Information Sheet on Ramsar Wetlands

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties.

NOTE: It is important that you read the accompanying *Explanatory Note and Guidelines* document before completing this form.

1. Date this sheet was completed/updated:

20.8.98

For office use only.

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Designation date Site Reference Number

2. Country:
Italy

3. Name of wetland:
Orbetello Lagoon

4. Geographical coordinates:
42° 27' N - 1l° 13' E

5. Altitude: (average and/or max. & min.). 0 m

6. Area: (in hectares) 887 ha

7. Overview: (general summary, in two or three sentences, of the wetland's principal characterstics)
The lagoon was an ancient gulf, then separated by the sea thanks to two sand dunes which reach the "fossil island" of Argentario, now a promontory. The habitat comprehends the sandy beaches, the brackish lagoon, some freshwater ponds, small woodlands, pinewoods, the cultivations. The lagoon is a fundamental site for resting, wintering or nesting for thousands of waterfowl.

8. Wetland Type: (please circle the applicable codes for wetland types as listed in Annex I of the *Explanatory Note and Guidelines* document)

marine-coastal: A - B - C - D - **E** - F - G - H - I - **J** - K

inland: L - M - N - O - P - Q - R - Sp - Ss - Tp
Ts - U - Va - Vt - W - Xf - Xp - Y - Zg - Zk

man-made: 1 - 2 - **3** - 4 - 5 - 6 - 7 - 8 - 9

Please now rank these wetland types by listing them from the most to the least dominant: a)J; b) E; c) 3; d)Ts.

9. Ramsar Criteria: (please circle the applicable criteria; see point 12, next page.)

1a - lb - lc - 1d / 2a - 2b - 2c - 2d / 3a - **3b** - **3c** / 4a - 4b

Note: criterion 2a also applies - globally threatened waterbirds Crex crex and Aythya nyroca occur at the site - comment by Wetlands International, EH, 31-05-1999
Please specify the most significant criterion applicable to the site: 1a

10. **Map of site included?** Yes. ***Cartography:*** IGMI

11. **Name and address of the compiler:** Dr. Paolo Macedone via Bresadola 54, 00171 Roma.

12. **Justification of criteria:** The Orbetello lagoon is the most important continental lagoon along the Tyrrhenian coast. It gives hospitality to more than 10.000 waterfowl, such as *Himantopus himantopus*, *Recurvirostra avosetta*, *Numenius tenuirostris*, *Circus pygargus*, *Merops apiaster*, and it is a nesting site for *Tadorna tadorna* and *Phoenicopterus ruber*. The area is the most southern site for the heather *Calluna vulgaris.*

13. **General location:** 28 km S of GROSSETO (nearest Provincial Administrative town); 136 km S of FLORENCE (Regional Administrative city); 110 km NW of ROME.

14. **Physical features:** The Orbetello lagoon is now separated by the sea thanks to two main sand bars, Giannella and Feniglia, which starting from the Maremma coast reach the Argentario. A third sand bar reaches the town of Orbetello, which is located just in the middle of the lagoon, and then it is extended with a dam as far as the Argentario, parting the lagoon into two basins: the lagoon of Ponente (west) and the lagoon of Levante (east). The sand dune of Giannella is more recent than the other: it was formed, in historic times, by alluvial debris carried by the river Albegna. The sand bar of Feniglia is formed by a series of parallel dunes, which sand was accumulated by the sea in the direction of the predominat south winds. The depth of water varies between 1.5 m and 2 m.

15. **Hydrological values:** tide flows in Ansedonia channel is 4 cm/sec, NW-SE direction . Average salinity: 37.8 ‰; pH: 10. Temperature: 14.69 ± 5.89 °C. Oss.7.58 ± 2.20 mg/l.

16. **Ecological features:** shallow brackish waters with submersed vegetation; the banks are covered with *Phragmites australis*, *Juncus* spp., *Salicornia europaea*, *Tamarix gallica*, *Populus alba*; freshwater ponds; sand dunes colonized by *Ammophila littoralis*, *Juniperus oxycedrus macrocarpa*, *Juniperus phoenicea*, and Mediterranean shrubs and trees, as *Phyllirea latifolia*, *Myrtus communis*, *Quercus suber*, *Q. ilex*, *Paliurus spina-christi*, *Euonymus europaeus*, *Erica arborea*; wide meadows; cultivated fields. Some *Eucaliptus* spp. has been introduced in the past, but they are marginal and not invasive.

17. **Noteworthy flora.** *Quercus suber*, *Calluna vulgaris* (most southern site), *Pinus halepensis*, wild orchids (*Serapias* spp., *Ophrys* spp., *Orchis* spp., *Limodorum abortivum*, *Anacamptys pyramidalis*). Particularly good examples of native plant communities.

18. **Noteworthy fauna. Fish fauna**: *Liza saliens*, *Mugil cephalus*, *Anguilla anguilla.* ***Economical importance:*** *Sparus auratus*, *Dicentrarchus labrax*, *Solea lutea*. In the

surroundings: *Hystrix cristata.* **Waterfowl*:*** *Gavia artica*, *Podiceps cristatus*, *P. grisegena*, *P. nigricollis*, *Tachybaptus ruficollis* (nesting), *Phalacrocorax carbo*, *Botaurus stellaris*, *Ixobrychus minutus* (nesting), *Egretta garzetta*, *Casmerodius albus*, *Ardeola ibis*, *A. ralloides*, *Ardea cinerea*, *A. purpurea*, *Nycticorax nycticorax*, *Platalea leucorodia*, *Plegadis falcinellus*, *Ciconia ciconia*, *Phoenicopterus ruber* (its wintering population is the most significant of the whole Mediterranean)**,** *Anser* spp., *Anas strepera* (one of the largest populations), *A. penelope*, *A. crecca*, *A. querquedula*, *A. platyrhyncos* (nesting), *Tadorna tadorna*, *Aythya marila*, *A. fuligula*, *A. ferina*, *A. nyroca* (globally threatened; occasionally nesting), *Glaucionetta clangula*, (occasionally: *Clangula hyemalis*, *Melanitta nigra*, *Somateria mollissima*), *Mergus serrator*, *Circus aeruginosus*, *C. cyaneus*, *C. pygargus* (nesting), *Aquila pomarina*, *A. clanga*, *Pandion haliaetus*, *Grus grus*, *Porzana pusilla*, *Porzana parva*, *P. porzana*, *Crex crex* (globally threatened), *Rallus aquaticus* (nesting), *Gallinula chloropus*, *Fulica atra* (nesting), *Haematopus ostralegus*, *Charadrius* spp. (some nesting), *Pluvialis* spp., *Arenaria* spp., *Gallinago* spp., *Numenius* spp., *Limosa* spp., *Tringa* spp., *Calidris* spp., *Burhinus oedicnemus* (nesting),*Himantopus himantopus* (nesting), *Recurvirostra avosetta*, *Phalaropus lobatus* (locally rare species), *Glareola pratincola*, *Chlidonias niger*, *C. leucopterus*, *C. hybrida*, *Sterna hirundo* and *S. albifrons* (nesting). *Anas clypeata and A. acuta* are represented by the 10% of the whole Italian population of these species. *Clamator glandarius*, *Melanocorypha calandra* and *Sylvia conspicillata* have their most northern nesting sites here. The lagoon hosts more than 10.000 Anatidae and Rallidae.

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19. **Social and Cultura values:** fishing activity and tourism in the neighbouring areas. Ecological values: microclimate improvement; important feeding site for fish and birds; resting and nesting site for many migratory species. Education: more than 9,000 people visit the WWF Reserve every year.

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20. **Land tenure/ownership:** a)State, WWF Italy, Privates owners, Orbetello Municipality.
b)Privates Owners. The site's management is under the responsibility of WWF Italy, Via Garigliano 57, 00198 Roma.

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21. **Current land use:** a) nature conservation, environmental education, naturalistic tourism, agriculture. b) agriculture, fishing, tourism, aquaculture. On 2550 hectares of the lagoon, outside the Reserve, hunting is permitted, under specific rules.

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22. **Factors adversely affecting the site's ecological character:** changes in flora due to eutrophication; morphological changes in the surroundings due to bad water circulation.

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23. **Conservation measures taken:** The Management Authority Commissioner is undertaking a monitoring programme of the wetland. WWF Italy and the Italian Wildlife Institute are undertaking a yearly waterfowl census. WWF has carried out a zoning plan for the Reserve area. Hunting in the westem side of the lagoon has been strongly reduced. A LIFE project, aiming at wetland restoration and at resting and nesting sites rehabilitation, is in progress. Starting since 1993 the goverrunent has carried out interventions in the lagoon for 60 billion lire, as follows: removal of macroalgae to strengthen development of the most important species of plants; hydraulic works to improve water circulation between sea and lagoon;

connecting sewage of the town of Orbetello to the Monte Argentario cleaning plant; construction of phytopurification basins for aquaculture sewage; rehabilitation of some phanerogams; general improvement of water condition and sounding sediment. Since 1994 no death of fish has been observed in summer.

24. **Conservation measures proposed but not yet implemented:** enlargement of Ramsar site to the whole lagoon.

25. **Current scientific research and facilities:** ringing station for migratory birds; ecosanitary study on influenza viruses in Anatidae (INFS: National Institute for the Wild Fauna).

26. **Current conservation education:** environmental education centre (Casale Giannella); guided visits, birdwatching hides, butterfly garden.

27. **Current recreation and tourism:** birdwatching, one day tourism, summer camps, school camps. Frequency: 9,000 visitatore per year (1997)

28. **Jurisdiction:** Oasi di Protezione since 1970. a) Regione TOSCANA, Province of Grosseto.
b) Departtnent of Environment. Municipalities: Orbetello, Argentario.

29. **Management Authority:** WWF Italy, Via Garigliano, 57 - 00198 Roma, Italy.

30. **Bibliographical references:**

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- Lenzi, M., Mattei, N., Solimeno, P., 1998 - Analisi dei movimenti e dello svernamento del germano reale *(Anas platyrhynchos)* nella laguna di Orbetello