b>NO5</b> Shingle, Sea cliffs, Islets (3%)</p> <p><b>NO6</b> Inland water bodies (Standing water, Running water) (18%)</p> <p><b>NO7</b> Bogs, Marshes, Water fringed vegetation, Fens (1%)</p> <p><b>NO8</b> Heath, Scrub, Maquis and Garrigue, Phygrana (1%)</p> <p><b>N10</b> Humid grassland, Mesophile grassland (1%)</p> <p><b>N15</b> Other arable land (5%)</p> <p><b>N16</b> Broad-leaved deciduous woodland (1%)</p> <p><b>N20</b> Artificial forest monoculture (e.g. Plantations of poplar or Exotic trees) (1%)</p> <p><b>N23</b> Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites) (1%)</p>
Threats, pressures and activities with impacts on site	<p><b>A10.01</b> Removal of hedges and copses or scrub (N/B/i)</p> <p><b>D03</b> Shipping lanes, ports, marine constructions (N/M/b)</p>

	<p><b>E03</b> Discharges (N/B/i)  <b>E03.04.01</b> Costal sand suppletion/ beach nourishment (N/M/i)  <b>F01</b> Marine and Freshwater Aquaculture (N/B/i)  <b>F02</b> Fishing and harvesting aquatic ressources(N/B/b)  <b>F05.04</b> Poaching (N/M/i)  <b>G01</b> Outdoor sports and leisure activities, recreational activities (N/B/i)  <b>G01.01.01</b> Motorized nautical sports (N/B/i)  <b>G05.01</b> Trampling, overuse (N/B/i)  <b>H01</b> Pollution to surface waters (limnic, terrestrial, marine &amp; brackish) (N/M/b)  <b>H06.01</b> Noise nuisance, noise pollution (N/B/i)  <b>I01</b> Invasive non-native species (N/M/b)  <b>J02</b> Human induced changes in hydraulic conditions (N/B/b)  <b>J02.02.02</b> Estuarine and coastal dredging (N/B/i)  <b>J02.05</b> Modification of hydrographic functioning, general (N/B)  <b>J02.11.01</b> Dumping, depositing of dredged deposits (N/B/i)  <b>J02.12.02</b> Dykes and flooding defense in inland water systems (N/B/b)  <b>J03.01</b> Reduction or loss of specific habitat features (N/M/i)  <b>K01.01</b> Erosion (N/H/b)  <b>K03.05</b> Antagonism arising from introduction of species (N/H/b)</p> <p>Detailed description of threats/pressures are listed on <a href="http://www.biosferadeltapo.org/documents/01e_MAB_Delta_Po_Synt_esys_english.pdf">http://www.biosferadeltapo.org/documents/01e_MAB_Delta_Po_Synt_esys_english.pdf</a> See pp 69+</p>
<b>SITE PROTECTION STATUS</b>	
Designation types at national and regional level	
Code/Cover	IT05 (2%) IT04 (43%)
Designated at national nad regional level	
Type code/Site name	IT04 Parco Naturale Regionale del Delta del Po Type* (88%) IT04 Regionale - Bocche di Po Type* (100%)
Designated at international level	Man and Biosphere (MaB) UNESCO (2015) <a href="http://www.biosferadeltapo.org/">http://www.biosferadeltapo.org/</a>
<b>SITE MANAGEMENT</b>	
Managing authority	Institution for parks and biodiversity management Po Delta Emilia-Romagna/Ente di Gestione per i Parchi e la Biodiversità - Delta del Po <a href="http://www.parcodeltapo.it">http://www.parcodeltapo.it</a>
Management plan	Still not approved!

Monitoring activities /run by Managing authority or other entity	Occasional monitoring activities are performed at the sites
Ecological parameters monitored	Parameters occasionally monitored include species spatial distribution, richness, density, coverage, community structure.
Target goals at the NATURA 2000 site	Preservation of the favourable state of the key habitats and species.
Key ecological processes	Water, sediment and nutrients inputs from the river, water circulation due to the river and from sea tide.
Key management issues/goals at the NATURA 2000	<ul style="list-style-type: none"> <li>• Restoration / increase of Reed</li> <li>• Creation of multifunctional freshwater basins</li> <li>• Maintenance of water circulation in lagoons</li> <li>• Conservation and increase of freshwater habitats</li> <li>• Conservation of colonies of arboreal Ciconiiformes</li> <li>• Incentive to the sustainable management of rice fields</li> <li>• Incentive to the creation of woods in river branches</li> <li>• Incentive to organic farming practices; maintenance / creation of mosaic areas with uncultivated marginal stripes, hedges and woods even with tall trees</li> <li>• Monitoring of Habitat highly dynamic with variable geometry</li> <li>• Monitoring of hunting; Monitoring of breeding waterfowls</li> <li>• Conservation of habitats and species present in the brackish enclosed lagoons through the conservation of traditional extensive fish farming</li> <li>• Regulation of recreational and tourist activities for the reduction of anthropogenic disturbance in correspondence of nesting bird colonies</li> <li>• Implementation of a protection and intervention plan in case of oil spillage and / or other pollutants</li> </ul>
Institutions engaged in the monitoring activities	Parco Delta del Po Veneto
Web page with description of the NATURA 2000 site and monitoring activities	<a href="http://www.parcodeltapo.it/pages/en/institution/new-law.php">http://www.parcodeltapo.it/pages/en/institution/new-law.php</a>
Are the monitored data in the NATURA 2000 site available and under which conditions:	No data

List and describe performance indicators monitored at the NATURA 2000 site	No data
Equipment needed that would improve the monitoring activities at the NATURA 2000 site:	Improvement with modern equipment
Conservation strategies at the NATURA 2000 site	The conservation strategy should be focused on minimizing negative impacts or preventing potential impacts, as listed in Natura 2000 Standard Data Form. At the moment both sites lack an approved conservation and management plan.
Other NATURA2000 site(s)	<a href="#">SIC-ZPS IT4060002 Valli di Comacchio</a> <a href="#">SIC IT3270017 Delta del Po Veneto</a> <a href="#">SIC-ZPS IT3250032 Bosco Nordio</a>

### 2.6.2. Habitat types on the site

It protects 20 habitat types of the Habitats Directive.

ANNEX I HABITAT TYPES							SITE ASSESSMENT			
CODE	NAME	PF	NP	COVER (ha)	CAVES (number)	DATA QUALITY	A   B   C   D	A   B   C		
							Representativity	Relative surface	Conservation	Global
1110	Sandbanks which are slightly covered by sea water all the time			250,12			B	C	B	B
1130	Estuaries			250,12			B	C	B	B
1140	Mudflats and sandflats not covered by seawater at low tide			1250,6			B	C	B	B

1150	*Coastal lagoons		7253,48			C	A	C	B
1210	Annual vegetation of drift lines		250,12			B	C	B	B
1310	Salicornia and other annuals colonising mud and sand		250,12			B	C	B	B
1320	Spartina swards ( <i>Spartinion maritimae</i> )		250,12			A	B	B	B
1410	Mediterranean salt meadows ( <i>Juncetalia maritimi</i> )		250,12			B	C	B	B
1420	Mediterranean and thermo-Atlantic halophilous scrubs ( <i>Sarcocornetea fruticosi</i> )		2000,96			A	B	B	B
2110	Embryonic shifting dunes		250,12			B	C	C	C
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)		250,12			B	C	C	C
2130	*Fixed coastal dunes with herbaceous vegetation (grey dunes)		250,12			B	C	B	B
2160	Dunes with <i>Hippophae rhamnoides</i>		250,12			B	A	B	B
2250	*Coastal dunes with <i>Juniperus</i> spp.		250,12			A	C	B	B
2270	*Wooded dunes with <i>Pinus pinea</i> and/or <i>Pinus pinaster</i>		250,12			C	C	C	C
6420	Mediterranean tall humid herb grasslands of the Molinio-Holoschoenion		500,24			B	C	C	C
7210	*Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae		250,12			B	C	B	B
91EO	*Alluvial forests with <i>Alnus</i>		1250,6			B	C	B	B

	<i>glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)											
92AO	<i>Salix alba</i> and <i>Populus alba</i> galleries			1750,84					A	C	B	B
9340	<i>Quercus ilex</i> and <i>Quercus</i> <i>rotundifolia</i> forests			250,12					B	C	B	B

**PF:** Value "1" indicates the priority form for habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430)  
**NP:** Value "1" indicates a habitat type that no longer exists in the site  
**Caves:** for habitat types 8310, 8330 (caves) the number of caves is entered if estimated surface is not available.  
**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)  
**Representativity** (Degree of representativity of the habitat type on the site): A= excellent, B=good, C=significant, D=non-significant  
**Relative surface** (Area of the site covered by the natural habitat type in relation to the total area covered by that natural habitat type within the national territory): A = >15%, B = 2-15%, C = <2%  
**Conservation** (Degree of conservation of the structure and functions of the natural habitat type): A = excellent conservation, B = good conservation, C = average or reduced conservation  
**Global assessment** (Global assessment of the value of the site for conservation of the natural habitat concerned): A = excellent value, B = good value, C = significant value

### 2.6.3. Information about the target species

The target species (116) of the site are listed in a table below (1 Amphibian, 6 fish species, 2 plants, 1 reptile species and others are birds).

5 bird species listed are permanent residents (p), 40 species are reproducing (r), 33 species is wintering (w) in Delta Po site while 28 are marked as „concentrated“ (c).

Species				Population on site						Site assesment			
G	Code	Scientific name	NP	T	Size		Unit	Cat	D.qual	A/B/C/D		A/B/C	
					Min	Max				Pop.	Con.	Iso.	Global
A	1199	<i>Pelobates fuscus insubricus</i>		p				P	DD	C	B	B	B
B	A298	<i>Acrocephalus arundinaceus</i>		c				C	DD	C	B	C	B
B	A298	<i>Acrocephalus arundinaceus</i>		r				C	DD	C	B	C	B
B	A296	<i>Acrocephalus palustris</i>		c				C	DD	C	B	C	B
B	A296	<i>Acrocephalus palustris</i>		r				C	DD	C	B	C	B
B	A297	<i>Acrocephalus</i>		r				C	DD	C	C	C	C

		<i>scirpaceus</i>											
B	A297	<i>Acrocephalus scirpaceus</i>	c					C	DD	C	C	C	C
B	A229	<i>Alcedo atthis</i>	p					C	DD	C	C	C	C
B	A054	<i>Anas acuta</i>	w	507	507	i		G		B	B	C	B
B	A054	<i>Anas acuta</i>	c					C	DD	B	B	C	B
B	A056	<i>Anas clypeata</i>	c					C	DD	A	B	C	B
B	A056	<i>Anas clypeata</i>	w	2954	2954	i		G		A	B	C	B
B	A056	<i>Anas clypeata</i>	r	10	15	p		G		A	B	C	B
B	A052	<i>Anas crecca</i>	w	2247	2247	i		G		B	B	C	B
B	A052	<i>Anas crecca</i>	c					C	DD	B	B	C	B
B	A050	<i>Anas penelope</i>	c					C	DD	A	B	C	B
B	A050	<i>Anas penelope</i>	w	38488	38488	i		G		A	B	C	B
B	A053	<i>Anas platyrhynchos</i>	r					C	DD	A	B	C	B
B	A053	<i>Anas platyrhynchos</i>	c					C	DD	A	B	C	B
B	A053	<i>Anas platyrhynchos</i>	w	15164	15164	i		G		A	B	C	B
B	A055	<i>Anas querquedula</i>	r	5	10	p		G		B	B	C	B
B	A055	<i>Anas querquedula</i>	c					C	DD	B	B	C	B
B	A051	<i>Anas strepera</i>	r					P	DD	B	B	C	B
B	A051	<i>Anas strepera</i>	c					C	DD	B	B	C	B
B	A051	<i>Anas strepera</i>	w	368	368	i		G		B	B	C	B
B	A028	<i>Ardea cinerea</i>	r	10	30	p		G		C	B	C	B
B	A028	<i>Ardea cinerea</i>	w	580	580	i		G		C	B	C	B
B	A028	<i>Ardea cinerea</i>	c					C	DD	C	B	C	B
B	A029	<i>Ardea purpurea</i>	r	30	40	p		G		C	B	C	B
B	A024	<i>Ardeola ralloides</i>	r	25	25	p		G		C	B	C	B
B	A059	<i>Aythya ferina</i>	r	20	30	p		G		B	B	C	B
B	A059	<i>Aythya ferina</i>	c					C	DD	B	B	C	B
B	A059	<i>Aythya ferina</i>	w	1652	1652	i		G		B	B	C	B
B	A061	<i>Aythya fuligula</i>	c					C	DD	C	B	C	B
B	A061	<i>Aythya fuligula</i>	r					P	DD	C	B	C	B
B	A061	<i>Aythya fuligula</i>	w	381	381	i		G		C	B	C	B
B	A021	<i>Botaurus stellaris</i>	c					R	DD	C	C	C	C
B	A021	<i>Botaurus stellaris</i>	r					P	DD	C	C	C	C
B	A224	<i>Caprimulgus europaeus</i>	r					R	DD	C	C	C	C
B	A224	<i>Caprimulgus europaeus</i>	c					R	DD	C	C	C	C



B	A288	<i>Cettia cetti</i>		r				C	DD	C	B	C	B
B	A138	<i>Charadrius alexandrinus</i>		w	37	37	i		G	C	B	C	B
B	A138	<i>Charadrius alexandrinus</i>		r	10	50	p		G	C	B	C	B
B	A197	<i>Chlidonias niger</i>		c				C	DD	C	C	C	C
B	A081	<i>Circus aeruginosus</i>		w	54	54	i		G	C	C	C	A
B	A081	<i>Circus aeruginosus</i>		r	20	30	p		G	C	C	C	A
B	A082	<i>Circus cyaneus</i>		w	13	13	i		G	C	B	C	B
B	A084	<i>Circus pygargus</i>		r				P	DD	C	B	C	B
B	A289	<i>Cisticola juncidis</i>		r				C	DD	C	B	C	B
B	A027	<i>Egretta alba</i>		r				P	DD	B	B	C	B
B	A027	<i>Egretta alba</i>		w	568	568	i		G	B	B	C	B
B	A026	<i>Egretta garzetta</i>		p				C	DD	B	B	C	B
B	A026	<i>Egretta garzetta</i>		r	400	400	p		G	B	B	C	B
B	A026	<i>Egretta garzetta</i>		w	619	619	i		G	B	B	C	B
B	A381	<i>Emberiza schoeniclus</i>		r				P	DD	C	C	B	C
B	A381	<i>Emberiza schoeniclus</i>		c				C	DD	C	C	B	C
B	A125	<i>Fulica atra</i>		r	100	200	p		G	B	B	C	B
B	A125	<i>Fulica atra</i>		w	10279	10279	i		G	B	B	C	B
B	A125	<i>Fulica atra</i>		c				C	DD	B	B	C	B
B	A153	<i>Gallinago gallinago</i>		w	74	74	i		G	C	C	C	C
B	A153	<i>Gallinago gallinago</i>		c				C	DD	C	C	C	C
B	A130	<i>Haematopus ostralegus</i>		r	58	81	p		G	C	B	C	B
B	A130	<i>Haematopus ostralegus</i>		c				P	DD	C	B	C	B
B	A131	<i>Himantopus himantopus</i>		r	100	120	p		G	C	B	C	B
B	A022	<i>Ixobrychus minutus</i>		r				C	DD	C	B	C	C
B	A338	<i>Lanius collurio</i>		r				P	DD	C	B	C	B
B	A339	<i>Lanius minor</i>		r	2	3	p		G	C	B	C	B
B	A459	<i>Larus cachinnans</i>		r	2000	2500	p		G	C	B	C	B
B	A459	<i>Larus cachinnans</i>		w	5244	5244	i		G	C	B	C	B
B	A179	<i>Larus ridibundus</i>		w	11760	11760	i		G	C	B	C	B
B	A179	<i>Larus ridibundus</i>		r	10	20	p		G	C	B	C	B
B	A069	<i>Mergus serrator</i>		w	61	61	i		G	C	B	C	B
B	A160	<i>Numenius arquata</i>		w	74	74	i		G	C	B	C	B
B	A160	<i>Numenius arquata</i>		c				C	DD	C	B	C	B

B	A023	<i>Nycticorax nycticorax</i>	r	200	200	p	G	C	B	C	B
B	A023	<i>Nycticorax nycticorax</i>	w	111	111	i	G	C	B	C	B
B	A391	<i>Phalacrocorax carbo sinensis</i>	w	3432	3432	i	G	C	B	C	B
B	A393	<i>Phalacrocorax pygmeus</i>	r			P	DD	A	B	C	B
B	A393	<i>Phalacrocorax pygmeus</i>	w	131	131	i	G	A	B	C	B
B	A151	<i>Philomachus pugnax</i>	c			P	DD	C	B	C	B
B	A035	<i>Phoenicopiterus ruber</i>	w	187	187	i	G	C	B	C	B
B	A140	<i>Pluvialis apricaria</i>	c			P	DD	C	B	C	B
B	A140	<i>Pluvialis apricaria</i>	w	60	60	i	G	C	B	C	B
B	A141	<i>Pluvialis squatarola</i>	w	190	190	i	G	B	B	C	B
B	A141	<i>Pluvialis squatarola</i>	c			C	DD	B	B	C	B
B	A005	<i>Podiceps cristatus</i>	c			C	DD	B	B	C	B
B	A005	<i>Podiceps cristatus</i>	w	1076	1076	i	G	B	B	C	B
B	A005	<i>Podiceps cristatus</i>	p			P	DD	B	B	C	B
B	A005	<i>Podiceps cristatus</i>	r	51	76	p	G	B	B	C	B
B	A008	<i>Podiceps nigricollis</i>	w	1398	1398	i	G	B	B	C	B
B	A008	<i>Podiceps nigricollis</i>	c			C	DD	B	B	C	B
B	A132	<i>Recurvirostra avosetta</i>	r	100	200	p	G	C	B	C	A
B	A195	<i>Sterna albifrons</i>	r	250	300	p	G	C	C	C	B
B	A193	<i>Sterna hirundo</i>	r	100	200	p	G	C	B	C	B
B	A191	<i>Sterna sandvicensis</i>	r	1	8	p	G	C	C	C	B
B	A305	<i>Sylvia melanocephala</i>	p			R	DD	C	C	C	C
B	A004	<i>Tachybaptus ruficollis</i>	c			C	DD	C	B	C	B
B	A004	<i>Tachybaptus ruficollis</i>	w	794	794	i	G	C	B	C	B
B	A004	<i>Tachybaptus ruficollis</i>	r	130	266	p	G	C	B	C	B
B	A004	<i>Tachybaptus ruficollis</i>				P	DD	C	B	C	B
B	A048	<i>Tadorna tadorna</i>	r	60	70	p	G	A	B	C	B
B	A048	<i>Tadorna tadorna</i>	w	1112	1112	i	G	A	B	C	B
B	A161	<i>Tringa erythropus</i>	w	169	169	i	G	B	B	C	B
B	A161	<i>Tringa erythropus</i>	c			C	DD	B	B	C	B
B	A162	<i>Tringa totanus</i>	w	38	38	i	G	C	B	C	B
B	A162	<i>Tringa totanus</i>	r	20	30	p	G	C	B	C	B
B	A142	<i>Vanellus vanellus</i>	w	722	722	i	G	C	B	C	B
F	1100	<i>Acipenser naccarii</i>	p			V	DD	C	C	C	A
F	1103	<i>Alosa fallax</i>	c			C	DD	C	C	B	C

F	1155	<i>Knipowitschia panizzae</i>		p				C	DD	C	C	C	C
F	6152	<i>Lampetra zanandreae</i>		p				R	DD	B	B	B	B
F	1095	<i>Petromyzon marinus</i>		c				P	DD	C	C	B	C
F	1154	<i>Pomatoschistus canestrinii</i>		p				C	DD	C	C	C	C
P	1581	<i>Kosteletzkya pentacarpus</i>		p				V	DD	C	C	A	C
P	1443	<i>Salicornia veneta</i>		p				R	DD	C	B	B	C
R	1220	<i>Emys orbicularis</i>		p				P	DD	C	B	C	B

**Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles

**NP:** Value "1" indicated that a species is no longer present in the site

**Type:** p = permanent, r = reproducing, c = concentration, w = wintering

**Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))

**Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - information is provided if data are deficient (DD) or in addition to population size information

**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); "DD" = Data deficient (category used when not even a rough estimation of the population size can be made; "Abundance categories" is used instead of population size)

**Population** (Size and density of the population of the species present on the site in relation to the populations present within national territory): A = >15%, B = 2-15%, C = <2%, D = non-significant population

**Conservation** (Degree of conservation of the features of the habitat which are important for the species concerned and possibilities for restoration): A = excellent conservation, B = good conservation, C = average or reduced conservation

**Isolation** (Degree of isolation of the population present on the site in relation to natural range of the species): A = population (almost) isolated, B = population not-isolated, but on the margins of area of distribution, C = population not-isolated within extended distribution range

**Global** (Global assessment of the value of the site for conservation of the species concerned): A = excellent value, B = good value, C = significant value



Photo: [https://twitter.com/EU\\_DOPA](https://twitter.com/EU_DOPA)

#### **2.6.4. Other important species**

Total of 37 species are listed: 8 species of invertebrates, 1 mammal species and 28 plant species.

Full list of species is listed in Annex IV.

### 2.6.5. SWOT analysis

STRENGTHS	WEAKNESSES
<p>„Good“ database of target species and habitats Other important species listed</p> <p>Management issues/goals defined Ecological parameters monitored (occasionally) Key ecological processes clearly defined Wider area designated as Biosphere reserve (MaB - UNESCO)</p> <p>Threats/pressures for targeted species/habitats described in details</p>	<p>Management plan - not approved!!!</p> <p>No official conservation strategy (not approved)</p> <p>Performance indicators not defined</p> <p>Long list of potential pressures/activities which may impact the area.</p> <p>There are significant “DD” regarding targets species data, and no “Data quality” assessment related to target habitat</p>
OPPORTUNITIES	THREATS
<p>EU funding for human and technical resources</p> <p>Better networking/data exchange within Adriatic-Ionian basin</p>	<p>Climate change (increase of temperature may lead to disbalance)</p> <p>Other listed in a 2.6.1.</p>

## 2.7. IT3270017 Delta del Po: tratto terminale e delta veneto



### 2.7.1. Information about the site

SITE IDENTIFICATION	
TYPE	B
FIRST COMPILATION DATE	06/1996
UPDATE DATE	01/2017
RESPONDENT	Regione Veneto Segreteria Regionale per il Bilancio - Unità di Progetto Foreste e Parchi
SITE INDICATION AND DESIGNATION/CLASSIFICATION DATES	
DATE SITE PROPOSED AS SCI	09/1995
National legal reference of SAC	08/2018 <sup>11</sup>
SITE LOCATION	
SITE CENTRE LOCATION (decimal degrees)	
Longitude	11.907157
Latitude	44.977424
AREA (HA)	25362
MARINE AREA (%)	1
SITE LENGTH (km)	628
ADMINISTRATIVE REGION CODE AND NAME	
Nuts level II code	ITD3

<sup>11</sup>

[https://www.gazzettaufficiale.it/atto/serie\\_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2018-08-17&atto.codiceRedazionale=18A05429&elenco30giorni=true](https://www.gazzettaufficiale.it/atto/serie_generale/caricaDettaglioAtto/originario?atto.dataPubblicazioneGazzetta=2018-08-17&atto.codiceRedazionale=18A05429&elenco30giorni=true)

Region Name	Veneto
BIOGEOGRAPHICAL REGION(S)	
Region Code	
Region Name	Continental
<b>SITE DESCRIPTION</b>	
General site character	<p>River set characterized by a stretch of river of considerable size and flow, with delta system, coastal dune systems, valley wetlands, sandy formations (sandbanks) and river islands with floodplains and lakes.</p> <p>Presence of complex vegetational associations, with extensive reeds and psammophilous and halophilic series. Thermophilic forest flaps and hygrophilous wrecks.</p>
Habitat class	<p><b>NO2</b> Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins) (60%)</p> <p><b>NO3</b> Salt marshes, Salt pastures, Salt steppes (2%)</p> <p><b>NO4</b> Coastal sand dunes, Sand beaches, Machair (3%)</p> <p><b>NO5</b> Shingle, Sea cliffs, Islets (4%)</p> <p><b>NO6</b> Inland water bodies (Standing water, Running water) (30%)</p>
Threats, pressures and activities with impacts on site	<p><b>A10.01</b> Removal of hedges and copses or scrub (N/B/i)</p> <p><b>D03</b> Shipping lanes, ports, marine constructions (N/M/b)</p> <p><b>E03</b> Discharges (N/B/i)</p> <p><b>E03.04.01</b> Costal sand suppletion/ beach nourishment (N/M/i)</p> <p><b>F01</b> Marine and Freshwater Aquaculture (N/B/i)</p> <p><b>F02</b> Fishing and harvesting aquatic ressources(N/B/b)</p> <p><b>F05.04</b> Poaching (N/M/i)</p> <p><b>G01</b> Outdoor sports and leisure activities, recreational activities (N/B/i)</p> <p><b>G01.01.01</b> Motorized nautical sports (N/B/i)</p> <p><b>G05.01</b> Trampling, overuse (N/B/i)</p> <p><b>H01</b> Pollution to surface waters (limnic, terrestrial, marine &amp; brackish) (N/M/b)</p> <p><b>H06.01</b> Noise nuisance, noise pollution (N/B/i)</p> <p><b>I01</b> Invasive non-native species (N/M/b)</p> <p><b>J02</b> Human induced changes in hydraulic conditions (N/B/b)</p> <p><b>J02.02.02</b> Estuarine and coastal dredging (N/B/i)</p> <p><b>J02.05</b> Modification of hydrographic functioning, general (N/B)</p> <p><b>J02.11.01</b> Dumping, depositing of dredged deposits (N/B/i)</p>

	<p><b>J02.12.02</b> Dykes and flooding defense in inland water systems (N/B/b)</p> <p><b>J03.01</b> Reduction or loss of specific habitat features (N/M/i)</p> <p><b>K01.01</b> Erosion (N/H/b)</p> <p><b>K03.05</b> Antagonism arising from introduction of species (N/H/b)</p>
<b>SITE PROTECTION STATUS</b>	
Designation types at national and regional level	
Code/Cover	<p>IT00 (59%)</p> <p>IT04 (40%)</p> <p>IT05 (1%)</p>
Designated at national and regional level	
Type code/Site name	<p>IT04 Regionale - Bocche di Po Type + (100%)</p> <p>IT04 Parco Naturale Regionale del Delta del Po Type * (79%)</p>
Designated at international level	<p>Man and Biosphere (MaB) UNESCO (2019)</p> <p><a href="http://www.biosferadeltapo.org/2019/06/le-due-nuove-riserve-di-biosfera-in-italia/">http://www.biosferadeltapo.org/2019/06/le-due-nuove-riserve-di-biosfera-in-italia/</a></p>
<b>SITE MANAGEMENT</b>	
Managing authority	<p>Institution for parks and biodiversity management Po Delta Emilia-Romagna/ Ente di Gestione per i Parchi e la Biodiversità - Delta del Po</p> <p><a href="http://www.parcodeltapo.it">http://www.parcodeltapo.it</a></p>
Management plan	no
Monitoring activities /run by Managing authority or other entity	Occasional monitoring activities are performed at the sites
Ecological parameters monitored	Parameters occasionally monitored include species spatial distribution, richness, density, coverage, community structure.
Target goals at the NATURA 2000 site	Preservation of the favourable state of the key habitats and species.
Key ecological processes	Water, sediment and nutrients inputs from the river, water circulation due to the river and from sea tide.



<p>Key management issues/goals at the NATURA 2000</p>	<ul style="list-style-type: none"> <li>• Restoration / increase of Reed</li> <li>• Creation of multifunctional freshwater basins</li> <li>• Maintenance of water circulation in lagoons</li> <li>• Conservation and increase of freshwater habitats</li> <li>• Conservation of colonies of arboreal Ciconiiformes</li> <li>• Incentive to the sustainable management of rice fields</li> <li>• Incentive to the creation of woods in river branches</li> <li>• Incentive to organic farming practices; maintenance / creation of mosaic areas with uncultivated marginal stripes, hedges and woods even with tall trees</li> <li>• Monitoring of Habitat highly dynamic with variable geometry</li> <li>• Monitoring of hunting; Monitoring of breeding waterfowls</li> <li>• Conservation of habitats and species present in the brackish enclosed lagoons through the conservation of traditional extensive fish farming</li> <li>• Regulation of recreational and tourist activities for the reduction of anthropogenic disturbance in correspondence of nesting bird colonies</li> <li>• Implementation of a protection and intervention plan in case of oil spillage and / or other pollutants</li> </ul>
<p>Institutions engaged in the monitoring activities</p>	<p>Parco Delta del Po Veneto</p>
<p>Web page with description of the NATURA 2000 site and monitoring activities</p>	<p><a href="http://www.parcodeltapo.it/pages/it/home.php">http://www.parcodeltapo.it/pages/it/home.php</a></p>
<p>Are the monitored data in the NATURA 2000 site available and under which conditions:</p>	<p>-</p>
<p>List and describe performance indicators monitored at the NATURA 2000 site</p>	<ul style="list-style-type: none"> <li>• Status of implementation of the actions foreseen by the Action plan (not approved)</li> <li>• Respect of the time schedule</li> <li>• Respect for estimated costs</li> <li>• Expected goals achieved</li> </ul>
<p>Equipment needed that would improve the monitoring activities at the NATURA 2000 site</p>	<p>Improvement with modern equipment</p>

Conservation strategies at the NATURA 2000 site	The conservation strategy should be focused on minimizing negative impacts or preventing potential impacts, as listed in Natura 2000 Standard Data Form. At the moment both sites lack an approved conservation and management plan.
Other NATURA2000 site(s)	<a href="#">SIC-ZPS IT4060002 Valli di Comacchio</a> <a href="#">ZPS IT3270023 Delta del Po Veneto</a> <a href="#">SIC-ZPS IT3250032 Bosco Nordio</a>

### 2.7.2. Habitat types on the site

It protects 20 habitat types of the Habitats Directive.

ANNEX I HABITAT TYPES							SITE ASSESSMENT			
CODE	NAME	PF	NP	COVER (ha)	CAVES (number)	DATA QUALITY	A   B   C   D	A   B   C		
							Representativity	Relative surface	Conservation	Global
1110	Sandbanks which are slightly covered by sea water all the time			253,62			B	C	B	B
1130	Estuaries			253,62			B	C	B	B
1140	Mudflats and sandflats not covered by seawater at low tide			2028,96			B	C	B	B
1150	*Coastal lagoons			11412,9			C	A	C	B
1210	Annual vegetation of drift lines			253,62			B	C	B	B
1310	Salicornia and other annuals colonising mud and sand			253,62			B	C	B	B
1320	Spartina swards ( <i>Spartinion maritimae</i> )			253,62			A	B	B	B
1410	Mediterranean salt meadows ( <i>Juncetalia maritimi</i> )			253,62			B	C	B	B

1420	Mediterranean and thermo-Atlantic halophilous scrubs ( <i>Sarcocornetea fruticosi</i> )		3043,44			A	B	B	B
2110	Embryonic shifting dunes		253,62			B	C	C	C
2120	Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)		253,62			B	C	C	C
2130	*Fixed coastal dunes with herbaceous vegetation (grey dunes)		253,62			B	C	B	B
2160	Dunes with <i>Hippophae rhamnoides</i>		253,62			B	A	B	B
2250	*Coastal dunes with <i>Juniperus</i> spp.		253,62			A	C	B	B
2270	*Wooded dunes with <i>Pinus pinea</i> and/or <i>Pinus pinaster</i>		253,62			C	C	C	C
6420	Mediterranean tall humid herb grasslands of the Molinio-Holoschoenion		760,86			B	C	C	C
7210	*Calcareous fens with <i>Cladium mariscus</i> and species of the Caricion davallianae		253,62			B	C	B	B
91EO	*Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, Salicion albae)		2028,96			B	C	B	B
92AO	<i>Salix alba</i> and <i>Populus alba</i> galleries		2536,2			A	C	B	B
9340	<i>Quercus ilex</i> and <i>Quercus rotundifolia</i> forests		253,62			B	C	B	B

**PF:** Value "1" indicates the priority form for habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430)

**NP:** Value "1" indicates a habitat type that no longer exists in the site

**Caves:** for habitat types 8310, 8330 (caves) the number of caves is entered if estimated surface is not available.

**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

**Representativity** (Degree of representativity of the habitat type on the site): A= excellent, B=good, C=significant, D=non-significant

**Relative surface** (Area of the site covered by the natural habitat type in relation to the total area covered by that natural habitat type within the national territory): A = >15%, B = 2-15%, C = <2%

**Conservation** (Degree of conservation of the structure and functions of the natural habitat type): A = excellent conservation, B = good conservation, C = average or reduced conservation

**Global assessment** (Global assessment of the value of the site for conservation of the natural habitat concerned): A = excellent value, B = good value, C = significant value

### 2.7.3. Information about the target species

The target species (105) of the site are listed in a table below (1 Amphibian, 6 fish species, 2 plants, 1 reptile species and others are birds).

5 bird species listed are permanent residents (p), 35 species are reproducing (r), 31 species are wintering (w) in Delta Po site while 24 are marked as „concentrated“ (c).

Species				Population on site						Site assessment			
G	Code	Scientific name	NP	T	Size		Unit	Cat	D.qual	A/B/C/D	A/B/C		
					Min	Max				Pop.	Con.	Iso.	Global
A	1199	<i>Pelobates fuscus insubricus</i>		p				P		C	B	B	B
B	A298	<i>Acrocephalus arundinaceus</i>		c				C		C	B	C	B
B	A298	<i>Acrocephalus arundinaceus</i>		r				C		C	B	C	B
B	A296	<i>Acrocephalus palustris</i>		c				C		C	B	C	B
B	A296	<i>Acrocephalus palustris</i>		r				C		C	B	C	B
B	A297	<i>Acrocephalus scirpaceus</i>		c				C		C	C	C	C
B	A297	<i>Acrocephalus scirpaceus</i>		r				C		C	C	C	C
B	A229	<i>Alcedo atthis</i>		p				C		C	C	C	C
B	A054	<i>Anas acuta</i>		w	507	507	i			B	B	C	B
B	A054	<i>Anas acuta</i>		c				C		B	B	C	B
B	A056	<i>Anas clypeata</i>		w	2954	2954	i			A	B	C	B
B	A056	<i>Anas clypeata</i>		c				C		A	B	C	B
B	A056	<i>Anas clypeata</i>		r	10	15	p			A	B	C	B
B	A052	<i>Anas crecca</i>		c				C		B	B	C	B
B	A052	<i>Anas crecca</i>		w	2247	2247	i			B	B	C	B
B	A050	<i>Anas penelope</i>		c				C		A	B	C	B
B	A050	<i>Anas penelope</i>		w	38488	38488	i			A	B	C	B
B	A055	<i>Anas querquedula</i>		c				C		C	B	C	B

B	A055	<i>Anas querquedula</i>	r	5	10	p			C	B	C	B
B	A051	<i>Anas strepera</i>	r				P		B	B	C	B
B	A051	<i>Anas strepera</i>	w	368	368	i			B	B	C	B
B	A051	<i>Anas strepera</i>	c				C		B	B	C	B
B	A028	<i>Ardea cinerea</i>	w	580	580	i			C	B	C	B
B	A028	<i>Ardea cinerea</i>	r	10	30	p			C	B	C	B
B	A029	<i>Ardea purpurea</i>	r	30	40	p			C	B	C	B
B	A024	<i>Ardeola ralloides</i>	r				P		C	B	C	B
B	A059	<i>Aythya ferina</i>	r	20	30	p			B	B	C	B
B	A059	<i>Aythya ferina</i>	w	1652	1652	i			B	B	C	B
B	A059	<i>Aythya ferina</i>	c				C		B	B	C	B
B	A061	<i>Aythya fuligula</i>	r				P		C	B	C	B
B	A061	<i>Aythya fuligula</i>	w	381	381	i			C	B	C	B
B	A061	<i>Aythya fuligula</i>	c				C		C	B	C	B
B	A021	<i>Botaurus stellaris</i>	r				P		C	C	C	C
B	A021	<i>Botaurus stellaris</i>	c				R		C	C	C	C
B	A149	<i>Calidris alpina</i>	w	4711	4711	i			B	B	C	B
B	A149	<i>Calidris alpina</i>	c				C		B	B	C	B
B	A224	<i>Caprimulgus europaeus</i>	c				R		C	C	C	C
B	A288	<i>Cettia cetti</i>	r				C		C	B	C	B
B	A197	<i>Chlidonias niger</i>	c				C		C	B	C	B
B	A081	<i>Circus aeruginosus</i>	w	54	54	i			C	C	C	A
B	A081	<i>Circus aeruginosus</i>	r	20	30	p			C	C	C	A
B	A082	<i>Circus cyaneus</i>	w	13	13	i			C	B	C	B
B	A084	<i>Circus pygargus</i>	r				P		C	B	C	B
B	A289	<i>Cisticola juncidis</i>	r				C		C	B	C	B
B	A027	<i>Egretta alba</i>	w				P		C	B	C	B
B	A026	<i>Egretta garzetta</i>	r	600	700	p			B	B	C	B
B	A026	<i>Egretta garzetta</i>	w	619	619	i			B	B	C	B
B	A026	<i>Egretta garzetta</i>	p				C		B	B	C	B
B	A381	<i>Emberiza schoeniclus</i>	r				P		C	C	B	C
B	A381	<i>Emberiza schoeniclus</i>	c				C		C	C	B	C
B	A125	<i>Fulica atra</i>	w	1027	10279	i			B	B	C	B
B	A125	<i>Fulica atra</i>	r	100	200	p			B	B	C	B
B	A125	<i>Fulica atra</i>	c				C		B	B	C	B
B	A153	<i>Gallinago gallinago</i>	c				C		C	C	C	C

B	A153	<i>Gallinago gallinago</i>	w	74	74	i			C	C	C	C
B	A131	<i>Himantopus himantopus</i>	r	100	120	p			C	B	C	B
B	A022	<i>Ixobrychus minutus</i>	r				C		C	B	C	C
B	A459	<i>Larus cachinnans</i>	w	5244	5244	i			C	B	C	B
B	A459	<i>Larus cachinnans</i>	r	200	250	p			C	B	C	B
B	A179	<i>Larus ridibundus</i>	w	11760	11760	i			B	B	C	B
B	A179	<i>Larus ridibundus</i>	r	10	20	p			B	B	C	B
B	A069	<i>Mergus serrator</i>	w	61	61	i			C	B	C	B
B	A160	<i>Numenius arquata</i>	w	74	74	i			C	B	C	B
B	A160	<i>Numenius arquata</i>	c				C		C	B	C	B
B	A023	<i>Nycticorax nycticorax</i>	w	111	111	i			C	B	C	B
B	A023	<i>Nycticorax nycticorax</i>	r				C		C	B	C	B
B	A391	<i>Phalacrocorax carbo sinensis</i>	r				P		C	B	C	C
B	A391	<i>Phalacrocorax carbo sinensis</i>	w	3432	3432	i			C	B	C	C
B	A393	<i>Phalacrocorax pygmeus</i>	r				P		A	B	C	B
B	A393	<i>Phalacrocorax pygmeus</i>	w	131	131	i			A	B	C	B
B	A151	<i>Philomachus pugnax</i>	c				C		C	B	C	B
B	A035	<i>Phoenicopterus ruber</i>	w	187	187	i			B	B	C	B
B	A140	<i>Pluvialis apricaria</i>	w	60	60	i			C	B	C	B
B	A140	<i>Pluvialis apricaria</i>	c				P		C	B	C	B
B	A141	<i>Pluvialis squatarola</i>	c				C		C	B	C	B
B	A141	<i>Pluvialis squatarola</i>	w	190	190	i			C	B	C	B
B	A005	<i>Podiceps cristatus</i>	w	1076	1076	i			B	B	C	B
B	A005	<i>Podiceps cristatus</i>	p				P		B	B	C	B
B	A005	<i>Podiceps cristatus</i>	r	51	76	p			B	B	C	B
B	A008	<i>Podiceps nigricollis</i>	r				P		B	B	C	B
B	A008	<i>Podiceps nigricollis</i>	w	1398	1398	i			B	B	C	B
B	A132	<i>Recurvirostra avosetta</i>	r	100	200	p			C	B	C	A
B	A195	<i>Sterna albifrons</i>	r	250	300	p			C	B	C	B
B	A193	<i>Sterna hirundo</i>	r	100	200	p			C	B	C	B
B	A191	<i>Sterna sandvicensis</i>	r	1	8	p			C	C	C	B
B	A305	<i>Sylvia melanocephala</i>	p				R		C	C	C	C
B	A004	<i>Tachybaptus</i>	r	130	266	p			C	B	C	B

		<i>ruficollis</i>											
B	A004	<i>Tachybaptus ruficollis</i>	w	794	794	i			C	B	C	B	
B	A004	<i>Tachybaptus ruficollis</i>	p				C		C	B	C	B	
B	A048	<i>Tadorna tadorna</i>	w	1112	1112	i			A	B	C	B	
B	A048	<i>Tadorna tadorna</i>	r	60	70	p			A	B	C	B	
B	A161	<i>Tringa erythropus</i>	w	169	169	i			B	B	C	B	
B	A161	<i>Tringa erythropus</i>	c				C		B	B	C	B	
B	A162	<i>Tringa totanus</i>	c				C		C	B	C	B	
B	A162	<i>Tringa totanus</i>	w	38	38	i			C	B	C	B	
B	A162	<i>Tringa totanus</i>	r	20	30	p			C	B	C	B	
F	1100	<i>Acipenser naccarii</i>	p				V		C	C	C	A	
F	1103	<i>Alosa fallax</i>	c				C		C	C	B	C	
F	1155	<i>Knipowitschia panizzae</i>	p				C		C	C	C	C	
F	6152	<i>Lampetra zanandreae</i>	p				R		B	B	B	B	
F	1095	<i>Petromyzon marinus</i>	c				P		C	C	B	C	
F	1154	<i>Pomatoschistus canestrinii</i>	p				C		C	C	C	C	
P	1581	<i>Kosteletzkya pentacarpos</i>	p				V		C	C	A	C	
P	1443	<i>Salicornia veneta</i>	p				R		B	C	B	C	
R	1220	<i>Emys orbicularis</i>	p				P		C	B	C	B	

**Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles

**NP:** Value "1" indicated that a species is no longer present in the site

**Type:** p = permanent, r = reproducing, c = concentration, w = wintering

**Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))

**Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - information is provided if data are deficient (DD) or in addition to population size information

**Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); "DD" = Data deficient (category used when not even a rough estimation of the population size can be made; "Abundance categories" is used instead of population size)

**Population** (Size and density of the population of the species present on the site in relation to the populations present within national territory): A = >15%, B = 2-15%, C = <2%, D = non-significant population

**Conservation** (Degree of conservation of the features of the habitat which are important for the species concerned and possibilities for restoration): A = excellent conservation, B = good conservation, C = average or reduced conservation

**Isolation** (Degree of isolation of the population present on the site in relation to natural range of the species): A = population (almost) isolated, B = population not-isolated, but on the margins of area of distribution, C = population not-isolated within extended distribution range

**Global** (Global assessment of the value of the site for conservation of the species concerned): A = excellent value, B = good value, C = significant value

### 2.7.4. Other important species

Total of 37 species are listed: 8 species of invertebrates, 1 mammal species and 28 plant species.

Full list of species is listed in Annex V.

### 2.7.5. SWOT analysis

STRENGTHS	WEAKNESSES
<p>„Good“ knowledge base of target species and habitats</p> <p>Other important species listed</p> <p>Management issues/goals defined</p> <p>Ecological parameters monitored (occasionally)</p> <p>Key ecological processes clearly defined</p> <p>Wider area designated as Biosphere reserve (MaB - UNESCO)</p> <p>Threats/pressures for targeted species/habitats described in details</p>	<p>Management plan - not approved and no official conservation strategy (not approved)<sup>12</sup></p> <p>Performance indicators not defined</p> <p>Long list of potential pressures/activities which may impact the area.</p> <p>There are significant “DD” regarding targets species data, and no “Data qualitya” assessment related to target habitat</p>
OPPORTUNITIES	THREATS
<p>EU funding for human and technical resources</p> <p>Better networking/data exchange within Adriatic-Ionian basin</p>	<p>Climate change (increase of temperature may lead to disbalance)</p> <p>Other listed in a 2.7.1</p>

<sup>12</sup> Some conservation measures need to be prescribed since it become SAC in 2018.



### 3. CONCLUSION AND RECOMMENDATION

After detailed analysis of available data for selected NATURA2000 sites, following conclusions are drawn:

#### I. Designation

- Two out of 6 *Sites of Community Interest (SCI)* become *Special Area of Conservation - SAC* in 2018. (IT3250047 Tegnùe di Chioggia, IT3270017 Delta del Po: tratto terminale e delta veneto),
- Some NATURA2000 site belong to national/regional protected area system (HR4000015 Malostonski zaljev, IT3250047 Tegnùe di Chioggia, IT3270023 Delta del Po, IT3270017 Delta del Po: tratto terminale e delta veneto),
- Three Natura2000 sites overlap with internationally designated areas (GEOPARC - HR3000469 Viški arhipelag and MaB-UNESCO - IT3270023 Delta del Po, IT3270017 Delta del Po: tratto terminale e delta veneto)
- Lack of updated information of the status of some designations (and other relevant information) by relevant national/regional managing authority (e.g. list of SICs/SACs on relevant Ministry's page updated in December 2017, lack of updates on managing authority's site,.....).

#### II. Management

- None of selected NATURA2000 sites has approved Management plan nor clearly defined conservation goals/issues/strategies except those brought by national authorities for designation of SACs (necessary conservation measures applied for the maintenance or restoration, at a favourable conservation status, of the natural habitats and/or the populations of the species for which the site is designated),
- Management plan of SCI HR4000015 Malostonski zaljev is expected in 2020,
- Due to their regular activities, majority of managing authorities has no resources to maintain monitoring and adequate surveillance of the area,
- Some NATURA 2000 sites are conducting regular monitoring activities regarding target species (HR3000469 Viški arhipelag, HR3000161 Cres-Lošinj, HR4000015 Malostonski zaljev),
- Some NATURA sites are occasionally conducting monitoring activities (IT3330009 Trezze San Pietro e Bardelli, IT3250047 Tegnùe di Chioggia, IT3270023 Delta del Po, IT3270017 Delta del Po: tratto terminale e delta veneto),
- For none of selected areas key ecological processes are not known (HR3000469 Viški arhipelag, HR3000161 Cres-Lošinj) or are partially known (others),
- Performance indicators are not defined in all selected NATURA2000 sites,

- Ecological parameters monitored vary between sites depending on target species/habitat,
- List of pressures/threats defined for 6/7 selected NATURA2000 sites (missing one for Tegnùe di Chioggia),
- Additional equipment is needed for monitoring activities.

### III. Target species and habitat (and other species) database

- Different level of data quality on target species and habitats between selected sites,
- Different level of information on other species and habitats and ecosystem in general,
- Some relevant data of biodiversity and ecological components are not shared with managing authorities therefore missing in their database,
- Research activities are conducted by national research institutions and NGOs (e.g. Blue World Institute). Data available for collaboration projects.

All selected NATURA2000 sites are places in Adriatic Sea therefore very connected in terms of species and habitat distribution and connectivity, natural threats and anthropogenic impacts. Therefore, it is recommended to:

- to improve networking between all Adriatic marine and coastal NATURA2000 sites, especially those with similar targeted species and habitats,
- to improve networking and cooperation between managing authorities and research institutions/organizations on Adriatic level,
- to work on standardization of ecological, biological, oceanographic and other relevant parameters for NATURA2000 according to relevant EU and international legal framework Birds and Habitat Directives, Marine Strategy Framework Directive,...),
- to develop comprehensive database of Adriatic Natura2000 sites and other non-designated areas with all relevant data needed.

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## ANNEX I. Other species: Malostonski zaljev

Species					Population in the site			Motivation						
Group	CODE	Scientific Name	S	N P	Size		Unit	Cat. C R V P	Species Annex		Other categories			
					Min	Max			IV	V	A	B	C	D
F		<i>Alosa fallax nilotica</i>						C			X			
F		<i>Atherina boyeri</i>						C			X			
F		<i>Atherina hepsetus</i>						C			X			
F		<i>Arnoglossus laterna</i>						C						X
F		<i>Bothus podas</i>						C			X			
F		<i>Boops boops</i>						C						X
F		<i>Buglossidium luteum</i>						C						X
F		<i>Callionymus pussilus</i>						C						X
F		<i>Cepola rubescens</i>						C						X
F		<i>Citharus linguatula</i>						C						X
F		<i>Conger conger</i>						C						X
F		<i>Chromis chromis</i>						C						X
F		<i>Dasyatis pastinaca</i>						C			X			
F		<i>Dentex dentex</i>						C			X			
F		<i>Dentex gibbosus</i>						C			X			
F		<i>Dentex macrophthalmus</i>						C						X
F		<i>Dicentrarchus labrax</i>						C			X			
F		<i>Diplodus annularis</i>						C						X
F		<i>Diplodus puntazzo</i>						C			X			
F		<i>Diplodus sargus</i>						C			X			
F		<i>Diplodus vulgaris</i>						C			X			
F		<i>Engraulis encrasicolus</i>						C						X
F		<i>Gaidropsarus mediterraneus</i>						C						X
F		<i>Gobius cruentatus</i>						C						X
F		<i>Gobius cobitis</i>						C			X			X
F		<i>Gobius geniporus</i>						C						X



F		<i>Sparus aurata</i>						C			X			
F		<i>Spicara maena</i>						C						X
F		<i>Solea kleini</i>						C						X
F		<i>Symphodus cinereus</i>						C						X
F		<i>Symphodus ocellatus</i>						C						X
F		<i>Symphodus mediterraneus</i>						C						X
F		<i>Symphodus rostratus</i>						C						X
F		<i>Symphodus tinca</i>						C						X
F		<i>Scorpaena porcus</i>						C						X
F		<i>Scorpaena scrofa</i>						C			X			
F		<i>Trachinus draco</i>						C					X	
F		<i>Trachurus mediterraneus</i>						C						X
F		<i>Trachurus trachurus</i>						C						X
F		<i>Torpedo marmorata</i>						C			X			
F		<i>Trigloporus lastoviza</i>						C						X
F		<i>Trisopterus minutus</i>						C						X
F		<i>Uranoscopus scaber</i>						C						X
F		<i>Zeus faber</i>						C			X			
F		<i>Prionace glauca</i>						C			X			
I		<i>Ostrea edulis</i>						C						X
I		<i>Mytilus galloprovincialis</i>						C						X
I		<i>Nucula hanleyi</i>						C						X
I		<i>Tellina donacina</i>						C						X
I		<i>Abra alba</i>						C						X
I		<i>Arca noae</i>						C						X
I		<i>Modiolus barbatus</i>						C						X
I		<i>Nuculana pella</i>						C						X
I		<i>Ctena Decussata</i>						C						X
I		<i>Ioripes lacteus</i>						C						X
I		<i>Lucinella divaricata</i>						C						X
I		<i>Anodontia fragilis</i>						C						X
I		<i>Acanthocardia paucicostata</i>						C						X
I		<i>Ensis minor</i>						C						X
I		<i>Tellina serrata</i>						C						X
I		<i>Psammobia depressa</i>						C						X











## ANNEX III. Other species: Tegnùe di Chioggia

Species					Population in the site			Motivation							
Group	CODE	Scientific Name	S	NP	Size		Unit	Cat.	Species Annex		Other categories				
					Min	Max			IV	V	A	B	C	D	
								C R V P							
F		<i>Carcharodon carcharias</i>						P						X	
F		<i>Cetorhinus maximus</i>						P						X	
F		<i>Hippocampus hippocampus</i>						P						X	
F		<i>Hippocampus ramulosus</i>						P						X	
F		<i>Isurus oxyrinchus</i>						P						X	
F		<i>Lamna nasus</i>						P						X	
F		<i>Mobula mobular</i>						P						X	
F		<i>Prionace glauca</i>						P						X	
F		<i>Raja alba</i>						P						X	
F		<i>Sciaena umbra</i>						P						X	
F		<i>Squatina squatina</i>						P						X	
F		<i>Umbrina cirrosa</i>						P						X	
I		<i>Aplysina aerophoba</i>						P						X	
I		<i>Astroides calycularis</i>						P						X	
I		<i>Axinella cannabina</i>						P						X	
I		<i>Axinella polypoides</i>						P						X	
I		<i>Geodia cydonium</i>						P						X	
I		<i>Hippospongia communis</i>						P						X	
I		<i>Homarus gammarus</i>						P						X	
I	1027	<i>Lithophaga lithophaga</i>						P	X						
I		<i>Maja squinado</i>						P						X	
I		<i>Pholas dactylus</i>						P						X	
I	1028	<i>Pinna nobilis</i>						P	X						
I		<i>Spongia agaricina</i>						P						X	
I		<i>Spongia officinalis</i>						P						X	
I		<i>Tethya aurantium</i>						P						X	
I		<i>Tethya citrina</i>						P						X	

## ANNEX IV. Other species: Delta del Po

Species		Population in the site				Motivation								
Group	CODE	Scientific Name	S	NP	Size		Unit	Cat. C R V P	Species Annex		Other categories			
					Min	Max			IV	V	A	B	C	D
I		<i>Aeshna affinis</i>						R						X
I		<i>Anax parthenope</i>						R						X
I		<i>Apatura ilia</i>						R						X
I		<i>Cicindela majalis</i>						P			x			
I		<i>Cylindera trisignata</i>						P			x			
I		<i>Melitaea cinxia</i>						R						x
I		<i>Oxyloma elegans</i>						R						x
I		<i>Succinea putris</i>						R						x
M		<i>Suncus etruscus</i>						C					x	
P		<i>Phillyrea angustifolia</i>						C						x
P		<i>Plantago cornuti</i>						R			x			
P		<i>Aceras anthropophorum</i>						V					x	
P		<i>Caltha palustris</i>						V					x	
P		<i>Centaurea tommasinii</i>						C			x			
P		<i>Cephalanthera longifolia</i>						C					x	
P		<i>Cladium mariscus</i>						R						x
P		<i>Epipactis palustris</i>						V					x	
P		<i>Hydrocotyle vulgaris</i>						P						x
P		<i>Lathyrus palustris</i>						R						x
P		<i>Leersia oryzoides</i>						R						x
P		<i>Leucojum aestivum</i>						V						x
P		<i>Linum maritimum</i>						P						x
P		<i>Loroglossum hircinum</i>						R					x	
P		<i>Medicago marina</i>						C						x
P		<i>Ophrys sphecodes</i>						R					x	
P		<i>Orchis morio</i>						C					x	
P		<i>Orchis purpurea</i>						P					x	

P		<i>Orchis simia</i>						R						x	
P		<i>Plantago crassifolia</i>						V							x
P		<i>Pyracantha coccinea</i>						R							x
P		<i>Quercus ilex</i>						C							x
P		<i>Salicornia patula</i>						C							x
P		<i>Salvinia natans</i>						C			x				
P		<i>Senecio paludosus</i>						R			x				
P		<i>Spartina maritima</i>						C							x
P		<i>Trachomitum venetum</i>						R			x				
P		<i>Trapa natans</i>						C			x				

## ANNEX V. Other species: Delta del Po: tratto terminale e delta veneto

Species					Population in the site			Motivation						
Group	CODE	Scientific Name	S	NP	Size		Unit	Cat. C R V P	Species Annex		Other categories			
					Min	Max			IV	V	A	B	C	D
I		<i>Aeshna affinis</i>						R						X
I		<i>Anax parthenope</i>						R						X
I		<i>Apatura ilia</i>						R						X
I		<i>Cicindela majalis</i>						P			X			
I		<i>Cylindera trisignata</i>						P			X			
I		<i>Melitaea cinxia</i>						R						X
I		<i>Oxyloma elegans</i>						R						X
I		<i>Succinea putris</i>						R						X
M		<i>Suncus etruscus</i>						C					X	
P		<i>Aceras anthropophorum</i>						V					X	
P		<i>Caltha palustris</i>						V					X	
P		<i>Centaurea tommasinii</i>						C			X			
P		<i>Cephalanthera longifolia</i>						C					X	
P		<i>Cladium mariscus</i>						R						X
P		<i>Epipactis palustris</i>						V					X	
P		<i>Hydrocotyle vulgaris</i>						P						X
P		<i>Lathyrus palustris</i>						R						X
P		<i>Leersia oryzoides</i>						R						X
P		<i>Leucojum aestivum</i>						V						X
P		<i>Linum maritimum</i>						P						X
P		<i>Loroglossum hircinum</i>						R					X	
P		<i>Medicago marina</i>						C						X
P		<i>Ophrys sphecodes</i>						R					X	
P		<i>Orchis morio</i>						C					X	
P		<i>Orchis purpurea</i>						P					X	

P		<i>Orchis simia</i>						R					X	
P		<i>Phillyrea angustifolia</i>						C						X
P		<i>Plantago cornuti</i>						R			X			
P		<i>Plantago crassifolia</i>						V						X
P		<i>Pyracantha coccinea</i>						R						X
P		<i>Quercus ilex</i>						C						X
P		<i>Salicornia patula</i>						C						X
P		<i>Salvinia natans</i>						C			X			
P		<i>Senecio paludosus</i>						R			X			
P		<i>Spartina maritima</i>						C						X
P		<i>Trachomitum venetum</i>						R			X			
P		<i>Trapa natans</i>						C			X			