

3.44. THEERTHANGAL BIRD SANCTIARY

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Section 1: Identification, Location and Jurisdiction

- 1.1 *Name of the Wetland:* Theerthangal Bird Sanctuary or Theerthangal Tank or Theerthangal Kanmoi
- 1.2 *Name of the Village (s), Tehsil (s), Municipal area (s):* Theerthangal, Ramanatapuram
- 1.3 *Name of the District (s) in which Wetlands complex located:* Ramanatapuram
- 1.4 *Geographical coordinates:*
 - ▶ Latitude: 9°27'23" N
 - ▶ Longitude: 78°46' 19" E
- 1.5 *Name of the Department/ Agency which has jurisdiction over Wetland/ Wetland complex:* Forest Department

Section 2: Site Characteristics

- 2.1 *Area of Wetland:* 51.37 ha
- 2.2 *Wetland type:*

Category	Subcategory
✓ Natural (Inland)	☐ Permanent lakes ☒ Seasonal/ intermittent lakes ☐ Permanent streams/ creeks ☐ Seasonal/ intermittent streams/ creeks ☐ Oxbow ☐ River floodplain ☐ Permanent freshwater marshes ☐ Seasonal/ intermittent freshwater marshes ☐ Shrub-dominated Wetlands ☐ Tree-dominated Wetlands ☐ Geothermal Wetlands ☐ Karst and other subterranean hydrological

	systems
☐ Natural (Coastal)	☐ Coastal lagoon ☐ Estuary ☐ Intertidal mud, sand or salt flats ☐ Mangroves ☐ Coral reefs
☐ Human-made	☐ Aquaculture pond ☐ Tank ☐ Saltpan ☐ Dam/ Reservoir

2.3 *Depth (m):* Average - 2; Maximum - 3.5

2.4 *Elevation (m above mean sea level):* 15

2.5 *Water regimes*

a) Main source of water

- ☒ Rainfall inflow from river
- ☐ Groundwater
- ☒ Catchment runoff
- ☐ Direct/ indirect inflow from the river:
- ☐ Others, please specify:
- ☐ Name of River/ Canal System

b) Water performance

- ☐ Mostly permanent
- ☒ Mostly intermittent

c) Destination of water from Wetland

- ☒ Feeds groundwater river to sea
- ☐ To downstream catchment

d) Water pH

- ☐ Acid (< 5.5)
- ☒ Circumneutral (5.5-7.4)
- ☐ Alkaline (> 7.4)

e) Water salinity

- ☒ Fresh (< 0.5 g/l)
- ☐ Brackish (0.5-30 g/l)
- ☐ Euhaline (30-40 g/l)
- ☐ Hypersaline (> 40 g/l)
- ☐ Not known

- f) Nutrients in water
- ✓ Eutrophic
 - ☐ Mesotrophic
 - ☐ Oligotrophic
 - ☐ Not known

2.6 *Climatic setting*

- a) Annual rainfall/ Snowfall (mm): 70.6
 b) Temperature (°C) Minimum 26.65 ; Maximum 34.45
 c) Humidity (%) Minimum 75.3 ; Maximum 80.8

2.7 *Area of zone of influence (in ha):* 3826.42 ha (with an irregular radius of 3.51 km)

2.8 *Major land use within zone of influence*

Land Use	Percentage
Forest	: 0%
Vegetation (Plantation)	: 6%
Agriculture	: 79%
Settlements (Rural)	: 3%
Settlements (Urban)	: 0%
Industrial	: 0%
Waterbody	: 12%

2.9 *Map of Wetland complex and zone of influence:* Enclosed as Annexure 3.44 (Fig. 3.44.1-3.44.2)

Section 3: Biodiversity

- 3.1 *Notable plant species present in Wetland:* The Wetland is home to a diverse range of plant species, totaling 49 species. (refer to Table 3.44.1 in Annexure 3.44).
- 3.2 *Notable animal species present in Wetland:* The Wetland supports a variety of animal species, with a total of 78 recorded species. This includes 3 mammal species, 7 reptile species, 8 amphibian species, 49 bird species, and 11 species of butterflies (refer to Table 3.44.2-3.44.3 in Annexure 3.44).
- 3.3 *Species of conservation significance:* Highlighted in Table 3.44.1-3.44.3
- 3.4 *Major plant invasive alien species:* The Wetland supports 6 plant invasive species (refer to Table 3.44.4 in Annexure 3.44).
- 3.5 *Major animal invasive alien species:* The Wetland supports 1 animal invasive species (refer to Table 3.44.5 in Annexure 3.44).

Section 4: Ecosystem Services

Importance	Relevance	Details
Source of drinking water for people living and around	☐ Yes ☒ No	
Source of water for agriculture	☒ Yes ☐ No	Water has been drawn from outflow for agricultural activities
Fisheries	☒ Yes ☐ No	Subsistence fishing activity is happening
Cultivation of aquatic food plants	☐ Yes ☒ No	
For buffalo wallowing and use of domesticated animals	☐ Yes ☒ No	
Medicinal plants	☒ Yes ☐ No	Few Medicinal plants around the Wetland. Listed in Table 3.44.8 (Annexure 3.44)
Is a recreational site	☐ Yes ☒ No	
Buffering communities from extreme events as floods and storms	☐ Yes ☒ No	
Groundwater recharge	☒ Yes ☐ No	Major source of ground water recharge
Water purification	☐ Yes ☒ No	
Acts as a sink for sediments	☒ Yes ☐ No	Substantial water flow from the surrounding watershed
Has significant cultural and religious values	☒ Yes ☐ No	There is a temple around the embankment of the Wetland
Is a site for recreation and tourism	☐ Yes ☒ No	
Supports noteworthy plant species	☐ Yes ☒ No	
Support noteworthy animal species	☐ Yes ☒ No	

Site of high congregation of migratory water birds	☒ Yes ☐ No	Provides a suitable site for the high congregation of migratory water birds.
Supports life cycle of fish or amphibians	☒ Yes ☐ No	Almost 8 variety of amphibians were surviving
Mining	☐ Yes ☒ No	
Any others	☐ Yes ☒ No	

Section 5: Pre-Existing Rights and Privileges

Nature of right and privilege	Relevant for the site	Does this negatively impact the Wetland's ecological health?	Brief description
Community Fishing (without any lease or permission from government department)	☒ Yes ☐ No	☐ Yes ☐ No ☒ Not assessed	Illegal Subsistence fishing activity
Fishing under lease from government department	☐ Yes ☒ No	☐ Yes ☐ No ☐ Not assessed	
Harvest of plants (without any lease or permission from government department)	☐ Yes ☒ No	☐ Yes ☐ No ☐ Not assessed	
Harvest of plants under lease from government department	☐ Yes ☒ No	☐ Yes ☐ No ☐ Not assessed	
Agriculture or horticulture within Wetland	☐ Yes ☒ No	☐ Yes ☐ No ☐ Not assessed	
Grazing	☒ Yes ☐ No	☐ Yes ☐ No ☒ Not assessed	Grazing activity is done by cattle
Religious practices	☒ Yes ☐ No	☐ Yes ☐ No ☒ Not assessed	There is a temple around the embankment of the Wetland

Withdrawal of water for domestic use	☐ Yes ☒ No	☐ Yes ☐ No ☐ Not assessed	
Withdrawal of water for agriculture or fisheries	☒ Yes ☐ No	☐ Yes ☐ No ☒ Not assessed	Water has been drawn from outflow for agricultural activities
Bathing or wallowing of domestic animals	☒ Yes ☐ No	☐ Yes ☐ No ☒ Not assessed	Cattle wallowing is observed
Plying of boats	☐ Yes ☒ No	☐ Yes ☐ No ☐ Not assessed	
Any other	☐ Yes ☒ No	☐ Yes ☐ No ☐ Not assessed	

Section 6: Present and Potential Threats

Threat	Degree	Present/ Potential	Additional info.
Changes in water inflow and outflow	☐ High ☐ Medium ☐ Low	☐ Present ☐ Potential	
Pollution	☐ High ☐ Medium ☐ Low	☐ Present ☐ Potential	
Unsustainable harvest of biological resources	☐ High ☐ Medium ☐ Low	☐ Present ☐ Potential	
Mining	☐ High ☐ Medium ☐ Low	☐ Present ☐ Potential	
Siltation	☐ High ☐ Medium ☒ Low	☒ Present ☐ Potential	Substantial water flow from the surrounding watershed
Encroachment	☐ High ☐ Medium	☐ Present ☐ Potential	

	☐ Low		
Spread of invasive species	☐ High ☐ Medium ☒ Low	☒ Present ☐ Potential	Listed in Table 3.44.4-3.44.5 in Annexure 3.44
Any other, please list	☐ High ☐ Medium ☐ Low	☐ Present ☐ Potential	

Section 7: Activities Proposed to Be Prohibited (other than those listed in Rule 4 (2) of Wetlands Rules and Regulated

Activity	Whether prohibited or regulated	Regulation within Wetlands zone of influence	If regulated indicates the level of regulation	Name of department/ agency responsible for regulation/ prohibition	Additional info.
Withdrawal of water / impoundment/diversion or any other hydrological intervention		☐ Wetland/ Wetland complex boundary ☐ Zone of influence			
Harvesting of resources (living / non-living)		☐ Wetland/ Wetland complex boundary ☐ Zone of influence			
Grazing	Regulated	☒ Wetland/ Wetland complex boundary ☐ Zone of influence	Upto the boundary is well		
Discharge of treated sewage/ effluent / wastewater		☐ Wetland/ Wetland complex boundary ☐ Zone of influence			

Construction of boat jetties, and facilities for temporary use, as pantoon bridges		☐ Wetland/ Wetland complex boundary ☐ Zone of influence			
Aquaculture, agriculture and horticulture activities within the Wetland boundaries.		☐ Wetland/ Wetland complex boundar ☐ Zone of influence			
Any other, please list		☐ Wetland/ Wetland complex boundary ☐ Zone of influence			

Section 8: Activities Proposed to be permitted

Activity	Relevance	Within Wetlands or zone of influence	Additional info.
Withdrawal of water for agriculture		☐ Wetland/ Wetlands complex boundary ☒ Zone of influence	May permitted, since the surrounding area is rich in agriculture

Section 9: Listing of Available Scientific Resources Used

1. Aengals, R., Sathish Kumar, V.M., Palot, M.J. & Ganesh, S.R. (2018). A Checklist of Reptiles of India. 35 pp. Version 3.0. Online publication is available at www.zsi.gov.in (Last update: May 2018)
2. Ali, S. (2002). The Book of Indian Birds (13th Revised Edition). Oxford University Press, New Delhi, 326pp.
3. Bibby, C.J., N.D. Burgess & D.A. Hill (1993). Bird Census Techniques. Academic Press Limited, London, 257pp.
4. Gamble, J.S. and C.E.C. Fischer. 1915-1935. Flora of Presidency of Madras, Adlard and Son, London. pp. 1-3.
5. Grimmet, R., C. Inskipp & T. Inskipp (2000). Pocket Guide to the Birds of the Indian Subcontinent. Oxford University Press, New York, 384pp.
6. Henry, A.N., Chithra, V.N. and Balakrishnan, P. (1989) Flora of Tamil Nadu India. Series 1: Analysis. Vol. III. Botanical Survey of India, Coimbatore.
7. *K. Ratnam* Bird of Tamil Nadu

8. Kamalakannan, M.& P.O.Nameer (2019). A checklist of mammals of Tamil Nadu, India. *Journal of Threatened Taxa* 11(8): 13992–14009; <https://doi.org/10.11609/jott.4705.11.8.13992-14009>.
9. Kehimkar I. *The Book of Indian Butterflies*. Bombay Natural History Society, 2008, 497.
10. Mathew, K. M. 1981. *The Material for the Flora of the Tamilnadu Carnatic*, Madras, India.
11. Matthew, K. M. 1982. *Illustrations on the Flora of the Tamilnadu Carnatic*. Vol. II. The Diocesan press, Madras, India.
12. Matthew, K. M. 1983. *The Flora of Tamilnadu Carnatic*. Vol. III. The Diocesan press, Madras, India.
13. Matthew, K. M. 1988. *Further Illustrations on the Flora of the Tamilnadu Carnatic*. Vol. IV. The Diocesan press, Madras, India.
14. Nair, N.C. and A.N. Henry. 1983. *Flora of Tamil Nadu, India*. Series 1, Vol. 1, Botanical Survey of India, Southern Circle, Coimbatore. 1-184.

ANNEXURE 3.44

Fig 3.44.1 Zone of Influence of Theerthangal Bird Sanctuary

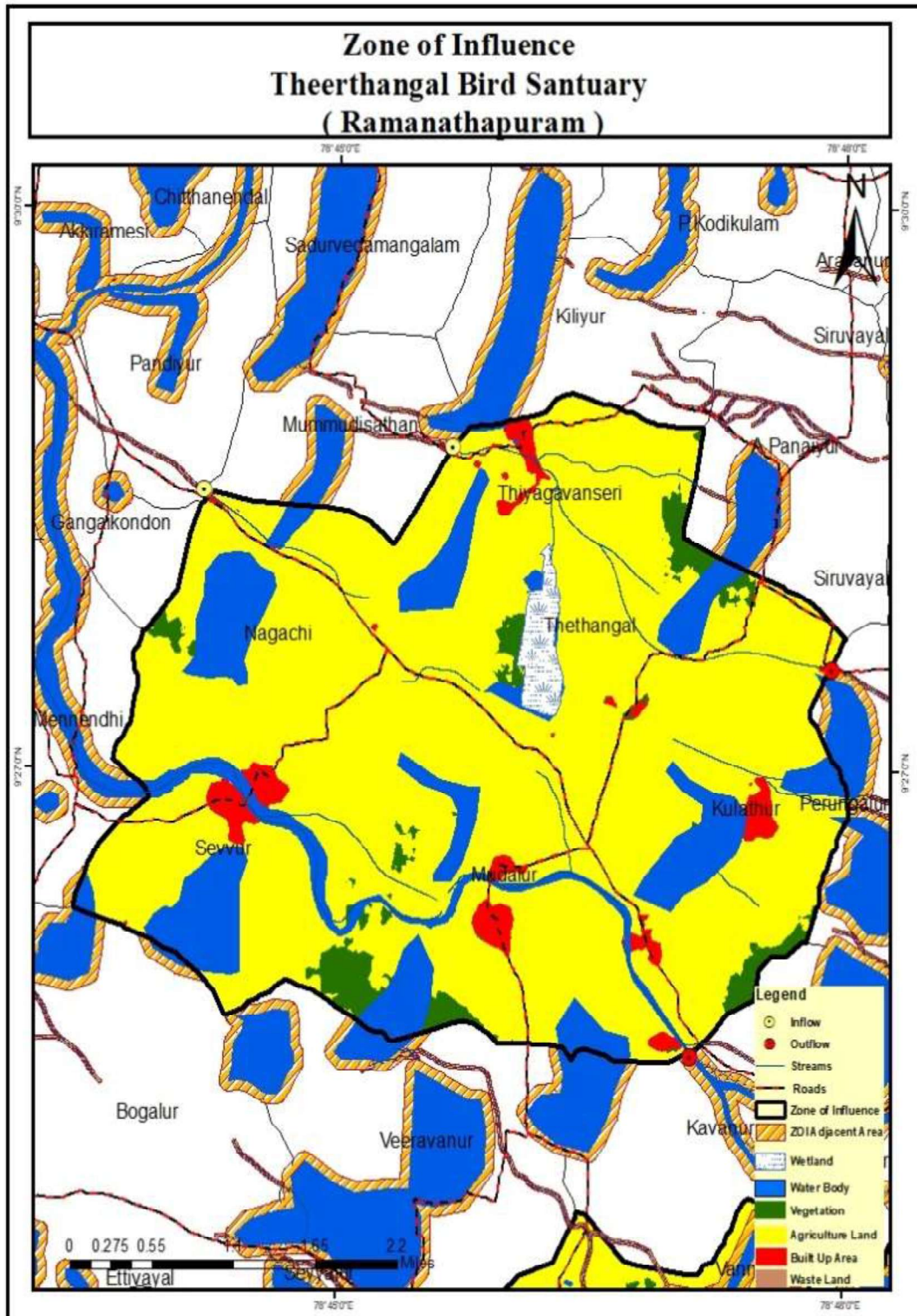
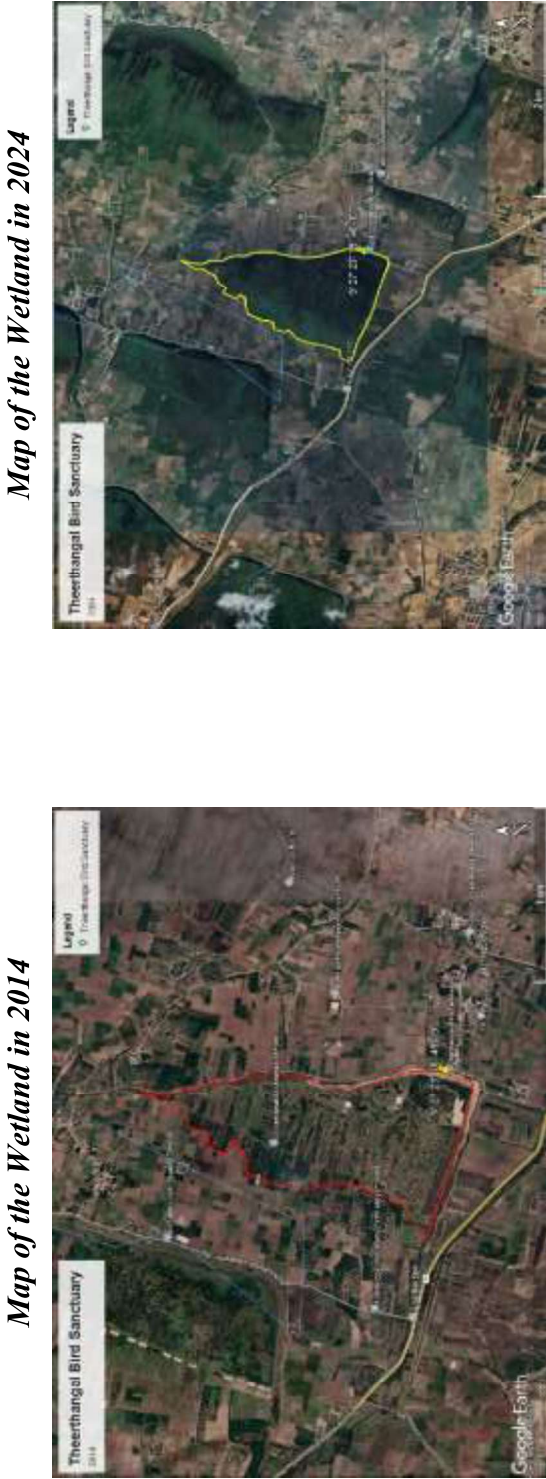


Fig 3.44.2. Map (2004 vs. 2024) and Land Cover of Theerthangal Bird Sanctuary



Land Use/ Land Cover of the Wetland

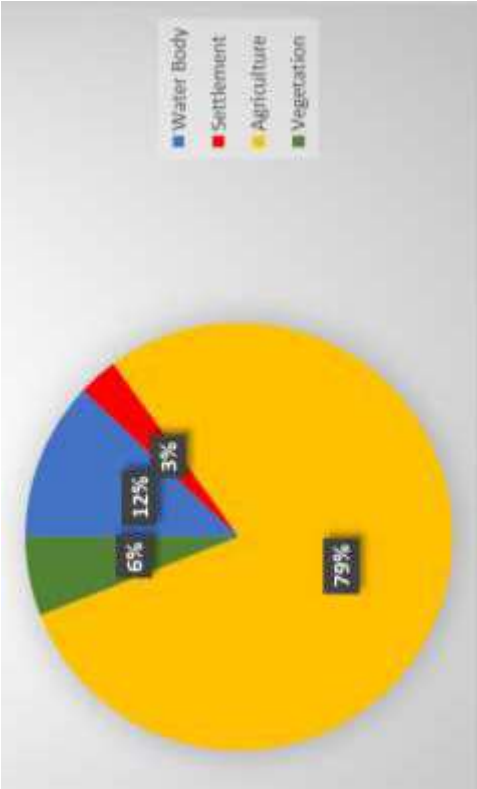


Table 3.44.1. IUCN Status of Floral Species in Theerthangal Bird Sanctuary

S. No.	Species	Family	Tamil Name	Habit	IUCN
1.	<i>Abrus precatorius</i>	Fabaceae	Kundumani	Climber	NE
2.	<i>Abutilon indicum</i>	Malvaceae	Thuthi	Shrub	LC
3.	<i>Acacia nilotica</i>	Fabaceae	Karuvel	Tree	LC
4.	<i>Acalypha indica</i>	Euphorbiaceae	Kuppaimeni	Herb	NE
5.	<i>Acanthospermum hispidum</i>	Compositae		Herb	NE
6.	<i>Achyranthes aspera</i>	Amaranthaceae	Nayurivi	Herb	NE
7.	<i>Aerva lanata</i>	Amaranthaceae	Peelai	Herb	NE
8.	<i>Albizia lebbeck</i>	Mimosaceae	Vaagai	Tree	LC
9.	<i>Albizia saman</i>	Fabaceae	Rain tree	Tree	LC
10.	<i>Azadiracta indica</i>	Meliaceae	Vembu	Tree	LC
11.	<i>Alternanthera sessilis</i>	Amaranthaceae	Ponnanganni	Herb	NE
12.	<i>Boerhavia diffusa</i>	Nyctaginaceae	Mookarattai	Herb	NE
13.	<i>Brachiaria ramosa</i>	Poaceae		Grass	NE
14.	<i>Calotropis gigantea</i>	Asclepiadaceae	Erukku	Shrub	NE
15.	<i>Cardiospermum halicacabum</i>	Sapindaceae	Mudakotthan	Herb	NE
16.	<i>Chloris barbata</i>	Poaceae	Kodaipul	Grass	NE
17.	<i>Cleome viscosa</i>	Capparidaceae	Nai vaelai	Herb	NE
18.	<i>Commelina benghalensis</i>	Commelinaceae	Kanaangozhai	Herb	LC
19.	<i>Corchorus capsularis</i>	Tiliaceae	Sanal	Herb	NE
20.	<i>Cynodon dactylon</i>	Poaceae	Aruhampul	Grass	NE
21.	<i>Datura metal</i>	Solanaceae	Karu Oomatthai	Herb	NE
22.	<i>Digitaria abludens</i>	Poaceae		Grass	NE
23.	<i>Digitaria ciliaris</i>	Poaceae		Grass	NE
24.	<i>Eragrostis viscosa</i>	Poaceae	-	Grass	LC
25.	<i>Ficus benghalensis</i>	Moraceae	Allamaram	Tree	LC
26.	<i>Hyptis suaveolens</i>	Labiatae		Shrub	NE
27.	<i>Ipomoea carnea</i>	Convolvulaceae		Shrub	NE
28.	<i>Ipomoea pes-caprae</i>	Convolvulaceae	Attukkal	Climber	LC
29.	<i>Isachne miliacea</i>	Poaceae	-	Grass	LC

30.	<i>Ischaemum indicum</i>	Poaceae	-	Grass	LC
31.	<i>Jatropha gossypifolia</i>	Euphorbiaceae	Kaatu-amanakku	Shrub	NE
32.	<i>Justicia procumbens</i>	Acanthaceae	Ottupillu	Herb	NE
33.	<i>Justicia prostrata</i>	Acanthaceae		Herb	NE
34.	<i>Leucas aspera</i>	Labiatae	Thumbai	Herb	LC
35.	<i>Mollugo cerviana</i>	Molluginaceae	Parpaadagam	Herb	NE
36.	<i>Mukia leiosperma</i>	Cucurbitaceae		Climber	NE
37.	<i>Passiflora foetida</i>	Passifloraceae	Poonaipidukku	Climber	NE
38.	<i>Phyllanthus reticulatus</i>	Euphorbiaceae	Inki pazham	Shrub	LC
39.	<i>Senna occidentalis</i>	Caesalpiniaceae	Thagarai	Shrub	NE
40.	<i>Sphaeranthus amaranthoides</i>	Compositae	Siva karandhai	Herb	LC
41.	<i>Tephrosia purpurea</i>	Fabaceae	Kozhinji	Herb	NE
42.	<i>Thevetia peruviana</i>	Apocynaceae	Ponnarali	Shrub	NE
43.	<i>Tinospora cordifolia</i>	Menispermaceae	Seendhil	Climber	NE
44.	<i>Trachys muricata</i>	Poaceae	-	Grass	LC
45.	<i>Trianthema portulacastrum</i>	Aizoaceae		Herb	NE
46.	<i>Tridax procumbens</i>	Compositae	Vettukkaaya-thazhai	Herb	LC
47.	<i>Tylophora indica</i>	Asclepiadaceae	Naippalai	Climber	NE
48.	<i>Typha angustifolia</i>	Typhaceae	Sambu	Herb	LC
49.	<i>Xanthium indicum</i>	Compositae	Marul oomatham	Herb	LC

Table 3.44.2. IUCN Status of Selected Fauna Species in Theerthangal Bird Sanctuary

S. No.	Scientific Name of the Species	Family	Common Name	IUCN	Present study
<i>A. Mammal</i>					
1.	<i>Funambulus pennantii</i>	Sciuridae	Five striped Palm squirrel	LC	*
2.	<i>Urva edwardsii</i>	Herpestidae	Indian grey mongoose	LC	*
3.	<i>Rattus argentiventer</i>	Muridae	Field Rat	LC	*

<i>B. Reptile</i>					
1.	<i>Calotes versicolor</i>	Agamidae	Oriental Garden lizard	LC	
2.	<i>Ptyas mucosa</i>	Colubridae	Indian Rat Snake	LC	
3.	<i>Psammophilus dorsalis</i>	Agamidae	Peninsular Rock Agama	LC	
4.	<i>Xenochrophis piscator</i>	Colubridae	Checkered keelback	LC	
5.	<i>Ophisops leschenaultia</i>	Lacertidae	Leschenault's snake-eye	LC	
6.	<i>Sitana ponticeriana</i>	Agamidae	Fan-throated lizard	LC	
7.	<i>Bungarus caeruleus</i>	Elapidae	Common krait	LC	
<i>C. Amphibian</i>					
1.	<i>Bufo scaber</i>	Bufonidae	Fergusons toad	LC	*
2.	<i>Duttaphrynus melanostictus</i>	Bufonidae	Common indian toad	LC	*
3.	<i>Kaloula taprobanica</i>	Microhylidae	Painted frog	LC	*
4.	<i>Uperodon systoma</i>	Microhylidae	Marbled ballon frog	LC	*
5.	<i>Polypedates maculatus</i>	Rhacophoridae	Common tree frog	LC	*
6.	<i>Euphlyctis cyanophlyctis</i>	Dicroglossidae	Indian skipper frog	LC	*
7.	<i>Fejervarya caperata</i>	Dicroglossidae	Cricket frog	LC	*
8.	<i>Fejervarya limnocharis</i>	Dicroglossidae	Paddy field frog	LC	*
<i>D. Butterfly</i>					
1.	<i>Euploea core</i>	Nymphalidae	Common crow	LC	PS
2.	<i>Catopsilia pomona</i>	Pieridae	Common Emigrant	NE	*
3.	<i>Melanitis leda</i>	Nymphalidae	Common evening brown	LC	*
4.	<i>Eurema hecabe</i>	Pieridae	Common	LC	*

			grass yellow		
5.	<i>Papilio demoleus</i>	Papilionidae	Common lime	NE	*
6.	<i>Papilio polytes</i>	Papilionidae	Common mormon	NE	*
7.	<i>Junonia lemonias</i>	Nymphalidae	Lemon pansy	NE	*
8.	<i>Catopsilia pyranthe</i>	Pieridae	Mottled Emigrant	NE	*
9.	<i>Pseudozizeeria maha</i>	Lycaenidae	Pale Grass Blue	NE	*
10.	<i>Junonia almana</i>	Nymphalidae	Peacock pansy	LC	*
11.	<i>Danaus chrysippus</i>	Nymphalidae	Plain tiger	LC	*

LC – Least Concern; * - Yes

Table 3.44.3. IUCN Status of Bird Species in Theerthangal Bird Sanctuary

S. No.	Scientific Name of the Species	Common name	Habitat	IUCN	PS
1.	<i>Acridotheres tristis</i>	Common Myna	T	LC	*
2.	<i>Actitis hypoleucos</i>	Common Sandpiper	D	LC	
3.	<i>Alcedo atthis</i>	Common Kingfisher	T	LC	
4.	<i>Amaurornis phoenicurus</i>	White-breasted Waterhen	A	LC	
5.	<i>Anas poecilorhyncha</i>	Spot-billed Duck	A	LC	
6.	<i>Anhinga melanogaster</i>	Darter	A	LC	
7.	<i>Anthus rufulus</i>	Paddy-field Pipit	D	LC	
8.	<i>Ardea cinerea</i>	Grey Heron	A	LC	
9.	<i>Ardeola grayii</i>	Indian Pond Heron	A	LC	*
10.	<i>Bubulcus ibis</i>	Cattle Egret	D	LC	*
11.	<i>Casmerodius albus</i>	Great Egret	A	LC	
12.	<i>Ceryle rudis</i>	Pied Kingfisher	D	LC	*
13.	<i>Columba livia</i>	Rock Pigeon	T	LC	
14.	<i>Copsychus saularis</i>	Oriental Magpie Robin	T	LC	
15.	<i>Coracias benghalensis</i>	Indian Roller	T	LC	*
16.	<i>Corvus macrorhynchus</i>	Large-billed Crow	T	LC	*
17.	<i>Corvus splendens</i>	House Crow	T	LC	*
18.	<i>Cypsiurus balasiensis</i>	Asian Palm Swift	T	LC	*

19.	<i>Dicrurus adsimilis</i>	Black Drongo	T	LC	*
20.	<i>Egretta garzetta</i>	Little Egret	A	LC	*
21.	<i>Elanus caeruleus</i>	Black-shouldered Kite	T	LC	*
22.	<i>Eudynamys scolopacea</i>	Asian Koel	T	LC	*
23.	<i>Falco tinnunculus</i>	Common Kestrel	T	LC	
24.	<i>Gallinula chloropus</i>	Common Moorhen	A	LC	*
25.	<i>Haliastur indus</i>	Brahminy Kite	T	LC	*
26.	<i>Hydrophasianus chirurgus</i>	Pheasant-tailed Jacana	A	LC	
27.	<i>Lonchura Malacca</i>	Black-headed Munia	D	LC	
28.	<i>Merops orientalis</i>	Green Bee-eater	T	LC	*
29.	<i>Merops philippinus</i>	Blue-tailed Bee-eater	T	LC	
30.	<i>Mesophoyx intermedia</i>	Intermediate Egret	A	LC	
31.	<i>Metrpidius indicus</i>	Bronze- Winged Jacana	A	LC	
32.	<i>Milvus migrans</i>	Black Kite	T	LC	*
33.	<i>Oriolus oriolus</i>	Eurasean Golden Oriole	T	LC	
34.	<i>Orthotomus sutorius</i>	Common Tailorbird	T	LC	
35.	<i>Passer domesticus</i>	House Sparrow	T	LC	*
36.	<i>Pelecanus philippensis</i>	Spot-billed Pelican	A	LC	
37.	<i>Phalacrocorax carbo</i>	Great Cormorant	A	LC	
38.	<i>Phalacrocorax niger</i>	Little Cormorant	A	LC	*
39.	<i>Porphyrio porphyrio</i>	Purple Swamphen	A	LC	*
40.	<i>Prinia inornata</i>	Plain Prinia	T	LC	
41.	<i>Prinia socialis</i>	Ashy Prinia	T	LC	*
42.	<i>Psittacula krameri</i>	Rose-ringed Parakeet	T	LC	
43.	<i>Pycnonotus cafer</i>	Red-vented Bulbul	T	LC	
44.	<i>Sterna aurantia</i>	River Tern	A	LC	
45.	<i>Sternula albifrons</i>	Little Tern	A	LC	*
46.	<i>Streptopelia chinensis</i>	Spotted Dove	T	LC	*
47.	<i>Sturnus pagodarum</i>	Brahminy Starling	T	LC	
48.	<i>Threskiornis melanocephalus</i>	Black-headed Ibis	A	NT	*

LC – Least Concern; * - Yes; T – Terrestrial; A – Aquatic; D – Dry/ desert; NT – Near Threatened

**Table 3.44.4. IUCN Status of major plant invasive alien species in
Theerthangal Bird Sanctuary**

S. No.	Species	Family	Tamil Name
1.	<i>Albizia saman</i>	Fabaceae	Rain tree
2.	<i>Alternanthera sessilis</i>	Amaranthaceae	Ponnanganni
3.	<i>Ipomoea carnea</i>	Convolvulaceae	
4.	<i>Senna occidentalis</i>	Caesalpiniaceae	Thagarai
5.	<i>Typha angustifolia</i>	Typhaceae	Sambu
6.	<i>Xanthium indicum</i>	Compositae	Marul oomatham

**Table 3.44.5. IUCN Status of major animal invasive alien species in
Theerthangal Bird Sanctuary**

S. No.	Species	Family	Common name	IUCN
A. Fish				
1.	<i>Clarias gariepinus</i>	Clariidae	African Catfish	LC

Table 3.44.6. IUCN Status of major medicinal plant species in Theerthangal Bird Sanctiary

S. No.	Species	Family	Tamil Name	Habit
1.	<i>Abrus precatorius</i>	Fabaceae	Kundumani	Climber
2.	<i>Abutilon indicum</i>	Malvaceae	Thuthi	Shrub
3.	<i>Acalypha indica</i>	Euphorbiaceae	Kuppaimeni	Herb
4.	<i>Acanthospermum hispidum</i>	Compositae		Herb
5.	<i>Achyranthes aspera</i>	Amaranthaceae	Nayurivi	Herb
6.	<i>Borassus flabellifer</i>	Arecaceae	Panai Maram	Tree
7.	<i>Brachiaria ramosa</i>	Poaceae		Grass
8.	<i>Calotropis gigantea</i>	Asclepiadaceae	Erukku	Shrub
9.	<i>Cardiospermum halicacabum</i>	Sapindaceae	Mudakotthan	Herb
10.	<i>Leucas aspera</i>	Labiatae	Thumbai	Herb
11.	<i>Mukia leiosperma</i>	Cucurbitaceae		Climber

12.	<i>Pontederia vaginalis</i>	Pontederiaceae	Karung kuvalai	Tree
13.	<i>Solanum trilobatum</i>	Solanaceae	Thoodhuvalai	Herb
14.	<i>Tephrosia purpurea</i>	Fabaceae	Kozhinji	Herb
15.	<i>Tinospora cordifolia</i>	Menispermaceae	Seendhil	Climber
16.	<i>Tridax procumbens</i>	Compositae	Vettukkaaya-thazhai	Herb
17.	<i>Tylophora indica</i>	Asclepiadaceae	Naippalai	Climber

CHECK LIST

- ✓ Responsible agency has been clearly identified and details of contact person included
- ✓ Wetland/Wetlands complex boundary has been delineated using GIS and firmed up by adequate ground truthing
- ✓ Wetland/Wetlands complex map has been provided at required scale
- ✓ Zone of influence has been delineated and included in Wetland map or a separate map
- ✓ Wetland zone of influence is sufficient to manage all activities
- ✓ Site's importance have been listed, and for major categories, justification provided
- ✓ Site's biodiversity values are listed, and for major categories, justification provided
- ✓ List of pre-existing rights and privileges provided
- ✓ Consistency or, inconsistency of pre-existing rights and privileges indicated to be best of available knowledge
- ✓ Threats to site listed, and for major categories details provided
- ✓ Activities prohibited, beyond those already listed in Rule 4 (2) have been mentioned
- ✓ List of activities to be regulated within Wetlands and zone of influence is provided
- ✓ List of activities to be permitted is provided