Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties
[Français] [Español]

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**: ASHTAMUDI WETLAND

4. **Geographical coordinates**: Between 8^0 50' to 9^0 05'N latitude and 76^0 35' E longitude

5. **Elevation**: (average and/or maximum and minimum): 10 m above MSL

6. **Area**: (in hectares): 61400 ha

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

The Ashtamudi wetland ecosystems in an estuarine system lies in Kollam district and is the second largest of the Kerala State. This estuary is a palm-shaped extensive water body with eight prominent arms, adjoining the Kollam town. All the arms converge into a single outlet at Neendakara near Kollam, to enter the Lakshadweep sea. This estuary is the deepest among all the estuaries of Kerala with a maximum depth of 6.4 m at the confluence zone. The Kallada river which originates from the western ghats, traverses through virgin forests and finally falls into the Ashtamudi wetland, after travelling a distance of about 120 km. It carries an average runoff of 76,000 million m^3 of freshwater into the estuary every year

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: F,I

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: 8

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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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 particularly good representative example of a wetland that plays a substantial hydrological, biological or ecological role in the natural functioning of a major river basin or coastal system, especially where it is located in a transbounder position. The Ashtamudi wetland is the second largest wetland in the Kerala State and deepest among all the estuaries of Kerala with a maximum depth of 6.4 m at the confluence zone.

(ii) Criterion 2: Wetland supports some endangered species according to the Red Data Book of Indian Plants, such as the *Zyzigium travencoricum.*

(iii) Criterion 3: The wetland supports around 43 species of marshy and mangrove, 57 species birds (6 migratory species and 51 residence species), 97 species of fishes (42 species typically marine, 3 estaurine-riverine and 15 marine esturine) and some unique copepode species. .Details are given in Appendix.

(iv) Criterion 8:
It is an important source of food for fishes, spawning ground, nursery and/or migration path on which fish stocks, either within the wetland or elsewhere, depend. In all 97 species of fishes are found in the estuarie, which includes 42 marine, 3 estuarine, 9 estuarine-riverine and 15 marine estuarine species along with 21 copepod species. List of fishes with status is given in Appendix II.

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

It is in Kollam Town, Kollam District, Kerala.

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 annual range of temperature is comparatively low in Kerala. The area records a maximum temperature of 27.5^0c and a minimum of 25.5^0c. In the coastal area it is hot and humid during April-May while cool during December-January. Laterite is seen in different colours ranging from reddish grey to yellowish red. It contains granite and gneiss stones. Through the atmospheric contact it gradually becomes solid and firm. The laterite soil seen in the districts of Kannur, Kasargode and Kollam is less in organic content. The land area 4-6 metres above sea level are generally regarded as low land. It stretches along the coastal plain on the western side of the state. Between the backwaters and the sea it is a narrow and long stretch of sand. It is low and generally swampy. Moisture regime will be dry in March and April and medium in February and moist during the rest of the year.

15. **Hydrological values**: (groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.)

Flood control and sediment trapping.

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

Congenial habitat for all species of penaied and palaemonid prawns, edible crabs, black clams and a variety of fishes.

17. **Noteworthy flora**: (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc.)

(i) *Zyzigium travencoricum*- endangered species (Red data book of Indian Plants)
(ii) *Calmus rotang*- endemic endangered species
(iii) Mangrove vegetation
Among these three species of true mangroves *Avicennia officinalis, Bruguiera gymnorrhiza* and *Sonneratia casenlaris* are present and around 43 species of marshy and mangrove associates are present.

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

(i) Avian fauna, abundant. 57 species- 6 migratory species and 51 residence species.
(ii) 97 species of fishes (42 species typically marine, 3 estaurine, 9 estaurine-riverine, 15 marine estaurine.
(iii) Unique copepod species. List given in Appendix III.

19. **Social and cultural values**: (e.g., fisheries production, forestry, religious importance, archaeological site, etc.)

Coconut husk retting, fishing, inland navigation, fishing harbour (Neendakara). *It is the second biggest fish-landing centre next to Vembanad estuary, thousands of fisherman depend directly on the estuary for their livelihood.
* Source CESS News letter Vol.12 , March 2002, No.1.

20. **Land tenure/ownership of**:

(a) Site: Wetland- Government of Kerala
(b) Surrounding area: Private ownership

21. **Current land use**:

(a) Site: Fisheries, coir retting
(b) Surroundings/catchment: Plantation crops, Industries

22. **Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects**: (a) at the site (b) around the site
The surrounding areas are thickly populated and urbanised to a greater extent, leading to excessive human interference and subsequent environmental degradation.

(a) Site

- Pollution from oil spills from thousands of fishing boats
- Destruction of natural habitat including reclamation of the estuary. . It is estimated that the total extent of the fragile lake zone has recently shrunk to an area of 61.4 km^2.

(b) Surrounding area

- It is estimated that the total extent of the fragile lake zone has recently shrunk to an area of 61.4 km^2.
- Disposal of huge quantities of untreated sewage from Kollam city; direct disposal of human excreta from hanging latrines.
- Pollution from Punalur Paper mills; Aluminum Industries Ltd., & Ceramics.
- Pollution from fish and sea food industries.
- Pollution from coconut husk retting.

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)

NIL

24. **Conservation measures proposed but not yet implemented**: (e.g, management plan in preparation; officially proposed as a protected area, etc.)

Some of the recommended actions in the Ashtamudi Management Plan are:

- Identifying and phasing out of the pollution sources to create improved sanitation, industrial growth, reduction of industrial growth, reduction of urban waste and ensuring the sustainability of the water quality of the estuary.
- Encouraging mangrove afforestation around the banks of the estuary, to serve both the purpose of shore protection and ecosystem development.
- Stopping estuary reclamation.
- Allowing village level mining in the selected locations only up to sustainable level, but certainly not very close to the banks.
- Setting aside narrow navigation routes, where in fishing nets are not to be used.
- Upgrading the Neendakara port with sanitation facilities, better boat fuelling terminals and drainage terminals.

- Phase out the discharge of waste pith into the water. Alternatively, take up projects for manufacturing value-added products from piths, which are now not only being wasted but also creating serious environmental problems.

It is proposed in the Management Plan to establish three conservation zones, which are:

- A marine bio-reserve to conserve fishery resources and for fisheries research.
- Nature Conservation Park for small mammals and Birds on an uninhabited island within the marine reserve.
- Mangrove conservation-cum-rehabilitation in areas near the confluence point of the Kallada river and the Ashtamudi estuary.

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

NIL

26. **Current conservation education**: (e.g., 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)

Tourism is not developed to its optimum potential, the industry presently relies heaviely on the natural beauty of the region. Training of local people in tourism management and operations is recommended to optimise employment and other local benifits.

28. **Jurisdiction**: (territorial, e.g., state/region and functional, e.g., Dept. of Agriculture/Dept. of Environment etc.)

Kollam District, Govt. of Kerala

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

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

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APPENDIX – I

Birds of Asramom Mangrove Area

S.No.	Common Name	Status
1.	Little Cormorant	R
2.	Indian Darter or Snake Bird	R
3.	Indian Little Green Bittern	R
4.	Indian Pond Heron or Paddy Bird	R
5.	Black Bittern	R
6.	Night Heronn	R
7.	Chestnut Bittern	R
8.	Indian Smaller Egret	R
9.	Little Egret	R
10.	Eastern Large Egret	R
11.	Cattle Egret	R
12.	Common Pariah Kite	R
13.	Brahminy Kite	R
14.	Crested Serpent Eagle	R
15.	Eastern Peregrine Falcon or Duck Hawk	W.V.
16.	White Breasted Water Hen	R
17.	Common Sandpiper	W.V
18.	Rose ringed Parakeet	R
19.	Indian Koel	R
20.	Barn Owl	R
21.	Collared Seeps Owl	R
22.	Malabar Jungle Owlet	R
23.	South Indian Hawk Owl	R
24.	Southern Spotted Owlet	R
25.	Travancore Pied Kingfisher	R
26.	Common Ceylon Kingfisher	R
27.	Brown headed Storkbilled Kingfisher	R
28.	Indian White breasted Kingfisher	R
29.	Black capped Kingfisher	R
30.	Blue tailed Bee-eater	R
31.	Common Bee-eater	R
32.	Southern Indian Roller	R
33.	Small Green Barbet	R
34.	Crimson breasted Barbet	R
35.	Malabar Golden backed Woodpecker	R
36.	Malabar Pigmy Woodpecker	R
37.	South Indian Black headed Oriole	R
38.	Black Drongo	R
39.	Common Myna	R

40.	Southern Red whiskered Bulbul	R
41.	Tree Pie	R
42.	Ceylon House Crow	R
43.	Indian Jungle Crow	R
44.	Southern Red whiskered Bulbul	R
45.	Southern red vented Bulbul	R
46.	Malabar Jungle Babble	R
47.	Brown Flycatcher	W.V
48.	Southern White browned Fantail Flycatcher	R
49.	Parradise Flycatcher	W.V
50.	Travancore Streaked Fantail Warbler	R
51.	Tailor Bird	R
52.	Southern Magpie-Robin	R
53.	The Indian Blackbacked Robin	R
54.	Lesser Wagtail	W.V
55.	Indian White Wagtail	R
56.	Large Pied Wagtail	R

APPENDIX – II

Fishes of Asramom Mangrove Area

S.No.	Species	Status
1	*Arius caelatus*	Marine
2	*Engraulis indicus*	Marine, Estuarine – Freshwater
3	*Engraulis purava*	Marine and Estuarine
4	*Etoplus maculatus*	Freshwater and Estuarine
5	*Etroplus suratensis*	Freshwater and Eastuarine
6	*Fistulaserrata*	Marine and Estuarine
7	*Haplochilus lineatus*	Freshwater and Estuarine
8	*Hemirhamphus xanthopterus*	Marine
9	*Lutianus argentimaculatus*	Marine
10	*Lulianus roseus*	Marine
11	*Mugli cunesius*	Marine
12	*Mugil macrolepis*	Marine and Estuarine
13	*Mugli macrolepis*	Marine and Estuarine
14	*Mugil parsia*	Marine and Estuarine
15	*Mugil seheli*	Marine
16	*Polycanthus cupranus*	Freshwater and estuarine

APPENDIX- III

Stationwise distribution of copepod species in the Ashtamudi estuary

Sl.No.	Name of Species	St.1	St.2	St.3	St.4
1	*Centropages elongatus*	+	+	+	-
2	*C. aleocki*	+	-	+	-
3	*Acartia spinicauda*	+	-	-	-
4	*Acrocalanus gracilis*	+	+	+	-
5	*A. gibber*	+	+	+	-
6	*Euchaeta sp.*	+	-	-	-
7	*Pseudodiaptomus sp.*	+	-	-	-
8	*P. binghami malayalus*	+	-	-	-
9	*P. aurivilli*	+	+	-	-
10	*P. serricaudatus*	+	-	-	-
11	*Oithona sp.*	+	+	+	+
12	*Euterpina sp.*	+	+	+	-
13	*Acrocalanus monachus*	-	+	-	-
14	*Calanopia aurivilli*	-	+	-	-
15	*Isias sp.*	-	-	+	-
16	*Acartia centrura*	+	-	+	-
17	*Paradiaptomus sp.*	-	-	-	+
18	*Phyllodiaptomus sp.*	-	-	-	+
19	*Mesocyclops sp.*	-	-	-	+
20	*Cletocamptus sp.*	-	-	-	+
21	*Acrocalanus longicornis*	+	-	-	-