



# Ramsar Information Sheet

Published on 26 August 2024

## India

### Nanjarayan Bird Sanctuary



Designation date	16 January 2024
Site number	2549
Coordinates	11°08'03"N 77°23'10"E
Area	125,87 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

The Nanjarayan lake is located around 110 8' 5" N and 77 22' 59" E is a large shallow wetland situated along the north-eastern region of Uthukuli Taluk of Tiruppur District in Tamil Nadu. The wetlands in this region depend mainly on weather conditions, especially on heavy rain water flow from Nallar drainage. Nanjarayan Lake is located on the Tiruppur -Uthukkuli main road about 10 km north of Tiruppur city in an area of 125.86.50 Ha near Sarkar Periyapalayam village in Tiruppur district. The lake falls under two villages (Sarkar Periyapalayam and Neruperichal). The lake got its name from the fact that it was repaired and restored by King Nanjarayan who was ruling the region many centuries ago.

Further, about 191 species of birds, 87 species of butterflies, 7 species of amphibians, 21 species of reptiles, 11 species of small mammals and 77 species of plants have been recorded in and around the lake. The site acts as feeding and nesting habitat for resident bird species, migratory birds use this lake as their feeding ground during the migratory season. The lake also serves as important water source for agricultural purpose in the region. The lake plays vital role in ground water recharge. The lake is announced as 17th bird sanctuary of state of Tamil Nadu owing to its rich avifaunal diversity. The local community has already formed strong association in protecting the lake and its habitat. The forest department in collaboration with the local community manages the lake on sustainable basis.

## 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 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 and Climate Change
Postal address	Secretary, 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	2015
To year	2023

#### 2.1.3 - Name of the Ramsar Site

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

## 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

North: Starting from Tri-junction of Village No 7. Mannarai and Village No.3. Nerupperichal of Tiruppur – North Taluk and Village No. 37. Sarkar Periyapalayam of Uthukuli Taluk, then runs towards East along the Southern side of S.F. Nos 458, 457, 456, 448, 447 of Village No. 3. Nerupperichal Village then runs towards north along Eastern side of S.F. Nos. 445, 444, 451 and 462 of Village No. 3. Nerupperichal Village then runs towards East along the Southern side of S.F. Nos 442, 441 and 440 of Village No. 3. Nerupperichal Village and run towards South along the Western side of S.F. Nos 437, 436 and 433 of Village No. 3. Nerupperichal Village.

East: Then the Boundary runs generally towards South and the along Western side of SF. Nos. 123, 122, 121 and 39 of Village No. 37 Sarkar Periyapalayam.

South: Then the Boundary runs towards West along with Northern side of SF. Nos. 38, 36, 35, 31, 30, 21, 20, 19, 18, 17 and 16 of Village No 37. Sarkar Periyapalayam.

West: Then the Boundary runs generally towards North along with Eastern side of SF. Nos. 9, 5, 4, 3 and 2 of Village No. 37. Sakar Periyapalayam & SF. Nos. 2, 1 and 13 of Village No 7. Mannarai Village boundary and joins the starting point.

### 2.2.2 - General location

a) In which large administrative region does the site lie?	The wetland is situated at a distance of approximately 10 kms from Tiruppur town on the north side on the Tiruppur-Uthukuli main road. Nanjarayan Lake Bird Sanctuary is locally known as
b) What is the nearest town or population centre?	Villages that surround the wetland include Sarkar Periyapalayam and Nerupperichal village.

### 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): 125.865

Area, in hectares (ha) as calculated from GIS boundaries 126.274

## 2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
WWF Terrestrial Ecoregions	South Deccan Plateau dry deciduous forests

### 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 2 Vulnerable (VU) species and 6 Near Threatened (NT) species. Out of the 191 species of birds recorded in the Site, 1 species is classified as VU and 5 as NT in the IUCN Red List. Other VU species in the Site is the Indian flap-shelled turtle. 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.

Criterion 3 : Biological diversity

Justification

The site supports about 191 bird, 11 mammal, 82 butterflies, 21 reptile, 7 amphibian and 77 plant species. The site provides diverse habitats such as bunds, shallow water and deep water habitats, thus supporting various types of flora and fauna. The site especially supports diverse variety of water bird species. The site lies in the Central Asian fly way and is an important breeding and foraging ground for both resident as well as migratory birds species. Near threatened (NT) Darter, breeds in the trees found in this area. Several other species of water birds such as Cormorants, Egrets and Storks also use the area as breeding grounds because of the availability of food for the juveniles during the breeding season and also due to the trees found in the bunds of the wetland which helps them to be protected from predators. The wetland birds such as Cormorants and Darter are very much dependent on the wetland as they have special adaptation to hunt their prey by diving in the water and several species of Ducks visit the wetland to feed on the aquatic vegetation. Thus the water birds, with specific adaptation to survive in wetland habitat, is critically dependent on the Nanjarayan Bird Sanctuary. Migratory Wader species also visit the wetland in huge numbers and thus the wetland is considered as one of the important stopover site for migratory birds. Hence the wetland helps in maintaining the biological diversity of this particular biogeographic region.

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

Optional text box to provide further information

The heronry of Nanjarayan Birds Sanctuary supports more than 100 individuals of colonial nesting water birds. Near threatened Oriental Darter nest in the trees of the wetland. 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. The migratory bird species uses the Site as an important stopover point during their migration.

Criterion 6 : >1% waterbird population

Optional text box to provide further information

More than 1% population of Near threatened Spot-billed Pelican and Least Concerned Indian Cormorant of the South Asian population is supported by the Site. The site acts as a foraging ground for the bird species and the Indian Cormorant breeds in the trees found in the wetland. The bird population data was used from 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

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
<b>Plantae</b>								
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Vachellia nilotica</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		The site provides nesting habitat for water birds that are dependent on the wetlands. Water bird species such as Near Threatened Darter breeds in the trees found in the bunds of the lake which also provides protection from predators helping in increased survival rate of juveniles. Thus the species is important in maintaining the biological diversity of the area.

### 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								
<b>Others</b>																	
CHORDATA / REPTILIA	<i>Lissemys punctata</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 type="checkbox"/>	Protected under Schedule I (Part C) of the Wild Life (Protection) Amendment Act, 2022.	The site provides suitable habitat for the turtle species and also provides breeding ground as the species prefers areas with soil exposed to sunlight along the bank of waterbodies.
<b>Birds</b>																	
CHORDATA / AVES	<i>Anhinga melanogaster</i>	<input 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"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	Protected under Schedule II (Part B) of the Wild Life (Protection) Amendment Act, 2022.	The species breeds in the trees found in and around the wetland and also uses the wetland as foraging ground
CHORDATA / AVES	<i>Ciconia episcopus</i>	<input 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"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	Protected under Schedule II (Part B) of the Wild Life (Protection) Amendment Act, 2022.	The bird migrates in the Central Asian Flyway and the site provides feeding ground for the bird species during migratory season
CHORDATA / AVES	<i>Limosa limosa</i>	<input 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"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	Appendix II of CMS, Protected under Schedule II (Part B) of the Wild Life (Protection) Amendment Act, 2022.	The bird migrates in the Central Asian Flyway and the site provides feeding ground for the bird species during migratory season
CHORDATA / AVES	<i>Pelecanus philippensis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	126	2023	1.26	NT	<input type="checkbox"/>	<input type="checkbox"/>	Protected under Schedule II (Part B) of the Wild Life (Protection) Amendment Act, 2022.	The species 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 100.
CHORDATA / AVES	<i>Phalacrocorax fuscicollis</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	410	2020	1.36	LC	<input type="checkbox"/>	<input type="checkbox"/>	Protected under Schedule II (Part B) of the Wild Life (Protection) Amendment Act, 2022.	The 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 300.
CHORDATA / AVES	<i>Sterna aurantia</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"/>	Protected under Schedule I (Part B) of the Wild Life (Protection) Amendment Act, 2022.	The site provides foraging ground for the species.

1) Percentage of the total biogeographic population at the site

The site supports the bird and turtle species by providing suitable habitat, foraging ground and breeding habitat. The site lies in the Central Asian Flyway and hence it is an important stopover site for migratory birds. The population estimate of the species have been made with the data collected by Tamil Nadu Forest Department and data from ebird which is a citizen science platform. The population data from Waterbirds Population Porta has been used to estimate the 1% threshold population for various bird species.

### 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 site comes under Southern Deccan Plateau dry deciduous forest in the Regionalization scheme of WWF (World Wide Fund For Nature) Terrestrial Ecoregions. A major water source of the Nanjarayan Tank is the Nallar river. The average depth of the water in the wetland is 19 feet. The elevation of the wetland is 285 meters (msl). Main source of water for the wetland is rainfall, the surrounding runoff from the catchment area and from the Nallar river. Water is mostly present throughout the year but dries very rarely during severe drought. The average annual rainfall is around 700 mm (28 in), the North East and the South West monsoons contributing to 47% and 28% respectively to the total rainfall received in this region. Any excess water accumulated due to excess rainfall or any other reason is diverted towards the Sarkar Periyapalayam village for irrigation purpose. The site provides provisional ecosystem services, such as, fresh water for drinking purposes and irrigating the agricultural fields to the adjoining villages 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. 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 supports diverse variety of flora and fauna which includes 191 species of birds, 87 species of butterflies, 7 species of amphibians, 21 species of reptiles, 11 species of small mammals and 77 species of plants have been recorded in and around the lake. The site acts as feeding and nesting habitat for resident bird species, migratory birds use this lake as their feeding ground during the migratory season. The lake also serves as important water source for agricultural purpose in the region. The lake plays vital role in ground water recharge.

### 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	Nanjarayan lake	1	125.865	

### 4.3 - Biological components

#### 4.3.1 - Plant species

##### Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/LILIOPSIDA	<i>Borassus flabellifer</i>	India to Indo-China, Java 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>Ficus religiosa</i>	The species is found throughout India. The native range of this species is SE. Pakistan to Myanmar.
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

##### Invasive alien plant species

Phylum	Scientific name	Impacts
TRACHEOPHYTA/LILIOPSIDA	<i>Eichhornia crassipes</i>	Actual (major impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Lantana camara</i>	Actual (minor impacts)
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Prosopis juliflora</i>	Actual (minor 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/REPTILIA	<i>Atretium schistosum</i>				Protected under Schedule I (Part C) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/REPTILIA	<i>Daboia russelii</i>				Protected under Schedule I (Part C) of the Wild Life (Protection) Amendment Act, 2022.



Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/MAMMALIA	<i>Herpestes edwardsi</i>				Protected under Schedule I (Part A) of the Wild Life (Protection) Amendment Act, 2022.
ARTHROPODA/INSECTA	<i>Hypolimnas misippus</i>				Protected under Schedule II (Part H) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/REPTILIA	<i>Naja naja</i>				Protected under Schedule I (Part C) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/MAMMALIA	<i>Paradoxurus hermaphroditus</i>				Protected under Schedule I (Part A) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/REPTILIA	<i>Ptyas mucosa</i>				Protected under Schedule II (Part C) of the Wild Life (Protection) Amendment Act, 2022
CHORDATA/REPTILIA	<i>Varanus bengalensis</i>				Protected under Schedule I (Part C) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/REPTILIA	<i>Xenochrophis piscator</i>				Protected under Schedule I (Part C) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Accipiter badius</i>				d under Schedule I (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Anastomus oscitans</i>				Protected under Schedule II (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Ciconia nigra</i>				Protected under Schedule II (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Circus aeruginosus</i>				d under Schedule I (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Circus pygargus</i>				d under Schedule I (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Haliastur indus</i>				d under Schedule I (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Mycteria leucocephala</i>				Protected under Schedule II (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Nettapus coromandelianus</i>				d under Schedule I (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Pavo cristatus</i>				Protected under Schedule I (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Platalea leucorodia</i>				Protected under Schedule I (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Pluvialis fulva</i>				Protected under Schedule I (Part B) of the Wild Life (Protection) Amendment Act, 2022.

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	<i>Tringa glareola</i>				Protected under Schedule II (Part B) of the Wild Life (Protection) Amendment Act, 2022.
CHORDATA/AVES	<i>Tringa nebularia</i>				Protected under Schedule I (Part B) of the Wild Life (Protection) Amendment Act, 2022.

Invasive alien animal species

Phylum	Scientific name	Impacts
CHORDATA/ACTINOPTERYGII	<i>Clarias gariepinus</i>	Actual (major 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	Af: Tropical wet (No dry season)

The water is mostly of intermittent nature with occasionally drying, as the wetland is mostly dependent on the rainfall and runoff waters. The average annual rainfall is around 700 mm (28 in) with the North East and the South West monsoons contributing to 47% and 28% respectively to the total rainfall.

### 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.

Nanjarayan Bird Sanctuary is located in the Nallaru river basin. Nallaru, being one of the tributaries of the Noyyal river, runs through Tiruppur city and floods the Nanjarayan Bird Sanctuary.

### 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 predominant soil present in the tank is black cotton soil, but during the release of water, alluvial soil is deposited every year. The rocks in the tank primarily belong to the Archean age (more than 2.5 billion years old) and are part of the Dharwar Supergroup. The Dharwar Supergroup consists of various rock types, including granites, gneisses, schists, and metavolcanic rocks. These rocks have undergone extensive metamorphism and deformation over millions of years. The humus content of the soil is low.

### 4.4.4 - Water regime

Water permanence

Presence?	
Usually permanent 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?	
To downstream catchment	No change
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 average depth of the water in the wetland is 19 feet. The elevation of the wetland is 285 meters (msl). Main source of water for the wetland is rainfall, the surrounding runoff from the catchment area and from the Nallar Rivers. The water is mostly of intermittent nature with occasionally drying, as the wetland is mostly dependent on the rainfall and runoff waters. The average annual rainfall is around 700 mm (28 in) with the North East and the South West monsoons contributing to 47% and 28% respectively to the total rainfall. If excess water gets accumulated, it is diverted towards the Sarkar Periyapalayam village.

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

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

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

Nanjarayan Lake is a part of Neruperichal village, Sarkar Periyapalayam Village, Uthukuli Talukh, Tiruppur district, Tamil Nadu, India. The lake is 10 km away from Tiruppur Town. Villages that surround the wetland include Neruperichal Sarkar Periyapalayam and Koolipalayam and high agricultural and development activities are undertaken in the areas around the lake.

## 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

#### 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
Biological control of pests and disease	Support of predators of agricultural pests (e.g., birds feeding on locusts)	High

#### Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	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

Optional text box to provide further information

The total population of the Sarkar Periyapalayam village consists of 2977 males and 3009 females and Neruperchal village consists 27162 and females 27675. Maximum population is located in Neruperichal village followed by Sarkar Periyapalayam. Agriculture and allied activities such as livestock rearing are the major sources of economy for the people. Thus majority of the people directly or indirectly benefit from the lake

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

Where economic studies or assessments of economic valuation have been undertaken at the site, it would be helpful to provide information on where the results of such studies may be located (e.g. website links, citation of published literature):

The Study was carried out by Madras Institute of Developmental Studies, Chennai. The study report has been uploaded in the Tamil Nadu State Wetland Authority website in following link, <https://drive.google.com/file/d/1xMXKboFX3OM0zJQ6ozgDUs7znnG1Lzm6/view>

### 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

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

Description if applicable

The Nanjarayan Bird Sanctuary was renovated by King Nanjarayan who had ruled these parts several hundred years ago.

- 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

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

##### Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

##### Other

Category	Within the Ramsar Site	In the surrounding area
Commoners/customary rights	<input checked="" type="checkbox"/>	<input type="checkbox"/>

#### 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, Tiruppur District

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

Thiru. Devendra Meena

Postal address:

O/o The Deputy Director, Babukhan Street, Udumalpet, Pin – 642 126.

E-mail address:

dfo.tnpr@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	High 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
Drainage	Medium impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Canalisation and river regulation	Medium impact	High impact	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Marine and freshwater aquaculture	Medium impact	High 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
Dams and water management/use	Medium impact	High impact	<input checked="" 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	High impact	High 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
Household sewage, urban waste water	Medium impact	Medium impact	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
Droughts	Medium impact	Medium impact	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Temperature extremes	Medium impact	Medium impact	<input 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	Nanjarayan Bird Sanctuary	<a href="https://forests.tn.gov.in/storage/tbfd/G.O.%28Ms.%29No.154%20-%20Nanjarayan%20Birds%20Sanctuary%2C%20Tiruppur.pdf">https://forests.tn.gov.in/storage/tbfd/G.O.%28Ms.%29No.154%20-%20Nanjarayan%20Birds%20Sanctuary%2C%20Tiruppur.pdf</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

#### Human Activities

Measures	Status
Harvest controls/poaching enforcement	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:

The Forest Department conduct some educational activities in the site.

### 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

Monitoring	Status
Water regime monitoring	Proposed
Birds	Proposed



## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

1. <https://ebird.org/hotspot/L3240448>
2. Frank et al. (2021), Heronry distribution and site preference dynamics of tree-nesting colonial waterbirds in Tamil Nadu. PeerJ 9:e12256 DOI 10.7717/peerj.12256
3. Nandhini et al. (2023), Conservation of biodiversity and environmentally friendly in response to climate change and bird population at Nanjarayan lake, Volume 11, Issue 10 October 2023 | ISSN: 2320-2882
4. National Wetland Atlas: Tamilnadu, SAC/RESA/AFEG/NWIA/ATLAS/22/2009, Space Applications Centre (ISRO), Ahmedabad, India, 222p.
5. Managements Plan for Nanjarayan Bird Sanctuary for the period 2022 -23 to 2032-34 by Tamil Nadu Forest Department.
6. 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.

#### 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

<2 file(s) uploaded>

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

Please provide at least one photograph of the site:

	Landscape image of Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )		Image of Heronry in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )		Oriental Darter nesting in the Heronry of Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )		Image of Heronry in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )
	Flock of Cormorant resting in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )		Flock of Northern shoveler resting in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )		Flock of Bar-headed Goose resting in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 12-01-2020 )		Flock of Bar-headed Goose resting in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 12-01-2020 )
	Flock of Spot-billed Pelican and Cormorant foraging in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )		Flock of Juvenile Spot-billed Pelican resting in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )		Aerial view of Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )		Ruddy Shelduck in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )
	Black-winged Stilt in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 12-01-2020 )		Ruff in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 12-01-2020 )		Flock of Northern shoveler resting in Nanjarayan Bird Sanctuary ( Tamil Nadu Forest Department, 09-11-2020 )		

#### 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation