Information Sheet on Ramsar Wetlands (RIS)

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

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

1. **Date this sheet was updated**: 19th August 2002.

2. **Country**: India

3. **Name of wetland**: SASTHAMKOTTA LAKE

4. **Geographical coordinates**: 9^0 00 to 9^0 5' N latitude, 76^0 35 to 76^0 40' E longitude
South West Coast of India

5. **Elevation**: (average and/or maximum and minimum) : 33 m above MSL

6. **Area**: (in hectares): 373 ha

7. **Overview**: (general summary, in two or three sentences, of the wetland's principal characteristics)

The Sasthamkotta lake is the largest fresh water lake in Kerala covering an area of 373 hectare It does not get frozen in winter and fresh water is available 365 days a year. It is surrounded by hills on all sides except south, where, a bund has been constructed separating the lake from the neighbouring rice fields. A large part of the lake has been reclaimed for agriculture. The source of water is from the underground sprouts. The lake has a capacity to hold 22390 million liters of water and serves as the source of drinking water for half a million people of Kollam district.

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**	**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:	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**Zk(c)**		

Please now rank these wetland types by listing them from the most to the least dominant:
O

9. **Ramsar Criteria**: (please circle the applicable criteria; see point 12 below)

1 **2** **3** **4** **5** **6** **7** **8**

Please specify the most significant criterion applicable to this site:
1

10. **Map of site included**? Please tick **YES** --or-- **NO**
(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map
traits.)

Yes

11. **Name and address of the compiler of this form**:

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New Delhi- 110 003
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Tel: 91(11)4616532, 4691760-62

With inputs from:
Centre for Water Resources Development and Management, PO Kunnamangalam, Kozhikode 673 571, Kerala, India

12. Justification of the criteria selected under point 9, on previous page. (please refer to Annex II in the Explanatory Note and Guidelines document).

(i)Criterion 1:
It is the largest fresh water lake in Kerala, the water in the lake is special in that it does not contain common salt or other minerals and metals. No water plant grows in the lake, which is also totally devoid of any flora.

(ii) Criterion 2:
The wetland supports some vulnerable, endangered and critically endangered species as:
Critically Endangered: *Puntiusn ticto punctatus* (Day)
Endangered: *Horabagrus brachysoma* (Gunther)
Vulnerable: *Parambassi thomassi* (Day)

(iii) Criterion 7:
The wetland supports many fish species including some indigenous fish species like: *Puntiusn ticto punctatus* (Day), *Puntius sarana subnasutus* (Ham.), *Horabagrus brachysoma* (Gunther), *Etroplus suratensis* (Bloch), *AplochEilus lineatus* (Val.), *Parambassi thomassi* (Day) and *Macrognathus guentheri.*

Some other species which found in the lake are:
Megalpos cyprinoides (Broussonet), *Puntius fialmentosus* (Valenciennes), *Puntiusn ticto punctatus* (Day), *Puntius sarana subnasutus (*Ham.), *Glossogobius giuris (*Ham. Buch.), *Horabagrus brachysoma* (Gunther),Sigala spp. *Mystus gulio* (Ham.),Singhi *Heteropneustes fossilis* (Bloch), *Etroplus suratensis* (Bloch), *Etroplus maculatus* (Bloch), *Amblypharyngodon melettinus* (Val.), *Xenentodon cancila* (Ham. Buch.), *Aplocheilus lineatus* (Val.), *Parambassi thomassi* (Day), *Macrognathus guentheri.*

(iv) Criterion 8:
27 species of freshwater fish depend on this wetland for food, spawning and nursery.

13. **General location:** (include the nearest large town and its administrative region)

Kollam town; Kollam District

14. **Physical features:** (e.g. Geology, geomorphology; origins – natural or artificial; hydrology; soil type; water quality; water depth water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

The area receives annual average Rainfall 2398 mm. with mean annual temperature between 26.7^0 C and 29.16^0 C. Undulating hills with steep side slopes and narrow valleys, rock type observed are mainly archaean in origin. Other rock types includes charnockite gneiss and biotite, dolorite dykes cut across these rocks. The Tertiary Varkala bed along the coastal beds of Varkala formation is also observed in the area; the recent sand and silt deposits are observed in the valley portion.

15. **Hydrological Values:** Groundwater recharge, flood control, sediment trapping, shoreline stabilisation etc.)

The lake supplies drinking water to nearly 10 million people including the population of the Municipality of Kollam.

Quality For Surface Water, Interstitial Water and Sediments of Sasthamkotta Wetland

PARAMETER	RANGE	MEAN VALUE
Surface Water:		
PH	7.20 – 7.30	7.25
EC (Millimhos/cm)	50-70	63.00
PO_4 – P (Micro gm. / l)	3.20 – 6.00	4.93
Ca (Micro gm. / l)	6.01 – 10.02	7.01
Na (Micro gm. / l)	2.30 – 9.43	4.33
Fe (Micro gm. / l)	26.25 + 45.94	41.57
Mn (Micro gm. / l)	8.0 – 19.69	12.11
Interstitial Water:		
PH	7.14 – 7.25	7.20
PO_4 – P (Micro gm. / l	0.55 – 1.82	1.11
Fe (Micro gm. / l)	42.00 – 780.00	591.00
Mn (Micro gm. / l)	30.00 – 60.00	49.00
Sediments:		
Organic C (%)	0.80 – 15.8	8.95
PO_4 – P (Micro gm. / l)	1012 – 2030	1690.00
Fe (Micro gm. / l)	6884 – 26648	17724.27
Mn (Micro gm. /l)	46.0 – 130.0	86.36

16. **Ecological features:** (main habitats and vegetation types)

The water in the lake is special in that it does not contain common salt or other minerals and metals. No water plant grows in the lake which is also totally devoid of any flora. A larva called

"Cavaborus" abounds in the lake. They eat up the viruses and bacteria in the water thus contributing substantially to the high degree of purity of the water.
Cashewnut, paddy, tapioca and plantain are grown on and along the banks of the lake. Phytoplankton is scarce and primary productivity is low.

17. **Noteworthy flora:** (indicating eg. which species/communities are unique, rare, endangered or biogeographically importantetc):

NIL

18. **Noteworthy fauna:** (including eg. which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc)

The lake abounds in 21 species of Herrings Sardines of the family Clupeidae. They swim in school generally near shores and estuaries. The most common fish in the lake is "*Callichrous bimaculatus* and *wallago attu*". The fish is so called because most of them are provided with whisker like barbels arranged round the mouth. These are considered sacred and therefore not caught.
Source : education.vsnl.com/dataline/skt.html

19. **Social and Cultural values:** (eg. Fisheries production, forestry, religious importance, archaeological site etc).

The majestic size of the lake is by itself a spectacular sight. The ancient Sastha Temple, which lends its name to the town, is an important pilgrim centre.

20. Land tenure/ownership of:

(a) **Site:** Wetland – Govt. of Kerala
(b) **Surrounding area:** Private ownership

21. **Current land use:**

(a) **Site :** Fisheries, water supply to Kollam municipality and suburbs
(b) **Surroundings:** Plantation crops and Rice cultivation.

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

(a) **Site:** Pollution – sewage and agrochemical
(b) **Surrounding:** Agriculture (plantation crops/rice) in the catchment & sewage disposal from households.

23. **Conservation measures taken:** (national category and legal status of protected areas – including any boundary changes which have been made; management practices; whether an officially approved management plan exists and whether it has been implemented)

Listed national wetland of importance for conservation; No approved MAP exist; MAP has been proposed to MoEF.

24. **Conservation measures proposed but not yet implemented: (**eg. Management plan in preparation; officially proposed as s protected area etc.)

MAP prepared and submitted to MOEF for funding.

25. **Current scientific research and facilities:** (eg. details of current projects; existence of field station etc.)

Nil

26. Current conservation education: (eg. visitors centre, hides, information booklet, facilities for school visits etc.)

Nil

27. **Current recreation and tourism:** (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

Sasthamkotta is on the right bank of the Kallada river. This is a small town dedicated to Lord Sastha. So mostly religious tourists visit here, their frequency is very low. It is an important pilgrim center. Accommodation is available at the PWD (Public Works Department) Rest House.

28. **Jurisdiction** (territorial eg. state/region and functional eg. Dept. of Agriculture/Dept. of Environment etc.)

Forest Department, Kerala.

29. **Management authority:** (name and address of local body directly responsible for managing the wetland)

Kollam Municipality, Kollam District, State Govt. of Kerala, India.

30. **Bibliographical references:** (scientific/technical only)

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