



Ramsar Information Sheet

Published on 12 September 2017

Italy

Massaciuccoli lake and marsh

ramsar

Designation date	22 June 2017
Site number	2311
Coordinates	43°45'46"N 10°18'10"E
Area	11 135,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

The Ramsar site "Massaciucoli lake and marsh" belongs to a large ecological and diversified wetland "Lake and Marshland of Massaciucoli – Forest of Migliarino - Estate of San Rossore" surrounded by the rich economic area of northern Tuscany coast.

The characteristic of the site is the flat, mixed open-closed (forest) ecosystem, where soils arise from a continuous and dynamic sedimentation/erosion balance increased by winds and hydrological movements of the system Arno-Serchio rivers / Ligurian sea.

The main ecological systems are represented by the two final parts of Arno and Serchio rivers, with the wetland of the old river Arno delta in the inland (named "Lame di Fuori"), by the wetland of the old back-dune with the Lake of Massaciucoli, which is surrounded by the fen beds (*Cladium* sp.) mixed with reed beds (*Phragmites* sp.) and *Sphagnum* spp. peatland that floats on root mats islands, and by an extensive hosted paleo-dune system that alternates with dry forests (dune top) and flooded forests (interdunal lowlands), up to the newly formed dunes and the beaches.

The vegetation has great variability of communities and richness of species; large areas are flooded by rains in autumn-winter-spring.

The site is an important migratory and wintering area for hundreds species of birds and bird-watching observatories are placed near the marshlands. The site is also an important area for recreation as e.g. swimming, boat trips and trekking.

Open and closed wetlands of this size are extremely rare in coastal plains of the Mediterranean area. *Sphagnum* spp. community, the coexistence of tertiary and quaternary (atlantic and boreal) relict entities and numerous endemisms attest a peculiar biogeographical history and microclimate.

This importance has been recognized at European level in the Natura 2000 network: 3 SPAs Wild Bird Conservation Directive (2009/147/EEC) and 4 SACs (with perimeters coinciding) according to the Directive on the conservation of natural and semi-natural habitat (92/43/EEC); it has been recognized also by the Council of Europe (European Diploma of Protected Areas) and at the world level (Biosphere Reserve).

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

Name	Antonio Perfetti
Institution/agency	Regional park authority Migliarino San Rossore Massaciucoli
Postal address	Palazzo degli Stalloni, Cascine Vecchie di San Rossore, I 56122 PISA Italy
E-mail	a.perfetti@sanrossore.toscana.it
Phone	+39 348 8111912

2.1.2 - Period of collection of data and information used to compile the RIS

From year	2009
To year	2015

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Massaciucoli lake and marsh
Unofficial name (optional)	Lago e palude di Massaciucoli

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps	0
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Boundaries description

The area occupies 11,135 hectares and includes the territory of all five municipalities that are already part of the Regional Park of Migliarino San Rossore community. The site extends in the north from the Massaciucoli Lake and continuing southward through the San Rossore estate. Further south it includes also the Cornacchiaia Reserve, which is part of the Tombolo Estate. Most of Ramsar site corresponds to four Natura 2000 Network sites, as reported in section 5.2.2. It should be noted, anyway, that there is no a total compliance of the Ramsar site boundaries with the four Natura 2000 Network sites boundaries, since these confines were defined by the presence or absence of wet habitats complying with the Ramsar criteria. Indeed, the portion of the site located at south of Arno river, inside SIC Selva Pisana, is excluded from Ramsar area, because it is mostly characterized by woods and tickets dominated by Pinus pinea and Mediterranean xerophile vegetation on well drained soils, mixed with smaller areas of mesophile forests with dominance of common oak, Quercus robur, common alder, Alnus glutinosa and poplars, Populus spp. Whereas, proceeding even further south towards the Channel Scolmatore (the Arno floodway), the last portion, Cornacchiaia Reserve, has been included in the proposed Ramsar area because humid environments prevail here, characterized by a rich vegetation of fresh and brackish waters wetlands (Saliconia spp., Artrochneum sp., Phragmites australis, Juncus spp., Limonium spp., Quercus robur, Fraxinus sp., Ulmus minor, Alnus glutinosa) and, also, it is crossed by reclamation channels (as the Navigable Channel of the Navicelli that crosses it in NE-SW direction). Furthermore, in the central and northern area of Ramsar site, there is no a total match of the perimeter of Natura 2000 Network sites with the perimeter of Ramsar area: indeed, there are agricultural areas and small wetlands that retain important aspects, e.g. concerning the wintering of water birds, which make them fall within the RAMSAR criteria, even though they are not part of the Natura 2000 Network.

2.2.2 - General location

a) In which large administrative region does the site lie?	Tuscany Region
b) What is the nearest town or population centre?	Pisa

2.2.3 - For wetlands on national boundaries only

- a) Does the wetland extend onto the territory of one or more other countries? Yes No
- b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

2.2.4 - Area of the Site

Official area, in hectares (ha):

Area, in hectares (ha) as calculated from GIS boundaries

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Mediterranean

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

- Criterion 1: Representative, rare or unique natural or near-natural wetland types

Hydrological services provided

The Site is a plain with mixed open-closed (forest) ecosystems, where soils arise from a continuous and dynamic sedimentation/erosion balance increased by winds and hydrological movements of the system Arno-Serchio rivers / Ligurian sea. This dunal system has a great importance for the coast stability (resilience to erosion). Furthermore, in the mediterranean dry summer season, it has a great importance for the ground fresh water recharge. Its soils, with high primary permeability, give a strong contribution to water quality.

Other ecosystem services provided

These high productive wetlands contribute to carbon retention.

Other reasons

Main ecological system of the plain of the final part of the rivers Arno and Serchio is a mosaic of brackish and fresh water wetlands.
 First of all is the wetland of the old river Arno delta in the inland named Lame di Fuori.
 Moreover, the alkaline waters of the lake of Massaciuccoli is surrounded by hundreds of hectars with fen beds (*Cladium* sp.) and with reed beds (*Phragmites* sp.); here, on root-mats floating on the water, there is acid mesotrophic water with *Sphagnum* spp.
 Furthermore, an extensive paleo-dune system hosts an alternation of dry forests (dune top), flooded forests and elophytes ecosystems (interdunal lowlands) up to the newly formed dunes and to the beaches.
 In the plain, large areas are flooded by the autumn-winter-spring rains. All the main types of marshes of Mediterranean Basin bioregion are present in this territory: Annual vegetation of drift lines, Alluvial forests, Riparian mixed forests, *Salix* and *Populus* galleries, Mediterranean salt meadows, Coastal lagoons, Mediterranean salt steppes, Hard oligo-mesotrophic waters with benthic vegetation of *Chara* spp., Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation, Mediterranean tall humid herb grasslands of the Molinio-Holoschoenion, Calcareous fens with *Cladium mariscus* and species of the Caricion davallianae, Transition mires and quaking bogs, Mediterranean temporary ponds and Reedbeds.
 Open and closed wetlands of this big size are extremely rare in the coastal plains of the Mediterranean.
 The site is an important area for agriculture and recreation as e.g. swimming, boat trips and trekking.

- Criterion 2 : Rare species and threatened ecological communities



- Criterion 3 : Biological diversity































Justification

The site supports species typical for the wetlands (for example river in natural state, flooded fen beds and reed beds, mediterranean salt meadows, open water and forested rich wetlands), in the EU Mediterranean bioregion.

- Criterion 4 : Support during critical life cycle stage or in adverse conditions

3.2 - Plant species whose presence relates to the international importance of the site

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
<i>Anacamptis palustris</i> 		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	EN Italian red list	Few populations in coastal lowlands in Mediterranean bioregion.













































Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
<i>Anagallis tenella</i> 	Bog pimpernel	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	CR Italian red list (Conti et al 1997)	Linked to Sphagnum bogs at sea level. Probably this is a unique example in Mediterranean bioregion
<i>Artemisia caeruleascens cretacea</i> 		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Endemism	Endemism in central Italy
<i>Baldellia ranunculoides</i> 	Lesser water-plantain	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NT 	<input type="checkbox"/>		Few populations in Mediterranean bioregion.
<i>Centaurea aplolepa subciliata</i> 		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	Endemism	Endemism of tyrenic coasts, few populations known
<i>Cladium mariscus</i> 	Sawgrass	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>		Rare in other Italian territory and characteristic species of habitat 7210*
<i>Drosera rotundifolia</i> 	Round-leaved sundew	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>		Linked to Sphagnum bogs at sea level. Probably this is a unique example in Mediterranean bioregion
<i>Epipactis palustris</i> 	Marsh Helleborine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	VU in Tuscany (Conti et al., 1997)	Rare species
<i>Euphorbia palustris</i> 	Bog Spurge	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	VU in Tuscany (Conti et al., 1997)	Species at risk in all the Italian region where it is reported
<i>Hibiscus moscheutos moscheutos</i> 	Pink rosemallow	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>		Few populations in Mediterranean bioregion, American-Atlantic entity.
<i>Hydrocotyle ranunculoides</i> 	Water Pennywort	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	EN in Italy and CR in Tuscany (Conti et al., 1997)	Species at risk in many Italian region
<i>Hypericum elodes</i> 	Marsh St John's-wort	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	CR Italian red list	Few populations in Mediterranean bioregion, the only one in Italy, Atlantic entity, quaternary relict in Italy.
<i>Leucorum aestivum</i> 	Summer Snowflake	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	LR in Tuscany (Conti et al., 1997)	Rare species
<i>Marsilea quadrifolia</i> 	Four leaf clover	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	EN Italian red list	Few populations in Mediterranean bioregion.
<i>Nymphaea alba</i> 	White water rose	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>		Few populations in Mediterranean bioregion.
<i>Nymphoides peltata</i> 	Yellow Floatingheart	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	EN in Italy and Tuscany (Conti et al., 1997)	Very rare species
<i>Osmunda regalis</i> 	Royal fern	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>		Few populations in western Mediterranean bioregion, tertiary relict populations
<i>Periploca graeca</i> 	Silkvine	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	VU 	<input type="checkbox"/>		Few populations in Mediterranean bioregion, tertiary relict populations
<i>Rhynchospora alba</i> 	White beak-sedge	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>		Linked to Sphagnum bogs at sea level. Probably this is a unique example in Mediterranean bioregion.
<i>Sagittaria sagittifolia</i> 	Arrowhead	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC 	<input type="checkbox"/>	EN Italian red list VU in Tuscany (Conti et al., 1997)	Endangered species at Italian level
<i>Solidago litoralis</i> 		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EN 	<input type="checkbox"/>	EN Italian red list	Endemism of high tyrenic coasts, few populations known















































Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
<i>Sphagnum palustre</i>	Peat moss	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	DD Italian red list	In this site lives sphagnum bogs at sea level. Probably this is a unique example in Mediterranean bioregion of this northern entity/vegetation.
<i>Sphagnum subnitens</i>	Peat moss	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	DD Italian red list	Probably this is a unique example in Mediterranean bioregion of this northern
<i>Spirodela polyrrhiza</i>	Common Duckweed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC ●●●●● ●●●●●	<input type="checkbox"/>	VU in Tuscany (Conti et al., 1997)	Rare species
<i>Symphytum tanaicense</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC ●●●●● ●●●●●	<input type="checkbox"/>	CR Italian red list	Microtherm relict entity of Ponto-pannonian bioregion. The site guest one of the few Mediterranean bioregion populations, the only one in Italy.
<i>Thelypteris palustris</i>	Marsh fern	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC ●●●●● ●●●●●	<input type="checkbox"/>		Rare in Mediterranean bioregion.
<i>Utricularia australis</i>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC ●●●●● ●●●●●	<input type="checkbox"/>	EN in Italy and VU in Tuscany (Conti et al., 1997)	Rare species
<i>Utricularia vulgaris</i>	Greater bladderwort	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC ●●●●● ●●●●●	<input type="checkbox"/>		Few populations in Mediterranean bioregion.

In the column "Other status" we put: 1) National data, Italian red list, concern from AA.VV. 2013. Lista Rossa della Flora Italiana. Ministero Ambiente, Federparchi e IUCN, 2) the old Italian Red List from Conti et al. 1997, Liste Rosse Regionali delle Piante d'Italia. In the last case we have cited the reference.

3.3 - Animal species whose presence relates to the international importance of the site


































Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Birds																		
CHORDATA/ AVES	<i>Acrocephalus melanopogon</i>	Moustached Warbler	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC ●●●●● ●●●●●	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	The area provides food resources for individuals moving along an important migratory route
CHORDATA/ AVES	<i>Acrocephalus paludicola</i>	Aquatic Warbler	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU ●●●●● ●●●●●	<input type="checkbox"/>	<input checked="" type="checkbox"/>	NT Italian red list	The area provides food resources for individuals moving along an important migratory route
CHORDATA/ AVES	<i>Alcedo atthis</i>	Common Kingfisher	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU ●●●●● ●●●●●	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/ AVES	<i>Anas clypeata</i>	Northern Shoveler	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC ●●●●● ●●●●●	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	The area provides food resources for individuals moving along an important migratory route
CHORDATA/ AVES	<i>Anas crecca</i>	Eurasian Teal; Green-winged Teal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC ●●●●● ●●●●●	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	Endangered in Italy. Wintering in the area
CHORDATA/ AVES	<i>Anas querquedula</i>	Garganey	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC ●●●●● ●●●●●	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	Vulnerable in Italy. The site is important for migration
CHORDATA/ AVES	<i>Anas strepera</i>	Gadwall	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC ●●●●● ●●●●●	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	Vulnerable in Italy. Wintering in the area
CHORDATA/ AVES	<i>Anthus campestris</i>	Tawny Pipit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC ●●●●● ●●●●●	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I.	






































Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/AVES	 <i>Aquila clanga</i>	Greater Spotted Eagle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EU Birds Directive Annex I. CITES Appendix II, CMS Appendix I and II	Wintering (rare) in the area.
CHORDATA/AVES	 <i>Ardea purpurea</i>	Purple Heron	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I. LC Italian red list	Nesting population of national importance link to extensive reedbeds / fenbeds
CHORDATA/AVES	 <i>Ardeola ralloides</i>	Squacco Heron	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I.	
CHORDATA/AVES	 <i>Asio flammeus</i>	Short-eared Owl	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I.	
CHORDATA/AVES	 <i>Aythya ferina</i>	Common Pochard	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	The area provides food resources for individuals moving along an important migratory route
CHORDATA/AVES	 <i>Aythya nyroca</i>	Ferruginous Duck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	
CHORDATA/AVES	 <i>Botaurus stellaris</i>	Eurasian Bittern	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	Breeding populations at risk in all Italy. Linked to extensive reedbeds/fenbeds
CHORDATA/AVES	 <i>Burhinus oedichnemus</i>	Eurasian thick-knee	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
CHORDATA/AVES	 <i>Charadrius alexandrinus</i>	Kentish Plover; Snowy Plover	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	Wintering (rare) in the area
CHORDATA/AVES	 <i>Chlidonias hybrida</i>	Whiskered tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
CHORDATA/AVES	 <i>Chlidonias niger</i>	Black tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	
CHORDATA/AVES	 <i>Ciconia ciconia</i>	White Stork	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Ciconia nigra</i>	Black Stork	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
CHORDATA/AVES	 <i>Circaetus gallicus</i>	Short-toed Snake Eagle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
CHORDATA/AVES	 <i>Circus aeruginosus</i>	Western Marsh Harrier	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	Wintering (rare) in the area
CHORDATA/AVES	 <i>Circus cyaneus</i>	Northern Harrier	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Circus pygargus</i>	Montagu's Harrier	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
CHORDATA/AVES	 <i>Clamator glandarius</i>	Great Spotted Cuckoo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	
CHORDATA/AVES	 <i>Columba oenas</i>	Stock Dove	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	The site is important for migration
CHORDATA/AVES	 <i>Coracias garrulus</i>	European Roller	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
CHORDATA/AVES	 <i>Dendrocopos minor</i>	Lesser Spotted Woodpecker	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	LC Italian red list	Nesting population of this species is isolated and linked to the rare mature and extensive broadleaf forest of the site.
CHORDATA/AVES	 <i>Falco biarmicus</i>	Lanner Falcon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/AVES	 <i>Falco peregrinus</i>	Peregrine Falcon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Falco vespertinus</i>	Red-footed Falcon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	VJ Italian red list	
CHORDATA/AVES	 <i>Gavia arctica</i>	Arctic Loon; Black-throated Loon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Gavia stellata</i>	Red-throated Diver; Red-throated Loon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Gelochelidon nilotica</i>	Gull-billed Tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list, EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Glareola pratincola</i>	Collared Pratincole	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	
CHORDATA/AVES	 <i>Grus grus</i>	Common Crane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	RE Italian red list	
CHORDATA/AVES	 <i>Haliaeetus albicilla</i>	White-tailed Eagle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Himantopus himantopus</i>	Black-winged Stilt	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Hydroprogne caspia</i>	Caspian Tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Ichthyaeetus audouinii</i>	Audouin's Gull	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I, EN Italian red list	
CHORDATA/AVES	 <i>Ichthyaeetus melanocephalus</i>	Mediterranean Gull	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I, VJ Italian red list	
CHORDATA/AVES	 <i>Ixobrychus minutus</i>	Little Bittern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VJ Italian red list	
CHORDATA/AVES	 <i>Lanius collurio</i>	Red-backed Shrike	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VJ Italian red list	
CHORDATA/AVES	 <i>Lanius minor</i>	Lesser Grey Shrike	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VJ Italian red list	
CHORDATA/AVES	 <i>Lanius senator</i>	Woodchat Shrike	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	
CHORDATA/AVES	 <i>Limosa lapponica</i>	Bar-tailed Godwit	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	EU Birds Directive Annex I and II. CMS Appendix II	
CHORDATA/AVES	 <i>Limosa limosa</i>	Black-tailed Godwit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	Stop-over site during migration.
CHORDATA/AVES	 <i>Luscinia svecica</i>	Bluethroat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Melanitta fusca</i>	Velvet Scoter; White-winged Scoter	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VJ 	<input type="checkbox"/>	<input type="checkbox"/>		Wintering and migrating site of national importance.
CHORDATA/AVES	 <i>Milvus migrans</i>	Black Kite	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I	
CHORDATA/AVES	 <i>Milvus milvus</i>	Red Kite	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	VJ Italian red list	Wintering and migration site.
CHORDATA/AVES	 <i>Numenius arquata</i>	Eurasian Curlew	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex II	Studies show a declines of populations

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/AVES	<i>Nycticorax nycticorax</i> 	Black-crowned Night Heron; Black-crowned Night-Heron	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list		
CHORDATA/AVES	<i>Pandion haliaetus</i> 	Osprey; Western Osprey	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I	Corsican, German and tuscan (new nesting pairs) individuals live in the site all the year. Mediterranean population near extinction in '70 now in increasing trend from Corsica (F).	
CHORDATA/AVES	<i>Panurus biarmicus</i> 	Bearded Reedling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list		
CHORDATA/AVES	<i>Pernis apivorus</i> 	European Honey Buzzard	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I		
CHORDATA/AVES	<i>Philomachus pugnax</i> 	Ruff	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I, II		
CHORDATA/AVES	<i>Phoenicopterus ruber</i> 	Greater Flamingo	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I		
CHORDATA/AVES	<i>Platalea leucorodia</i> 	Eurasian Spoonbill	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list		
CHORDATA/AVES	<i>Plegadis falcinellus</i> 	Glossy Ibis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list		
CHORDATA/AVES	<i>Pluvialis apricaria</i> 	European Golden Plover; European Golden-Plover	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex I, II, III		
CHORDATA/AVES	<i>Podiceps auritus</i> 	Horned Grebe	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU 	<input type="checkbox"/>	<input type="checkbox"/>		Migratory in the area	
CHORDATA/AVES	<i>Porzana parva</i> 	Little Crane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I		
CHORDATA/AVES	<i>Porzana porzana</i> 	Spotted Crane	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I		
CHORDATA/AVES	<i>Recurvirostra avosetta</i> 	Pied Avocet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I		
CHORDATA/AVES	<i>Sterna hirundo</i> 	Common Tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I		
CHORDATA/AVES	<i>Sterna albifrons</i> 	Little Tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list		
CHORDATA/AVES	<i>Sylvia undata</i> 	Dartford Warbler	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list		
CHORDATA/AVES	<i>Tadorna tadorna</i> 	Common Shelduck	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list		
CHORDATA/AVES	<i>Thalasseus sandvicensis</i> 	Sandwich Tern	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list		
CHORDATA/AVES	<i>Tringa glareola</i> 	Wood Sandpiper	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I		
CHORDATA/AVES	<i>Vanellus vanellus</i> 	Northern Lapwing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex II	The overall population trend is decreasing	
CHORDATA/AVES	<i>Xenus cinereus</i> 	Terek Sandpiper	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Birds Directive Annex I. Bern Convention Appendix II		

Fish, Mollusc and Crustacea

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/ ACTINOPTERYGII	 <i>Alosa fallax</i>	Twaite shad	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
MOLLUSCA/ GASTROPODA	 <i>Anisus vorticulus</i>	Lesser ramshorn snail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		EN for the Tuscany
CHORDATA/ ACTINOPTERYGII	 <i>Aphanius fasciatus</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex II. VU in the red list of fishes of fresh water	Very rare in Tuscany (see data base RENATO*).
CHORDATA/ ACTINOPTERYGII	 <i>Epinephelus fasciatus</i>	Dusky grouper	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN 	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA/ ACTINOPTERYGII	 <i>Epinephelus marginatus</i>	Dusky grouper; Dusky perch; Dusky sea perch	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN 	<input type="checkbox"/>	<input type="checkbox"/>		
MOLLUSCA/ BIVALVIA	 <i>Lithophaga lithophaga</i>	date mussel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV.	
CHORDATA/ CEPHALASPIDOMORPHI	 <i>Petromyzon marinus</i>	Lamprey eel	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	CR Italian red list	
MOLLUSCA/ BIVALVIA	 <i>Pinna nobilis</i>	noble pen shell	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV	
MOLLUSCA/ GASTROPODA	 <i>Vertigo angustior</i>	marsh snail	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				WU 	<input type="checkbox"/>	<input type="checkbox"/>		
Others																		
ARTHROPODA/ INSECTA	 <i>Agabus striolatus</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Central-northern european entity, at the border of its range this site is the only italian known population.
ARTHROPODA/ INSECTA	 <i>Bidessus pumilus</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Central-western mediterranean entity, few populations in Italy.
CHORDATA/ REPTILIA	 <i>Caretta caretta</i>	Loggerhead Turtle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				WU 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	
ARTHROPODA/ INSECTA	 <i>Cerambyx cerdo</i>	Cerambyx longicorn	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				WU 	<input type="checkbox"/>	<input type="checkbox"/>	LC Italian red list	
CHORDATA/ REPTILIA	 <i>Coronella girondica</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	Annex II Bern Convention	
CHORDATA/ REPTILIA	 <i>Emys orbicularis</i>	Eurasian pond turtle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list	
CHORDATA/ MAMMALIA	 <i>Eptesicus serotinus</i>	serotine; Common Serotine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV.	
CHORDATA/ MAMMALIA	 <i>Eptesicus serotinus</i>	Serotine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV	
ARTHROPODA/ INSECTA	 <i>Graphoderus austriacus</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Central-northern european and siberian species, rare and localized in Italy.
ARTHROPODA/ INSECTA	 <i>Gyrinus parvus</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Northern european and siberian species, extremely rare and localized in Italy
ARTHROPODA/ INSECTA	 <i>Hydroporus distinguendus</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Tyrenic species, very few populations in freshwater habitats.
ARTHROPODA/ ARACHNIDA	 <i>Hygrobatas excilis</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		European and north african species, very localized in italian marshlands.

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
ARTHROPODA/ INSECTA	 <i>Hygrobus decoratus</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		European and siberian species, in Italy is very localized in central Italy freshwater wetlands.
CHORDATA/ AMPHIBIA	 <i>Hyla arborea</i>	European tree frog	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV	
ARTHROPODA/ INSECTA	 <i>Hyphydrus anatolicus</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Eastern mediterranean species, is very localized in Italy. It lives in lentic water channels and swamps
CHORDATA/ MAMMALIA	 <i>Hystrix cristata</i>	Crested Porcupine	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV	
ARTHROPODA/ INSECTA	 <i>Keroplatus tipuloides</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Central-northern europe entity, at the border of its range this site has one of the few italian known populations.
CHORDATA/ REPTILIA	 <i>Lacerta bilineata</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	Appendix II of the Bern Convention, EC Habitat Directive Annex IV	
ARTHROPODA/ INSECTA	 <i>Lindenia tetraphylla</i>	Bladetail	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex II and IV	
ARTHROPODA/ INSECTA	 <i>Lucanus cervus</i>	Stag beetle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex II	
ARTHROPODA/ INSECTA	 <i>Lycaena dispar</i>	Large copper	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex II and IV	
CHORDATA/ MAMMALIA	 <i>Myotis blythii</i>	lesser mouse-eared bat; Lesser Mouse-eared Myotis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
CHORDATA/ MAMMALIA	 <i>Myotis daubentonii</i>	Daubenton's Myotis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV	
CHORDATA/ MAMMALIA	 <i>Myotis emarginatus</i>	Geoffroy's bat; Geoffroy's Myotis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex II	
CHORDATA/ MAMMALIA	 <i>Myotis myotis</i>	mouse-eared bat; Mouse-eared Myotis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
CHORDATA/ MAMMALIA	 <i>Myotis mystacinus</i>	whiskered myotis; whiskered bat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
CHORDATA/ REPTILIA	 <i>Natrix tessellata</i>	Tessellated water snake	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV	
CHORDATA/ MAMMALIA	 <i>Nyctalus leisleri</i>	Leisler's Noctule; lesser noctule	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV	
CHORDATA/ MAMMALIA	 <i>Nyctalus noctula</i>	noctule	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list	
CHORDATA/ MAMMALIA	 <i>Plecotus auritus</i>	brown big-eared bat; Brown Long-eared Bat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV	
CHORDATA/ AMPHIBIA	 <i>Pseudepidalea viridis</i>		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV	
ARTHROPODA/ INSECTA	 <i>Rhantus suturellus</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Central-northern european and north-american entity, at the border of its range. This site is the one of the few tuscan known populations. It lives in freshwater wetlands
CHORDATA/ MAMMALIA	 <i>Rhinolophus ferrumequinum</i>	greater horseshoe bat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	VU Italian red list. EU Habitats Directive Annex II.	

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA/ MAMMALIA	<i>Rhinolophus hipposideros</i>	lesser horseshoe bat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EN Italian red list. EU Habitats Directive Annex II.		
CHORDATA/ MAMMALIA	<i>Tadarida teniotis</i>	European Free-tailed Bat	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV		
CHORDATA/ AMPHIBIA	<i>Triturus carnifex</i>	Italian crested newt	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC 	<input type="checkbox"/>	<input type="checkbox"/>	EC Habitat Directive Annex IV		

1) Percentage of the total biogeographic population at the site

3.4 - Ecological communities whose presence relates to the international importance of the site

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
1410 - Mediterranean salt meadows (<i>Juncetalia maritimi</i>)	<input checked="" type="checkbox"/>	Various Mediterranean communities of the <i>Juncetalia maritimi</i> . The association of tall rush saltmarshes is dominated by <i>Juncus maritimus</i> and/or <i>J. acutus</i> is common in the area.	Annex I of the EU Habitats Directive
6420 - Mediterranean tall humid herb grasslands of the <i>Molinio-Holoschoenion</i>	<input checked="" type="checkbox"/>	Mediterranean humid grasslands of tall grasses and rushes, widespread in clay-sand soils, in particular in dunal systems.	Annex I of the EU Habitats Directive
3150 - Natural eutrophic lakes with Magnopotamion or Hydrocharition-type vegetation	<input checked="" type="checkbox"/>	Lakes and ponds with mostly dirty grey to blue-green, more or less turbid, waters, particularly rich in dissolved bases (pH usually > 7), with free-floating surface communities of the Hydrocharitionor, in deep, open waters, with vegetation of Magnopotamion	Annex I of the EU Habitats Directive
7210* - Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i>	<input checked="" type="checkbox"/>	<i>Cladium mariscus</i> beds of the emergent-plant zones of lakes, interdune wetlands often closely <i>Phragmition</i> species.	Annex I of the EU Habitats Directive
7140 - Transition mires and quaking bogs	<input checked="" type="checkbox"/>	Peat-forming communities developed at the surface of oligotrophic to mesotrophic waters, with characteristics intermediate between soligenous and ombrogenous types	Annex I of the EU Habitats Directive
3170* - Mediterranean temporary ponds	<input checked="" type="checkbox"/>	Very shallow temporary ponds (a few centimetres deep) which exist only in winter or late spring, with a flora mainly composed of Mediterranean therophytic and geophytic species	Annex I of the EU Habitats Directive
1510 - Mediterranean salt steppes (<i>Limonietalia</i>)	<input checked="" type="checkbox"/>	Associations rich in perennial, rosette-forming (<i>Limonium</i> spp.), occupying, along central and south site coasts, soils temporarily permeated (not inundated) by saline water and subject to extreme summer drying, with formation of salt efflorescence.	Annex I of the EU Habitats Directive

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Reedbeds	<input checked="" type="checkbox"/>	Elophyte dominant landscape (Phragmites australis) around Massaciuccoli lake, interdune wetlands, lowland meadows and along channels.	Their extension, from few meter square to 700 ha (together with Cladium habitat), of tens of reedbeds make this wetland archipelago an ecological rare ecosystem in Mediterranean biographic zone.
1110 - Sandbanks which are slightly covered by sea water all the time	<input type="checkbox"/>	Sandbanks permanently submerged by waters whose level rarely exceeds 20 m. They may form an underwater prolongation of sandy coasts.	Annex I of the EU Habitats Directive
1130 - Estuaries	<input type="checkbox"/>	Downstream part of a river valley, subject to the tide and extending from the limit of brackish waters	Annex I of the EU Habitats Directive
1210 - Annual vegetation of drift lines	<input checked="" type="checkbox"/>	Communities of annuals or representatives of annuals and perennials, occupying accumulations of drift material rich in nitrogenous organic matter (Cakiletea maritima)	Annex I of the EU Habitats Directive
91E0* - Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	<input checked="" type="checkbox"/>	Alluvial forests, riparian and swamp Alnus spp., Fraxinus excelsior and Salix spp. in mountain and hill traits	Annex I of the EU Habitats Directive
92A0 - Salix alba and Populus alba galleries	<input checked="" type="checkbox"/>	Riparian forests of the Mediterranean basin dominated by Salix alba, Salix fragilis or their relatives	Annex I of the EU Habitats Directive
1150* - Coastal lagoons	<input checked="" type="checkbox"/>	These lagoons are bodies of shallow coastal salt water, of varying salinity and water volume, wholly or partially separated from the sea by sand banks. Salinity may vary from brackish water to hypersalinity depending on rain, evaporation and temperature	Annex I of the EU Habitats Directive
3140 - Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	<input checked="" type="checkbox"/>	Lakes and pools with waters fairly rich in dissolved bases (pH often 6-7) or with mostly blue to greenish, very clear, waters poor (to moderate) in nutrients, base-rich. The bottom of these unpolluted water bodies are covered with charophyte, Chara spp.	Annex I of the EU Habitats Directive
91F0 - Riparian mixed forests of Quercus robur, Ulmus laevis and Ulmus minor, Fraxinus excelsior or Fraxinus angustifolia, along the great rivers (Ulmion minoris)	<input checked="" type="checkbox"/>	Forests of hardwood trees, liable to flooding following the regular rising of the water table. These forests develop on recent alluvial deposits. The soil may be well drained between inundations or remain wet.	Annex I of the EU Habitats Directive

Optional text box to provide further information

In the habitat 1510, characteristic syntaxa are Limonietalia, Arthrocnemetalia, Thero-Salicornietalia and Saginetalia maritima.
 In the habitat 91F0, following the hydric regime, the woody dominated species belong to Fraxinus, Ulmus or Quercus genus. The undergrowth is well developed if not overgrazed.
 The reedbeds habitat is fundamental for wintering, breeding and stop-over in the site along birds route migration, before or after Appenine-Alps system.

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

The site is a large ecological and diversified wetland plain. It is a mixed open-closed (forest) ecosystems, where soils arise from a continuous and dynamic sedimentation/erosion balance increased by winds and hydrological movements of the system Arno-Serchio rivers / Ligurian sea. Large areas are flooded by autumn-winter-spring rains and the vegetation is rich of species and formations. Wetlands of this size are extremely rare in coastal plains of the Mediterranean area.

The main ecological systems are represented by the two final parts of Arno and Serchio rivers, with the wetland of the old river Arno delta in the inland (named "Lame di Fuori"), by the wetland of the old back-dune with the Lake of Massaciuccoli, which is surrounded by the fen beds (*Cladium* sp.) mixed with reed beds (*Phragmites* sp.) and *Sphagnum* spp. peatland that floats on root mats islands, and by an extensive hosted paleo-dune system that alternates with dry forests (dune top) and flooded forests (interdunal lowlands), up to the newly formed dunes and to the beaches.

The occurrence of relict species such as *Sphagnum* spp. (Quaternary), *Osmunda regalis*, *Hibiscus palustris* (*Hibiscus moscheutos* *moscheutos*), and *Drosera rotundifolia*, are linked to the past climatic events and to the richness of the current microclimate. In the wet plain forests there are big trees of *Quercus robur*, *Fraxinus angustifolia*, *Quercus ilex* etc. These formations are witnesses of ancient wet forests that dominated the coastal plain until the XVIII century (before the great land reclamation and the planting of pines). The open spaces between the wet forests are strategic for birds and turtles (*Emys orbicularis*).

Massaciuccoli and Lame di Fuori swamps are a very important site for migratory routes to / from Africa and in winter these areas are important crossroads for a large number of birds from all over Europe, Siberia and Africa (ducks, birds of prey, herons, flamingos, tadome, curlews, avocets and other waders).

In the south part of the site, "Bosco della Cornacchiaia" and the more flooded area "Bosco dell'Ulivo" are dominated by green oak trees typical of the Mediterranean area (with monumental specimens) and other sclerophyllous (*Phyllirea latifolia*, *Myrtus communis*), but also by *Quercus suber* and huge specimens of *Pinus pinea* residues of old plantations.

The undergrowth is dense: there are *Crataegus monogyna*, *Prunus spinosa*, etc., but also the very rare *Periploca graeca*, a Tertiary relict. Along these woods there are brackish wetlands with typical Mediterranean salt marshes vegetation (*Salicornia* sp. and *Limonium* sp.): the most north "Maremma" in Italy.

4.2 - What wetland type(s) are in the site?

Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
A: Permanent shallow marine waters		2		Representative
E: Sand, shingle or pebble shores		4		Representative
F: Estuarine waters		4		Representative
J: Coastal brackish / saline lagoons		0		Representative
K: Coastal freshwater lagoons		4		Rare

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
Fresh water > Flowing water >> M: Permanent rivers/ streams/ creeks		4		Representative
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		3		Representative
Saline, brackish or alkaline water > Marshes & pools >> Sp: Permanent saline/ brackish/ alkaline marshes/ pools		0		Rare
Saline, brackish or alkaline water > Marshes & pools >> Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools		4		Rare
Fresh water > Lakes and pools >> Tp: Permanent freshwater marshes/ pools		4		Rare
Fresh water > Marshes on inorganic soils >> Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils		0		Rare
Fresh water > Marshes on inorganic soils >> W: Shrub-dominated wetlands		3		Representative
Fresh water > Marshes on inorganic soils >> Xf: Freshwater, tree-dominated wetlands		1		Rare

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
1: Aquaculture ponds		0		
2: Ponds		4		
7: Excavations		0		
9: Canals and drainage channels or ditches		3		

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
2110 - Embryonic shifting dunes	
2120 - Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes)	
2210 - <i>Crucianellion maritimae</i> fixed beach dunes	
2230 - <i>Malcolmietalia</i> dune grasslands	
2240 - <i>Brachypodietalia</i> dune grasslands with annuals	
2250 - Coastal dunes with <i>Juniperus</i> spp.	
2260 - <i>Cisto-Lavanduletalia</i> dune sclerophyllous scrubs	
2270 - Wooded dunes with <i>Pinus pinea</i> and/or <i>Pinus pinaster</i>	
9340 - <i>Quercus ilex</i> and <i>Quercus rotundifolia</i> forests	

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
<i>Cirsium palustre</i>		rare
<i>Eleocharis uniglumis</i>		rare
<i>Polygonatum odoratum</i>		rare
<i>Salvinia natans</i>		rare

Invasive alien plant species

Scientific name	Common name	Impacts
<i>Ailanthus altissima</i>		Actually (minor impacts)
<i>Amorpha fruticosa</i>		Actually (major impacts)
<i>Arundo donax</i>		Actually (minor impacts)
<i>Baccharis halimifolia</i>		Potentially
<i>Myriophyllum aquaticum</i>		Actually (major impacts)
<i>Paspalum botteri</i>		Actually (minor impacts)
<i>Robinia pseudacacia</i>		Actually (minor impacts)
<i>Yucca gloriosa</i>		Actually (minor impacts)

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATA/AVES	Anas acuta	Northern Pintail				EC Birds Directive Annex II and III.
CHORDATA/AVES	Anas penelope	Eurasian Wigeon				EC Birds Directive Annex II and III.
CHORDATA/AVES	Anas platyrhynchos	Mallard				DD for Italian populations. EC Birds Directive Annex II and III.
CHORDATA/AVES	Anser anser	Greylag Goose				EC Birds Directive Annex II and III.
CHORDATA/AVES	Lymnocyptes minimus	Jack Snipe				EC Birds Directive Annex II and III.
CHORDATA/AVES	Melanitta nigra	Common scoter				EC Birds Directive Annex II and III.
CHORDATA/AVES	Numenius phaeopus	Whimbrel				EC Birds Directive Annex II.
CHORDATA/MAMMALIA	Martes martes	European Pine Marten				EC Habitat Directive Annex V.
CHORDATA/MAMMALIA	Mustela putorius	Western Polecat				EC Habitat Directive Annex V.

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts
CHORDATA/AVES	Amandava amandava		No impacts
CHORDATA/AVES	Cygnus olor		No impacts
CHORDATA/ACTINOPTERYGII	Ameiurus melas		No impacts
CHORDATA/ACTINOPTERYGII	Carassius auratus		Actually (major impacts)
CHORDATA/ACTINOPTERYGII	Cyprinus carpio		Actually (major impacts)
CHORDATA/ACTINOPTERYGII	Gambusia holbrooki		Actually (major impacts)
CHORDATA/ACTINOPTERYGII	Micropterus floridanus		Actually (major impacts)
ARTHROPODA/MALACOSTRACA	Procambarus clarkii		Actually (major impacts)
CHORDATA/ACTINOPTERYGII	Pseudorasbora parva		Actually (major impacts)
CHORDATA/ACTINOPTERYGII	Scardinius erythrophthalmus		Actually (major impacts)
CHORDATA/ACTINOPTERYGII	Silurus glanis		Potentially
MOLLUSCA/BIVALVA	Sinanodonta woodiana		Potentially
CHORDATA/REPTILIA	Graptemys pulchra		Actually (minor impacts)
ARTHROPODA/INSECTA	Ips sexdentatus		Potentially
ARTHROPODA/INSECTA	Leptoglossus occidentalis		Actually (major impacts)
ARTHROPODA/INSECTA	Matsucoccus feytaudi		Actually (major impacts)
CHORDATA/MAMMALIA	Myocastor coypus coypus		Actually (major impacts)
CHORDATA/MAMMALIA	Rattus norvegicus		Actually (major impacts)
ARTHROPODA/INSECTA	Tomicus pinifer		Potentially
CHORDATA/REPTILIA	Trachemys scripta scripta		Actually (minor impacts)

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Csb: Mediterranean (Mid with dry, warm summer)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- Entire river basin
- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin
- Not in river basin
- Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

Tuscany coast in Ligurian Sea, lower part of Arno and Serchio rivers.

4.4.3 - Soil

- Mineral
- Organic
- No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes No

4.4.4 - Water regime

Water permanence

Presence?
Usually permanent water present
Usually seasonal, ephemeral or intermittent water present

Source of water that maintains character of the site

Presence?	Predominant water source
Water inputs from rainfall	<input checked="" type="checkbox"/>
Water inputs from groundwater	<input checked="" type="checkbox"/>
Marine water	<input checked="" type="checkbox"/>

Water destination

Presence?
Feeds groundwater
Marine

Stability of water regime

Presence?
Water levels fluctuating (including tidal)

4.4.5 - Sediment regime

- Significant erosion of sediments occurs on the site
- Significant accretion or deposition of sediments occurs on the site
- Significant transportation of sediments occurs on or through the site
- Sediment regime is highly variable, either seasonally or inter-annually
- Sediment regime unknown

Please provide further information on sediment (optional):

There is a transport of sediments in the Arno and Serchio rivers and along the sea coast by the longshore drift. The budget is negative in south part and positive in northern site coast.
The inland wetlands have also the sediments transport through the flow from surrounding lands, through soil or reclamation channels.

4.4.6 - Water pH

- Acid (pH<5.5)
- Circumneutral (pH: 5.5-7.4)
- Alkaline (pH>7.4)
- Unknown

4.4.7 - Water salinity

- Fresh (<0.5 g/l)
- Mxohaline (brackish)/Mxosaline (0.5-30 g/l)
- Euhaline/Eusaline (30-40 g/l)
- Hyperhaline/Hypersaline (>40 g/l)

Unknown

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic

Mesotrophic

Oligotrophic

Dystrophic

Unknown

Please provide further information on dissolved or suspended nutrients (optional):

Massaciucoli Lake water flows through over-nourished agricultural land where fertilizers and oxidation of organic matter in agricultural peat soils carry high levels of the dissolved or suspended nutrients in the water. Also Arno river, and part of reclamation channels, have high nutrient level. To the other side Serchio river and ombrotrophic wetlands (thousands of hectares) still have low nutrient level. This is fundamental for biodiversity conservation purposes of the site.

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the site itself: i) broadly similar ii) significantly different

Surrounding area has greater urbanisation or development

Surrounding area has higher human population density

Surrounding area has more intensive agricultural use

Surrounding area has significantly different land cover or habitat types

Please describe other ways in which the surrounding area is different:

The site is surrounded to the west by coastal villages: Marina di Pisa, Tirrenia and Calambrone. There are also large agricultural horticultural areas, cereals, sunflowers and other traditional crops.
 Big cities outside the site are just a few kilometers from it: to the North, there is Viareggio (63,447 inhabitants), East, Lucca (89,204 inhabitants) and Pisa (88,627 inhabitants) and South Livorno (160,512 inhabitants) - Census 2013.
 There are other small cities surrounding the Ramsar site: Massarosa (22,541 inhabitants), Vecchiano (12,302 inhabitants), and San Giuliano Terme (31,315 inhabitants).

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium
Fresh water	Drinking water for humans and/or livestock	Low
Fresh water	Water for irrigated agriculture	High
Wetland non-food products	Timber	High
Wetland non-food products	Fuel wood/fibre	High
Wetland non-food products	Livestock fodder	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
Maintenance of hydrological regimes	Storage and delivery of water as part of water supply systems for agriculture and industry	High
Erosion protection	Soil, sediment and nutrient retention	High
Pollution control and detoxification	Water purification/waste treatment or dilution	High
Climate regulation	Local climate regulation/buffering of change	Medium
Biological control of pests and disease	Support of predators of agricultural pests (e.g., birds feeding on locusts)	Medium
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	High
Recreation and tourism	Picnics, outings, touring	High
Recreation and tourism	Nature observation and nature-based tourism	Medium
Spiritual and inspirational	Inspiration	High
Spiritual and inspirational	Contemporary cultural significance, including for arts and creative inspiration, and including existence values	Low
Spiritual and inspirational	Aesthetic and sense of place values	High
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High
Scientific and educational	Educational activities and opportunities	Medium
Scientific and educational	Long-term monitoring site	High
Scientific and educational	Major scientific study site	High
Scientific and educational	Type location for a taxon	High

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Sediment retention	High
Soil formation	Accumulation of organic matter	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High
Nutrient cycling	Carbon storage/sequestration	Medium
Pollination	Support for pollinators	Medium

Within the site: 10000

Outside the site: 1000000

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes No Unknown

4.5.2 - Social and cultural values

i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland

Description if applicable

The great geological, natural and historical importance of the site encouraged the creation of numerous associations of young environmental guides and cultural associations for the promotion of the area that organize excursions and that have created a network of well-marked trails. The Regional Park "Migliarino San Rossore Massaciuccoli" has been engaging for years with farmers and agronomists of the University of Pisa for the promotion of local products, the respect of the natural elements of the plains (wetlands, hedgerows, ditches) and their ecological connection function.

ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland

Description if applicable

The diversity of landscape is also the result of a long history of human activities: reclamation of flood plain for agriculture and urbanization, system of ditches, pumping station, and hedges; cultivated forests (as the pine forests of Pinus pinea, the "Italic" pine, typical in coast landscapes since XIX century A.D.) and, then, the great estates with The use of earth products. This story has contributed to shape and preserve through the centuries, fen and reed beds, salt marshes and old-growth broadleaf mixed forests in areas that flood for 4-6 months each year.

iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples

iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

Description if applicable

After year 1000 the area experienced a boom of ecclesiastical and religious population thanks to the emergence of several monasteries, dedicated to Santa Maddalena, San Bartolo and San Luxorio. The latter was a Christian soldier who was martyred under Diocletian in Sardinia, in the early fourth century. In year 1080 his remains were moved to the church of the monastery that once stood at the current San Rossore Estate. Since that time the area was called San Luxorio, transformed over time in "San Rossore". It is currently planning the archaeological excavation for San Luxorio monastery remains. In the 10th century, monasteries performed an important economic role. Indeed, they were real production centers capable to nourish not only the monks, but a great deal of needy too. Therefore, the monasteries did not lack the functions related to agricultural activities: their fields and their farms paid well so much that a small part could be destined for commerce and slowly became important farms. This situation led to a territory government that, in wetland it is implemented the effect by the central institution due to the peculiarities of its environment. The activities of the monastery are joined by other areas connected to the wetlands: fishing, gathering of vegetable fibers, hunting. Furthermore, the woods' government, both the wetlands' quercines and sweet wood plantations, provided acorn for the lumber and pigs breeding.

4.6 - Ecological processes

<no data available>

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
Provincial/region/state government	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Local authority, municipality, (sub)district, etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Commercial (company)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Regional park authority "Migliarino San Rossore Massaciucoli"

Provide the name and title of the person or people with responsibility for the wetland:

Dr. Andrea Gennai - Director of Regional park authority

Postal address: Director of Regional park authority
Tenuta di San Rossore, Loc. Cascine Vecchie
56122 Pisa (PI) ITALY

E-mail address: direttore@sanrossore.toscana.it

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Tourism and recreation areas	High impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Drainage	High impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water abstraction	High impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Salinisation	High impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Canalisation and river regulation	High impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Annual and perennial non-timber crops	High impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Roads and railroads	High impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Utility and service lines (e.g., pipelines)	High impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Shipping lanes	High impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aircraft flight paths	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Hunting and collecting terrestrial animals	Medium impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Logging and wood harvesting	Medium impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Fishing and harvesting aquatic resources	Medium impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	High impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
(Para)military activities	Medium impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fire and fire suppression	Medium impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dams and water management/use	Medium impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien species	High impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Problematic native species	Medium impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Household sewage, urban waste water	High impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Agricultural and forestry effluents	High impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Garbage and solid waste	Medium impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Excess heat, sound, light	High impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Air-borne pollutants	High impact	High impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Storms and flooding	Low impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Please describe any other threats (optional):

Fresh water environments have suffered the most severe changes in the last decades and are still continuing to decline due to the erosion of the coasts and to water supplies for agricultural and urban/industrial uses, processes that favour the flow of salted water in the inland. Aquatic environments are also subjected to eutrophication processes due to the organic oxidation of organic matter in agricultural peatlands and the use of fertilizers, and also to the inefficient treatment of urban waste waters.

The fresh water environments changes are here linked also to the strong subsidence of agricultural lands external to the site. This brought e.g. the Lake of Massaciuccoli to be a wetland raised (2-5 meters) above the surrounding lands. Thus the fauna and the hydrophytes habitats linked to freshwater are increasingly threatened.

5.2.2 - Legal conservation status

Global legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
UNESCO Biosphere Reserve	Selve costiere di Toscana	http://www.unesco.org/mabdb/br/br_rdir/directory/biores.asp?code=ITA+08&mode=all	

Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	Dune litoranee di Torre del Lago IT5170001	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IT5170001	whole
EU Natura 2000	Lago e Palude di Massaciuccoli IT5120017	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IT5120017	whole
EU Natura 2000	Macchia Lucchese IT5120016	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IT5120016	whole
EU Natura 2000	Selva Pisana IT5170002	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=IT5170002	whole
Other international designation	Parco naturale Migliarino San Rossore Massaciuccoli	http://www.coe.int/en/web/bern-convention/italy	

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National decree for designating Ramsar site (DM21.10.2013)	Lago e Padule di Massaciuccoli	http://www.minambiente.it/sites/default/files/archivio/normativa/ramsar/tos_dm_21_10_2013_Massaciuccoli.pdf	whole
Protected Area	Parco regionale Migliarino San Rossore Massaciuccoli	http://www.parcosanrossore.org/	partly

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Lake Massaciuccoli	http://datazone.birdlife.org/site/factsheet/lake-massaciuccoli-i-ba-italy	partly
Important Plant Area	Lago di Massaciuccoli e Selva Pisana – TCS 4		partly

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- Ib Wilderness Area: protected area managed mainly for wilderness protection
- II National Park: protected area managed mainly for ecosystem protection and recreation
- III Natural Monument: protected area managed mainly for conservation of specific natural features
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Catchment management initiatives/controls	Partially implemented
Improvement of water quality	Partially implemented
Habitat manipulation/enhancement	Partially implemented
Hydrology management/restoration	Partially implemented
Re-vegetation	Partially implemented
Faunal corridors/passage	Partially implemented

Species

Measures	Status
Threatened/rare species management programmes	Partially implemented
Reintroductions	Partially implemented
Control of invasive alien plants	Partially implemented
Control of invasive alien animals	Partially implemented

Human Activities

Measures	Status
Management of water abstraction/takes	Partially implemented
Regulation/management of wastes	Partially implemented
Livestock management/exclusion (excluding fisheries)	Implemented
Harvest controls/poaching enforcement	Partially implemented
Regulation/management of recreational activities	Implemented
Communication, education, and participation and awareness activities	Implemented
Research	Implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes No

URL of site-related webpage (if relevant):

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No, but restoration is needed

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Water regime monitoring	Implemented
Water quality	Implemented
Animal species (please specify)	Implemented
Birds	Implemented

Monitoring programmes are taken on specific projects: ungulate management, waterbirds, dunal and wetland restoration, reintroduction activities. In Deliberation 1223/2015 the Tuscany region has planned the needs of monitoring Natura 2000 sites for their management.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Blasi C. et al. (eds.) 2010. Italian interpretation Manual of the habitats (92/43/EEC Directive) su <http://vnr.unipg.it/habitat/>
Blasi C. et al. (eds.) 2010. Le aree importanti per le piante nelle regioni d'Italia: il presente e il futuro della conservazione del nostro patrimonio botanico. Ministero dell'Ambiente, Roma.
Perfetti A. (ed.) 2010. La conservazione degli ecosistemi costieri della toscana settentrionale: 2005-2009. Ente parco regionale MSRM, Pisa. (En/It version).
Petraglia A. 2013. Analisi della vegetazione delle principali zone umide del parco di Migliarino San Rossore Massaciuccoli. Ente parco regionale MSRM, Pisa (Not published technical report).
Puglisi L. and E. Arcamone (eds.) 2010. Atlante degli uccelli nidificanti e svernanti nel Parco Naturale regionale Migliarino San Rossore Massaciuccoli. Ente parco regionale MSRM, Pisa (Not published technical report).
RENATO (Naturalistic Tuscany Repertory) <http://www.regione.toscana.it/-/repertorio-naturalistico-toscana-re-na-to> Sforzi A., L. Bartolozzi (eds.).
2001. Libro rosso degli insetti della Toscana. ARSIA-Regione Toscana.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

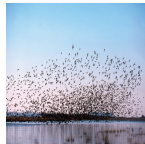
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6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Lame di Fuori Natural Reserve – Massaciuccoli Ramsar Site ([Archive-Park-MSRM/LGorreni, 01-01-2008](#))



Wintering ducks – Massaciuccoli Ramsar Site ([Archive-Park-MSRM/RA.MI., 01-01-2005](#))



Massaciuccoli lake and marshland – Massaciuccoli Ramsar Site ([Archive-Park-MSRM/LGorreni, 01-01-2009](#))



Flooded forest – Massaciuccoli Ramsar Site ([Archive-Park-MSRM/LGorreni, 01-03-2011](#))

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation