Ramsar Information Sheet

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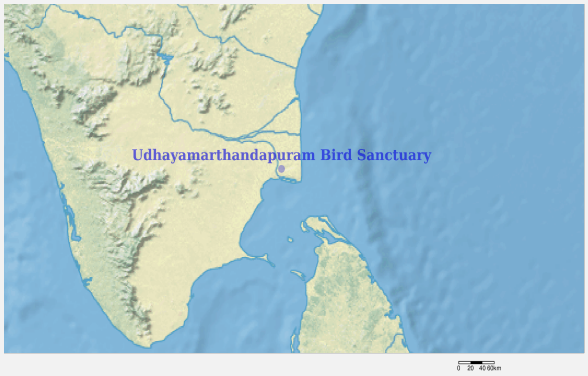
India

Udhayamarthandapuram Bird Sanctuary



Designation date	8 April 2022
Site number	2476
Coordinates	10°27'02"N 79°33'16"E
Area	43,77 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

Udayamarthandapuram is one of the important Birds Sanctuaries in Tamil Nadu, one km off East Coast Road connecting Chennai and Kanyakumari. It is under the administrative jurisdiction of Thiruthuraipoondi taluk, Muthupet Block, located on Mannargudi–Udayamarthandapuram road. It is well known for sighting a large number of globally EN Asian Openbill Stork. Created in 1998 in Tiruvarur District it is near the confluence of Baminiyar-Kannanaar rivers, covering 43.767 ha. The sanctuary is a seasonal wetland fed by small canals receiving water from Mettur Dam through the Koraiyar canal. The southern part of the landscape is partly Koraiyar River running W to E and draining into Muthupet mangroves. It remains dry from April to August, during which small (artificial) tanks in the sanctuary store water to sustain the resident bird population. The wetland is representative of flat topography encompassing floodplains along rivers/streams, within the Cauvery delta& agricultural ecosystems. The vegetation cover serves as a good habitat for several birds, butterflies &other fauna. The site is an important staging and breeding ground for several species of waterbirds. The notable species observed at the site are oriental darter, glossy ibis, grey Heron &Eurasian spoonbill. It is one of the important breeding sites for the darter & Eurasian spoonbill. Udhayamarthandapuram stores floodwaters during monsoon overflows and maintains surface water flow during drier periods.

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 Wetalnd 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	Ministry of Environment, Forest and Climate Change 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	2016
To year	2021

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Udhayamarthandapuram Bird Sanctuary

2.2 - Site location

2.2.1 - Defining the Site boundaries

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

Former maps	0

Boundaries description

Udyamarthandapuram Bird Sanctuary is basically a human-made irrigation tank used for storing water for agriculture, which receives water from Mettur dam from August onwards, further supplemented by the NE monsoons during Oct-Jan; the tank remains completely dry from Mar-August. There is no natural forest within the Sanctuary; Babul (Acacia nilotica) plantations were raised by the Social Forestry wing of the Forest Dept. during 1985-86 &other major flora in the tank bunds and foreshore are Inca dulce, Prosopis juliflora, Terminalia arjuna, Ficus bengalensis, Syzigium cumini and Pongamia pinnata, etc.,& used for roosting & nesting by migratory birds like Open billed stork, White ibis etc.

All areas of valuable natural heritage in the around the wetland areas such as the gene pool reserve areas, rock formations, waterfalls, springs, gorges, groves, caves, points, walks, rides, cliffs, etc., are present at the site. Udayamarthandapuram is a seasonal wetland fed by small canals that receive water from the Mettur Dam through the Koraiyar canal, post the release scheduled for every year for the month of June. The southern part of the landscape of which Birds Sanctuary is a part of has the Koraiyar River running west to East to finally drain into the Muthupet mangroves. During dry periods small (artificial) tanks in the sanctuary store water and sustain the resident bird population. Topography of the Udayamarthandapuram bird sanctuary is flat, located at an elevation of nearly 8-12 m ASL. The sanctuary represents an inland type of wetland. Such kinds of wetlands are most common on floodplains along rivers & streams, and Udayamarthandapuram typically belongs to this category, located within the Cauvery delta. The sanctuary encompasses floodplains and agricultural ecosystems. The predominant vegetation in this area is Acacia nilotica planted in the North-Western side of the wetland by Tamil Nadu Forestry Department. As the Sanctuary is an inland wetland, it does not show the presence of structures like beach/shoreline/sand dune/ mud flats, etc. It has been declared as Protected Area in 1998.

2.2.2 - General location

a) In which large administrative region does the site lie?	The Sanctuary is located on Tiruthuraipoondi Taluk of Tiruvarur district in Tamil Nadu., and is located about 80 kilometres from Thanjavur, about 58km from Vaduvur Birds sanctuary and 10 km from Point Calimere Birds Sanctuary Block A.
b) What is the nearest town or population centre?	The villages surrounding the wetland include Nachikulam, Pinnathur, Udhayamarthandapuram, Serumanur. Udayamarthandapuram village is surrounded by Pinnathur in the North; Nachikulam in the South; Udhayamarthandapuram in the east; Serumanur in the west.

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): 43.767

Area, in hectares (ha) as calculated from GIS boundaries: 43.767

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
WWF Terrestrial Ecoregions	Site falls specifically under the Indo-Malayan Ecoregion & sub-region East Deccan Dry evergreen Forest type, converted to agriculture or degraded. >95% of ecoregion-deforested; leaving scattered small forest fragments; threat from deforestation& grazing

Other biogeographic regionalisation scheme

This sanctuary being near Vaduvur Bird Sanctuary, also falls under East coast biogeography zone as defined by the Wildlife Institute of India and the Eastern Ghats and Tamil Nadu Uplands and Deccan (Karnataka) Plateau, hot semiarid eco-region (H1D2) [Tamil Nadu Uplands and Plains, hot moist semi-arid ESR with deep red loamy soils, low AWC and LGP 120-150 days (H1Dm4)] as defined by ICAR. The predominant vegetation in this area is Acacia nilotica. Black cotton soil and sandy alluvium are the two main soil types found in the tank. Fresh alluvium soil is deposited every year by irrigation water received from Mettur dam. Humus content of soil is low but calcium content is high possibly due to accumulation of bird droppings and skeletal remains of aquatic life forms.

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

<no data available>

☑ Criterion 2 : Rare species and threatened ecological communities

☑ Criterion 3 : Biological diversity

Justification	As the sanctuary is a human-made irrigation tank, there is no natural forest within the sanctuary. Inca dulce and Acacias, planted on the earthen mounds, are the major tree species of the sanctuary. Other species include Zizyphus, Pongamia pinnata, Acacia leucopholea, Lannea coromandelica, Albizzia lebbeck. Most part of the tank bed has been encroached by a variety of weeds and reeds. Acacia nilotica plantations had been raised by social forestry in 1985 and 1986 and these trees had covered a great part of the sanctuary in the past. However, the trees gradually died and only those on the bund remain. The natural vegetation of the lake comprises emergent, floating and submerged plant species distributed almost throughout the lake and form associations of different species. Their distribution is essentially related to water regimes. The rooted floating-leaf types commonly found in the Birds sanctuary area are: Nymphaea stellata, Nelumbium speciosum, Nymphoides indicum, Ipomoea aquatica, Neptunia oleracia, Ludwigia adsc endens, Pseudoraphis spinosus and Echinochloa colonum. The wetland is a important staging ground for birds. Around 104 species of birds have been recorded here belonging to 72 genera, 33 families and 18 orders.

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

Optional text box to provide further information	Udhayamarthandapuram Bird Sanctuary has a diverse habitat including large and deep reservoirs with a number of inlets and surrounding irrigated agricultural fields which provides good nesting and foraging habitats for birds. The diversity of habitats enable the wetland to act as an important breeding site for over 20 species of birds and other fauna, where the following species nest in large numbers: Anastomus oscitans, Anhinga melanogaster, Dicrurus macrocercus, Egretta garzetta, Fulica atra, Halcyon smyrnensis, and Threskiornis melanocephalus. Thus, the site provides support to the species listed above during critical stage of their life.

☑ Criterion 5 : >20,000 waterbirds

Overall waterbird numbers	28320
Start year	2011
Source of data:	Tamil Nadu Forest Department Census, Thiruvarur district & Brief Document data
Optional text box to provide further information	The wetland supports more than 1% population of about 9 species of waterbirds.

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

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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								
Birds																	
CHORDATA / AVES	*Anastomus oscitans*	☐	☑	☐	☐	☑	☑	☐	☐	2700	2012		LC	☐	☐		The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Anhinga melanogaster*	☐	☑	☐	☐	☑	☑	☐	☐	1900	2011		NT	☐	☑	Schedule I of the Indian Wildlife Protection Act 1972	The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Bubulcus ibis*	☐	☐	☐	☐	☑	☑	☐	☐	2300	2012		LC	☐	☐		The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Copsychus saularis*	☐	☐	☐	☐	☑	☑	☐	☐	1700	2011		LC	☐	☐		The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Corvus splendens*	☐	☐	☐	☐	☑	☑	☐	☐	1100	2011		LC	☐	☐		The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Dicrurus macrocercus*	☐	☑	☐	☐	☑	☑	☐	☐	1600	2012		LC	☐	☐		The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Egretta garzetta*	☐	☑	☐	☐	☑	☑	☐	☐	2300	2012		LC	☐	☐		The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Egretta intermedia*	☐	☐	☐	☐	☐	☑	☐	☐	1720	2011			☐	☐		More than 1% of its population is supported by the wetland and it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Eudynamys scolopaceus*	☐	☐	☐	☐	☐	☑	☐	☐	1200	2011		LC	☐	☐		More than 1% of its population is supported by the wetland and it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Fulica atra*	☐	☑	☐	☐	☑	☑	☐	☐	3100	2011		LC	☐	☐		The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Halcyon smyrnensis*	☐	☑	☐	☐	☑	☑	☐	☐	2800	2012		LC	☐	☐		The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Leptocoma zeylonica*	☐	☐	☐	☐	☑	☑	☐	☐	2200	2011		LC	☐	☐		The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Microcarbo niger*	☐	☐	☐	☐	☑	☑	☐	☐	1700	2011		LC	☐	☐		The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.
CHORDATA / AVES	*Neophron percnopterus*	☑	☐	☐	☐	☐	☐	☐	☐				EN	☐	☑		Being an ENdangered species, it qualifies for Criteria 2.

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 / AVES	*Threskiornis melanocephalus*	☐	☑	☐	☐	☑	☑	☐	☐	2000	2011		NT	☐	☑	Schedule I of the Indian Wildlife Protection Act 1972	The wetland supports the species in a critical stage in its life cycle. it contributes to more than 20000 waterbirds in the wetland.

1) Percentage of the total biogeographic population at the site

Black Headed Ibis and Oriental Darter: These water birds are Near Threatened species and is found to visit Udayamarthandapuram and breed during the migratory season.

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

Udhayamarthandapuram wetland belongs to the semi-arid region of Thiruvarur district, the southern Indian state of Tamil Nadu. Spreading across 43.76 ha, the sanctuary consists of wetlands in the form of manmade irrigation tanks, interconnected by an ancient network of canals, and fed by the Mettur dam. The main source of water for the wetland is rainfall, the surrounding runoff from the catchment area &the Mettur dam. The water in the wetland is mostly intermittent in nature and lasts for about 8 months. The water also helps in replenishing the groundwater and feeds surrounding smaller wetlands & agricultural lands. The wetland is closer to the Mesotrophic type as it is observed to have maximum floating, submergent and emergent vegetation. The natural vegetation of the lake comprises emergent, floating and submerged plant species distributed almost throughout the lake and form associations of different species. Their distribution is essentially related to water regimes. The rooted floating-leaf types commonly found in the sanctuary area are Nymphaea stellata, Nelumbium speciosum, Nymphoides indicum, Neptunia oleracia, Ludwigia adscendens, Pseudoraphis spinosus, and Echinochloa colonum. The wetland is a important staging ground for birds. Around 104 species of birds have been recorded here belonging to 72 genera, 33 families, and 18 orders. Large concentrations of waterbirds such as Eurasian Wigeon (Anas Penelope), Northern Pintail (Anas acuta), Garganey (Anas querquedula) have been recorded in tanks. The wetland supports the Endangered floral species Tephrosia purpurea along with the rare and near-threatened bird species namely darter(Anhinga melanogaster), black-headed ibis(Threskiornis melanocephalus).

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

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type
6: Water storage areas/Reservoirs		1	43.767

(ECD) Habitat connectivity	Main water source-rainfall, surrounding catchment runoff, Mettur dam; water-intermittent, lasts 8 months; replenishes G.water, feeds smaller wetlands/agricultural lands around; pH=9.5; salinity=0.245ppt; mesotrophic; has floating,submergent,emergent veg.

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	*Abrus precatorius*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Abutilon hirtum*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Acalypha indica*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Aerva lanata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Alternanthera pungens*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Amaranthus spinosus*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Argemone mexicana*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Azadirachta indica*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Boerhavia diffusa*	
TRACHEOPHYTA/LILIOPSIDA	*Borassus flabellifer*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Breynia vitis-idaea*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Cajanus scarabaeoides*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Calotropis gigantea*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Capparis grandis*	
TRACHEOPHYTA/LILIOPSIDA	*Chloris barbata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Clitoria ternatea*	
TRACHEOPHYTA/LILIOPSIDA	*Commelina benghalensis*	
TRACHEOPHYTA/LILIOPSIDA	*Cynodon dactylon*	
TRACHEOPHYTA/LILIOPSIDA	*Cyrtococcum trigonum*	
TRACHEOPHYTA/LILIOPSIDA	*Dactyloctenium aegyptium*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Datura metel*	
TRACHEOPHYTA/LILIOPSIDA	*Echinochloa crus-galli*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Eclipta alba*	
TRACHEOPHYTA/LILIOPSIDA	*Eichhornia crassipes*	
TRACHEOPHYTA/LILIOPSIDA	*Eragrostis amabilis*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Eucalyptus tereticornis*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Gomphrena serrata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Hygrophila schulli*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Jatropha gossypiifolia*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Justicia adhatoda*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Justicia glauca*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Kallstroemia maxima*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Leucaena leucocephala*	

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	*Leucas aspera*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Luffa acutangula*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Madhuca longifolia*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Malvastrum coromandelianum*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Marsdenia volubilis*	
TRACHEOPHYTA/POLYPODIOPSIDA	*Marsilea quadrifolia*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Martynia annua*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Nelumbo nucifera*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Ocimum americanum*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Oxalis corniculata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Oxystelma esculentum*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Parthenium hysterophorus*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Passiflora foetida*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Pedalium murex*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Peltophorum pterocarpum*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Pergularia daemia*	
TRACHEOPHYTA/LILIOPSIDA	*Phoenix sylvestris*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Phyllanthus maderaspatensis*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Phyllanthus niruri*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Physalis lagascae*	
TRACHEOPHYTA/LILIOPSIDA	*Pistia stratiotes*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Pithecellobium dulce*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Plumbago zeylanica*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Polycarpaea tenuifolia*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Pongamia pinnata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Ricinus communis*	
TRACHEOPHYTA/LILIOPSIDA	*Saccharum spontaneum*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Samanea saman*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Senegalia caesia*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Senna auriculata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Senna occidentalis*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Senna siamea*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Sesbania procumbens*	
TRACHEOPHYTA/LILIOPSIDA	*Setaria verticillata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Sida cordata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Sida rhombifolia*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Solanum mauritianum*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Solanum melongena*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Solanum violaceum*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Spathodea campanulata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Spermacoce pusilla*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Sphaeranthus suaveolens*	
TRACHEOPHYTA/LILIOPSIDA	*Spirodela polyrhiza*	
TRACHEOPHYTA/LILIOPSIDA	*Sporobolus tenuissimus*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Stachytarpheta jamaicensis*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Syzygium cumini*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Tamarindus indica*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Tecoma stans*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Terminalia arjuna*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Thespesia populnea*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Tiliacora acuminata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Trianthema portulacastrum*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Tridax procumbens*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Turnera subulata*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Utricularia vulgaris*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Vachellia nilotica*	
TRACHEOPHYTA/MAGNOLIOPSIDA	*Wrightia tinctoria*	

Invasive alien plant species

Phylum	Scientific name	Impacts
TRACHEOPHYTA/MAGNOLIOPSIDA	*Prosopis juliflora*	Actual (major impacts)

Optional text box to provide further information

The introduction of this invasive species to address erosion problems, has turned this into an invader species. It has started off invading the river banks and slowly extended to the agricultural lands, as well as adjacent dryland areas. The negative impacts of this species are that its rapid spread has a bearing on the Ecosystem Services. Despite partially the invasion offsets by provisioning of firewood and charcoal needs of the local communities, there is difficulty in controlling its rapid growth as the threats to Ecosystems Service, people's livelihoods and lifestyles exceed the benefits it may offer.

Optional text box to provide further information (This field is limited to 2500 characters) Since the negative impacts of this invasive species may far exceed the benefits, the solution would be to have an integrated research approach that considers both services and disservices among different groups, so that it may be addressed appropriately and solutions could be identified for suitable action.

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/MAMMALIA	*Bos taurus*				
ARTHROPODA/INSECTA	*Brachythemis contaminata*				
CHORDATA/MAMMALIA	*Bubalus bubalis*				
CHORDATA/REPTILIA	*Calotes versicolor*				
CHORDATA/MAMMALIA	*Canis lupus familiaris*				
ARTHROPODA/INSECTA	*Catopsilia pyranthe*				
CHORDATA/ACTINOPTERYGII	*Channa punctata*				
CHORDATA/ACTINOPTERYGII	*Channa striata*				
ARTHROPODA/INSECTA	*Chrysocoris stollii*				
CHORDATA/ACTINOPTERYGII	*Ctenopharyngodon idella*				
ARTHROPODA/INSECTA	*Danaus chrysippus*				
ARTHROPODA/INSECTA	*Diplacodes trivialis*				
CHORDATA/MAMMALIA	*Funambulus palmarum*				
CHORDATA/ACTINOPTERYGII	*Hypophthalmichthys molitrix*				
ARTHROPODA/INSECTA	*Junonia lemonias*				
ARTHROPODA/MALACOSTRACA	*Macrobrachium rosenbergii*				
ARTHROPODA/INSECTA	*Melanitis leda*				
CHORDATA/AVES	*Motacilla maderaspatensis*				
CHORDATA/AVES	*Nycticorax nycticorax*				
CHORDATA/ACTINOPTERYGII	*Oreochromis niloticus*				
ARTHROPODA/INSECTA	*Orthetrum sabina*				
CHORDATA/AVES	*Orthotomus sutorius*				
ARTHROPODA/INSECTA	*Pachliopta aristolochiae*				
ARTHROPODA/INSECTA	*Pachliopta hector*				
CHORDATA/AVES	*Pavo cristatus*				
CHORDATA/AVES	*Phalacrocorax fuscicollis*				
CHORDATA/AVES	*Plegadis falcinellus*				
CHORDATA/AVES	*Psittacula krameri*				
ARTHROPODA/INSECTA	*Tetraponera rufonigra*				
CHORDATA/AVES	*Turdoides affinis*				
ARTHROPODA/INSECTA	*Utetheisa pulchelloides*				
CHORDATA/AVES	*Vanellus indicus*				
ARTHROPODA/INSECTA	*Xylocopa latipes*				

Invasive alien animal species

Phylum	Scientific name	Impacts
CHORDATA/ACTINOPTERYGII	*Cyprinus carpio*	Actual (major impacts)

Optional text box to provide further information

The presence of carp makes the water more turbid, increases the algal blooms, resulting in decreased growth of aquatic macrophytes. Excess nutrients entering the wetland and the feeding habits of the carp result in suspension of sediment and nutrients. The nutrients fuel the algal blooms, which reduce the water quality and ultimately eliminates the submerged aquatic vegetation. With the loss of submerged vegetation, the water quality continues to deteriorate and fish species and quality declines.

4.4 - Physical components

4.4.1 - Climate

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

The area experiences a tropical type of climate with maximum temperature recorded during the months of March to May. The Months of January and December are the winter months. Overall the average maximum and minimum temperatures are 35°C; and 26°C; respectively. The area receives rainfall from South West & North East monsoon with the average annual rainfall range being 1000-1200 mm.

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 8

a) Maximum elevation above sea level (in metres): 12

- 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.

Udayamarthandapuram sanctuary supports populations of plant and Avifauna maintaining connections with the Point Calimere Wildlife and Bird Sanctuary (designated Ramsar Site) Panchanathikulam, Vaduvur and beyond as connecting migratory paths to birds. These sites attract thousands of migratory birds with the result of contiguous lagoons and wetland patches. The distribution of wetlands within the landscape provides an ideal location for “stop over” for wintering grounds to migratory birds for their foraging and shelter. This long stretch of wetland area is well protected and the extent of human induced disturbance is less and hence this area is highly used by the birds both migratory and resident populations. Udayamarthandapuram is also connected to the Vaduvur Birds Sanctuary. These wetlands together supports vulnerable, endangered, or critically endangered species; or threatened ecological communities.

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 ◉

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 precipitation	☑	No change
Water inputs from surface water	☑	No change

Water destination

Presence?	
Feeds groundwater	No change

Stability of water regime

Presence?	
Water levels fluctuating (including tidal)	No change

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

The main source of water for the wetland is Rainfall, groundwater, the surrounding runoff from the catchment area and from the Mettur Dam. The water in the wetland is mostly of intermittent nature with now frequent occasions of drying, as the wetland is mostly dependent on the rainfall and runoff waters that replenishes the groundwater. The water from the wetland is not used for drinking purpose. Agriculture is undertaken around and the wetland and ground water used for irrigation. The wetland plays the primary role of buffering by acting as a sponge during events of floods and extreme rainfall. It is a major source of ground water recharge. There is significant runoff from the surrounding catchment and the wetland acts as a sink for sediments.

(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 ☐

Please provide further information on pH (optional):

The pH of the water is found to be 9.5

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 ☐

Please describe other ways in which the surrounding area is different:

The Sanctuary is a manmade irrigation tank used for storing water for agriculture, receiving water from Mettur dam from August onwards, further supplemented by the NE monsoons from Oct to Jan; tank remains completely dry from Mar to Aug; no natural forest within the Sanctuary; Babul (Acacia nilotica) plantations were raised by Social Forestry wing, Forest Dept. during 1985-86& other major flora in the tank bunds &foreshore are Inca dulce, Prosopis juliflora, Terminalia arjuna, Ficus bengalensis, Syzigium cumini & Pongamia pinnata, etc., used for roosting/nesting by migratory birds like Open billed stork, White ibis etc.
All sites of valuable natural heritage in the around the wetland areas such as the gene pool reserve areas, rock formations, waterfalls, springs, gorges, groves, caves, points, walks, rides, cliffs, etc., are present. Udayamarthandapuram is a seasonal wetland fed by small canals that receive water from Mettur Dam through Koraiyar canal, post the release scheduled for June every year. Southern part of the landscape is part of the Koraiyar River running West to East, finally draining into Muthupet mangroves. During dry periods from Apr-Aug small (artificial) tanks in the sanctuary store water sustaining resident bird population. Topography of the site is flat, located at an elevation of nearly 8-12 m ASL. The sanctuary represents inland wetland encompassing floodplains along rivers& streams as well as agricultural ecosystems, located within the Cauvery delta. Predominant vegetation in this area is Acacia nilotica planted in the North-Western side of the wetland by Tamil Nadu Forestry Dept. As the Sanctuary is an inland wetland, it does not show the the presence of structures like beach/shoreline/sand dune/ mud flats, etc. It has been declared as Protected Area in 1998.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	High
Fresh water	Drinking water for humans and/or livestock	High
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
Climate regulation	Regulation of greenhouse gases, temperature, precipitation and other climactic processes	High
Hazard reduction	Flood control, flood storage	High
Hazard reduction	Coastal shoreline and river bank stabilization and storm protection	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 microorganizms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Sediment retention	High
Soil formation	Accumulation of organic matter	High
Nutrient cycling	Storage, recycling, processing and acquisition of nutrients	High
Nutrient cycling	Carbon storage/sequestration	High
Pollination	Support for pollinators	High

Within the site: 1000

Outside the site: 10000

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

Udhayamarthandapuram Bird Sanctuary is a unique sanctuary actively protected and managed by the Forest dept. & the Udhayamarthandapuram village community. It is one of the largest breeding waterbird reserves in Tamil Nadu, attracting more than 40,000 birds annually. It is significant that local people show keen interest in protecting this sanctuary &live with the birds in a total symbiotic relationship. There is a need to monitor these and other tanks in the region on a regular basis to identify more important sites and understand the ecological importance of the tanks better.

The Site consists of Acacia nilotica planted by the Forest Dept. These trees, used by birds for nesting and roosting are eventually harvested making the tank devoid of nesting habitats. Agriculture is undertaken around the wetland and the groundwater is used for irrigation. The wetland plays the primary role of buffering by acting as a sponge during events of floods and extreme rainfall, & is a major source of ground water recharge. There is significant runoff from surrounding catchment area and the wetland acts as a sink for sediments.

The surroundings are used by locals for agriculture and water is extraction for this purpose. No agricultural and plantation activities exist within the wetland. It provides a suitable habitat for birds as we also recorded the local and migratory bird species. The wetland supports diverse fish species, although the commercial fishery is not practiced.

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 ☑

Description if applicable

As mentioned in point (i) under 4.5.2 above, the local population are engaged in agricultural activities, and so are dependent completely on the sanctuary for irrigation and livestock purposes.

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 ☑

Description if applicable

A few cultural activities are organized in the temple near the sanctuary during specific festival times.

4.6 - Ecological processes

<no data available>

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	☑	☑
Local authority, municipality, (sub)district, etc.	☑	☑

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

Udayamarthandapuram Bird Sanctuary, Vaduvur Bird Sanctuary, and Point Calimere Wildlife and Bird Sanctuary (Muthupet Lagoon), are under the control of Thiruvarur District Management. Since the Udayamarthandapuram Bird Sanctuary was originally a human-made irrigation tank owned by the Public
Works Department of the Government of Tamil Nadu there are no issues regarding its ownership. The sanctuary was declared in the G.O.No.379, Environment & Forest (FRV) Department, dt. 31.12.98. The total area of the sanctuary is 45.28.5 ha. (Survey no: R.S.No.11-1 of Udayamarthadapuram village) under
section 26 A (1) of The Wildlife (Protection) Act 1972.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: Tamil Nadu Forest Department, Thiruvarur District

Provide the name and/or title of the person or people with responsibility for the wetland: District Forest Officer, Thiruvarur Division

Postal address:
O/o The District Forest Officer,
Thiruvarur Division,
Thiruvarur – 610 004,
Tamil Nadu
INDIA

E-mail address: dfothiruvarur@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		☐	☑

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Water abstraction	Medium impact		☐	☑
Salinisation	Medium impact		☐	☑
Drainage	Medium impact		☐	☑
Water releases	Medium impact		☐	☑

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Livestock farming and ranching	Medium impact		☐	☑

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		☐	☑

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		☑	☑

Natural system modifications

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Vegetation clearance/ land conversion	Medium impact		☐	☑

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		☑	☑

Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Agricultural and forestry effluents	Medium impact		☐	☑
Garbage and solid waste	Medium impact		☐	☑

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		☑	☑
Droughts	Medium impact		☑	☑
Temperature extremes	Medium impact		☑	☑
Storms and flooding	Medium impact		☑	☑

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Comes under the Indian Wildlife Protection Act, 1972	Udayamarthandapuram Bird Sanctuary	https://legislative.gov.in/sites/default/files/A1972-53_0.pdf	whole
Sanctuary was declared in the G.O.No.379, Environment& Forest (FRV) Dept. dtd.31.12.98.Survey no: R.S.No.11-1 of Udayamarthadapuram village) under section 26 A (1) of The Wildlife (Protection) Act 1972.	Udayamarthandapuram Bird Sanctuary	http://www.wiienvis.nic.in/Database/Tamil_Nadu_7838.aspx	whole
Udayamarthandapuram wetalnd was declared as a bird Sanctuary in 1998 (Protected Area) notified under Wild Life Protection Act 1972 (Central Act 53 of 1972)	Udayamarthandapuram Bird Sanctuary	http://www.wiienvis.nic.in/Database/Tamil_Nadu_7838.aspx	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

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

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 ◉

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

There is no Current communications, Education and public awareness programmes (CEPA) are undertaken in this wetland area.

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

5.2.7 - Monitoring implemented or proposed

<no data available>

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

Bhubesh Guptha, M., Sridharan, N., Vijayan, L, Thiyagesan, K., Sandaliyan, S and Somasundaram, S (2011) Status of major wetlands and wetland birds in Kanyakumari, Coimbatore, Thanjavur, Thiruvarur, Perambalur, Cuddalore, Nagapattinam and Trichy districts in Tamil Nadu, India. World Journal of Zoology, 6 (3): 235-242, 2011, ISSN 1817-3098

Siva, T and Goldin Quadros (2021) Egyptian Vulture (Neophron percnopterus) in Udhayamarthandapuram Bird Sanctuary, Thiruvarur District, Tamil Nadu: a First record. Ambient Science, 2021: Vol. 08(1); 37-38.

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)
<1 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
<1 file(s) uploaded>

vi. other published literature
<no file available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

Glossy Ibis and Red Wattled Lapwing (*Tamil Nadu State Wetland Authority, 10-11-2021*)

Panoramic view of the bird sanctuary (*Tamil Nadu State Wetland Authority, 10-11-2021*)

Waterbirds (*Tamil Nadu State Wetland Authority, 10-11-2021*)

The wetland. (*Tamil Nadu State Wetland Authority, 10-11-2021*)

6.1.4 - Designation letter and related data

Designation letter
<1 file(s) uploaded>

Date of Designation: 2022-04-08