

Information Sheet on Ramsar Wetlands (RIS) – 2006-2008 version

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

Ministry for the Environment, Land and Sea –
Directorate General for Nature Protection.
Via Capitan Bavastro 174, I-00154 Rome
Tel./Fax: +39.06.57228510/+39.06.57228390
Email: DPN-Div6@minambiente.it

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

20 November 2008

3. Country:

Italy

4. Name of the Ramsar site:

Stagno di Cagliari

5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

- a) Designation of a new Ramsar site ; or
b) Updated information on an existing Ramsar site

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

- i) the boundary has been delineated more accurately ; or
ii) the boundary has been extended ; or

iii) the boundary has been restricted**

and/or

If the site area has changed:

i) the area has been measured more accurately ; or

ii) the area has been extended ; or

iii) the area has been reduced**

**** Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

Thanks to a Life Nature Project (Gilia), the Site has been object of several actions devoted to recovery the lagoon eco system. The ecological characteristics have been systematically monitored with particular attention to avifauna, improving the wise use of a few sectors of the wetland.

7. Map of site:

a) A map of the site, with clearly delineated boundaries, is included as:

i) a **hard copy** (required for inclusion of site in the Ramsar List): ;

ii) an **electronic format** (e.g. a JPEG or ArcView image) ;

iii) a **GIS file providing geo-referenced site boundary vectors and attribute tables** .non ci e' pervenuto nessun file GIS. Could you please provide it? Thanks

b) Describe briefly the type of boundary delineation applied:

8. Geographical coordinates (latitude/longitude, in degrees and minutes):

39° 12'N; 09° 03'E

9. General location:

Italy, Sardinia Region, Province of Cagliari, Municipalities of Assemini, Cagliari, Capoterra ed Elmas.

10. Elevation: (in metres: average and/or maximum & minimum)

Average: 1.8, maximum: 7 m a.s.l., minimum: 0 m a.s.l.

11. Area: (in hectares) 3.466

12. General overview of the site:

The Santa Gilla Lagoon is situated in the west-north-west area of Cagliari reaching the town's hinterland. It is one of the widest and more articulated wetland coastal system of Sardinia. The mixing of inland and sea waters is the main characteristic which let several interesting habitats from an ecological point of view to develop. It has been always very important for local population, mostly for salt production and fisheries.

13. Ramsar Criteria:

1	•	2	•	3	•	4	•	5	•	6	•	7	•	8	•	9
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14. Justification for the application of each Criterion listed in 13 above:

1. The site represents a typical example of coastal wetland in the Mediterranean Region. The site is part of the coastal system of Cagliari Gulf contributing to maintain the right ecological equilibrium between fresh and salt water.

2. The Site supports many waterfowls species listed in Annex I of the Directive 79/409/EEC (*Ardeola ralloides*, *Botaurus stellaris*, *Grus grus*, *Nycticorax nycticorax*, *Tringa glareola*, *Sterna albifrons*, *Sterna nilotica*, *Sterna sandvicensis*, *Plegadis falcinellus*, *Ardea purpurea*, *Glareola pratincola*, *Ixobrychus minutus*, *Phylomachus pugnax*, *Larus genei*, *Aythya ferina*, *Larus audouinii*, *Aythya fuligula*, *Hieraetus pennatus*, *Pandion haliaetus*, *Porphyrio porphyrio*, *Alectoris barbara*, *Alcedo atthis*) and listed in Annex II of the Habitat Directive: fishes (*Aphanius fasciatus*) and amphibians (*Emys orbicularis*).

3. The site supports population of plant and animal species very important to maintain the biodiversity of this biogeographical region. Many waterbirds nest here (*Tachybaptus ruficollis*, *Podiceps cristatus*, *Ixobrychus minutus*, *Nycticorax nycticorax*, *Ardeola ralloides*, *Bubulcus ibis*, *Egretta garzetta*, *Ardea purpurea*, *Phoenicopterus roseus*, *Tadorna tadorna*, *A. platyrhynchos*, *Aythya ferina*, *Circus aeruginosus*, *Rallus aquaticus*, *Gallinula chloropus*, *Porphyrio porphyrio*, *Fulica atra*, *Himantopus himantopus*, *Recurvirostra avosetta*, *Burhinus oedipnemus*, *Charadrius dubius*, *C. alexandrinus*, *Tringa totanus*, *Larus ridibundus*, *L. genei*, *L. michabellis*, *Sterna nilotica*, *S. hirundo*, *S. albifrons*) and amongst the anfibians, *Hyla sarda*, is known exclusively for Tyrrhenian islands. The site also supports endemic plants *Plagius flosculosus*, *Stachys glutinosa*, *Limonium dubium*, *Limonium glomeratum*, *Limonium retinameum*, *Polygonum scoparium*, *Urtica atrovirens*, *Arum pictum* and *Ornithogalum corsicum*.

4. Among the breeding species, the site supports: *Anas platyrhynchos*, *Aythya ferina*, *Ardea purpurea*, *Ardeola ralloides*, *Bubulcus ibis*, *Burhinus oedipnemus*, *Charadrius dubius*, *C. alexandrinus*, *Circus aeruginosus*, *Egretta garzetta*, *Fulica atra*, *Gallinula chloropus*, *Himantopus himantopus*, *Larus ridibundus*, *L. genei*, *L. michabellis*, *Ixobrychus minutus*, *Nycticorax nycticorax*, *Phoenicopterus roseus*, *Podiceps cristatus*, *Porphyrio porphyrio*, *Rallus aquaticus*, *Recurvirostra avosetta*, *Tachybaptus ruficollis*, *Tadorna tadorna*, *Tringa totanus*, *Sterna nilotica*, *S. hirundo*, *S. albifrons*. Because of its ecological characteristics, strategic position, forbidden hunting, the site appears to be one of the most important wintering area of the Southern and insular Italy. It supports more than 20 species: e.g. *Anas crecca*, *Anas chpeata*, *Anas penelope*, *Anas strepera*, *Ardea cinerea*, *Calidris alba*, *Calidris minuta*, *Charadrius alexandrinus*, *Charadrius hiaticula*, *Egretta garzetta*, *Fulica atra*, *Larus genei*, *Larus michabellis*, *Numenius arquata*, *Phalacrocorax carbo*, *Pluvialis squatarola*, *Recurvirostra avosetta*, *Tadorna tadorna*, *Tringa erythropus*, *Tringa totanus*, *Vanellus vanellus* and it is the most important wintering site for *P. roseus* with 14% of the western paleoartic population in 2005.

5. the site is one of the most important wetlands of the Southern part of Italy. During the winter period more than 36.331 waterbirds belonging to fifty different species have been counted with an average of 27.672 individuals in the period between 1993 and 2006

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

a) biogeographic region:

Mediterranean

b) biogeographic regionalisation scheme (include reference citation): EEA EU Habitat Directive Biogeographical Regions, Europe 2005, officially used in the Habitats Directive (92/43/EEC) and for the EMERALD Network set up under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). The bio-geographic regions dataset contains the official delineations used Modifications adopted by the Bern Convention Standing Committee and approved by habitats Committee in 05/04/03.

<http://dataservice.eea.eu.int/dataservice/metadetails.asp?id=839&i=1>

16. Physical features of the site:

From a geological point of view the Santa Gilla Lagoon is young, formed in the late Quaternary period, between 100.000 and 70.000 years ago, during the Tyrrhenian stage. The site is located in the South of Sardinia Region, close to the Chief Towns of the Region, Cagliari. This land belongs to Assemini, Capoterra and Elmas. This wetland is a typical saline lagoon with various connections to the sea. It includes a reedy dune system utilized as a salt-exploitation. It supports a good assemblage of rare, vulnerable or endangered species of plants and animals and important habitats. It is divided into three main areas: 1) Lagoon of Santa Gilla (1.500 hectares), which has natural and artificial connection to the sea. It is 1.20 m average depth, and it has two principal affluent, Rio Mannu e Rio Cixerri. 2) Saline lagoon of Macchiareddu (1.350 hectares), which is an important salt exploitation site, is separated from the sea by a littoral cordon. 3) Lagoon of Capoterra (100 hectares). This wetland is in the south of Campidano trough, originated by fluvial erosion (sea regression and sea intrusion) and by subsidence of Thirrenian platform in the Quaternary. This depression is filled up by marine intrusion and separated from the sea via a littoral cordon. The platform is constituted of one 5 m depth Miocenic carbonaceous sandstone bed and siliceous stones rest on plastic clay bed.

17. Physical features of the catchment area:

It is the terminal part of several basins (Flumini Mannu, del Rio Cixerri, del Rio Sa Nuxedda, del Rio Sa Murta e del Rio Santa Lucia) covering 2.404 km², about 10% of the Region. The basin of Flumini Mannu (1.517 km²) is the most important in southern Sardinia. Rio Cixerri (covering 534,7 km²) runs for 50,6 km reaching Campidano Valley. Rio Santa Lucia is wide 102,2 km². There are also several fewer stagional tributaries: Rio sa Nuxedda, Rio Giacu Meloni, Rio sa Murta, Rio is Molentis and Rio di Sestu. The site is subject to a Mediterranean climate with winds predominately from NW and SE.


18. Hydrological values:

The Phoenicians used it as a natural inland harbour with a view to possible expansion into the fertile Campidano Plain and the forests of the Gutturu Mannu massif, as well as for the transportation of goods to the inland settlements of the native inhabitants. At the end of the 16th century, seven new canals giving access to the sea were dug through the lagoon's line of dunes and in the centuries that followed (17th-18th centuries) the area known as Sa Illetta became the property of the Cervellò, a family of atalan origins and they made substantial changes to the lagoon with regular municipal authorizations. Following the tremendous flood in 1892, which caused serious damage to the settlements in the southern basin of the Cixerri and Flumini Mannu water courses, in 1904 the lagoon was embanked and in 1920 engineer Luigi

Conti-Vecchi planned the great works for the regulation and reclamation of more than two thousand hectares, leading to the creation of the salt pans actually in use.

19. Wetland Types

a) presence:

Marine/coastal: A • B • C • D • E • F • G • H • I •  • K • Zk(a)

Inland: L • M • N • O • P • Q • R • Sp • Ss • Tp • Ts • U • Va •
Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made:  • 2 • 3 •  •  • 6 • 7 • 8 •  • Zk(c)

b) dominance: 5, J, 9, 4, 1

20. General ecological features:

The variety of habitats depending from the different salinity of the water determinates a remarkable multiplicity of vegetation kinds: psammophile communities on emerged sands, halo-nitrophilous vegetation surrounding S. Gilla lake, communities of perennial halofites (*Arthrocnemum fruticosum*, *Arthrocnemum glaucum*, *Halocnemum strobilaceum* prevalent) in wet brackish meadows, meadows subject to tidal variations in water level with *Ruppia maritima* mostly in the southern part of S. Gilla, annual meadows and fields, muddy expanses covered with *Phragmites australis*, *Typha latifolia* and *Typha angustifolia* around the mouth of Mannu and Cixerri rivers, Mediterranean shrubs (*Cistus monspeliensis*, *Cistus salvifolius*, *Olea europea* var. *sylvestris*, *Pistacia lentiscus*, *Olea europea* var. *sylvestris*, *Lavandula stoechas*) on the western salt pans and around P.to di S. Pietro.

21. Noteworthy flora:

There are a few subendemic species such as *Crepis bellidifolia*, known for Sardinia, Corsica, Tuscany Islands, *Teucrium marum*, known for Sardinia, Corsica, Tuscany Islands, Provence and Dalmatia and several species quite rare in Italy (*Lavatera triloba*, *Ranunculus macrophyllus*, *Oenanthe crocata*, *Halocnemum strobilaceum*, *Magydaris pastinacea* and *Asparagus stipularis*).

22. Noteworthy fauna:

the site is represented by a great richness in fauna supporting many waterfowls listed in Annex I of the Directive 79/409/EEC (*Ardeola ralloides*, *Botaurus stellaris*, *Grus grus*, *Nycticorax nycticorax*, *Tringa glareola*, *Sterna albifrons*, *Sterna nilotica*, *Sterna sandvicensis*, *Plegadis falcinellus*, *Ardea purpurea*, *Glareola pratincola*, *Ixobrychus minutus*, *Phylomachus pugnax*, *Larus genei*, *Aythya farina*, *Larus audouinii*, *Aythya fuligula*, *Hieraaetus pennatus*, *Pandion haliaetus*, *Porphyrio porphyrio*, *Alectoris barbara*, *Alcedo atthis*) and listed in Annex II of the Habitat Directive: fishes (*Aphanius fasciatus*) and amphibians (*Emys orbicularis*).

The site also supports *Hyla sarda*, *Bufo viridis*.

23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

The population of the area has ever been closely linked to the lagoon for both fisheries and production of salt as several archeological (Santa Igia) and religious (Churches dedicated to San Simone and Santa Caterina) sites show.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box and describe this importance under one or more of the following categories:

- i) sites which provide 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:
 - ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
 - iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
 - iv) sites where 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:
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24. Land tenure/ownership:

- a) within the Ramsar site: private and State owned
 - b) in the surrounding area: private and State owned
-

25. Current land (including water) use:

- a) within the Ramsar site:
salt production, fisheries
- b) in the surroundings/catchment:
urban and cultivated areas

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

- a) within the Ramsar site:

With the industrial boom of the 1960s, the lagoon was polluted by chemical, mechanical, engineering, building and food-processing industries, as well as by urban waste from many towns through canals. Thanks to reclamation projects and the building of infrastructures in the entire area with funds provided by the Sardinian Autonomous Region at the end of the 1980s, the danger of mercury pollution was removed with the dredging of an enormous amount of mud from the bottom of the lagoon. In 1999 a serious flood destroyed part of the works which had been built and led to a period of inactivity. In 2001, a devastating sea storm caused more damage and once again brought the lagoon's ecosystem to its knees. In that period the salubrity of the waters was compromised to such a point that the municipal administration of Cagliari issued an order (revoked in the month of May) prohibiting the harvesting of mussels, clams and other molluscs in the lagoon due to the excessive proliferation of faecal coliform bacilli.

- b) in the surrounding area: urban expansion.
-

27. Conservation measures taken:

- a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:

National: the Site is a faunistic protection oasis according to the Regional Law n. 23/1998 where hunting is forbidden.

International: the Site occurs in the Important Bird Area (IBA) Cagliari wetlands, in the Special Area for Conservation (EU Habitats Directive) Stagno di Cagliari, Saline di Macchiareddu, Laguna di Santa Gilla and in the Special Protection Area (EU Birds Directive) Stagno di Cagliari

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

c) Does an officially approved management plan exist; and is it being implemented?:
It is in the course of definition.

d) Describe any other current management practices:

At the end of the 1990s different institutions intervened to solve the situation of the site: the European Community co-funded the Life Natura "Gilia" project with the municipal administrations of Elmas, Assemini, Cagliari and Capoterra for the purpose of creating a natural reserve of international interest; the provincial administration drew up the Plan for an Integrated Area (PIA) titled "6 Sud-Santa Gilla" financed with public and private funds within the framework of a new conception for the purpose of administering the resources of the lagoon by means of compatible productive activities, services and works of different kinds; in 1998, a decree of the Regional Council for the Environment granted the Consorzio Ittico Santa Gilla (set up at that time with a merger of the two cooperatives La Peschereccia and Consarpesca of Cagliari) the exclusive management of the entire area for ten years. Just after the sea storm in 2001, solid urban wastes, used car batteries, tyres, whole cars, mechanical parts, dead animals and other foreign objects were removed from the lagoon. In October 2004, the Area Authority included funds amounting to one million euros in the Three-Year Executive Plan to repair and develop the water treatment system.

28. Conservation measures proposed but not yet implemented:

29. Current scientific research and facilities:

The health of the lagoon is now constantly monitored by technicians of the Local Health Agency and the University of Sassari who perform periodic analyses. Also involved are the operators of an office created specifically by the towns of Cagliari, Elmas, Assemini and Capoterra for the purpose of monitoring and performing reclamation works and monitoring flora and fauna, mostly avifauna.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

There is a visitors' centre Centro in the locality Terr'e Oli, natural trails and observation points.

31. Current recreation and tourism:

The educational programs carried out involved around 1.500 people.

32. Jurisdiction:

Region Autonomous of Sardinia

Mailing Address: Via Roma 80, I-09123 Cagliari

Telephone/Fax: +39.070.6067007/+39.070.6066716

Email: amb.assessore@regione.sardegna.it

33. Management authority:

Ufficio Intercomunale per la gestione della ZPS Stagno di Santa Gilla (Comuni di Assemini, Cagliari, Capoterra, Elmas)

Head of the Management authority: Ing. Paolo Malavasi

Mailing Address: Via Nazario Sauro snc, I-09100 Cagliari

Telephone: +39.070.6776200

Email: santa_gilla@yahoo.it

34. Bibliographical references:

A.P.M. & I.V.R.A.M., 1993-1999 - *Censimenti invernali degli uccelli acquatici nelle zone umide della Sardegna*. RAS (Ass.Difesa Amb. - Com. Reg. Faun.).

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- UFFICIO INTERCOMUNALE 2005-2006: dati Censimenti

Please return to: **Ramsar Convention Secretariat, Rue Mauverney 28, CH-1196 Gland, Switzerland**
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • e-mail: ramsar@ramsar.org

