

Ramsar Information Sheet

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ItalyTrapani and Paceco salt ponds



Designation date 19 October 2017
Site number 2329
Coordinates 37°59'18"N 12°30'56"E
Area 971,00 ha

https://rsis.ramsar.org/ris/2329 Created by RSIS V.1.6 on - 18 May 2020

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

Located in western Sicily Trapani and Paceco salt ponds are one of the most important wetlands for millions of birds migrating to and from Africa. It is a crucial staging area before or after crossing the sea of the Sicily channel, which is about 140 km large in the shortest point between Trapani and Cape Bon in Tunisia. Beforehand, many birds had to also cross about 2,800 km of the Sahara Desert (see map in section 2.2.1.d).

224 species of birds, including some accidental or rare, have been observed at the site, most of them considered as vulnerable or threatened. The number of breeding species have increased since the establishment of the Natural Reserve in 1995.

The area is an example of the biodiversity benefiting from the ancient traditional cultivation of sea salt. Very high level of biodiversity is demonstrated in high numbers of bird and plant species - some of these rare or unique - as well as insects, and amphibians.

The site represents a fascinating historical testimonial of salt production. Salt ponds together with their ancient mills survived the urbanisation and industrial pressures. This unique landscape is never the same, it is changing hour by hour, day by day.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Compiler 1

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

From year 1995 To year 2016

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Trapani and Paceco salt ponds Spanish) Unofficial name (optional) | Saline di Trapani e Paceco

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<2 file(s) uploaded>

Former maps 0

Boundaries description

The western section of the site borders the Sicily Channel (Mediterranean Sea), while the northern and north-eastern area borders the town of Trapani together with an industrial area. Some small villages (Nubia, Salina Grande, Marausa), open marshlands and arable land border the site further south. The Site mostly follows the borders of the Natura 200 sites.

2.2.2 - General location

a) In which large administrative region does Sicily the site lie? b) What is the nearest town or population Trapani, then also Paceco (and the small village of Nubia)

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries?

b) Is the site adjacent to another designated Ramsar Site on the Yes O No (9) territory of another Contracting Party?

2.2.4 - Area of the Site

Official area, in hectares (ha): 971

Area, in hectares (ha) as calculated from 970.44 GIS boundaries

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Marine Ecoregions of the World (MEOW)	Mediterranean
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

This site contains marine-coastal and ancient time human-made wetlands, which have been used for salt production. The sea water comes through a channel to different salt ponds: the first one near the sea is large and the subsequent basins are decreasing in width and depth. Salt is extracted from "casedda", the smallest pond.

Only sea water, sun and wind are used for salt production. In ancient times, wind mills were used to move the water from pond to pond but, nowadays they are replaced by a small water pump

The presence of rainfall, river water and groundwater together with the sediments and the characteristics of the soil, created other natural habitats typical of the wetland (marsh and both temporary and permanent grass fields).

Hydrological services provided

These salt ponds, together with the Stagnone di Marsala lagoon nature reserve, are the last ones still producing salt in Sicily, one of the few remaining active salinas in Italy (other still salt producing salinas are only in Puglia and Sardinia). The other Sicilian salt ponds have been abandoned in the recent past, such as those located near Priolo, Siracusa and Augusta.

No other salt ponds in the world have such a production cycle that remained the same since its invention in Phoenician times.

Trapani & Paceco salt ponds, as demonstrated by history, play a major role in the natural control and prevention of dangerous flooding.

Other ecosystem services provided

The site is a very important area for migratory, wintering and breeding birds as well as for plants adapted to an alkaline substrate, insects and amphibians: all of which live in an area where the salt production is still active. Some species of plants are endemic, and a species of insect lives only in this place of the

The increase of tourism is creating a new sustainable economy that, indirectly, helps the conservation of the protected area. The institution of the Nature Reserve helps to save the area from industrialization and urbanization.

This is the only site in the region, together with the Stagnone di Marsala, where salt is still produced and this guarantees a high level of habitat diversity.

Other reasons At the same time, the ancient salt ponds are central for the history of the place and to the landscape characteristics. The other examples of Italian salt ponds do not have the same peculiarities which are associated with incredible wildlife values, along with historical and economic values.

- ☑ Criterion 2 : Rare species and threatened ecological communities
- Criterion 3 : Biological diversity

The Salt ponds of Trapani and Paceco have high biodiversity values thanks to the variety of different habitats (including a high percentage of wetlands) and thanks to being on a very important bird migration route from the breeding grounds in Europe to the wintering area in Africa, and back in spring. Moreover, for the birds coming from Africa during the spring migration, this wetland area is the largest and one of the few that they can find after crossing the Mediterranean Sea. This is the longest sea crossing in the western Paleartic: on this path, between Cap Bon (Tunisia) and Trapani (Sicily), the crossing way is 140 km long. In comparison, birds that reach Europe through Spain fly, at most, for 44 km over the sea (Morocco - Spain), and through Istanbul only 2,5 km (see map in section 2.2.1.d). It means that most of the birds flying through the Sicily path, can recover lost energy here, thus having more chances to survive for the rest of the trip, for many of them a very long one.

Justification

This area is a very important hotspot for migratory birds and, thanks to the protection accorded by WWF, in the last 15 years it has become a very important place for both wintering and/or breeding birds (Blackwinged Stilt, Avocet, Kentish Plover, Little Tern, Little Egret, Little Bittern, Shelduck).

Other species of interest are some amphibians and one species of fish (listed in Annex II, Habitat Directive).

The Trapani and Paceco salt ponds host a huge number of species, more or less strictly adapted to this peculiar habitat (or mosaic of habitats) which are rare at regional and global scales. Therefore, the local biological diversity contributes greatly to the regional diversity.

Also, the entomological fauna is rich in species which are rarely found in the rest of Mediterranean, or that are endemic in this part of Sicily. To highlight that, 50% of the population of the moth Orgya (Teia) dubia arcerii lives at the Ramsar site: it is an endemic subspecies and the whole population lives only in Trapani and Paceco salt ponds and in the nearby Stagnone of Marsala.

At the site we find different rare plant species, some of them endemic to the area and most of them adapted to the extreme saline conditions.

- ☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions
- ☑ Criterion 6 : >1% waterbird population
- ☑ Criterion 8 : Fish spawning grounds, etc.

The marine area outside the protected area has an important coverage of the habitat of Posidonia oceanica which plays the role of nursery for many species of fish.

Justification

Many of these move into the salt ponds closest to the sea (called "fredda") through the channels and contribute to the biomass present on the site as the food resource for thousands of birds.

☑ Criterion 9 : >1% non-avian animal population

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
Aeluropus lagopoides	mamoncillo		2				LR (Lower Risk) in Italy and in Sicily (Conti et al. 1997)	Rare species reported in Italyonlyin Sardinia and Sicily
Anemone palmata		V					CR (Critically Risk) in Sicily (Conti et al. 1997)	Very rare species in Italy, reported only for few places of Sicily and Sardinia
Anthemis secundiramea			V				Endemism	Rare species reported only for same site of Sicily

Scientific name	Common name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Calendula incana maritima	Sea Marigold	2	V				EN (Endangered) in Italy and in Sicily (Conti et al. 1997)	Endemic, rare and threatened species In the site there is about the 10-20% of the world population of this plant
Cressa cretica		Ø					EN (Endangered) in Italy and VU (Vulnerable) in Sicily (Conti et al. 1997)	Rare species reported in the red list of Italian regions where it is documented its present
Cynomorium coccineum	Desert thumb, red thumb, tarthuth	Ø					VU (Vulnerable) in Italy and Sicily (Conti et al. 1997)	Rare species reported in Italyonlyin some place of Sicily
Euphorbia pithyusa cupanii			V				Endemism, LR (Lower Risk) in Sicily (Conti et al. 1997)	Endemic species of Sicily
Galium verrucosum			V				Endemism	Rare species reported in Italy only in Tuscany, Sardinia and Sicily
Halocnemum strobilaceum	jointed glasswort	2					VU (Vulnerable) in Italy and CR (Critically Risk) in Sicily (Conti et al. 1997)	rare species
Halopeplis amplexicaulis		2					VU (Vulnerable) in Italy and Sicily (Conti et al. 1997)	rare species with South Western Mediterranean distribution
Limoniastrum monopetalum		2					VU (Vulnerable) in Italy and Sicily (Conti et al. 1997)	Rare species
Limonium avei	Statice of Ave-Lallemant	2					VU (Vulnerable) in Italy, and LR (Lower Risk) in Sicily (Conti et al. 1997)	Rare species with fragmented distribution
Limonium densiflorum	Statice in dense spikes		V				LR (Lower Risk) in Sicily (Conti et al. 1997)	Rare species reported only in Sardinia and Sicily in Italy and Algeria
Limonium glomeratum			V				Endemism reported as LR (Lower Risk) in Sicily (Conti et al. 1997)	Endemic species reported only in Sicily
Limonium hyblaeum			V				LR (Lower Risk) in Italy and in Sicily (Conti et al. 1997)	Rare species reported in Italyonlyin Sicily
Limonium lilybaeum		2					Endemism reported as VU (Vulnerable) in Italy and in Sicily (Conti et al. 1997)	Reported at national level only in Sicily
Limonium virgatum			V				LR (Lower Risk) in Sicily (Conti et al. 1997)	Rare species reported in Sicily
Myriolimon ferulaceum		2					VU (Vulnerable) in Italy and Sicily (Conti et al. 1997)	In Italy is reported only for Sicily where is rare and located in heavily salted plant communities
Scrophularia frutescens		2					VU (Vulnerable) in Italy and Sicily (Conti et al. 1997)	Rare species reported in Italy only in few places of Sicily
Solenopsis minuta		2					EN (Endangered) in Sicily (Conti et al. 1997)	Rare species
Triglochin barrelieri		2					VU (Vulnerable) in Sicily (Conti et al. 1997)	Rare species in Sicily

Conservation problems have been reported for the Calendula maritima: the site is one of the seven sites in the world where this species lives. Many species of Limonium are here reported and some of them are listed in Italian Red List (Conti et al. 1997). The taxon reported in table as Anthemis secundiramea corresponds to Anthemis secundiramea Biv. subsp. intermedia (Guss.) R. Fern., important endemism of Sicily. Galium verrucosum reported in table refers to Galium verrucosum Huds. subsp. halophilum (Ponzo) Lambinon. Triglochin barrellieri in the table refers to Triglochin bulbosum L. subsp. barrelieri (Loisel.).

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

3.3 - Anima	al species wh	nose presend					national importance	of th	e site			
Phylum	Scientific name	Common name	Species qualifie under criterio 2 4 6	es co r on	Species ontribute under criterion	Pop. Size			CITES Appendix I	CMS Appendix I	Other Status	Justification
Birds								_				
CHORDATA/ AVES	Acrocephalus melanopogon	Moustached Warbler						LC ●離		Ø	Annex I Birds Directive	The area provides food resources in migration seasons and hosts wintering population. The species migrates by night. It has been seen every year during both migration time (autumn, spring) with about 10/100 individuals in turnover during migration.
CHORDATA/ AVES	Actitis hypoleucos	Common Sandpiper				<u> </u>	2009	LC			Species of European Conservation Concern	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position betwee Africa and Europe. This species with all other waterbirds exceeds the 20,000 individuals that search food resources in this area.
CHORDATA/ AVES	Alauda arvensis	Eurasian Skylark; Sky Lark						LC ●野			Species of European Conservation Concern 3	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population
CHORDATA/ AVES	Alcedo atthis	Common Kingfisher	2	100	300	20	2001	LC •å: •bs			Species of European Conservation Concern 3, Annex I Birds Directive	Important migratory route to and from Africa and hosts wintering population. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 10/100 individuals in turnover during migration time, probably it greater number but impossible to estimate.
CHORDATA/ AVES	Anas acuta	Northern Pintail)O@	300	350	1997	LC			Species of European Conservation Concern 3	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area. 350 refers twintering populations; over 500/1000 individuals in turnover during migration time. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position betwee Africa and Europe.
CHORDATA/ AVES	Anas clypeata	Northern Shoveler			300	☐ 471	2010				Species of European Conservation Concern 3	Contribute to the maintaining of biodiversity. The area provides food resources for individuals moving along an important migratory route to and from Africa. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 471 refers to wintering populations; ove 500/1000 individuals in turnover during migration time.
CHORDATA/ AVES	Anas crecca	Eurasian Teal; Green-winged Teal				825	2010	LC ●数 ●開				This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area. 825 refers twintering populations; over 500/1000 individuals in turnover during migration time. The area provides food resources for individuals moving along an important migratory route to and from Africa. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe

Phylum	Scientific name	Common name	Specie qualific unde criteric 2 4 6	es co r on c	Species ontributes under criterion	Size Period of pop. Est.	% occurrence		CMS Appendix I	Cother Status	Justification
CHORDATA/ AVES	Anas penelope	Wigeon				2130 2016					The area provides food resources for individuals moving along an important migratory route to and from Africa. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 2130 refers to wintering populations; over 500/1000 individuals in turnover during migration time.
CHORDATA/ AVES	Anas platyrhynchos	Mallard				400 2016		LC		CMS Appendix II. EU Birds Directive Annex II and III	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 400 refers to wintering population; > 500/1000 individuals in turnover during migration time
CHORDATA/ AVES	Anas querquedula	Garganey				7 2016					This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 500/1000 individuals in turnover during migration time. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Anas strepera	Gadwall] 111 2015					The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population and breeding pairs in this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 111 refers to wintering populations; over 100 individuals in turnover during migration time.
CHORDATA/ AVES	Anthus campestris	Tawny Pipit	77]		LC		Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Anthus cervinus	Red-throated Pipit						LC ●数 ●翻			The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population.
CHORDATA/ AVES	Anthus pratensis	Meadow Pipit	~~			200 1996		NT ●診 ●際		VU (Italian Red List)	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 100/1000 individuals in turnover during migration time; probably in greater number but impossible to estimate. The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Aquila pomarina	Lesser Spotted Eagle						LC		Species of European Conservation Concern 2, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa
CHORDATA/ AVES	Ardea alba	Great Egret	2 20			85 2009		LC •\$		Annex I Birds Directive	With all other waterbirds exceed the 20,000 individuals: over 150 individuals in turnover during migration time. Underestimate for the habit to migrate also by night. Site to restore lost energy of the migratory flight.
CHORDATA/ AVES	Ardea cinerea	Gray Heron; Grey Heron] 150 1996		LC ●数 ●際			They restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 150 refers wintering populations; over 150 individuals in turnover during migration time the species is underestimate because of the habit to migrate also by night.

Phylum	Scientific name	Common name	Specie qualifie under criterio 2 4 6	es c er on	Species contribut under criterio	es n	Pop. Size Period of pop. Est.	% occurrence 1)	IUCN Red A List	CITES Appendix I	CMS Appendix I	c Other Status	Justification
CHORDATA/ AVES	Ardea purpurea	Purple Heron			000				LC • St • GR			Species of European Conservation Concern 3, Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 50 individuals in turnover during migration time. The area provides food resources for individuals moving along an important migratory route to and from Africa. The species is probably underestimate because of the habit to migrate by night and the attitude to avoid open places, preferring marsh area with vegetation
CHORDATA/ AVES	Ardeola ralloides	Squacco Heron							LC			Species of European Conservation Concern 3, Vulnerable (Italian Red List, by WWF), Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 100 individuals in turnover both migration seasons. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Asio flammeus	Short-eared Owl					3 2015		LC			Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering individuals. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 10/20 individuals in turnover during migration time.
CHORDATA/ AVES	Athene noctua	Little Owl							LC •#			Species of European Conservation Concern 3	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts breeding pairs.
CHORDATA/ AVES	Aythya nyroca	Ferruginous Duck	990				2007		NT ©#		V	CR (Italian red list, by WWF), Annex I Birds Directive	Not sure the number in migration. The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Botaurus stellaris	Eurasian Bittern	2 20						LC ●診 ●際			Species of European Conservation Concern 3, Endangered (Italian Red List, by WWF), Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population
CHORDATA/ AVES	Burhinus oedicnemus	Eurasian Stone- curlew							LC			Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa
CHORDATA/ AVES	Buteo rufinus	Long-legged Buzzard	~~						LC ©			Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa
CHORDATA/ AVES	Calandrella brachydactyla	Greater Short-toed Lark	990						LC Str			Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population and is a breeding site
CHORDATA/ AVES	Calidris alpina	Dunlin					1708 2015		LC			Species of European Conservation Concern 3	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 1000/2000 individuals in turnover during migration time; the species is underestimate because of the habit to migrate by night. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Caprimulgus europaeus	European Nightjar							LC © SS © TSF			Species of European Conservation Concern 2, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa
CHORDATA/ AVES	Cecropis daurica	Red-rumped Swallow	990				5		LC ●数 ●簡			CR (Italian Red List) Bern Convention Appendix II	The area provides food resources for individuals moving along an important migratory route to and from Africa.

Phylum	Scientific name	Common name	Specia qualifi unde criteri 2 4 6	es co er ion	Species ontributes under criterion	Size Period of pop. Est	% occurrence 1)	IUCN Red A	CITES Appendix I	CMS Appendix I	C Other Status	Justification
CHORDATA/ AVES	Charadrius alexandrinus	Kentish Plover; Snowy Plover	2 20		000	285 1999/2001		LC			Annex I Bird Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 500 individuals in turnover during migration time. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Charadrius dubius	Little Ringed Plover				100 2001		LC				This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 100/300 individuals in turnover during migration time; probably in great number but impossible to estimate because of the habit to migrate by night. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Charadrius hiaticula	Common Ringed Plover				100 2001		LC				In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 50/100 individuals in turnover during migration time; probably in great number but impossible to estimate because of the habit to migrate by night.
CHORDATA/ AVES	Charadrius morinellus	Eurasian Dotterel	990					LC			CR (Italian Red List) Annex I Bird Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Chlidonias hybrida		V					LC Sign			Bern Convention Appendix II	> 10/100 individuals in turnover during migration time. The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Chlidonias leucopterus	White-winged Tern						LC				This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 10 individuals in turnover during migration time. Contribute to the maintaining of biodiversity The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population and breeding pairs
CHORDATA/ AVES	Chlidonias niger	Black Tern	VV			9 1998		LC ●\$ ●爾			CR (Italian Red List) Species of European Conservation Concern 3 Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 10/30 individuals in turnover during migration time.
CHORDATA/ AVES	Chroicocephalus genei	Slender-billed Gull			1000	300 2014					EN (Italian Red List) Species of European Conservation Concern 3 Annex I Birds Directive	The area hosts more than 20,000 birds in a continuous fly to and from Africa both in migration or during winter time (criterion 5): > 300/500 individuals in turnover during migration time. Important area to support both migrating and wintering individuals in a critical stage of their life cycles (criterion 4).
CHORDATA/ AVES	Chroicocephalus ridibundus	Black-headed Gull				320 1997						Important area to support both migrating and wintering individuals in a critical stage of their life cycles (criterion 4). This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 500/1000 individuals in turnover during migration time; probably in greater number but impossible to estimate.

Phylum	Scientific name	Common name	Special qualification unde criteria 2 4 6	ies er ion	contri un crite	ecies ibutes ider erion	Pop. Size Period of pop. Est.	% occurrence 1)	IUCN Red A List	CITES Appendix I	CMS Appendix I	Cother Status	Justification
CHORDATA/ AVES	Ciconia ciconia	White Stork			2 0] 100		LC ●\$: ●®			SPEC2, Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 100 individuals in turnover during migration time. The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population
CHORDATA/ AVES	Ciconia nigra	Black Stork			2 0		50		LC			Species of European Conservation Concern 2, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 50 individuals in turnover during migration time.
CHORDATA/ AVES	Circaetus gallicus	Short-toed Snake Eagle			2 0]		LC			Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa
CHORDATA/ AVES	Circus aeruginosus	Western Marsh Harrier	220		7 0] 17 2016		LC S OM			EN (Italian Red List) Annex I Birds Directive	The area hosts more than 20,000 birds in a continuous fly to and from Africa both in migration or during winter time (criterion 5): where observed 17 individuals, but are 400/600 in turnover during migration time, > 3000 observed on the Straits of Messina, the main route in central Europe, after their arrival in Sicily, maximum count in 33 years of census. Important area to support both migrating and wintering individuals in a critical stage of their life cycles (criterion 4).
CHORDATA/ AVES	Circus cyaneus	Northern Harrier			2 0				LC STRP			Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts sometimes wintering individuals.
CHORDATA/ AVES	Circus macrourus	Pallid Harrier	V		V		40		NT			Species of European Conservation Concern 3, Annex I Birds Directive	The area hosts more than 20,000 birds in a continuous flyto and from Africa both in migration or during winter time (criterion 5): where observed > 40 individuals of this species in turnover during migration time. The Straits of Messina is the most important migratory route in spring season, in the whole west Palearctic (over 150 individuals). The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Circus pygargus	Montagu's Harrier			Z		80		LC			Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: where observed > 80 individuals in turnover during migration time. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Coturnix coturnix	Common Quail			2 0				LC © 53 © 1587				The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Delichon urbicum	House martin			2 0				LC			Species of European Conservation Concern 3	In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 1000/3000 individuals in turnover during migration time; probably in greater number but impossible to estimate.

Phylum	Scientific name	Common name	Specie qualification unde criterical 2 4 6	ies er ion	Spec contrib unde criter	outes er ion	Pop. Size Period of pop. Est.	% occurrence	IUCN Red List		CMS Appendix	x Other Status	Justification
CHORDATA/ AVES	Egretta garzetta	Little Egret	2 20		200		150 2016		LC			Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 150 refers winterin population; over 150 individuals in turnover during migration time the species is underestimate because of the habit to migrate also by night. In this way they restore lost energy of the migratory flight, because Sicilyis in a strategic position between Africa and Europe
CHORDATA/ AVES	Emberiza calandra	Corn Bunting			2 00				LC ©#				The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population and breeding pairs.
CHORDATA/ AVES	Falco biarmicus	Lanner Falcon			Z O				LC ©\$3 ©®#			LR (Italian Red List) Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for wintering individuals.
CHORDATA/ AVES	Falco cherrug	Saker Falcon	77		2 00				EN ●数 ●解		V	Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts sometimes wintering individuals.
CHORDATA/ AVES	Falco columbarius	Merlin	990		Z O				LC			Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Falco naumanni	Lesser Kestrel			Z O				LC ©		V	LR (Italian Red List) Species of European Conservation Concern 1, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Falco peregrinus	Peregrine Falcon			200				LC OMP	✓		VU (Italian Red List) Annex I Bird Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population.
CHORDATA/ AVES	Falco tinnunculus	Common Kestrel; Eurasian Kestrel	2		Z O(LC ●数 ●關			Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population and breeding pairs.
CHORDATA/ AVES	Falco vespertinus	Red-footed Falcon			Z O (NT ●\$* ●®		V	Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Ficedula albicollis	Collared Flycatcher			Z O				LC			Annex I Birds Directive; Species of European Conservation Concern 3	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Fringilla coelebs	Common Chaffinch			200				LC ©#				The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population and breeding pairs.
CHORDATA/ AVES	Fulica atra	Eurasian Coot			200		800 2001		LC ©##				This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 500/1000 individuals in turnover during migration time. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Galerida cristata	Crested Lark			20C				LC ●数 ●際			Species of European Conservation Concern 3	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population and breeding pairs.
CHORDATA/ AVES	Gallinago gallinago	Common Snipe			2 00		5		LC ●数 ●翻				The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population.

Phylum	Scientific name	Common name	Specie qualific unde criteric 2 4 6	es d r on	Species contribute under criterion 3 5 7	es 1	Pop. Size Period of pop. Est.	% occurrence 1)		CITES Appendix I	CMS Appendi: I	C Other Status	Justification
CHORDATA/ AVES	Gallinago media	Great Snipe							NT			Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Gallinula chloropus	Common Moorhen			000		50 1996		LC				Species present probably in great number but impossible to estimate because of the habit (nocturnal migration, restoring in vegetation). The site provide for wintering migratory and breeding population.
CHORDATA/ AVES	Gelochelidon nilotica	Gull-billed Tern	990		200				LC © 53: © 1589			EN (Italian Red List) Species of European Conservation Concern 3, Annex I Birds Directive	Not sure number about individual of population. The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Glareola pratincola	Collared Pratincole			200				LC Single			EN (Italian Red List) Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Grus grus	Common Crane			2 00		1500 1998		LC Singer			Species of European Conservation Concern 2, Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: the population individuals have variable number in spring and autumn migration, depending by weather conditions. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Haematopus ostralegus	Eurasian Oystercatcher			200				NT			Annex II (B) of the EU Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population.
CHORDATA/ AVES	Hieraaetus pennatus	Booted Eagle	990		200				LC Sign			Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population.
CHORDATA/ AVES	Himantopus himantopus	Black-winged Stilt	V V		200		100 2015		LC Sisteman			Annex I Birds Directive	This species with all other waterbirds exceed the 20,000: the wintering population is 100 individuals but during migration time the individuals are > 500 in turnover; difficult to estimate for the habit to migrate by night.
CHORDATA/ AVES	Hirundo rustica	Barn Swallow			000				LC ●Si ●Bi			Species of European Conservation Concern 3	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 1000/3000 individuals in turnover during migration time; probably in greater number but impossible to estimate. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Hydroprogne caspia	Caspian Tem	2 20		2 00				LC			Species of European Conservation Concern 3, Annex I Birds Directive	Unknown number of individuals of population. The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Ichthyaetus audouinii	Audouin's Gull			200							EN (Italian red list) Species of European Conservation Concern 1, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Ichthyaetus melanocephalus	Mediterranean Gull			2 00				LC •\$? •®			VU (Italian red list) Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	lxobrychus minutus	Little Bittern	2 20		200				LC Si Sin			Species of European Conservation Concern 3, Annex I Birds Directive	For Birdlife census (2006) it is a species under threats. The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts breeding pairs.

Phylum	Scientific name	Common name	Specie qualifie under criterio 2 4 6	es contrib	outes er rion	Pop. Size Period of pop. Est.	% occurrence 1)		CITES Appendix I	CMS Appendix I	Cother Status	Justification
CHORDATA/ AVES	Jynx torquilla	Eurasian Wryneck						LC © SS © SSS			Species of European Conservation Concern 3	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Limosa lapponica	Bar-tailed Godwit						NT			Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: >100/300 individuals in turnover during migration time; probably in greater number but impossible to estimate because of the habit to migrate by night. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Limosa limosa	Black-tailed Godwit				70 1997		NT ●SS				The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 30/100 individuals in turnover during migration time; probably in greater number but impossible to estimate because of the habit to migrate by night.
CHORDATA/ AVES	Linaria cannabina	Common Linnet						LC Sis				The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population and breeding pairs.
CHORDATA/ AVES	Luscinia svecica	Bluethroat						LC			Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Lymnocryptes minimus	Jack Snipe						LC Singer				Unknown number of population. Contribute to the maintaining of biodiversity. The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Marmaronetta angustirostris	Marbled Duck	990					VU © iii © iiii		Ø	Species of European Conservation Concern 1, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts sometimes wintering individuals.
CHORDATA/ AVES	Melanocorypha calandra	Calandra Lark						LC Sign			VU (Italian red list) Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts occasional breeding pairs.
CHORDATA/ AVES	Merops apiaster	European Bee- eater						LC Sign			Species of European Conservation Concern 3	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 500/1000 individuals in turnover during migration time; probably in greater number but impossible to estimate. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Milvus migrans	Black Kite						LC			Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Monticola solitarius	Blue Rock Thrush						LC Str			Species of European Conservation Concern 3	The site hosts wintering individuals and breeding pairs.
CHORDATA/ AVES	Motacilla flava	Western Yellow Wagtail						LC ●辞				This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 1000/1500 individuals in turnover during migration time; probably in greater number but impossible to estimate. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe

Phylum	Scientific name	Common name	Specie qualific unde criteric 2 4 6	es d er on	Speci contrib unde criter	utes er ion	Pop. Size	% occurrence 1)	IUCN Red A	CITES Appendix /	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Muscicapa striata	Spotted Flycatcher			Z O				LC Sign			Species of European Conservation Concern 3	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Neophron percnopterus	Egyptian Vulture			200				EN Sign		V	CR (Italian red list) Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Netta rufina	Red-crested Pochard	2 20		200				LC			EN (Italian red list, by WWF)	3 refers to wintering populations; > 5 individuals in turnover during migration time. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Numenius arquata	Eurasian Curlew			200		35 2002		NT ●数 ●簡			Species of European Conservation Concern 2	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe.
CHORDATA/ AVES	Numenius phaeopus	Whimbrel			200				LC Single				Unknown number data of population. Contribute to the maintaining of biodiversity. The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population and breeding pairs.
CHORDATA/ AVES	Numenius tenuirostris	Slender-billed Curlew	990		200				CR ●診 ●際	 ✓	V		The area can still be an important place that provides food resources for the remaining individuals survived in nature, also if the species has been not observed in nature since many years.
CHORDATA/ AVES	Nycticorax nycticorax	Black-crowned Night-Heron; Black-crowned Night Heron			200				LC			Annex I Birds Directive	In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 200 individuals in turnover; the species is understimated because of its habit to migrate by night and the attitude to avoid open places, preferring marsh area with vegetation.
CHORDATA/ AVES	Oenanthe oenanthe	Northern Wheatear			Z O				LC Str			Species of European Conservation Concern 3	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Otus scops	Eurasian Scops Owl			2 00				LC			Species of European Conservation Concern 2	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts breeding pairs.
CHORDATA/ AVES	Pandion haliaetus	Osprey, Western Osprey	2 20		200		4 2016		LC ●数 ●簡明			Species of European Conservation Concern 3, Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: where observed >20 individuals in turnover during migration time. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Passer montanus	Eurasian Tree Sparrow			2 00				LC			Species of European Conservation Concern 3	The area hosts wintering and breeding population.
CHORDATA/ AVES	Pelecanus onocrotalus	Great White Pelican	9		200				LC Sign		V	Species of European Conservation Concern 3, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The species is wintering/migrating irregularly.

Phylum	Scientific name	Common name	Speci qualifi unde criteri 2 4 0	ies (er ion	Speciontribution under criteri	utes r on	Pop. Size Period of pop. Est.	% occurrence 1)		CITES Appendix I	CMS Appendi I	x Other Status	Justification
CHORDATA/ AVES	Pernis apivorus	European Honey Buzzard	990		20c				LC ©\$\$			Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Phalacrocorax carbo sinensis	Cormorant	770		Z OC		212 2013	1				Endangered (Italian Red List, by WWF), Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe.
CHORDATA/ AVES	Philomachus pugnax	Ruff	2 20		200		175					Species of European Conservation Concern 2, Annex I Birds Directive	In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: where observed 150/200 individuals in turnover during migration time; the species is underestimate because of the habit to migrate by night.
CHORDATA/ AVES	Phoenicopterus ruber	Greater Flamingo			2 00		1081 2010		LC ●\$ ●®			Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: the population > 500/1000 individuals in turnover during migration time. The species does many movements between Sardinia, South west Sicily (Vendicari) and Tunisia; also French populations have been observed through the lectures of the ringed birds. Probably the turnover is much bigger in numbers. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Phoenicurus phoenicurus	Common Redstar	t 🗆 🗷 C		20c				LC			Species of European Conservation Concern 2	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Platalea leucorodia	Spoonbill	77	206	20c		270 2014	2	LC ●数 ●關			Species of European Conservation Concern 2, Annex I Birds Directive	The species is present all the year at the Reserve, max count winter, 270 individuals in wintering, > 150 during migration time.
CHORDATA/ AVES	Plegadis falcinellus	Glossylbis			20C				LC ●\$‡ ●爾			CR (Italian Red List, by WWF), Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering population. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 100 individuals in turnover during migration time.
CHORDATA/ AVES	Pluvialis apricaria	European Golden Plover; European Golden-Plover	770		2 00		3		LC			Annex I Birds Directive	This species with all other waterbirds exceed the 20,000: the wintering population is only 3 individuals but during migration time the individuals are >50 in turnover; the species is underestimate.
CHORDATA/ AVES	Pluvialis squatarola	Grey Plover			Z OC		20 2016		LC			Annex IV of Habitat Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 100 individuals in turnover during migration time; the species is underestimate because of the habit to migrate. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Porzana parva	Little Crake	77		2 00							Annex I Birds Directive	Unknown number of population. The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Porzana porzana	Spotted Crake	2		200				LC ●数 ●簡			Annex I Birds Directive	Unknown number of population. The area provides food resources for individuals moving along an important migratory route to and from Africa.

Phylum	Scientific name	Common name	Speci qualifi unde criteri 2 4 6	ies er ion	Speci contrib unde criter	outes er rion	Pop. Size Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AVES	Porzana pusilla	Baillon's Crake	V									Annex I Birds Directive	Unknown number of population. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Rallus aquaticus	Water Rail			2 00		6		LC ●辞				Unknown number, probably in great number but impossible to estimate because of its habits (nocturnal migration, restoring in vegetation). This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Recurvirostra avosetta	Pied Avocet			2 00		400 2010		LC ●数 ●爾			Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 500/1000 individuals in turnover during migration time; probably in great number but impossible to estimate because of the habit to migrate by night. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Riparia riparia	Sand Martin			200				LC ●\$3 ●爾			Species of European Conservation Concern 3	In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 100/300 individuals in turnover during migration time; probably in greater number but impossible to estimate.
CHORDATA/ AVES	Sterna hirundo	Common Tern	VV (2 00				LC ●部			LC (Italian red list) Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe.
CHORDATA/ AVES	Sternula albifrons	Little Tern	990		2 00		108 2001		LC ●辭			Species of European Conservation Concern 3, Annex I Birds Directive	In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 100 individuals in turnover during migration time - the presence of breeding population doesn't allow the count of migrating individuals, the number is underestimate.
CHORDATA/ AVES	Streptopelia turtur	European Turtle Dove; European Turtle-Dove			2 00				VU •\$ •\$			Species of European Conservation Concern 3	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts breeding pairs.
CHORDATA/ AVES	Sturnus unicolor	Spotless Starling			200				LC ●数 ●關				Living onlyin Sicily, Sardinian Spain, north Africa. The area hosts wintering and breeding population
CHORDATA/ AVES	Sylvia undata	Dartford Warbler			200				NT OFF			VU (Italian red list) Species of European Conservation Concern 2, Annex I Birds Directive	The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts irregular wintering population.
CHORDATA/ AVES	Tadoma tadoma	Common Shelduck	~		200		549 2016		LC ●節			EN (Italian red list, byWWF)	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: 549 refers to wintering populations; 500/1000 individuals in turnover during migration time. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe

Phylum	Scientific name	Common name	Specie qualific unde criteric 2 4 6	es o er on	Speci contrib unde criteri	utes er ion	Pop. Size Period of pop. Est	% occurrence		CITES Appendix I	CMS Appendix	x Other Status	Justification
CHORDATA/ AVES	Thalasseus sandvicensis	Sandwich Tern			000		4		LC ●部 ●爾			Species of European Conservation Concern 2, Annex I Birds Directive, CMS Appendix II, Bern Convention Appendix II	This species with all other waterbirds exceed the 20,000 individuals; the wintering population is only 4 (data winter 1999) individuals but during migration time the individuals are 50 -100 in turnover.
CHORDATA/ AVES	Tringa erythropus	Spotted Redshank			200		100 1997		LC				This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 30/100 individuals in turnover during migration time probably in greater number but impossible to estimate because of the habit to migrate by night. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Tringa glareola	Wood Sandpiper	990		200		4		LC			Annex I Birds Directive	This species with all other waterbirds exceed the 20,000 individuals: the wintering population is only4 (winter 1998) individuals but during migration time are 20 - 50 in turnover; difficult to estimate because of the habit to migrate by night.
CHORDATA/ AVES	Tringa nebularia	Common Greenshank			200		100 1997		LC ●\$ ●爾				This taxon with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 50/100 individuals in turnover during migration time probably in greater number but impossible to estimate because of the habit to migrate by night. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Tringa ochropus	Green Sandpiper			000		50 1998		LC				This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 20/50 individuals in turnover during migration time; probably in greater number but impossible to estimate because of the habit to migrate by night. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Tringa stagnatilis	Marsh Sandpiper			000		12		LC •\$ •\$				The area provides food resources for individuals moving along an important migratory route to and from Africa. The area hosts wintering individuals. This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 20/50 individuals in turnover during migration time probably in greater number but impossible to estimate because of the habit to migrate by night.
CHORDATA/ AVES	Tringa totanus	Common Redshank			2 00		700 1997		LC •\$* •\$*				This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area: > 500/1000 individuals in turnover during migration time. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe
CHORDATA/ AVES	Tyto alba	Barn Owl			2 00				LC ©SS			LC (Italian red list)	The area hosts breeding pairs.
CHORDATA/ AVES	Upupa epops	Common Hoopoe; Eurasian Hoopoe			2 00				LC			Species of European Conservation Concern 3	The area provides food resources for individuals moving along an important migratory route to and from Africa.
CHORDATA/ AVES	Vanellus vanellus	Northern Lapwing			000		120 2001		NT ●\$ ●\$			SPEC2	This species with all other waterbirds exceed the 20,000 individuals that search food resources in this area. In this way they restore lost energy of the migratory flight, because Sicily is in a strategic position between Africa and Europe

Phylum	Scientific name	Common name	Species qualifies under criterion	Species contributes under criterion	Size Perio	od of pop. Est.	% occurrence 1)	IUCN Red List	CMS Appendix I	Other Status	Justification
Fish, Mollusc	and Crustacea										
CHORDATA/ ACTINOPTERYGI	Anguilla anguilla	European eel; European eel; European eel; European eel; European eel]			CR ●\$ ●®			Important presence in the river Baiata, one of the only two rivers that cross the protected area (sweet water).
CHORDATA/ ACTINOPTERYGI	Aphanius fasciatus	Mediterranean killifish	2 000					LC •©		Annex II Habitat Directive	The site is important as nursery for the species.
CHORDATA/ ACTINOPTERYGI	Atherina boyeri				9			LC Sign			The site is important as nursery for the species.
CHORDATA/ ACTINOPTERYGI	Mugil cephalus	Bright mullet			9			LC Sign			The site is important as nursery for the species.
CHORDATA/ ACTINOPTERYGI	Pomatoschistus marmoratus	Marbled goby, Marbled goby	0000					LC Str			The site is important as nursery for the species.
CHORDATA/ ACTINOPTERYGI	Syngnathus abaster	Blackstripe pipefish						LC ©SP			The site is important as nursery for the species.
Others											
ARTHROPODA/ INSECTA	Cephalota circumdata imperialis										West Mediterannean areal, in Sicilyliving only at the salt ponds of Trapani and Paceco and Stagnone di Marsala
ARTHROPODA/ INSECTA	Cephalota litorea goudotii)						Western Mediterranean, very rare and localized everywhere
ARTHROPODA/ INSECTA	Cephalota maura										Species living only in Tunisia and Sicily. At the salt ponds of Trapani have been found a colony, bigger than those found in very few other places in Sicily
CHORDATA/ REPTILIA	Chalcides bottegi]			LC © 53 © 1587			Localized, decreasing in Sicily for fires and loss of habitat, lives in the area all the life cycle
ARTHROPODA/ INSECTA	Heteracris adspersa]						Living only in Sardinia and Sicily, where it is very rare and known only at the Salt ponds of Trapani and Paceco
ARTHROPODA/ INSECTA	Hydroporus limbatus]						Living in few coastland in Sicily, very localized
ARTHROPODA/ INSECTA	Incertana drepanensis] 1000		50				Endemic, living only in the Salt ponds of Trapani and Paceco and as recently discovered, in a very small area over Palermo town (Piana degli Albanesi). The genus exist in Italy only in Sicily region
CHORDATA/ MAMMALIA	Myotis capaccinii		220C)			VU Sign		EN in Italian red list, Annex II Habitats Directive	Great affinity with wetland area, still living in the site
CHORDATA/ REPTILIA	Podarcis waglerianus]			LC		NT In Italian red list of vertebrates, Annex IV of Habitats Directive	Endemic of Sicily island
ARTHROPODA/ INSECTA	Polyphylla ragusae)						Endemic of Sicily island, exinct in the north west coast of Sicily, still surviving along the coast of Trapani district

Phylum	Scientific name	Common name	Species qualifies under criterion	Species contributes under criterion	Size Period of pop. E	% occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA/ AMPHIBIA	Pseudepidalea sicula						LC ©SF			Annex IV Habitats Directive Berna Directive	Endemic of Sicily island
ARTHROPODA/ INSECTA	Pterolepis elymica						EN				Living only in the west side of Sicily between Trapani and Mazara del Vallo

¹⁾ Percentage of the total biogeographic population at the site

Birds in section 3.3 are just some of the 224 different species observed at the Salt Ponds of Trapani and Paceco (1977, 1996 - 2016). In the table we included the species which have an IUCN red list classification from LC up, the classification of SPEC 1, 2 and 3 according by Birdlife International (2006), those in Annex I of the Birds Directive (2009/147/CE, ex 79/409/CE) and those classified in the red list of fauna of Italy (WWF). Other species, including those for which the site is very important as a rest area during migration or in wintering, have been included in the list because their presence contributes to the criterion 3 or 4.

The 50% of Orgya (Teia) dubia arcerii population lives in this Ramsar site. It is an endemic subspecies and the whole population lives only in Trapani and Paceco salt ponds and in the near Stagnone of Marsala. Female is not able to fly and this may be the reason for its limited distribution. It supports the criteria 4, 3 and 8.

The site regularly supports a great number of waterbirds, surely more than 20 000, but the criterion 5 is not included as the monitoring of all of them is not completed. By the way, in the justification it is reported which of them contribute.

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
Mediterranean salt steppes (Limonietalia) (Code 1510*)	Ø	Perennial prairie with rosette-forming (Limonium spp.) or esparto grass (Lygeum spartum), along Mediterranean coasts, soils temporarily permeated by saline water and subject to extreme summer drying	This habitat that brings together plant communities as a result of the peculiar soil conditions. Coastal and halophytic habitats - Directive 92/43/CEE Annex I: Habitats
Lagune costiere (Code 1150*)	Ø	Habitat in direct or indirect contact with the sea, which are typically separated by cordons of sand or pebbles and less frequently by low rocky coasts	The aquatic vegetation in coastal lagoons make catenal contacts with the communities of the banks. Coastal and halophytic habitats - Directive 92/43/CEE Annex I: Habitats
Mediterranean salt meadows (Juncetalia maritimi) (Code 1410)	v	Mediterranean halophytes and subalofile Community referred to Juncetalia maritimi order	Perennial grasslands dominated by Juncus sp. pl. Coastal and halophytic habitats - Directive 92/43 / EEC Annex I: Habitats
Mediterranean and thermo-Atlantic nalophilous scrubs (Sarcocometiea fruticosi) (Code 1420)	Ø	Scrubland vegetation of salt marsh with perennial halophytes plants mainly camephytes and succulent nanophanerophytes adapted to extreme conditions	This habitat hosts several rare animal and plant species. Coastal and halophytic habitats - Directive 92/43/CEE Annex I: Habitats
Pseudo-steppe with grasses and annuals of the Thero-Brachypodietea (code 6220*)	Ø	Pseudo-steppe with grasses and annuals species that refer to follow syntaxa: Lygeo-Stipetea, Poetea bulbosae and Helianthemetea guttati	Coastal and halophytic habitats - Directive 92/43/CEE Annex I : Habitats
Annual vegetation of drift lines (Code 1210)	Ø	Communities of annual plants that colonize the sandy coast near the shoreline with Cakile maritima subsp. maritima	Annual plants community of sandy beaches. Coastal and halophytic habitats - Directive 92/43/CEE Annex1: Habitats
Vegetated sea cliffs of the Mediterranean coasts with endemic Limonium spp. (code 1240)	Ø	Vegetated cliffs and rocky shores of the Mediterranean, of the Mediterranean-temperate eastern Atlantic (south-western lberia) and of the Black Sea. Crithmo-Limonietalia	Communities with many casmophytic plants, who have the ability to live in the rocks in direct contact with the water sea and aerosols marine. Very common are Crithmum maritimum and many endemic species of Limonium. Directive 92/43/CEE Annex I

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

4.1 - Ecological character

The ancient salt ponds have a very interesting and complex water cycle: seawater comes into ponds through channels and flows into gradually smaller and less profound ponds. The smallest and last ponds are perfect for the water evaporation and thus are characterized by water with high salinity: this way produced salt is collected in the summertime, from July to September/October.

Such ancient traditional methods of salt production, preserve the old salt ponds and guarantee habitats characterised by different salinity and species. One example is the many species in the site belonging to Limonium genus.

Salt ponds provide food for migratory and wintering birds during all seasons, especially in relation to the pattern of rainfall that, in this Mediterranean Center area, can also lead to long periods of drought.

Therefore, the area of the salt ponds remains a source of water and food for migrant species who find shelter here, even in these periods of aridity.

The river assures the freshwater supply and, after the construction of the dam upstream, this resource is constant all year long. The presence of freshwater habitats contributes to the nesting of many bird species closely linked to freshwater reserves.

Marine areas and river courses outside the Ramsar area are of a great importance for the site and should be adequately protected.

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	Secca	3		
F: Estuarine waters	Foce	3		

Inland wetlands

II II al lu Wellal lus				
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	Torrente	2		Representative
Saline, brackish or alkaline water > Marshes & pools >> Ss: Seasonal/ intermittent saline/ brackish/ alkaline marshes/ pools	Margio	2		Representative

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	
5: Salt exploitation sites		1	750	Representative	

Other non-wetland habitat

Other non-weiland habitat	One non-wetano naorat									
Other non-wetland habitats within the site	Area (ha) if known									
Grassland posidonia oceanica meadows										

(ECD) Habitat connectivity

Most of the area has a good habitat connectivity, interrupted only in some part by human infrastructure realized in the past, before the institution of the natural reserve. There is not a good habitat connectivity with the rest of the territory.

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Biscutella maritima		rare species in territory
Daucus carota drepanensis		rare species in territory
Himantoglossum robertianum		rare species in territory
Hornungia procumbens		rare species in territory
Ophioglossum lusitanicum		rare species
Ruppia cirrhosa		rare species in territory
Sarcocornia perennis		rare species in territory

Invasive alien plant species

Scientific name	Common name	Impacts
Acacia saligna		Actually (major impacts)
Agave americana		Actually (minor impacts)
Agave angustifolia		Potentially
Agave tenuifolia		Potentially
Ailanthus altissima		Actually (major impacts)
Aster squamatus		Actually (minor impacts)
Carpobrotus edulis		Actually (minor impacts)
Eucalyptus globulus		Actually (minor impacts)
Myoporum tenuifolium		Actually (minor impacts)
Opuntia ficus-indica	Indian-fig	Actually (minor impacts)
Oxalis pes-caprae		Actually (minor impacts)
Pennisetum setaceum		Actually (minor impacts)
Tamarix africana		Actually (minor impacts)
Tamarix gallica		Actually (minor impacts)
Yucca aloifolia		Potentially
Yucca gloriosa		Potentially

4.3.2 - Animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	%occurrence	Position in range /endemism/other
CHORDATAMAMMALIA	Erinaceus europaeus	West European Hedgehog;western European hedgehog				
CHORDATA/REPTILIA	Hierophis viridiflavus	green whip snake				
CHORDATA/REPTILIA	Natrix natrix	grass snake				
CHORDATA/REPTILIA	Podarcis siculus	Italian wall lizard				
CHORDATA/REPTILIA	Tarentola mauritanica	gecko				

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude	Csa: Mediterranean (MId
climate with mild winters	with dry, hot summer)

4.4.2 - Geomorphic setting

a) Mnimum elevation above sea level (in metres) 0
a) Maximum elevation above sea level (in metres) 5
Entire river basin
Upper part of river basin ☐
Mddle part of river basin ☐
Lower part of river basin ✓
More than one river basin \Box
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.

RIS for Site no. 2329,	Trapani and Paceco salt ponds,	Italy
	Organic &	2
	No available information C	
Are soil types subject to ch	nange as a result of changing hydrological ys (e.g., increased salinity or acidification)?	∕es O No
Please provide further informa	tion on the soil (optional)	
b.c., in the Holocene clir		Baiata and Chinisia rivers, form alluvial deposits in the site. Between 8,000 and 2,00 g led to the current configuration of the lagoon areas between Marsala and Trapani.
4.4.4 - Water regime		
Water permanence		
Presence? Usually permanent water		
present Usually seasonal,		
ephemeral or intermittent water present		
Source of water that maintains of		
Presence? P Marine water	redominant water source	
Water inputs from rainfall		
Water inputs from groundwater		
Water destination		
Presence? Feeds groundwater Marine		
Stability of water regime		
Presence? Water levels fluctuating (including tidal)		
The ancient salt ponds hof birds. Seawater comes into po	nave a very interesting and complex ands through channels and, through	levant). Use this box to explain sites with complex hydrology: x water cycle that guarantees the whole year a wide supply of food for many species a system of ever smaller and less profound ponds, it comes to the smallest one fro I the small size and depth of this last pond, are perfect for an easy and fast water
Salt ponds provide food	for migratory or wintering birds du	t production, which is collected from July to September or October. ring the seasons, especially in relation to the rainfall regime. After the construction of hich contributes to the nesting of many species of birds closely linked to freshwater
4.4.5 - Sediment regime		
•	nt erosion of sediments occurs on the site	٦
_	eposition of sediments occurs on the site E	
-	_	
	of sediments occurs on or through the site	
Sediment regime is nignly w	ariable, either seasonally or inter-annually	
	Sediment regime unknown	
In addition, the Posidon	due to the construction of the infrast ia oceanica habitat , that develops erimeter of the protected area and	tructure of the town of Trapani (the harbor) and the village of Marausa in the south. along the coast, is not properly protected. the Reserve Authority is committed to protecting Posidonia by promoting
1.4.6 - Water pH		
	Acid (pH<5.5)	
	Circumneutral (pH: 5.5-7.4)	
	Alkaline (pH>7.4)	
	Unknown [
Please provide further informa		of the salt production cycle, as some rivers, marsh areas, temporary pools.
1.4.7 - Water salinity		_
	Fresh (<0.5 g/l)	_
М	xohaline (brackish)/Mixosaline (0.5-30 g/l)	
	Euhaline/Eusaline (30-40 g/l)	<u> </u>
	Hyperhaline/Hypersaline (>40 g/l)	<u> 2</u>

Please provide further information on salinity (optional):

Unknown

The complex salt production system, already described, generates in this site a wide variability of water salinity values.

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic 🗹

Mesotrophic 🗹

Oligotrophic 🗹

Dystrophic

Unknown 🗹

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

Some areas have eutrophic conditions due to the general increase in pollution of marine and river waters, outside the protected area but closely connected with it.

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 i) broadly similar O ii) significantly different O site itself.

Surrounding area has greater urbanisation or development $\ensuremath{ \mathbb{Z}}$

Surrounding area has higher human population density 🗹

Surrounding area has more intensive agricultural use

Surrounding area has significantly different land cover or habitat types $\ensuremath{\overline{\psi}}$

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

In the past salt ponds have been considered as a land for infrastructure (urbanization, industrial areas, port areas) and many ponds have been destroyed and built up: this was especially the case before the establishment of the Natural Reserve and in the immediate years following. Therefore, the remaining ponds and marshes are saved and protected by the establishment of the Reserve.

However, the demand for new homes in the surrounding area is constantly increasing due to the increase in the tourist's interest in the area; some commercial areas on the borders create some problems. Despite this, there is still a non-intensive agricultural method and rural houses.

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)	High
Wetland non-food products	Other	High

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
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

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance	
Recreation and tourism	Nature observation and nature-based tourism	High	
Spiritual and inspirational	Contemporary cultural significance, including for arts and creative inspiration, and including existence values	High	
Scientific and educational	Important knowledge systems, importance for research (scientific reference area or site)	High	
Scientific and educational	Educational activities and opportunities	High	
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 microorganizms, 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	High	
Pollination	Support for pollinators	High	

Other ecosystem service(s) not included above

Very important place for millions of migratory birds (turnover), very important breeding place for different species of birds at various level of conservation importance (Little tern, Black winged tilt, Avocet, Shelduck, Kentish plover), very important place for wintering birds; very important place for endemic species of insects and, for one of them, unique place in the world; one of the most important place for a very rare plant (Calendula maritima).

The Wetland non-food products are cosmetics made by processing salt, as a secondary product (cosmetic muds etc.).

Within the site:	100s
Outside the site:	>10.000s

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):

The production of salt is a very important economy for the area and tourism, born after a while from the institution of the protected area which has created a new local economy (8 B&B inside the B area of the Reserve and two hotels that have restored pre-existing buildings without building new ones), as well as bus and taxi service, rental of cars and bikes, restaurants, bar, houses for rent.

This local economy does not have a negative impact on the site, except for the flow of tourists on the main road who, stopping at the edge of the road, try to enter the area, disturbing wildlife especially in summer, which is the season of nesting.

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 first testimony of these salt ponds dates back to 1200; in the "Book of Ruggero", dated 1154, the great Arabic geographer Idrisi writes "Just in front of the city gate (of Trapani) there is a salt".

Up to a few years ago, salt collection was carried out using traditional methods.

The economic crisis has blocked the harvest by hand and today many growers use small machinery (except in some ponds).

But the water cycle and the ponds are the same as in the past. The control of water passage from one pond to another is still carried out by a man's control. The reserve regulation protects traditional salt ponds activity and does not allow them to be changed.

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

Description if applicable

There are 52 ancient mills in the site and only some have been restored, while many others need urgent intervention.

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

Description if applicable

Biodiversity and ecological character are guaranteed by salt production: without this constant activity of local communities, habitats will evolve to values of less biodiversity.

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

4.6 - Ecological processes

(ECD) Notable aspects concerning migration

It is a very important place for birds migrating from and to the breeding area during the seasonal movement to/from Africa. It is one of only the two wetlands that are located in the northwestern part of Sicily.

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

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

	wners	

Category	Within the Ramsar Site	In the surrounding area
Provincial/region/state government	/	
Local authority, municipality, (sub)district, etc.	V	2
National/Federal government	2	/

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	>	>

Provide further information on the land tenure / ownership regime (optional):

Most of the protected area belong to private owners. Very few areas belong to public administrations (different level) and one salt pond is directly managed by WWF since it was bought by the regional government.

5.1.2 - Management authority

agency or organization responsible for	WWF Italy, identified as Reserve manager with regional decree.
managing the site:	
Provide the name and title of the person or	
	Anna Giordano, Natural Reserve Director
people with responsibility for the wetland:	
Postal address:	Via G. Garibaldi n. 138 - 91027 - C.da Nubia, Paceco (Trapani)
E-mail address:	a.giordano@wwf.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
Housing and urban areas	High impact	High impact		✓
Commercial and industrial areas	High impact	High impact		✓
Tourism and recreation areas	High impact	High impact	✓	✓
Unspecified development	High impact	High impact		2

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Water abstraction	Medium impact	High impact	1	✓
Water releases	Medium impact	High impact	4	 ✓
Canalisation and river regulation	Medium impact	High impact	✓	2

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Marine and freshwater aquaculture	Medium impact	Low impact	✓	

Energy production and mining

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Renewable energy	High impact	High impact		✓

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	1	✓
Utility and service lines (e.g., pipelines)	High impact	High impact	2	2
Shipping lanes	Medium impact	High impact		✓
Aircraft flight paths	High impact	High impact	1	₽

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Hunting and collecting terrestrial animals	unknown impact	unknown impact		✓
Fishing and harvesting aquatic resources	Low impact	unknown impact		✓

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	/	✓
(Para)military activities	High impact	High impact	✓	✓

Natural system modifications

Ivalui ai System mounications				
Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fire and fire suppression	High impact	High impact	✓	✓
Dams and water management/use	Medium impact	unknown impact		>
Vegetation clearance/ land conversion	High impact	unknown impact		✓

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	unknown impact		2

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	A	✓
Agricultural and forestry effluents	High impact	High impact	2	✓
Garbage and solid waste	High impact	High impact	4	✓
Excess heat, sound, light	High impact	High impact	✓	✓

Geological events

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Earthquakes/tsunamis	unknown impact	unknown impact	✓	

Climate change and severe weather

ominate and igo and octors t	10041101			
Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Storms and flooding	unknown impact	unknown impact	€	✓

Please describe any other threats (optional):

In recent years, the use of pesticides has been discovered in farmland both inside and outside the protected area and WWF has forbidden its use.

The wrong management of the coast, outside the protected area, and the construction of port infrastructures has created a strong coastal erosion that can have very negative effects on salt ponds and ecosystem services. Posidonia ocenica prairie, which is a nursery area for many species of fishes and also has the natural role of protecting the coast from erosion, is undergoing strong impacts.

5.2.2 - Legal conservation status

Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
EU Natura 2000	SCI - ITA010007	http://natura2000.eea.europa.eu/ Natura2000/SDF.aspx?site=ITA0100 07	whole
EU Natura 2000	SPA-ITA010028	http://natura2000.eea.europa.eu/ Natura2000/SDF.aspx?site=ITA0100 28	whole

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Decree designation Ramsar Site (DM04.04.2011)	Saline di Trapani e Paceco		whole
Natural Oriented Reserve	Saline di Trapani e Paceco		whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Trapani and Paceco salt ponds		whole

5.2.3 - IUCN protected areas categories (2008)

1.4	04-1-4	KI_L	D-	0000	

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 Industry landscape/seascape conservation and recreation

5.2.4 - Key conservation measures

Legal protection

Logar protoction		
Measu	es	Status
Legal prot	ection	Implemented

Habitat

Measures	Status
Habitat manipulation/enhancement	Partially implemented
Re-vegetation	Partially implemented

Species

Measures	Status
Threatened/rare species management programmes	Partially implemented

Human Activities

Measures	Status
Fisheries management/regulation	Partially implemented
Harvest controls/poaching enforcement	Partially implemented
Regulation/management of recreational activities	Partially implemented
Communication, education, and participation and awareness activities	Partially implemented
Research	Partiallyimplemented

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?

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning Yes O No

processes with another Contracting Party?

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

There are three centers, one of which is a visitor center, located in a mill, which is the information and visit activities point.

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	Proposed
Water quality	Proposed
Soil quality	Proposed
Plant community	Implemented
Plant species	Implemented
Animal community	Implemented
Animal species (please specify)	Implemented
Birds	Implemented

Breeding and wintering birds; flamingo's count.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

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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

<1 file(s) uploaded>

vi. other published literature

<1 file(s) uploaded>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site



Marsh and salt ponds area at the Salt ponds (near Salina Salinella) (WWF manager of the Natural Peserve of the Salt Ponds of Trapani and Paceco, 15-10-



A flock of Flamingos (Phoenicopterus ruber) (WWF manager of the Natural Reserve of the Salt Ponds of Trapani and Paceco, 03-09-2012)



Sunrise at the Salt ponds of Trapani and Paceco (Salina Salinella) (WWF nanager of Natural Reserve of the Salt Ponds of Trapani and Paceco, 10-11-1997)



Sunset (Salina Chiusa), on the left, the old tower of Nubia and the Egadi island on the background (WWF rranager of the Natural Reserve of the Salt Ponds of Trapani and Paceco, 29-07-



Pile of Salt harvested and left on the leeves of the salt ponds (Salina Calcara) (
WWF manager of the Natural Reserve of the Salt Ponds of Trapani and Paceco, 06-09-2006)



A flock of Flamingos (Phoenicopterus ruber), an old mill on the background and Favignana Island (WWF manager of the Natural Reserve of the Salt Ponds of Trapani and Paceco, 01-03-



Calendula incana subsp. maritima on Stagnone di Marsala Islands (Isola Grande) (Enrico Vito Perrino, 17-04-2010)



Cynomorium coccineum on Stagnone di Marsala Islands (Isola Grande) (Enrico Vito Perrino, 17-04-2010)



Myriolimon ferulaceum on Stagnone di Marsala Islands (Isola Grande) (Enrico Vito Perrino, 17-04-2010)



Scrophularia frutescens on Stagnone di Marsala Islanda (Isola Grande) (Enrico Vito Perrino, 17-04-2010)



Limonium hyblaeum on Stagnone di Marsala Islands (Isola Grande) (Enrico Vito Perrino. 17-04-2010)

6.1.4 - Designation letter and related data

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Date of Designation 2017-10-19