



Italy

Foce del Rio Posada

Offline RIS Word form

The purpose of this form is to help in collecting data on a Ramsar Site for the completion of an online Ramsar Information Sheet (RIS) at <https://rsis.ramsar.org>. It can be circulated between the National Focal Point, RIS compilers and other national data collectors. However, it is not accepted by the Ramsar Secretariat for submission of a Site update or new Site designation. The data collected through this form must be transferred to the online form by the National Focal Point or an authorized online RIS compiler.

All fields marked with an asterisk (*) are required.

For more information on how to use this form, please refer to the document [How to use the offline RIS Word form.](#)

Summary

1.1 Summary description

Please provide a short descriptive text summarising the key characteristics and internationally important aspects of the site. You may prefer to complete the four following sections before returning to draft this summary.

Summary (This field is limited to 2500 characters)

The site "Foce del Rio Posada", located within the boundaries of the Tepilora Regional Natural Park, includes the final stretch of the river *Rio Posada* including the alluvial plain formed by the Rio Posada itself and other minor water streams, as well as the sandy coastline and the stretch of sea included within the 5 m isobath.

It is a complex wetland system which extends over an area of about 841 ha and is characterised by a high degree of naturalness as it is not subject to significant hydraulic regulation interventions. It therefore represents an almost unique example in Sardinia, and now also rare in the Mediterranean zoogeographical region, of a practically intact mouth system of a typical torrential watercourse (criterion 1).

The site also presents a considerable environmental variety since the river stretches which flow into it are sinuous and create a network of waterways, as well as the formation in the alluvial plain of a system of back dune ponds and small internal ponds, partly temporary and partly sub-permanent. This environmental variety is reflected in a biocenosis rather rich in animal and plant taxa representative of the bio-geographical context (criterion 3).

Despite the contiguity of the site with the inhabited centre of Posada the level of anthropization is relatively low and urbanization is limited to sporadic housing units. Human activities in the alluvial plain are limited to horticultural crops and orchards in the marginal areas, and to sheep and cattle breeding in the internal areas, and moreover along the coastal strip there is a tourist use of the seaside between June and September with greater intensity in July-August.

Data & location

2.1 Formal data

2.1.1 Name and address of the compiler of this RIS

Name* (This field is mandatory)

Paolo Angelini

Institution/agency* (This field is mandatory)

Parco naturale regionale di Tepilora

Postal address (This field is limited to 254 characters)

Via Attilio Deffenu 69,08021 Bitti (NU)

E-mail* (The online RIS only accepts valid e-mail addresses, e.g. example@mail.com) (This field is mandatory)

info@parcotepilora.it, parcotepilora@pec.it

Phone* (The online RIS only accepts valid phone numbers, e.g. +1 41 123 45 67) (This field is mandatory)

+39 0784 1826080

Fax (The online RIS only accepts valid phone numbers, e.g. +1 41 123 45 67)

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

From year (The online RIS only accepts numeric values)

1993

To year (The online RIS only accepts numeric values)

2020

2.1.3 Name of the Ramsar Site

Official name (in English, French or Spanish)* (This field is mandatory)

Foce del Rio Posada

Unofficial name (optional)

2.2 Site location

2.2.1 Defining the Site boundaries

The site boundaries must be clearly delineated on both: a) a GIS shapefile and b) a digital map/image:
-> To define the site boundaries please complete field 2.2.1 a1), 2.2.1 a2) and 2.2.1 b) via the online form.
Boundaries description (optional) (This field is limited to 2500 characters)

The site includes the wetland system of the final stretch of the Rio Posada including part of the alluvial plain, the small temporary ponds and the ponds behind the dunes, which are functionally connected to the Rio Posada itself, and the stretch of sea in front of it. The boundaries of the site can be identified starting from the north-eastern end, from the municipal road that connects Punta Orvile (which almost coincides with the north-eastern limit of the proposed boundary) with the SS125 coasting Monte Orvili. Then the boundary of the area continues along the SS125 until the intersection with the paved road (that passes along the orographic left of the Rio Posada) until the narrowing of the riverbed near the village of Torpé. From here the boundary passes on the other side of the river and, following the embankment on the right bank, crosses the SS125. From here the boundary includes the Rio Santa Caterina along the road that runs alongside the eastern part of the village of Posada as far as its south-eastern end. From here the boundary follows the secondary road system bypassing the purifier and following a route that rejoins the provincial road to San Giovanni-Santa Lucia and then, through the local road system, reaches the Sos Palònes fishpond, which is the mouth of the Longo Pond. The east boundary of the site follows the boundary between halophilous and psammophilous vegetation along the coastal sandy cordon until it includes the mouth of the Rio Posada.

2.2.2 General location

a) In which large administrative region does the site lie?

Sardinia (Italy)

b) What is the nearest town or population centre?

The town of Posada (3,041 inhabitants), Nuoro Province, Northeast Sardinia

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

c) Is the site part of a formal transboundary designation with another Contracting Party?

Yes / No

d) Transboundary Ramsar Site name:

2.2.4 Area of the Site

If you have not established an official area by other means, you can copy the area calculated from the GIS boundaries into the 'official area' box.

Official area, in hectares (ha): (The online RIS only accepts numeric values)

736 ha

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

736 ha

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2.2.5 Biogeography

Please provide the biogeographic region(s) encompassing the site and the biogeographic regionalization scheme applied:

Biogeographic regions

Regionalisation scheme(s) ¹	Biogeographic region
Council Directive 92/43/EEC	Mediterranean
EU biogeographic regionalization	

Other biogeographic regionalisation scheme (This field is limited to 2500 characters)

¹ Marine Ecoregions of the World (MEOW) | Udvardy's Biogeographical Provinces | Bailey's Ecoregions | WWF Terrestrial Ecoregions | EU biogeographic regionalization | Freshwater Ecoregions of the World (FEOW) | Other scheme (provide name below)

Why is the Site important?

3.1 Ramsar Criteria and their justification

Tick the box against each criterion applied to the designation of the Ramsar Site. All criteria which apply should be ticked. Please explain why you selected a criterion by filling in the relevant fields on this page, on the three other pages of this section 'Criteria & justification' and on the 'Wetland types' page of the section 'What is the site like?'.

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

To justify this Criterion, please select at least one wetland type as representative, rare or unique in the section 'What is the site like?' > 'Wetland types' and provide further details in at least one of the three boxes below.

Hydrological services provided (This field is limited to 3000 characters)

From a hydraulic point of view, the mouth of the Rio Posada plays an important role in the natural drainage towards the sea of the waters of a 680 km² catchment area, which, due to its considerable extension and strong acclivity, is subject to occasional, sometimes very intense floods. During such flooding events, the entire plain of the mouth system is subject to flooding and this contributes to disperse the water over vast areas, mitigating the impact upstream of the floods. The periodic accumulation of alluvial deposits in the emerged areas determines a particular fertility of the soils which, in fact, in the peripheral areas and closer to Posada are rich in horticultural crops and orchards, in particular citrus fruits, contribute to the diversification of the agricultural landscape of the plain and consequently of the bird population which gravitates there during the year. The pasture areas, which make up the majority of the land that has emerged, occupy the areas that are less exposed to the contribution of sea water and are characterised partly by perennial pasture areas and partly by semi-natural grasslands that provide feeding habitats for various species of aquatic birds, in particular Ducks and Lapwings during wintering and Cattle Egrets following livestock throughout the year, but also wintering and/or nesting habitats for various species of passerines, some of which are of conservation interest. The continuous, although variable, contribution of inland water, with its organic and marine debris, contributes to the formation of complex and diversified aquatic biocenoses. In particular, the mouth to the sea of the Longo Pond allows the passage of various fish species of commercial value that are exploited both by humans (there is a fishing cooperative that is concessionary of part of the wetlands) and by aquatic birds that alternate during the year.

The catchment area consists of two main sub-basins, that of the Rio Posada and that of the Rio Mannu in the municipality of Bitti which flows into the latter upstream of the artificial barrier of Maccheronis. The mouth system maintains a high degree of naturalness and can therefore be considered a very rare and almost unique example of a river mouth system with a high degree of naturalness in Sardinia where most of the watercourses have undergone heavy interventions of water regulation all the way up to the mouth.

The site is fed mainly by the Rio Posada which, at about 1.8 km from the mouth at the sea, branches off into two sections which in turn give rise to further ramifications extending along the sandy cordon south of the mouth to the sea near Punta Orvili. Further tributaries of the mouth system are the Rio di San Simone which intercepting the Rio Posada downstream of the first forking and the Rio Santa Caterina flowing almost parallel to the Rio Posada, south of the latter, which contributes to the system of channels parallel to the coastal cordon and which provides the main continental water supply of the Longo Pond. The latter, also fed by the Paule Pedru reclamation canal, has a permanently perpendicular mouth that guarantees a continuous supply of salt water inside the pond. Finally, the alluvial plain is important, partly used for cultivation (citrus groves and vegetable gardens) and partly for grazing, with large halophyte meadows in the coastal portions and some small ponds in the more inland part that are often flooded even in

the summer months as they are fed by the surface water table.

Other ecosystem services provided (This field is limited to 3000 characters)

Other reasons (This field is limited to 3000 characters)

[X] Criterion 2 : Rare species and threatened ecological communities

To justify this Criterion, please give details below on:

- relevant plant species in the section Criteria & justification> Plant species (3.2)
- relevant animal species in the section Criteria & justification> Animal species (3.3)
- relevant ecological communities in the section Criteria & justification> Ecological communities (3.4)

[X] Criterion 3 : Biological diversity

To justify this Criterion, please give details in the box below. If you want to name any specific species, please give details on:

- relevant plant species in the section Criteria & justification> Plant species (3.2)
- relevant animal species in the section Criteria & justification> Animal species (3.3)

Justification (This field is limited to 3000 characters)

The site receives permanent contributions, even if subject to important seasonal and inter-annual variations, of fresh water from the vast catchment area and is also characterised by a continuous supply of sea water, also subject to seasonal variations, near the mouths. This contribution of continental and marine waters means that within a relatively small area there is considerable ecological diversity. There are, in fact, large extensions of reeds at *Phragmites australis* and valuable riparian formations at *Tamarix* and *Salix* along the banks of Rio Posada and Rio Santa Caterina, while in the terminal stretches, closer to the sandy cordon, and in the Longo Pond, halophytic saltwater formations prevail (*Sarcocornia spp.*) Suaeda (*Suaeda sp.*) and Sea Purslane (*Halimione portulacoides*); in the areas subject to grazing there are grasslands with grasses and annual plants, partly subject to temporary flooding, which take the form of Mediterranean steppe habitats. In the small internal ponds there are riparian formations at *Tamarix sp.* and *Typha angustifolia*.

This environmental diversity is reflected in a remarkable diversity of animal species, especially birds, but also amphibians and reptiles among which the presence of *Emys orbicularis* along the river rods of Rio Posada and Rio Santa Caterina is particularly relevant.

The Purple Swamphen (*Porphyrio porphyrio*) is present along the Rio Posada and in the inner pond near the SS 125. In the latter site there is regular nesting of Purple Heron (*Ardea purpurea*), Black-crowned Night-heron (*Nycticorax nycticorax*), and Cattle Egret (*Bubulcus ibis*), and also irregular nesting of Ferruginous Duck (*Aythya nyroca*) and Squacco Heron (*Ardeola ralloides*). In the salt and brackish water areas there is nesting of the Black-winged Stilt (*Himantopus himantopus*), while in the dune cordon the Kentish Plover (*Charadrius alexandrinus*) nests. Finally in the alluvial plain there is nesting of the Stone-curlew (*Burhinus oedicephalus*), the Greater Short-toed Lark (*Calandrella brachydactyla*), and the Tawny Pipit (*Anthus campestris*). During migration and over-wintering the site is frequented by a large number of ducks, rallids, limicolous and larids. It should also be considered that the site is one of the most extensive and articulated wetland systems along the eastern coast of Sardinia and therefore plays an important role as a resting area for water and terrestrial birds during pre-reproductive and post-reproductive migrations.

[X] Criterion 4 : Support during critical life cycle stage or in adverse conditions

To justify this Criterion, please give details below on:

- relevant plant species in the section Criteria & justification> Plant species (3.2)

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- relevant animal species in the section *Criteria & justification*> *Animal species* (3.3)
and explain the life cycle stage or nature of adverse conditions in the accompanying 'justification' box.

[] Criterion 5 : >20,000 waterbirds

To justify this Criterion, please give details below on:- the total number of waterbirds and the period of data collection - relevant waterbird species, and if possible their population size, in the section *Criteria & justification*> *Animal species* (3.3)

Overall waterbird numbers* (This field is mandatory)

Start year* (This field is mandatory)

End year* (This field is mandatory)

Source of data:

[] Criterion 6 : >1% waterbird population

To justify this Criterion, please give details on relevant waterbird species and their population size in the section *Criteria & justification*> *Animal species* (3.3)

[] Criterion 7 : Significant and representative fish

To justify this Criterion, please give information in the box below and details of relevant fish species in the section *Criteria & justification*> *Animal species* (3.3)

Justification (This field is limited to 3000 characters)

[] Criterion 8 : Fish spawning grounds, etc.

To justify this Criterion, please give information in the box below. Completion of details on relevant fish species in the section *Criteria & justification*> *Animal species* (3.3) is optional.

Justification (This field is limited to 3000 characters)

[] Criterion 9 : >1% non-avian population

To justify this Criterion, please give details on relevant non-avian species and their population size in the section *Criteria & justification*> *Animal species* (3.3)

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 ²	CITES Appendix I	Other status	Justification
<i>Cynomorium coccineum</i>	Maltese Fungus		[X]	[]		[]		This species is localised in Italy and occurs mainly in Sardinia, Sicily, Basilicata and some smaller islands.
<i>Halimione portulacoides</i>	Sea Purslane	[]	[X]	[]				A species present in association with <i>Cynomorium coccineum</i> , it forms large grasslands in the backdunes.
<i>Tamarix africana</i>	African Tamarisk	[]	[X]	[]				Species that characterises riparian habitats in structural terms.
<i>Phragmites australis</i>	Common Reed	[]	[X]	[]				Species that characterises riparian habitats in structural terms.

Optional text box to provide further information on plant species of international importance:

(This field is limited to 2500 characters)

² | LC | NT | VU | EN | CR | EW | EX

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 ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Chordata	<i>Hyla sarda</i>	Sardinian Tree Frog	[X]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II & IV Habitat Directive Annex II Bern Convention	
Chordata	<i>Emys orbicularis</i>	European Pond Turtle	[X]	[]	[]	[]	[X]	[]	[]	[]				NT	[]	[]	Annex II & IV Habitat Directive Annex II Bern Convention EN according to Italian red List (Rondinini et al., 2013)	The site has river banks with surrounding alluvial plains and is a good habitat for this species. CITES Appendix II
Chordata	<i>Tachybaptus ruficollis</i>	Little Grebe	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	
Chordata	<i>Phalacrocorax carbo sinensis</i>	Great Cormorant	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Regularly migratory and regularly

³ These fields are only compulsory to justify criteria 6 & 9

⁴ | LC | NT | VU | EN | CR | EW | EX

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
																		wintering
Chordata	<i>Ixobrychus minutus</i>	Little Bittern	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention VU according to Italian red List (Peronace et al., 2012; Rondinini et al., 2013)	Probable breeder and regular migrant
Chordata	<i>Nycticorax nycticorax</i>	Black-crowned Night Heron	[X]	[]	[]	[]	[X]	[]	[]	[]				LC	[]	[]	Annex I Dir. 2009/147/EC Annex II Bern Convention VU according to Italian red List (Peronace et al., 2012; Rondinini et al., 2013)	Regular migrant
Chordata	<i>Ardeola ralloides</i>	Squacco Heron	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention	Irregular breeder in multi-species heronry. Small breeding population in Sardinia (< 50

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
																		pairs)
Chordata	<i>Bubulcus ibis</i>	Cattle Egret	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regular breeder in multi-species heronry
Chordata	<i>Egretta garzetta</i>	Little Egret	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention	Regular breeder in multi-species heronry; regularly migratory and regularly wintering
Chordata	<i>Casmerodius albus</i>	Great Egret	[X]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention NT according to Italian red List (Peronace et al. 2012)	Regularly migratory and regularly wintering
Chordata	<i>Ardea cinerea</i>	Grey Heron	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Regularly migratory and regularly wintering
Chordata	<i>Ardea purpurea</i>	Purple Heron	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention	Regular breeder in multi-species heronry

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Chordata	<i>Phoenicopterus roseus</i>	Greater Flamingo	[X]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention	Regular migrator
Chordata	<i>Anas crecca</i>	Eurasian Teal	[X]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention EN according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Regularly migratory and regularly wintering
Chordata	<i>Anas platyrhynchos</i>	Mallard	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Breeding, migratory and wintering
Chordata	<i>Aythya ferina</i>	Pochard	[X]	[]	[]	[]	[X]	[]	[]	[]				VU			Annex III Bern Convention EN according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Regularly migratory and regularly wintering ; irregular breeder
Chordata	<i>Aythya nyroca</i>	Ferruginous Duck	[X]	[X]	[]	[]	[X]	[]	[]	[]				NT			Annex I Dir. 2009/147/EC Annex III Bern Convention	Irregular breeder

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
																	EN according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	
Chordata	Circus aeruginosus	Marsh Harrier	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention CITES Appendix II VU according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Regularly migratory and regularly wintering ; probable breeder
Chordata	Buteo buteo	Common Buzzard	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention CITES Appendix II	Breeding, migratory and wintering
Chordata	Falco tinnunculus	Kestrel	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention CITES Appendix II	Breeding, migratory and wintering
Chordata	Coturnix coturnix	Quail	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern	Breeding, migratory

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
																	Convention DD according to Italian red List.	and wintering
Chordata	Rallus aquaticus	Water Rail	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Breeding, migratory and wintering
Chordata\	Gallinula chloropus	Moorhen	[]	X	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Regular breeder
Chordata	Porphyrio porphyrio	Purple Swamphen	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention NT according to Italian red List (Peronace et al. 2012)	Regular breeder
Chordata	Fulica atra	Eurasian Coot	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Breeding, migratory and wintering
Chordata	Himantopus himantopus	Black-winged Stilt	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention	Migratory and breeding

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Chordata	Burhinus oedicnemus	Eurasian Stone-curlew	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Wild Birds Directive Annex II Bern Convention VU according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Regular breeder
Chordata	Charadrius dubius	Little Ringed Plover	[X]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention NT according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Regular migrant
Chordata	Charadrius alexandrinus	Kentish Plover	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Wild Birds Directive Annex II Bern Convention EN according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Breeding, migratory and wintering
Chordata	Gallinago gallinago	Snipe	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Regularly migratory and regularly

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
																	NA according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	wintering
Chordata	Tringa nebularia	Greenshank	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Regular migrant
Chordata	Tringa ochropus	Green Sandpiper	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regular migrant
Chordata	Chroicocephalus ridibundus	Black-headed Gull	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Regularly migratory and regularly wintering
Chordata	Larus michahellis	Yellow-legged Gull	[]	[]	[]	[]	[X]	[]	[]	[]				LC				Regularly migratory and regularly wintering
Chordata	Thalasseus sandvicensis	Sandwich Tern	[X]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex I Wild Birds Directive Annex II Bern Convention VU according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Regular migrant
Chordata	Columba	Wood Pigeon	[]	[]	[]	[]	[X]	[]	[]	[]				LC				Regularly migratory and regularly

Commentato [mp1]: Synonym: *Larus ridibundus*

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
	palumbus																	wintering
Chordata	Streptopelia decaocto	Collared Dove	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Resident
Chordata	Streptopelia turtur	Turtle Dove	[]	[X]	[]	[]	[X]	[]	[]	[]				VU			Annex III Bern Convention LC according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Regularly migratory and regular breeder
Chordata	Merops apiaster	European Bee-eater	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regularly migratory and regular breeder
Chordata	Alcedo atthis	Kingfisher	[X]	X	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention	Regularly migratory and regularly wintering ; irregular breeder
Chordata	Upupa epops	Hopoe	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regular migrator and regular breeder; irregular winterer
Chordata	Calandrella brachydactyla	Greater Short-toed Lark	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention	Regular migrator and regular breeder

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
																	EN according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	
Chordata	<i>Alauda arvensis</i>	Skylark	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention VU according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Regularly migratory, wintering and breeding
Chordata	<i>Hirundo rustica</i>	Barn Swallow	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention NT according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Regularly migratory and regularly breeding
Chordata	<i>Anthus campestris</i>	Tawny Pipit	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex I Dir. 2009/147/EC Annex II Bern Convention	Regularly migratory and regularly breeding
Chordata	<i>Anthus pratensis</i>	Meadow Pipit	[]	[]	[]	[]	[X]	[]	[]	[]				NT			Annex II Bern Convention	Regularly migratory and regularly

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
																	NA according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	wintering
Chordata	<i>Anthus spinoletta</i>	Water Pipit	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regularly migratory and regularly wintering
Chordata	<i>Motacilla flava</i>	Yellow Wagtail	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention VU according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Regularly migratory and regularly breeding
Chordata	<i>Motacilla alba</i>	Pied Wagtail	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regularly migratory and regularly wintering
Chordata	<i>Erithacus rubecula</i>	Robin	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regularly migratory and regularly wintering
Chordata	<i>Luscinia megarhynchos</i>	Nightingale	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regularly migratory and regularly breeding
Chordata	<i>Phoenicurus ochruros</i>	Black Redstart	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regularly migratory and regularly

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
																		wintering
Chordata	<i>Saxicola torquatus</i>	Stonechat	[X]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention VU according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Widespread resident species in Sardinia
Chordata	<i>Turdus merula</i>	Blackbird	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Regularly migratory, wintering and breeding
Chordata	<i>Turdus philomelos</i>	Song Thrush	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Regularly migratory and regularly wintering
Chordata	<i>Cettia cetti</i>	Cetti's Warbler	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Resident
Chordata	<i>Cisticola juncidis</i>	Zitting Cisticola	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Resident
Chordata	<i>Acrocephalus scirpaceus</i>	Reed Warbler	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regularly migratory and regularly breeding
Chordata	<i>Sylvia conspicillata</i>	Spectacled Warbler	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regularly migratory and regularly breeding

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
Chordata	<i>Sylvia subalpina</i>	Moltoni's Warbler	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regular migrant
Chordata	<i>Sylvia melanocephala</i>	Sardinian Warbler	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Resident
Chordata	<i>Sylvia atricapilla</i>	Blackcap	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Breeding, migratory, wintering
Chordata	<i>Phylloscopus collybita</i>	Chiffchaff	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regularly migratory and regularly wintering
Chordata	<i>Muscicapa striata</i>	Spotted Flycatcher	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Regularly breeding and regularly migratory
Chordata	<i>Parus major</i>	Great Tit	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Resident
Chordata	<i>Lanius senator</i>	Woodchat Shrike	[X]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention EN according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Breeding, migratory
Chordata	<i>Corvus corniz</i>	Hooded Crow	[]	[]	[]	[]	[X]	[]	[]	[]				LC				Resident
Chordata	<i>Sturnus vulgaris</i>	Starling	[]	[]	[]	[]	[X]	[]	[]	[]				LC				Regularly migratory and regularly

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
																		wintering
Chordata	Passer hispaniolensis	Spanish Sparrow	[X]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention VU according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Resident
Chordata	Passer montanus	Tree Sparrow	[X]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention VU according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	Resident
Chordata	Fringilla coelebs	Chaffinch	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Breeding, migratory and wintering
Chordata	Serinus serinus	Serin	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Resident
Chordata	Carduelis chloris	Greenfinch	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Resident
Chordata	Carduelis carduelis	Goldfinch	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern Convention	Resident
Chordata	Carduelis	Linnet	[]	[X]	[]	[]	[X]	[]	[]	[]				LC			Annex II Bern	Breeding, migratory

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Phylum	Scientific name*	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size ³	Period of pop. Est. ³	% occurrence ³	IUCN Red List ⁴	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
	cannabina																Convention NT according to Italian red List (Peronace et al. 2012; Rondinini et al., 2013)	and wintering
Chordata	Emberiza calandra	Corn Bunting	[]	[]	[]	[]	[X]	[]	[]	[]				LC			Annex III Bern Convention	Resident

Optional text box to provide further information on animal species of international importance:

(This field is limited to 2500 characters)

Among the reptiles, the presence of *Emys orbicularis* is significant.

Several rare and threatened bird species are also present in the site, including some which are included in Annex I of the Birds Directive:

Ixobrychus minutus - trans-Saharan migratory species, nesting in the reed beds along the river system. Rare at regional and national level.

Nycticorax nycticorax - mainly a trans-Saharan migratory species, present at the site mainly during migration and breeding season. There is no evidence of nesting and it is possible that the occurrence is due to individuals nesting outside the site. Rare in Sardinia and in decline nationally.

Ardeola ralloides - mainly a trans-Saharan migratory species, irregularly nesting at the site in a polyspecific garrison. Rare and localised regionally with a population of less than 20 pairs.

Aythya ferina - is present at the site mainly during migration and wintering and is an irregular breeder. The species is rare as a breeder at regional and national level and in decline globally.

Aythya nyroca - rare and localised in Sardinia. It nests irregularly in the site.

Circus aeruginosus - probably nesting regularly at the site. Also present with wintering and nesting contingents. The species is rare as a regional breeder and has a negative trend in Italy.

Calandrella brachydactyla - nesting in the grasslands within the site. In sharp decline in Italy.

Alauda arvensis - the skylark nests in the halophilous grasslands within the site and is present with migratory and wintering contingents. The species is declining in most of its range, but most markedly in Italy.

Motacilla flava - a migratory nesting species at the site. Rare and localised in Sardinia, it is in sharp decline throughout the country.

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Lanius senator - a trans-Saharan migratory species present at the site with a small breeding population. The Woodchat Shrike is in sharp decline in Italy.

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
Coastal lagoons	[X]	Expanses of shallow coastal salt water, of varying salinity and water volume.	It is listed in the Habitat Directive, Annex 1 (Natura 2000 code: 1150). Priority habitat.

What is the Site like?

4.1 Ecological character

Please summarize the ecological components, processes and services which are critical to determining the ecological character of the site. Please also summarize any natural variability in the ecological character of the site, and any known past or current

(This field is limited to 2500 characters)

The coastal lagoon system, which can be identified within the site, constitutes an ecological community of ecotone characterised by considerable complexity. The coastal lagoon system is classifiable among the priority sites listed in Annex I of the Habitats Directive.

The site is a complex ecological unit mainly subject to a dynamic equilibrium generated by the combined actions of marine currents and inland water flows from the vast geographical basin. Inland water inflows, although guaranteed by a permanent flow, are reduced by the artificial dam of Maccheronis (about 11.5 km inland) and still have a strong seasonal variability, and the site is subject to episodic flooding that can contribute alluvial deposits in the plain and shape the profile of the waterways at the coastline. In addition to the contribution of internal waters through natural channels, the site receives the purified wastewater from the municipality of Posada and this mainly flows into Stagno Longu.

The river and plain vegetation has a good degree of naturalness and plays an important role in mitigating the action of exceptional floods, reducing their erosive effects and helping to store and circulate in trophic networks the large quantities of nutrients the floods bring.

These dynamic processes, still largely mediated by natural factors, determine the constitution of aquatic and terrestrial biocenoses that are particularly rich and suitable as foraging and nesting areas for aquatic avifauna and other vertebrate taxa of conservation interest.

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

Please list all wetland types which occur on the site, and for each of them: - rank the four most abundant types by area from 1 (greatest extent) to 4 (least extent) in the third column, - if the information exists, provide the area (in ha) in the fourth column - if this wetland type is used for justifying the application of Criterion 1, indicate if it is representative, rare or unique in the last column - you can give the local name of the wetland type if different from the Ramsar classification system in the second column

Marine or coastal wetlands

Wetland types (code and name) ⁵	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1 ⁶
B: Marine subtidal aquatic beds				Representative
E: Sand, shingle or pebble shores				Representative
J: Coastal brackish / saline lagoons				Representative

Inland wetlands

Wetland types (code and name) ⁷	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1 ⁶
M: Permanent rivers/ streams/ creeks				Representative
Tp: Permanent freshwater marshes/ pools				Representative
L: Permanent inland deltas				Rare
Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools				Representative

⁵ A: Permanent shallow marine waters | B: Marine subtidal aquatic beds (Underwater vegetation) | C: Coral reefs | D: Rocky marine shores | E: Sand, shingle or pebble shores | G: Intertidal mud, sand or salt flats | Ga: Bivalve (shell-fish) reefs | H: Intertidal marshes | I: Intertidal forested wetlands | J: Coastal brackish / saline lagoons | F: Estuarine waters | Zk(a): Karst and other subterranean hydrological systems | K: Coastal freshwater lagoons

⁶ | Representative | Rare | Unique

⁷ M: Permanent rivers/ streams/ creeks | L: Permanent inland deltas | Y: Permanent Freshwater springs; oases | N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks | O: Permanent freshwater lakes | Tp: Permanent freshwater marshes/ pools | P: Seasonal/ intermittent freshwater lakes | Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils | Tp: Permanent freshwater marshes/ pools | W: Shrub-dominated wetlands | Xf: Freshwater, tree-dominated wetlands | Ts: Seasonal/ intermittent freshwater marshes/ pools on inorganic soils | U: Permanent Non-forested peatlands | Xp: Permanent Forested peatlands | Va: Montane wetlands | Vt: Tundra wetlands | Q: Permanent saline/ brackish/ alkaline lakes | R: Seasonal/ intermittent saline/ brackish/ alkaline lakes and flats | Sp: Permanent saline/ brackish/ alkaline marshes/ pools | Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools | Zg: Geothermal wetlands | Zk(b): Karst and other subterranean hydrological systems

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Human-made wetlands

Wetland types (code and name) ⁸	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1 ⁶

What non-wetland habitats are within the site?

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
In the site there are agricultural areas with a strong parcelling of fodder crops, horticultural crops, orchards, mostly irrigated.	

Habitat connectivity (ECD)

The habitat connectivity within the site is mainly provided by the hydrographic network formed not only by the branches of the main watercourse but also by the various minor tributaries, distributed in all sectors of the site, which create a close continuity between agricultural areas, pasture areas, wetlands of different types and salinity and the sea in front.

⁸ 1: Aquaculture ponds | 2: Ponds | 3: Irrigated land | 4: Seasonally flooded agricultural land | 5: Salt exploitation sites | 6: Water storage areas/Reservoirs | 7: Excavations | 8: Wastewater treatment areas | 9: Canals and drainage channels or ditches | Zk(c): Man-made subterranean hydrological systems

4.3 Biological components

4.3.1 Plant species

Other noteworthy plant species

Scientific name	Common name (optional)	Position in range / endemism / other (optional)
<i>Limonium virgatum</i> (Willd.) Fourr		Euri-Medit.
<i>Limonium glomeratum</i> (Tausch.) Erben		Endem. Ital.
<i>Limonium narbonense</i>		Euri-Medit.
<i>Agropyron elongatum</i> (Host.) Beauv.		Euri-Medit.
<i>Inula crithmoides</i> L.		Medit.-Atl.(Steno-) - Coste atlantiche e
<i>Frankenia laevis</i> L.		Steno-Medit..
<i>Halimione portulacoides</i> (L.) Aellen		Circumbor.
<i>Sarcocornia fruticosa</i> (L.) A.J. Scott		Euri-Medit.
<i>Triglochin bulbosum</i> L. subsp. barrelieri		Steno-Medit.
<i>Sporobolus pungens</i> (Schreber) Kunth		Subtrop.
<i>Juncus acutus</i> L.		Euri-Medit.
<i>Juncus maritimus</i> Lam.		Subcosmop.
<i>Centaurium pulchellum</i> (Swartz) Druce		Paleotemp.
<i>Juncus subulatus</i> Forssk.		S-Medit.
<i>Spergularia salina</i> J. Presl et C. Presl		Subcosmop.

Invasive alien plant species

Scientific name	Impacts ⁹

4.3.2 Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size (optional)	Period of pop. est. (optional)	% occurrence (optional)	Position in range /endemism/other (optional)
Chordata	<i>Discoglossus sardus</i>	Tyrrhenian Painted Frog				
Chordata	<i>Bufo viridis</i>	European Green Toad				
Chordata	<i>Hyla sarda</i>	Sardinian Tree Frog				
Chordata	<i>Podarcis sicula cettii</i>	Italian Wall Lizard				
Chordata	<i>Chalcides chalcides vittatus</i>	Three-toed Skink				
Chordata	<i>Chalcides ocellatus</i>	Ocellated Skink				
Chordata	<i>Hierophis viridiflavus</i>	Green Whip Snake				

⁹ No impacts | Potentially | Actually (minor impacts) | Actually (major impacts)

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Phylum	Scientific name	Common name	Pop. size (optional)	Period of pop. est. (optional)	% occurrence (optional)	Position in range /endemism/other (optional)
Chordata	<i>Erinaceus europaeus</i>	Hedgehog				
Chordata	<i>Suncus etruscus</i>	Etruscan Shrew				
Chordata	<i>Crocidura russula</i>	Greater White-toothed Shrew				
Chordata	<i>Oryctolagus cuniculus huxleyi</i>	European Rabbit				
Chordata	<i>Apodemus sylvaticus</i>	Wood Mouse				
Chordata	<i>Mus domesticus</i>	House Mouse				
Chordata	<i>Rattus rattus</i>	Black Rat				
Chordata	<i>Vulpes vulpes</i>	European Red Fox				
Chordata	<i>Mustela nivalis boccamela</i>	Least Weasel				

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts ⁹	Changes at RIS update ¹⁰

4.4 Physical components

4.4.1 Climate

Please indicate the prevailing climate type(s) by selecting below the climatic region(s) and subregion(s), using the Köppen-Gieger Climate Classification System.

Climatic region ¹⁰	Subregion ¹¹
C. Moist Mid-Latitude climate with mild winters	Csb: Mediterranean (Mild with dry, warm summer)

If changing climatic conditions are affecting the site, please indicate the nature of these changes:

(This field is limited to 1000 characters)

4.4.2 Geomorphic setting

a) Minimum elevation above sea level (in metres) (The online RIS only accepts numeric values)

a) Maximum elevation above sea level (in metres) (The online RIS only accepts numeric values)

b) Position in landscape/river basin:

- 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. (This field is limited to 1000 characters)

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

Please provide further information on the soil (optional) (This field is limited to 1000 characters)

¹⁰ A. Tropical humid climate | B. Dry climate | C. Moist Mid-Latitude climate with mild winters | D. Moist Mid-Latitude climate with cold winters | E. Polar climate with extremely cold winters and summers | H. Highland

¹¹ Af: Tropical wet (No dry season) | Am: Tropical monsoonal (Short dry season; heavy monsoonal rains in other months) | Aw: Tropical savanna (Winter dry season) | BWh: Subtropical desert (Low-latitude desert) | BSh: Subtropical steppe (Low-latitude dry) | BWk: Mid-latitude desert (Mid-latitude desert) | BSk: Mid-latitude steppe (Mid-latitude dry) | Csa: Mediterranean (Mild with dry, hot summer) | Csb: Mediterranean (Mild with dry, warm summer) | Cfa: Humid subtropical (Mild with no dry season, hot summer) | Cwa: Humid subtropical (Mild with dry winter, hot summer) | Cfb: Marine west coast (Mild with no dry season, warm summer) | Cfc: Marine west coast (Mild with no dry season, cool summer) | Dfa: Humid continental (Humid with severe winter, no dry season, hot summer) | Dfb: Humid continental (Humid with severe winter, no dry season, warm summer) | Dwa: Humid continental (Humid with severe, dry winter, hot summer) | Dwb: Humid continental (Humid with severe, dry winter, warm summer) | Dfc: Subarctic (Severe winter, no dry season, cool summer) | Dfd: Subarctic (Severe, very cold winter, no dry season, cool summer) | Dwc: Subarctic (Severe, dry winter, cool summer) | Dwd: Subarctic (Severe, very cold and dry winter, cool summer) | ET: Tundra (Polar tundra, no true summer) | EF: Ice Cap (Perennial ice) | H: Highland (-)

Organic soil with only superficial saline inputs

4.4.4 Water regime

Water permanence

Presence? ¹²	Changes at RIS update ¹⁰
Generally presence of permanent water	

Source of water that maintains character of the site

Presence? ¹³	Predominant water source	Changes at RIS update ¹⁰
Input from surface water	[Rio Posada]	

Water destination

Presence? ¹⁴	Changes at RIS update ¹⁰
Marine	

Stability of water regime

Presence? ¹⁵	Changes at RIS update ¹⁰
Very stable water levels	

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology: *(This field is limited to 1000 characters)*

Connectivity of surface waters and of groundwater (ECD)

Stratification and mixing regime (ECD)

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): *(This field is limited to 1000 characters)*

Water turbidity and colour (ECD)

Light - reaching wetland (ECD)

Water temperature (ECD)

¹² Usually permanent water present | Usually seasonal, ephemeral or intermittent water present | Unknown

¹³ Water inputs from rainfall | Water inputs from surface water | Water inputs from groundwater | Marine water | Unknown

¹⁴ Feeds groundwater | To downstream catchment | Marine | Unknown

¹⁵ Water levels largely stable | Water levels fluctuating (including tidal) | Unknown

4.4.6 Water pH

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

Please provide further information on pH (optional): *(This field is limited to 1000 characters)*

4.4.7 Water salinity

- Fresh (<0.5 g/l)
- Mixohaline (brackish)/Mixosaline (0.5-30 g/l)
- Euhaline/Eusaline (30-40 g/l)
- Hyperhaline/Hypersaline (>40 g/l)
- Unknown

Please provide further information on salinity (optional): *(This field is limited to 1000 characters)*

Salinity is variable in the different sectors of the area and at different times of the year, generally having near-marine values near the mouths and completely fresh-water values in the innermost areas.

Dissolved gases in water (ECD)

4.4.8 Dissolved or suspended nutrients in water

- Eutrophic
- Mesotrophic
- Oligotrophic
- Dystrophic
- Unknown

Please provide further information on dissolved or suspended nutrients (optional): *(This field is limited to 1000 characters)*

Dissolved organic carbon (ECD)

Redox potential of water and sediments (ECD)

Water conductivity (ECD)

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

If the surrounding area differs from the Ramsar Site, please indicate how: *(Please tick all categories that apply)*

- 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: *(This field is limited to 1000 characters)*

The Posada estuary and Rio Posada system constitutes a peculiar typology in the territorial context in which it exists. In fact, although this system maintains similarities with the neighbouring coastal system of Posada, from which it is separated by the mainly touristic village of San Giovanni, it is mostly included in the orographic system of which it is the final receptor and which begins, with a rather high gradient, in the immediate hinterland of the plain.

4.5 Ecosystem services

4.5.1 Ecosystem services/benefits

Please select below all relevant ecosystem services/benefits currently provided by the site and indicate their relative importance in the right-hand column.

Provisioning Services

Ecosystem service ¹⁶	Examples ¹⁷	Importance/Extent/Significance ¹⁸
Wetland non-food products	Reeds and fibre	Low
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium
Fresh water	Water for irrigated agriculture	Medium

Regulating Services

Ecosystem service ¹⁹	Examples ²⁰	Importance/Extent/Significance ¹⁸
Climate regulation	Local climate regulation/buffering of change	medium

Cultural Services

Ecosystem service ²¹	Examples ²²	Importance/Extent/Significance ¹⁸
Scientific and educational	Educational activities and opportunities	high
Recreation and tourism	Nature observation and nature-based tourism	high
Spiritual and inspirational	Aesthetic and sense of place values	high

Supporting Services

Ecosystem service ²³	Examples ²⁴	Importance/Extent/Significance ¹⁸
---------------------------------	------------------------	--

¹⁶ Food for humans | Fresh water | Wetland non-food products | Biochemical products | Genetic materials

¹⁷ Sustenance for humans (e.g., fish, molluscs, grains) | Drinking water for humans and/or livestock | Water for irrigated agriculture | Water for industry | Water for energy production (hydro-electricity) | Timber | Fuel wood/fibre | Peat | Livestock fodder | Reeds and fibre | Other | Extraction of material from biota | Medicinal products | Genes for tolerance to certain conditions (e.g., salinity) | Genes for resistance to plant pathogens | Ornamental species (live and dead)

¹⁸ not relevant for site | Low | Medium | High

¹⁹ Maintenance of hydrological regimes | Erosion protection | Pollution control and detoxification | Climate regulation | Biological control of pests and disease | Hazard reduction

²⁰ Groundwater recharge and discharge | Storage and delivery of water as part of water supply systems for agriculture and industry | Soil, sediment and nutrient retention | Water purification/waste treatment or dilution | Local climate regulation/buffering of change | Regulation of greenhouse gases, temperature, precipitation and other climatic processes | Support of predators of agricultural pests (e.g., birds feeding on locusts) | Flood control, flood storage | Coastal shoreline and river bank stabilization and storm protection

²¹ Recreation and tourism | Spiritual and inspirational | Scientific and educational

²² Recreational hunting and fishing | Water sports and activities | Picnics, outings, touring | Nature observation and nature-based tourism | Inspiration | Cultural heritage (historical and archaeological) | Contemporary cultural significance, including for arts and creative inspiration, and including existence values | Spiritual and religious values | Aesthetic and sense of place values | Educational activities and opportunities | Important knowledge systems, importance for research (scientific reference area or site) | Long-term monitoring site | Major scientific study site | Type location for a taxon

²³ Biodiversity | Soil formation | Nutrient cycling | Pollination

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 Accumulation of organic matter	medium

Other ecosystem service(s) not included above: *(This field is limited to 1000 characters)*

Please make a rough estimate of the approximate number of people who directly benefit from the ecological services provided by this site (estimate at least in orders of magnitude: 10s, 100s, 1000s, 10 000s etc.):

Within the site:

1000s

Outside the site:

10000s

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site?

Yes / No / Unknown

Where economic studies or assessments of economic valuation have been undertaken at the site, it would be helpful to provide information on where the results of such studies may be located (e.g. website links, citation of published literature): *(This field is limited to 2500 characters)*

4.5.2 Social and cultural values

Is the site considered internationally important for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? If so, please describe this importance under one or more of the four following categories. You should not list here any values derived from non-sustainable exploitation or which result in detrimental ecological changes.

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 *(This field is limited to 2500 characters)*

Numerous archaeological evidence shows that since the Middle Neolithic and throughout the Nuragic, Roman and Medieval eras, the Rio Posada estuary plain has been the site of human settlements, evidently favoured by the fertility of the alluvial land and the opportunities related to lagoon fishing, which have always characterised the area up to the present day, and which have certainly contributed to maintain the site's status quo.

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

Description if applicable *(This field is limited to 2500 characters)*

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

Description if applicable *(This field is limited to 2500 characters)*

²⁴ 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 | Sediment retention | Accumulation of organic matter | Storage, recycling, processing and acquisition of nutrients | Carbon storage/sequestration | Support for pollinators

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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 *(This field is limited to 2500 characters)*

4.6 Ecological processes

This section is not intended for completion as part of a standard RIS, but is included for completeness as part of the agreed format of a 'full' Ecological Character Description (ECD) outlined by Resolution X.15

Primary production (ECD)

Nutrient cycling (ECD)

Carbon cycling (ECD)

Animal reproductive productivity (ECD)

Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc. (ECD)

Notable species interactions, including grazing, predation, competition, diseases and pathogens (ECD)

Notable aspects concerning animal and plant dispersal (ECD)

Notable aspects concerning migration (ECD)

Pressures and trends concerning any of the above, and/or concerning ecosystem integrity (ECD)

How is the Site managed?

5.1 Land tenure and responsibilities (Managers)

5.1.1 Land tenure/ownership

Please specify if this category applies to the Ramsar Site, to the surrounding area or to both, by ticking the relevant option(s).

Public ownership

Category ²⁵	Within the Ramsar Site	In the surrounding area
Local authority, municipality, (sub) district, etc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Provincial/region/state government	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Private ownership

Category ²⁶	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Other

Category ²⁷	Within the Ramsar Site	In the surrounding area
	<input type="checkbox"/>	<input type="checkbox"/>

Provide further information on the land tenure / ownership regime (optional): (This field is limited to 1000 characters)

Most of the protected area belong to private owners.

5.1.2 Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: (This field is limited to 1000 characters)

Ente parco naturale regionale di Tepilora

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

Paolo Angelini

Postal address: (This field is limited to 254 characters)

Via Attilio Deffenu 69,08021 Bitti (NU)

E-mail address: (The online RIS only accepts valid e-mail addresses, e.g. example@mail.com)

info@parcotepilora.it

²⁵ Public land (unspecified) | National/Federal government | Provincial/region/state government | Local authority, municipality, (sub)district, etc. | Other public ownership

²⁶ Cooperative/collective (e.g., farmers cooperative) | Commercial (company) | Foundation/non-governmental organization/trust | Religious body/organization | Other types of private/individual owner(s)

²⁷ Unspecified mixed ownership | No information available | Commoners/customary rights

5.2 Ecological character threats and responses (Management)

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

Please specify if this category applies to the Ramsar Site, to the surrounding area or to both, by ticking the relevant option(s).

Human settlements (non agricultural)

Factors adversely affecting site ²⁸	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area

Water regulation

Factors adversely affecting site ³⁰	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area

Agriculture and aquaculture

Factors adversely affecting site ³¹	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area
Annual and perennial non-timber crops	Low impact		[x]	[x]

Energy production and mining

Factors adversely affecting site ³²	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area

Transportation and service corridors

Factors adversely affecting site ³³	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area
Roads and railroads	Low impact		[x]	[x]

Biological resource use

Factors adversely affecting site ³⁴	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area

²⁸ Housing and urban areas | Commercial and industrial areas | Tourism and recreation areas | Unspecified development

²⁹ Low impact | Medium impact | High impact | unknown impact |

³⁰ Drainage | Water abstraction | Dredging | Salinisation | Water releases | Canalisation and river regulation

³¹ Annual and perennial non-timber crops | Wood and pulp plantations | Livestock farming and ranching | Marine and freshwater aquaculture | Non specified

³² Oil and gas drilling | Mining and quarrying | Renewable energy | Unspecified

³³ Roads and railroads | Utility and service lines (e.g., pipelines) | Shipping lanes | Aircraft flight paths | Unspecified

Hunting and collecting terrestrial animals	Low impact			x
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Human intrusions and disturbance

Factors adversely affecting site ³⁵	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area
Recreational and tourism activities	Low impact		[x]	[x]

Natural system modifications

Factors adversely affecting site ³⁶	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area
Dams and water management/use	Low impact	Medium impact		[x]

Invasive and other problematic species and genes

Factors adversely affecting site ³⁷	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area

Pollution

Factors adversely affecting site ³⁸	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area
Household sewage, urban waste water	Low impact		[x]	[x]
Agricultural and forestry effluents		Low impact	[x]	[x]

Geological events

Factors adversely affecting site ³⁹	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area

³⁴ Hunting and collecting terrestrial animals | Gathering terrestrial plants | Logging and wood harvesting | Fishing and harvesting aquatic resources | Unspecified

³⁵ Recreational and tourism activities | (Para)military activities | Unspecified/others

³⁶ Fire and fire suppression | Dams and water management/use | Vegetation clearance/ land conversion | Unspecified/others

³⁷ Invasive non-native/ alien species | Problematic native species | Introduced genetic material | Unspecified

³⁸ Household sewage, urban waste water | Industrial and military effluents | Agricultural and forestry effluents | Garbage and solid waste | Air-borne pollutants | Excess heat, sound, light | Unspecified

³⁹ Volcanoes | Earthquakes/tsunamis | Avalanches/landslides | Unspecified

Climate change and severe weather

Factors adversely affecting site ⁴⁰	Actual threat ²⁹	Potential threat ²⁹	Within the site	In the surrounding area
Droughts	Medium impact	High impact	[x]	[x]
Storms and flooding	Medium impact	High impact	[x]	[x]

Please describe any other threats (optional): (This field is limited to 3000 characters)

5.2.2 Legal conservation status

Please list any other relevant conservation status, at global, regional or national level and specify the boundary relationships with the Ramsar Site:

Global legal designations

Designation type ⁴¹	Name of area	Online information url	Overlap with Ramsar Site ⁴²
UNESCO Biosphere Reserve	Tepilora, Rio Posada e Montalbo	www.unesco.it/it/RiserveBiosfera/Detail/365	whole

Regional (international) legal designations

Designation type ⁴³	Name of area	Online information url	Overlap with Ramsar Site ⁴³

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site ⁴³
Natural Regional Park established by regional Law - L.R. n.21/2014	Parco regionale naturale di Tepilora	www.tepilorapark.it/	whole

Non-statutory designations

Designation type ⁴⁴	Name of area	Online information url	Overlap with Ramsar Site ⁴³

⁴⁰ Habitat shifting and alteration | Droughts | Temperature extremes | Storms and flooding | Unspecified

⁴¹ World Heritage site | UNESCO Biosphere Reserve | Other global designation

⁴² whole | partly

⁴³ EU Natura 2000 | Other international designation

⁴⁴ Important Bird Area | Important Plant Area | Other non-statutory designation

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 ⁴⁵	Status ⁴⁶
Natural Regional Park	Implemented

Habitat

Measures ⁴⁷	Status ⁴⁷

Species

Measures ⁴⁸	Status ⁴⁷

Human Activities

Measures ⁴⁹	Status ⁴⁷

Other: (This field is limited to 2500 characters)

5.2.5 Management planning

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

⁵⁰ In preparation

⁴⁵ Legal protection

⁴⁶ Proposed | Partially implemented | Implemented

⁴⁷ Catchment management initiatives/controls | Improvement of water quality | Habitat manipulation/enhancement | Hydrology management/restoration | Re-vegetation | Soil management | Land conversion controls | Faunal corridors/passage

⁴⁸ Threatened/rare species management programmes | Reintroductions | Control of invasive alien plants | Control of invasive alien animals

⁴⁹ Management of water abstraction/takes | Regulation/management of wastes | Livestock management/exclusion (excluding fisheries) | Fisheries management/regulation | Harvest controls/poaching enforcement | Regulation/management of recreational activities | Communication, education, and participation and awareness activities | Research

⁵⁰ No | Yes | In preparation

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Is the management plan/planning implemented?

Yes / No

The management plan covers

51 All of Ramsar Site

Is the management plan currently subject to review and update?

Yes / No

Has a management effectiveness assessment been undertaken for the site?

Yes / No

Please give link to site-specific plan or other relevant management plan if this is available via the Internet or upload it in section 'Additional material': *(This field is limited to 500 characters)*

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

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site: *(This field is limited to 1000 characters)*

URL of site-related webpage (if relevant):

5.2.6 Planning for restoration

Is there a site-specific restoration plan?

52 No need identified

Has the plan been implemented?

Yes / No

The restoration plan covers:

53

Is the plan currently being reviewed and updated?

Yes / No

Where the restoration is being undertaken to mitigate or respond to a threat or threats identified in this RIS, please indicate it / them: *(This field is limited to 1000 characters)*

5.2.7 Monitoring implemented or proposed

Monitoring ⁵⁴	Status ⁵⁵

Please indicate other monitoring activities:

(This field is limited to 2500 characters)

⁵¹ All of Ramsar Site | Part of Ramsar Site

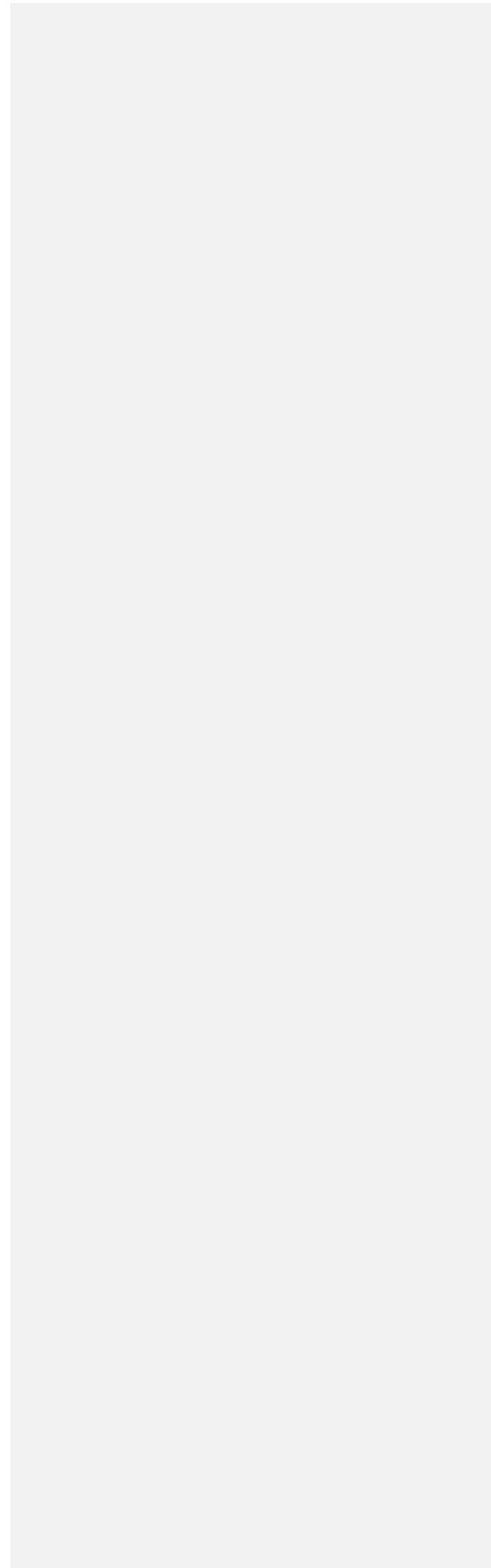
⁵² Please select a value | No need identified | No; the site has already been restored | No; but restoration is needed | No; but a plan is being prepared | Yes; there is a plan

⁵³ All of Ramsar Site | Part of Ramsar Site

⁵⁴ Water regime monitoring | Water quality | Soil quality | Plant community | Plant species | Animal community | Animal species (please specify) | Birds

⁵⁵ | Implemented | Proposed

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Additional material

6.1 Additional reports and documents

6.1.1 Bibliographical references

(This field is limited to 2500 characters)

Biondi E.; Diana S., Farris E., Filigheddu R., 2001. L'ordine Limonietalia Br.-Bl. et O. Bolòs 1958 in Sardegna. Fitosociologia, Vol. 38 (2), p. 37-44. ISSN 1125-9078..

Conti, F., Manzi A., Pedrotti F., 1992. Libro rosso delle Piante d'Italia. Ministero Ambiente, WWF Italia, Società Botanica Italiana, Roma. 637 pp.

Peronace, V., J. G. Cecere, M. Gustin, & C. Rondinini. 2012. Lista Rossa 2011 degli uccelli nidificanti in Italia. Avocetta 36:11–58

Rondinini, C., Battistoni, A., Peronace, V., Teofili, C. (compilatori), 2013. Lista Rossa IUCN dei Vertebrati Italiani. Comitato Italiano IUCN e Ministero dell'Ambiente e della Tutela del Territorio e del Mare, Roma

Rossi G., Montagnani C., Gargano D., Peruzzi L., Abeli T., Ravera S., Cogoni A., Fenu G., Magrini S., Gennai M., Foggi B., Wagensommer R.P., Venturella G., Blasi C., Raimondo F.M., Orsenigo S. (Eds.), 2013. Lista Rossa della Flora Italiana. 1. Policy Species e altre specie minacciate. Comitato Italiano IUCN e Ministero dell'Ambiente e della Tutela del Territorio e del Mare.

6.1.2 Additional reports and documents

- i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
-**UPLOAD via online form**-
- ii. a detailed Ecological Character Description (ECD) (in a national format)
-**UPLOAD via online form**-
- iii. a description of the site in a national or regional wetland inventory
-**UPLOAD via online form**-
- iv. relevant Article 3.2 reports
-**UPLOAD via online form**-
- v. site management plan
-**UPLOAD via online form**-
- vi. other published literature
-**UPLOAD via online form**-

Please note that any documents uploaded here will be made publicly available.

6.1.3 Photograph(s) of the Site

Please provide at least one photograph of the site:

File	Copyright holder	Date on which the picture was taken	Caption
Tepilora_01.jpg	Domenico Ruiiu	February, 2020	A Purple Swamphen (Porphyrio porphyrio)

I certify that I am the photographer, the valid holder of rights over the photograph(s), or an authorized representative of the organization which is the valid holder of rights over the photograph(s), and I hereby assign an irrevocable, perpetual and royalty-free right to use, reproduce, edit, display, transmit, prepare derivative works of, modify, publish, affix logos to, and otherwise make use of the submitted photograph(s) in any way, to the Ramsar Convention Secretariat, its affiliates and partners, for non-commercial purposes in conjunction with the mission of the Ramsar Convention. This use includes, but is not limited to, internal and external publication and materials, presentation on the websites of the Ramsar Convention or any affiliated body, and any and all other communication channels with copyright attributed to the holder in all published forms. The full accuracy of all data submitted rests with the submitter, or organization submitting the photograph(s). In submitting, I hereby agree to the aforementioned terms, personally or on behalf of the organization of which I am an authorized official, certifying that the Ramsar Convention Secretariat, its affiliates

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6.1.4 Designation letter and related data

Designation letter*

-UPLOAD via online form-

Date of Designation

Number of certificates wished *(The online RIS only accepts numeric values)*