



# Ramsar Information Sheet

Published on 31 January 2024

## India

### Karaivetti Bird Sanctuary



Designation date	24 May 2023
Site number	2537
Coordinates	10°58'48"N 79°02'44"E
Area	453,72 ha

## 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

Karaivetti Bird Sanctuary is located in Ariyalur District and covers an area of 453.715 ha. It lies between 10°58'12.19"N and 10°58'.50"E latitude and 7902'6.56" and 7903'26.2" Longitude. The Sanctuary is located 50 km from Trichy and 35 km from Thanjavur. The nearest town Ariyalur is situated 12 km from the Sanctuary. The Sanctuary mainly consists of a lake managed by the Forest Department and Public works Department (PWD) and stores water from the Mettur Dam from September onwards. It is one of the largest inland wetlands of Tamil Nadu and also helps in recharging the ground water of the area. The lake is supplemented by the north-east monsoon rainfall from October till January but it remains dry from July till it receives water from the Mettur Dam through Pullambadi canal. The soil present in the lake is black cotton soil while alluvial soil also gets deposited every year during release of water from Mettur Dam, but the humus content of the soil is low. Hard rock and sedimentary formations are found here from the depth beyond 3 meters. The lake water is extensively utilized by the villagers for agricultural crops such as paddy field, sugar cane, cotton, corn, and split red gram, covering an area of approximately 4124.00 ha.

The Sanctuary lies in the Central Asian Flyway and is an important breeding and foraging site for both resident and migratory birds. It has recorded one of the largest congregations of water birds among all the lakes in the State of Tamil Nadu. About 198 species of birds have been recorded in the Sanctuary; some of the important waterbirds that visit the Sanctuary are Bar headed Goose, Pin tailed duck, Garganey, Northern Shoveler, Common Pochard, Eurasian Wigeon, Common teal and Cotton teal. 14 species of colonial nesting waterbird species nest in the trees found in and around the wetland. When water level starts receding, larger birds like Painted storks and Open bill storks start congregating in the Sanctuary. The best time to visit the sanctuary for bird watching is from January to April when the bird population is high.

## 2 - Data & location

### 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

##### Responsible compiler

Institution/agency	Tamil Nadu State Wetland Authority
Postal address	O/o Additional Principal Chief Conservator of Forests & Member Secretary No.1, Jeenis Road, Panagal Building, VIII Floor, Saidapet, Chennai 600 015 Tamil Nadu, INDIA

##### National Ramsar Administrative Authority

Institution/agency	Ministry of Environment, Forest & Climate Change
Postal address	Office of the Secretary, Ministry of Environment, Forest and Climate Change, Government of India, Indira Paryavaran Bhavan, Jorbagh Road, New Delhi - 110 003 INDIA

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

From year	2005
To year	2021

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Karaivetti Bird Sanctuary
Unofficial name (optional)	Karaivetti Tank

## 2.2 - Site location

### 2.2.1 - Defining the Site boundaries

#### b) Digital map/image <1 file(s) uploaded>

Former maps	0
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Boundaries description

The Site's boundaries is based on the boundaries of a nationally protected area (Karaivetti Bird Sanctuary) and hence, their boundaries are the same. The boundaries capture both the permanent and seasonally flooded area and has been drawn to protect the wetland ecosystem.

2. The boundaries of Site are as follows:

Note: "S.F.No" in the Survey number of the Site which denotes Survey Field Number.

North:

The Boundaries of 65 AyanSuthamali Village starting from quadruple junction point of Survey No.177, 153 and 188. The boundary runs generally towards the West to East. The North side S.F.No.188, 189, 192, 193, 195, 196, 208, 209/1B, 209/14, 210/2B, 3A1, 4B, 272-1A, 274/3, 4B, 275/1A3, 2C, 276/1B, 3, 295, 237, 245.

East:

Then the boundary runs generally towards the southern side and starting from quadruple junction point of 65 Ayan Suthamalli Village S.F.No.277, 295, 287, 288. After that the boundary runs towards southern side from North to South side, the eastern side Survey No.287, 286, 284/4A, 4C & 5, 282/2A, 3B, 4B, 5B, 6, 7B & 8B.

Starting from Karaivetti village 42/1C, 2B, 41/2A, 2B, 2C, 35/2B1A, 2B2, 2D3A, 2D3B, 2D3C, 36/1B2A, 1B2B, 1B2C, 1B2D, 1B2E, 1B2F, 1B2G, 1B2H, 1B2I, 1B2J, 1B2K, 1B2L, 1B2M, 1B2N, 37/2B, 38 and 53.

South:

Thence the boundary runs generally towards east to west and starting from quadruple junction point of Karaivetti village SurveyNo.53, 54, 55 & 56.Starting from S.F.No.55, 59, 57/1B1, 67/7B1, 7B2, 8B1, 4B1, 4B2, 4B3, 66/1B2, A1A, 73/4B, 5B1, 5B2, 73/3B, 2B, 7A3, 7D, 7A2, 79/1B, 2B, 3B1, 3B2, 4B2A, 5B, 80/7D, 8B, 8C, 83/6B1A, 6B1B, 84, 96/1B1, 97/2, 98/1B, 6B2, 6A2, 125/2, 126/1B, 2B1, 127/1B1, 1B2, 1B3, 1B4, 1B5, 5B1, 6, 122/5B and 6B1 and then towards Venganur village Survey No.91/1B1, 1B2A, 2B1, 5B, 6B, 7B, 9B & 10B, 88/10B, 1B1A and 11B1B.

West:

Thence the boundary runs generally towards South to North and starting from junction point of 71 Venganur village Survey No.88/11B1A, 91/1B1A, 88/11B1B. After that the boundary runs towards western side S.F.No.88/1A, 4A4, 4A5, 4A6, 8A, 11B1A, 11B1B, 89/1A, 4A, 5A, 6A, 86/9A, 82/1A2, 2A, 6A, 9A, 83/1B, 78 and 77.

And then runs to Karaivetti Village boundaries S.F. Nlo. 189, 190 and 191 of Sanravoor Village.

And then turns to Eastern side Boundary and runs towards Eastern side S.F. No S.F.No.235, 236, 237 and 245.

And then turns to Northern side Boundary and runs towards North in 65 AyanSuthamalli Village S.F.No.245, 243, 242, 220, 219, 218, 217 and 177.

### 2.2.2 - General location

a) In which large administrative region does the site lie?

b) What is the nearest town or population centre?

### 2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes  No

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

### 2.2.4 - Area of the Site

Official area, in hectares (ha):

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

### 2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
WWF Terrestrial Ecoregions	Tropical and Sub-tropical dry broadleaf forest (Indo-Malayan Ecoregion)

### 3 - Why is the Site important?

#### 3.1 - Ramsar Criteria and their justification

<no data available>

Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

The Site supports 7 Vulnerable species and 8 near threatened species. Out of the 198 species of birds recorded in the Site, 5 are classified as VU and 8 as NT in the IUCN Red List. Other VU species in the Site are the Indian flap-shelled turtle and the Bonnet macaque. The Indian flap-shelled turtle prefers swampy areas with ample soil and sunlight as nesting grounds which is provided by this Site. It is also pouched for meat, hence, conserving this Site is important for protecting this species. The bonnet macaque often comes in contact with humans and faces issues related to human-wildlife conflict. The Site provides good shelter in a protected area and other resources such as food and water that helps in prevention of the conflict.

Criterion 3 : Biological diversity

Justification

The Site qualifies is an Important Bird and Biodiversity area with a IBA Site Code : IN-TN-13 and qualifies under IBA CRITERIA : A1 (Threatened species), A4i ( $\geq 1\%$  biogeographic population), A4iii ( $\geq 20,000$  waterbirds).

The Site supports about 198 bird, 10 mammal, 82 butterflies, 19 reptile, 10 amphibian and 165 plant species. It lies in the Central Asian fly way and is an important breeding and foraging ground for both resident and migratory birds. Near threatened (NT) aquatic birds such as darter, spot-billed pelican, oriental white ibis and painted stork breed in the trees of *Acacia nilotica* found in this area. Several other species of birds such as cormorants, egrets and storks also use the area as breeding grounds.

The Site also provides nesting grounds for 14 species of colonial nesting waterbirds. Because of the food availability for juveniles of waterbirds, the alpha and beta biodiversity of the area is enhanced. Migratory wader species also visit the Site in huge numbers and thus the Site, can be considered as one of the important stopover for migratory birds.

Criterion 4 : Support during critical life cycle stage or in adverse conditions

Optional text box to provide further information

The herony of Karavetti Birds Sanctuary supports more than 10,000 individuals of colonial nesting water birds. Near threatened bird species like Spot-billed Pelican, Black-headed Ibis and Oriental Darter nest in the trees of the wetland. *Acacia nilotica* are used by the birds for roosting and nesting.

The Site also provides nesting site for Vulnerable Indian Flap-shelled Turtle as they prefer Swampy areas with soil and exposure to sunlight and the site provides suitable habitat for them.

The wetland provides refuge for migratory waterbirds and acts as a foraging ground for them. Threatened species like Common Pochard, Curlew Sandpiper, Black-tailed Godwit use the Site as stopover points during their migration.

Criterion 5 : >20,000 waterbirds

Overall waterbird numbers 24145

Start year

End year

Source of data:

Optional text box to provide further information

The important avi-fauna of the Sanctuary include migratory waterbirds. Up to 50,000 migratory water birds have been recorded visiting the Sanctuary during the peak season in January. Birds start arriving in September and stay till May. Important birds are the high flying Bar-headed Goose, White Stork, Woolly-necked Stork, Grey Pelican, Spoonbill, Open bill stork, Grey heron, Night heron, Pond heron, Purple heron, Egrets and Glossy ibis. A study revealed occurrence of 149 species of birds at a point in time belonging to 104 genera, 49 families and 18 orders. Among the 18 orders, Passeriformes dominated the list with 44 species of birds followed by Charadriiformes with 24 species, Ciconiiformes with 17 species, Anseriformes with 15 species, Falconiformes with 10 species, Coraciiformes with nine species, Gruiformes with seven species, Pelecaniformes with five species, Columbiformes and Cuculiformes with three species each, Galliformes, Strigiformes, Piciformes and Apodiformes with two species each, Tuniciformes, Podicipediformes, Psittaciformes and Caprimulgiformes with one species each.

Year wise bird count data collected by Tamil Nadu Forest Department:

2018 - 27981 water birds  
 2019 - 26364 water birds  
 2020 - 22056 water birds  
 2021 - 22654 water birds  
 2022 - 21671 water birds

Criterion 6 : >1% waterbird population

Optional text box to provide further information

More than 1% population of Near threatened species of Black-headed Ibis and Oriental Darter of the South Asian population is supported by the Site. This is due to the heronry present in the area where these birds come for nesting. The availability of food and nesting site in the same area makes it as one of the important area for conservation for these bird species. The bird population data was used from the the Waterbirds Population Portal to determine the percentage of occurrence of the species in the biogeographical region.

### 3.2 - Plant species whose presence relates to the international importance of the site

<no data available>

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

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
Others																	
CHORDATA/ REPTILIA	<i>Lissemys punctata</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	CITES appendices II, Protected under Schedule (Part II) of wildlife protection act 1972	The Site provides nesting grounds for this species. This species prefer swampy areas with soil and exposure to sunlight and the Site provides these conditions for them. This species is also pouched for its meat hence conserving the Site is important for protecting the species.

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA/ MAMMALIA	<i>Macaca radiata</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>		This species often comes in contact with humans and faces issues related to human-wildlife conflict. The Site provides good shelter in a protected area and other resources such as food and water that helps in prevention of the conflict.
<b>Birds</b>																	
CHORDATA/ AVES	<i>Anhinga melanogaster</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	132	2018 - 2022	3.3	NT	<input type="checkbox"/>	<input type="checkbox"/>	Protected under Schedule IV of wildlife protection act 1972	This species breeds in the trees found in and around the wetland. It uses the wetland as foraging ground. The population of the bird is of the South Asian region according to the Waterbirds Population Portal and 1% threshold population is 40.
CHORDATA/ AVES	<i>Aquila clanga</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input checked="" type="checkbox"/>		The Site provides foraging ground during migratory season for this species.
CHORDATA/ AVES	<i>Aquila hastata</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>		The raptor uses the Site as foraging ground. The Site is important for the species as the availability of foraging ground is continuously reducing.
CHORDATA/ AVES	<i>Aquila rapax</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>		The raptor uses the Site as foraging ground. The Site is important for the species as the availability of foraging ground is continuously reducing.
CHORDATA/ AVES	<i>Aythya ferina</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>	Protected under Schedule IV of wildlife protection act 1972	The bird migrates in the Central Asian flyway and uses the Site as stopover and foraging ground.
CHORDATA/ AVES	<i>Calidris ferruginea</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	Protected under Schedule IV of wildlife protection act 1972	The bird migrates in the Central Asian flyway and uses the Site as stopover and foraging ground.
CHORDATA/ AVES	<i>Limosa limosa</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	Appendix II of CMS, Protected under Schedule IV of wildlife protection act 1972	The bird migrates in the Central Asian flyway and uses the Site as stopover and foraging ground.
CHORDATA/ AVES	<i>Mycteria leucocephala</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	Protected under Schedule IV of wildlife protection act 1972	This species breeds in the trees found in and around the wetland. They also use the wetland for foraging. Hence the Site is important for maintaining the population of the species.
CHORDATA/ AVES	<i>Pelecanus philippensis</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	Protected under Schedule IV of wildlife protection act 1972	This species breeds in the trees found in and around the wetland. They also use the wetland for foraging. Hence the Site is important for maintaining the population of the species.
CHORDATA/ AVES	<i>Sterna aurantia</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>		The Site provides the bird with foraging ground.
CHORDATA/ AVES	<i>Threskiornis melanocephalus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1460	2018 - 2022	5.84	NT	<input type="checkbox"/>	<input type="checkbox"/>	Protected under Schedule IV of wildlife protection act 1972	The species breeds in the trees found in and around the wetland. They use the wetland as foraging ground. The population of the bird is of the South Asian region according to the Waterbirds Population Portal and the 1% threshold population is 250.

1) Percentage of the total biogeographic population at the site

The waterbirds population data for Criterion 5 has been provided in a document named, "Criterion-5-data" in the additional material Section.

### 3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>



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

### 4.1 - Ecological character

The soil present in the Karaivetti lake is black cotton soil while alluvial soil also gets deposited every year during release of water from Mettur Dam, but the humus content of the soil is low. Hard rock and sedimentary formations are found here from the depth beyond 3 meters. The Site provides provisional ecosystem services like fresh water for drinking purposes and irrigating the agricultural fields around the lake. It also maintains the hydrological regime of the area, protects soil from erosion, regulates climate and reduces hazards by acting as a buffer during floods and extreme rainfalls. It is a major source of ground water recharge. There is significant runoff from the surrounding catchment area and the wetland acts as a sink for the sediments. The water holding capacity of the lake is 3.871 million m<sup>3</sup> or 0.0039 TMC (Thousand million cubic feet). It also provides cultural services in the form of recreation and tourism and supporting services in the form of biodiversity, nutrient cycling and pollination.

The Site lies in the mid part of the Cauvery River basin. It is classified as Aw. (Tropical Savana type) climate region under the Köppen-Gieger Climate Classification System. It supports about 198 species of birds, 10 mammals, 82 butterflies, 19 reptiles, 10 amphibians and 165 plant species. The Site provides nesting site for 14 species of colonial nesting water birds. Both Local and migratory bird species have been recorded during the yearly bird census. The adjacent paddy fields serve as a good foraging ground for majority of the aquatic birds that predominantly feed on insects, molluscs, and grains. Thus, the Site is important for maintaining the ecological and biological diversity of the area.

### 4.2 - What wetland type(s) are in the site?

#### Inland wetlands

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 > Lakes and pools >> O: Permanent freshwater lakes	karaivetti lake	1	453	

#### (ECD) Habitat connectivity

Main sources of water for the wetland is Rainfall, the surrounding runoff from the catchment area and from Vadavur and Cauvery River channels. The lake is intermittent as the water level becomes very low for six to eight months

### 4.3 - Biological components

#### 4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Azadirachta indica</i>	Native to the Indian region and Bangladesh in the Indian subcontinent and to Cambodia, Laos, Myanmar, Thailand and Vietnam in Indochina
TRACHEOPHYTA/LILIOPSIDA	<i>Borassus flabellifer</i>	India to Indo-China, Jawa to Lesser Sunda Islands. It is a tree and grows primarily in the wet tropical biome.
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Calotropis gigantea</i>	The native range of this species is S. China to Tropical Asia
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Crotalaria retusa</i>	The native range of this species is Somalia to Mozambique, W. Indian Ocean, Tropical & Subtropical Asia to N. Australia.
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Ficus religiosa</i>	The species is found throughout India. The native range of this species is SE. Pakistan to Myanmar.
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Nymphaea lotus</i>	It grows in various parts of East Africa and Southeast Asia
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Pongamia pinnata</i>	The native range of this species is Tropical & Subtropical Asia to W. Pacific. It is a shrub or tree and grows primarily in the seasonally dry tropical biome.
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Solanum melongena</i>	The native range of this species is India, Sri Lanka, Indo-China to Peninsula Malaysia.
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Syzygium cumini</i>	The native range of this species is Tropical & Subtropical Asia to N. Queensland. It is a tree and grows primarily in the wet tropical biome.
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Terminalia arjuna</i>	The native range of this species is Indian Subcontinent.
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Terminalia catappa</i>	The native range of this species is Comoros, Madagascar, Tropical & Subtropical Asia to Pacific, N. Australia.
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Vachellia nilotica</i>	The native range of this species is Dry parts of Africa, Arabian Peninsula, Indian Subcontinent to Myanmar.
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Wrightia tinctoria</i>	It is found in India, southeast Asia and Australia
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Ziziphus mauritiana</i>	The species is found in India. The native range of this species is Cape Verde, African Sahara to Sahel to Tanzania, S. Iran to Australia

## Invasive alien plant species

Phylum	Scientific name	Impacts
TRACHEOPHYTA/LILIOPSIDA	<i>Eichhornia crassipes</i>	Actual (major impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Prosopis juliflora</i>	Actual (major impacts)

## 4.3.2 - Animal species

## Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	<i>Anas acuta</i>				The bird uses the area as migratory stop over site as it lies in the central Asian fly way.
CHORDATA/AVES	<i>Anas clypeata</i>				The bird uses the area as migratory stop over site as it lies in the central Asian fly way.

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	<i>Anas crecca</i>				The bird uses the area as migratory stop over site as it lies in the central Asian fly way.
CHORDATA/AVES	<i>Anas penelope</i>				The bird uses the area as migratory stop over site as it lies in the central Asian fly way.
CHORDATA/AVES	<i>Anas querquedula</i>				The bird uses the area as migratory stop over site as it lies in the central Asian fly way.
CHORDATA/AVES	<i>Anser indicus</i>				The bird uses the area as migratory stop over site as it lies in the central Asian fly way
CHORDATA/REPTILIA	<i>Aretium schistosum</i>				Protected under Sch II (Part II) of wildlife protection act 1972
ARTHROPODA/INSECTA	<i>Castalius rosimon</i>				Protod under Sch I (Part IV) of Wildlife Protection act 1972
CHORDATA/AVES	<i>Ciconia episcopus</i>				Protected under Sch IV of wildlife protection act 1972
CHORDATA/REPTILIA	<i>Daboia russelii</i>				Protected under Sch II (Part II) of wildlife protection act 1972
ARTHROPODA/INSECTA	<i>Euploea core</i>				Protod under Schedule IV of Wildlife Protection act 1972
CHORDATA/MAMMALIA	<i>Felis chaus</i>				Protected under Sch II (Part I) of the wildlife protection act 1972
CHORDATA/MAMMALIA	<i>Herpestes edwardsi</i>				Protected under Sch II (Part I) of wildlife protection act 1972
ARTHROPODA/INSECTA	<i>Lampides boeticus</i>				Protod under Sch II (Part II) of Wildlife Protection act 1972
CHORDATA/REPTILIA	<i>Naja naja</i>				Protected under Sch II (Part II) of wildlife protection act 1972
CHORDATA/AVES	<i>Nettapus coromandelianus</i>				The species is protected under Schedule IV of the Wildlife Protection Act 1972
ARTHROPODA/INSECTA	<i>Pachliopta hector</i>				Protod under Sch I (Part IV) of Wildlife Protection act 1972
CHORDATA/AVES	<i>Pandion haliaetus</i>				Protected under Sch I (Part III) of wildlife protection act 1972
CHORDATA/MAMMALIA	<i>Paradoxurus hermaphroditus</i>				Protected under Sch II (Part I) of wildlife protection act 1972
CHORDATA/AVES	<i>Pavo cristatus</i>				Protected under Sch I (Part III) of wildlife protection act 1972
CHORDATA/AVES	<i>Platalea leucorodia</i>				Protected under Sch I (Part III) of wildlife protection act 1972
CHORDATA/REPTILIA	<i>Ptyas mucosa</i>				Protected under Sch II (Part II) of wildlife protection act 1972
ARTHROPODA/INSECTA	<i>Tellervo septentrionis</i>				Protod under Sch II (Part II) of Wildlife Protection act 1972

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/REPTILIA	<i>Varanus bengalensis</i>				Protected under Schedule I (Part II) of wildlife protection act 1972, Listed as Near Threatened by IUCN and comes under CITES Appendix I
CHORDATA/REPTILIA	<i>Xenochrophis piscator</i>				Protected under Sch II (Part II) of wildlife protection act 1972

Invasive alien animal species

Phylum	Scientific name	Impacts
CHORDATA/ACTINOPTERYGII	<i>Oreochromis mossambicus</i>	Actual (major impacts)

## 4.4 - Physical components

### 4.4.1 - Climate

Climatic region	Subregion
A: Tropical humid climate	Aw: Tropical savanna (Winter dry season)

### 4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

Entire river basin

Upper part of river basin

Middle part of river basin

Lower part of river basin

More than one river basin

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.

Cauvery River basin

### 4.4.3 - Soil

Mineral

Organic

No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes  No

Please provide further information on the soil (optional)

The soil present in the Karaivetti lake is black cotton soil. Alluvial soil also get deposited every year during release of water from the Mettur dam. Hard rock and sedimentary formations are found here from the depth beyond 3 meters. Humus content of the soil is low. The Site maintains the hydrological regime of the area and prevents soil from erosion.

### 4.4.4 - Water regime

Water permanence

Presence?	
Usually seasonal, ephemeral or intermittent water present	No change

Source of water that maintains character of the site

Presence?	Predominant water source	
Water inputs from surface water	<input checked="" type="checkbox"/>	No change
Water inputs from precipitation	<input type="checkbox"/>	No change

Water destination

Presence?	
Feeds groundwater	No change
To downstream catchment	No change

Stability of water regime

Presence?	
Water levels largely stable	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology:

Ariyalur district is situated in the Western Cauvery Delta Agro climatic zone. The most important feature of the Sanctuary is the presence of water until the month of May as most of the water bodies nearby dry up by the month of March. The lake remains dry from June to till August. The depth of the lake does not exceed more than 3 meters and the depth levels of water supports good diversity of water birds. Not much seasonal fluctuation in salinity is observed. The water holding capacity of the lake is 3.871 million m3 or 0.0039 TMC (Thousand million cubic feet).

(ECD) Connectivity of surface waters and of groundwater

Water from rainfall help in replenishing the groundwater

4.4.5 - Sediment regime

Significant erosion of sediments occurs on the site

Significant accretion or deposition of sediments occurs on the site

Significant transportation of sediments occurs on or through the site

Sediment regime is highly variable, either seasonally or inter-annually

Sediment regime unknown

(ECD) Water turbidity and colour

Water colour is light blue and grey-green; turbidity not measured

(ECD) Water temperature

Average temperature of water not known

4.4.6 - Water pH

Acid (pH<5.5)

Circumneutral (pH: 5.5-7.4 )

Alkaline (pH>7.4)

Unknown

4.4.7 - Water salinity

Fresh (<0.5 g/l)

Mixohaline (brackish)/Mixosaline (0.5-30 g/l)

Euhaline/Eusaline (30-40 g/l)

Hyperhaline/Hypersaline (>40 g/l)

Unknown

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic

Mesotrophic

Oligotrophic

Dystrophic

Unknown

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 site itself: i) broadly similar  ii) significantly different

Surrounding area has greater urbanisation or development

Surrounding area has higher human population density

Surrounding area has more intensive agricultural use

Surrounding area has significantly different land cover or habitat types

4.5 - Ecosystem services

### 4.5.1 - Ecosystem services/benefits

#### Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Fresh water	Drinking water for humans and/or livestock	Medium
Fresh water	Water for irrigated agriculture	High

#### Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High
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
Climate regulation	Local climate regulation/buffering of change	High
Biological control of pests and disease	Support of predators of agricultural pests (e.g., birds feeding on locusts)	High
Hazard reduction	Flood control, flood storage	High

#### Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	High
Recreation and tourism	Nature observation and nature-based tourism	High

#### Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High
Pollination	Support for pollinators	High

Within the site: V: 1000s

Outside the site: R: 10000s; V: 10000s

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes  No  Unknown

### 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

People in villages around the Sanctuary believe that the bar headed goose is the nominated deity of the wetland. There are small temples present in all villages and festivals are conducted once in a year. There are no historical monuments or archaeological buildings in the vicinity. The Site does have five temples and one church along its bank. A few cultural activities are organized around the wetland during some specific festivals. While agriculture is practiced around the wetland, no commercial fishing activities are undertaken. They wetlands receive a good population of Nature enthusiast as tourists.

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

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

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) Pressures and trends concerning any of the above, and/or concerning ecosystem integrity

Anthropogenic activities are affecting the habitat of water birds. This pond is being used for water collection for house hold work and livestock bathing. These activities disturb the water birds. The invasive Prosopis is slowly encroaching much of the sa

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

### 5.1 - Land tenure and responsibilities (Managers)

#### 5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
Provincial/region/state government	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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

Earlier the lake was maintained by the Public Works Department (PWD). However, since the declaration as a sanctuary in 1997, the Site has been under the Tamil Nadu Forest Department. Now the lake is maintained by both Tamil Nadu Forest Department and Public Works Department (PWD).

#### 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

District Forest Office, Ariyalur Division

Provide the name and/or title of the person or people with responsibility for the wetland:

Mr. Guganesh, District Forest Officer

Postal address:

District Forest Office,  
2nd Floor, Multi Department Campus,  
Jeyankondam Road,  
Ariyalur – 621 704.

E-mail address:

dfoariyalur@gmail.com

## 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	Medium impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Water abstraction	Medium impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Dredging	Medium impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water releases	Medium impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Livestock farming and ranching	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Fishing and harvesting aquatic resources	Medium impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Vegetation clearance/land conversion	Medium impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Agricultural and forestry effluents	Medium impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Habitat shifting and alteration	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Droughts	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Temperature extremes	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Storms and flooding	Medium impact	Medium impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Bird Sanctuary	Karaivetti Bird Sanctuary		whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Karaivetti Bird Sanctuary	<a href="http://datazone.birdlife.org/site/search">http://datazone.birdlife.org/site/search</a>	whole

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- 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 landscape/seascape conservation and recreation
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Habitat

Measures	Status
Habitat manipulation/enhancement	Partially implemented

Species

Measures	Status
Control of invasive alien plants	Partially implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? No

Has a management effectiveness assessment been undertaken for the site? Yes  No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes  No

5.2.6 - Planning for restoration



Is there a site-specific restoration plan? No, but a plan is being prepared

Further information

Conservation measures are being undertaken as per the Government Orders. The efforts include improving the wildlife habitats by extending and strengthening the area wherever required, ensuring connectivity of habitats management of wildlife resources at Landscape level, harnessing the sentiments of tribal and forest dwellers in wildlife management while ensuring livelihood security, protecting the migratory birds by wetland habitat conservation through periodic inventory of avifauna and other biodiversity, and understanding the lesser known diversity for conservation gains.

5.2.7 - Monitoring implemented or proposed

<no data available>

## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

1. Ali, S. and Ripley, D. (1983). Handbook of the Birds of India and Pakistan: Vol 1-10, OUP India hardcover 3121 pages, illustrated. ISBN: 0195655060.
2. Bhagat, M.L. and Dwivedi, S.N. (1988) Impact of the exotic fish, Oreochromis mossambicus on the indigenous fishery of Powai Lake, Bombay. Journal of the Indian Fisheries Association 18, 511–515.
3. Daniels, R J R (2005) India a Lifescape: Amphibians of Peninsular India. Universities Press (India) Ltd, Hyderabad, pp 268.
4. National Wetland Atlas: Tamilnadu, SAC/RESA/AFEG/NWIA/ATLAS/22/2009, Space Applications Centre (ISRO), Ahmedabad, India, 222p.
5. Subramanya, S (2005) Heronries of Tamil Nadu. Indian Birds 1(6): 126-140.
6. Udhayakumar S, Sivasubramanian C, Sirajuddin. M. Horaginamani and Ravichandran. M. Diversity in the water bird community and physico chemical analysis of Karaivetti lake bird sanctuary in TamilNadu, India. Indian Journal of Natural Sciences, Vol1 / Issue 5 / April 2011.
7. Water notes- Wetlands as waterbird habitat. Water and Rivers Commission WN5 January 2000, Natural Heritage Trust, Government of Western Australia.
8. G.V. Gopi, Frank S.J.D, Pandav B (2022). Atlas of Colonial nesting waterbirds in Tamil Nadu. Final Report: TR No./2022./17. Wildlife Institute of India, Dehradun. 200p.
9. Rahmani, A.R., Islam, M.Z. and Kasambe, R.M. (2016) Important Bird and Biodiversity Areas in India: Priority Sites for Conservation (Revised and updated). Bombay Natural History Society, Indian Bird Conservation Network, Royal Society for the Protection of Birds and BirdLife International (U.K.). Pp. 1992 + xii

#### 6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<2 file(s) uploaded>

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

<no file available>

vi. other published literature

<6 file(s) uploaded>

#### 6.1.3 - Photograph(s) of the Site

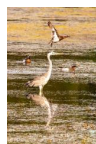
Please provide at least one photograph of the site:



Image of the Wetland ( Tamil Nadu Forest Department, 18-02-2022 )



Image of the Wetland ( Tamil Nadu Forest Department, 18-02-2022 )



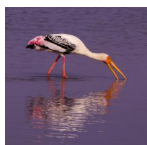
Grey Heron and Garganey seen in the Karaivetti wetland ( Tamil Nadu Forest Department, 07-03-2021 )



A pair of Black Winged Stilt mating in the Karaivetti wetland ( Tamil Nadu Forest Department, 07-03-2021 )



Painted Stork ( Tamil Nadu Forest Department, 23-01-2023 )



Painted stork foraging in the Karaivetti wetland. ( Tamil Nadu Forest Department, 23-01-2023 )

#### 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation