

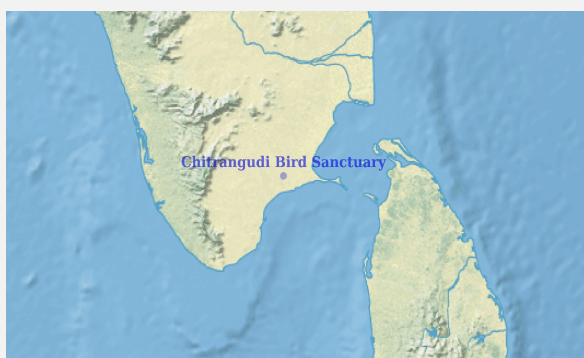


# Ramsar Information Sheet

Published on 31 October 2022

## India

### Chitrangudi Bird Sanctuary



Designation date	8 November 2021
Site number	2491
Coordinates	09°20'28"N 78°28'40"E
Area	260,47 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

Chitrangudi Bird Sanctuary, locally known as "Chitrangudi Kanmoli" is located in Ramanathapuram district, in the village named Chitrangudi, adjacent to Kanjirankulam Bird Sanctuary. The Sanctuary is 5 km from Mudukulathur and 25 km away from Paramakudi, in a drought-prone area. Villages surrounding Chitrangudi include, Poonghanpulli, Erachikulam, and Keelakanchanakulam. The wetland is a protected area since 1989 and declared as Bird Sanctuary, coming under the jurisdiction of Tamil Nadu Forest Department, Ramanathapuram division. Internationally, Chitrangudi comes under the Important Bird and Biodiversity Area (IBA; code IN261, Criteria A1, A4i) as reported by BirdLife International and Wetlands International, besides being part of the Key Biodiversity Areas of the world. Chitrangudi Bird Sanctuary is an ideal habitat for winter migratory birds. Around 50 birds belonging to 30 families have been reported from the site. Out of these 47 are water birds and 3 terrestrial birds. Notable waterbirds spotted from the site area spot-billed pelican, little egret, grey heron, large egret, open billed stork, purple, and pond herons. Chitrangudi is surrounded by agricultural fields, where different crops are grown throughout the year. Plant remains and grains scattered after harvesting along with the pond water allure the avifauna. The wetland also supports a number of fishes, amphibians, molluscs, aquatic insects, and their larvae forming good food sources for arriving waterbirds. Groundwater is extracted for irrigation around and within the wetland for agricultural purposes. Excess flood water is let out towards Chitrangudi village through a sluice gate about 0.5 km from the inlet aqueduct and helps avert overflowing. The main source of water for the wetland is rainfall, groundwater, and the surrounding runoff from the catchment area and Vaigai and Gundaru Rivers. Water is mostly intermittent in nature with frequent occasions of drying, helping in replenishing the groundwater.

## 2 - Data & location

### 2.1 - Formal data

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

##### Responsible compiler

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

##### National Ramsar Administrative Authority

Institution/agency	Ministry of Environment, Forest & Climate Change
Postal address	Office of the Additional 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	2002
To year	2021

#### 2.1.3 - Name of the Ramsar Site

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

## 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

Chitrangudi is adjacent to Kanjirankulam Bird Sanctuary. The crescent-shaped Kanmoli starts at a northern point where an aqueduct from the Gundar River flows into the Kanmoli. The boundary runs generally towards the north along the eastern side of S.F.No154 of the Chitrangudi village in the starting point. The wetland comes under the jurisdiction of Tamil Nadu Water resources department (PWD) and Tamil Nadu Forest Department, Ramanathapuram division. Villages that surround the wetland include Chitrangudi, Poonghanpulli, Erachikulam, Keelakanchanakulam. The Sanctuary area is within the 15 m (49 ft) high embankments of a community irrigation tank. The total length of the embankment is 4.01 km (2.492 miles). The fluvial landforms near Chitrangudi wetland comprises of flood plains of Vaigai, Varshalei, Pambar, Kottakkarai and Gundar rivers. The marine landforms comprise sand mounds (Teri's) and barrier dunes along the coast. The erosional processes are manifested in the form of pediments and pediplain around Kamuthi. The basin is characterized by the presence of NE-SW trending horst-graben subsurface basement structural features having a sediment cover of nearly 1-6 kms. The boundary shown in the map is indicative of the wetland boundary.

### 2.2.2 - General location

a) In which large administrative region does the site lie?	Ramanathapuram
b) What is the nearest town or population centre?	Chitrangudi

### 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):	260.47
Area, in hectares (ha) as calculated from GIS boundaries	260.474

## 2.2.5 - Biogeography

### Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Marine Ecoregions of the World (MEOW)	Chitrangudi belongs to the Ecoregion classified under the West and South Indian Shelf

### Other biogeographic regionalisation scheme

Chitrangudi wetland is a freshwater lake and a well-known bird sanctuary in Tamil Nadu. The Sanctuary area is within the high embankments of a community irrigation tank. The crescent-shaped Sanctuary starts at a northern point where an aqueduct from the Gundar River flows into it. Biogeographically it is a coastal region, forming a notable nesting site for several migratory heron species that roost on the prominent *Acacia nilotica* (babul) trees of the wetland.

### 3 - Why is the Site important?

#### 3.1 - Ramsar Criteria and their justification

<no data available>

Optional text box to provide further information

The plant species already mentioned doesn't fit in the Ramsar criteria. Hence, it has been deleted.

Criterion 3 : Biological diversity

Justification

Chitrangudi Bird Sanctuary sustains a spectacular congregation of waterbirds and waders. The wetland supports significant populations of *Bubulcus ibis*, *Microcarbo niger*, *Threskiornis melanocephalus*, *Platalea leucorodia*, and plants like *Abrus precatorius*, *Abutilon hirtum*, *Acalypha indica*, *Adiantum bellum*, *Blepharis maderaspatensis*, *Calotropis gigantea*, *Dichanthium foveolatum*, *Pentatropis capensis*, *Senegalia polyacantha*, and *Vachellia nilotica*, which is representative and significantly helps to maintain the biodiversity of the region owing to large variety of ecological functions performed by the above-mentioned species.

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

Optional text box to provide further information

Besides the Spot-billed Pelican, the Asian Openbill (*Anastomus oscitans*), Little Egret (*Egretta garzetta*), Great Egret (*Casmerodius albus*), Grey Heron (*Ardea cinerea*), Purple Heron (*Ardea purpurea*), and Indian Pond-heron (*Ardeola grayii*) are known to breed in both villages.

End year

2021

Criterion 6 : >1% waterbird population

Optional text box to provide further information

The site supports more than 1% threshold population of *Pelecanus philippensis* and *Threskiornis melanocephalus*.

#### 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>Abrus precatorius</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Supports populations of plant species important for maintaining the biological diversity of a particular biogeographic region.
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Abutilon hirtum</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Supports populations of plant species important for maintaining the biological diversity of a particular biogeographic region.
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Acalypha indica</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Supports populations of plant species important for maintaining the biological diversity of a particular biogeographic region.
TRACHEOPHYTA / POLYPODIOPSIDA	<i>Adiantum bellum</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Supports populations of plant species important for maintaining the biological diversity of a particular biogeographic region.
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Blepharis maderaspatensis</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Supports populations of plant species important for maintaining the biological diversity of a particular biogeographic region.
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Calotropis gigantea</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Supports populations of plant species important for maintaining the biological diversity of a particular biogeographic region.
TRACHEOPHYTA / LILIOPSIDA	<i>Dichanthium foveolatum</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Supports populations of plant species important for maintaining the biological diversity of a particular biogeographic region.
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Pentatropis capensis</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Supports populations of plant species important for maintaining the biological diversity of a particular biogeographic region.
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Senegalia polyacantha</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Supports populations of plant species important for maintaining the biological diversity of a particular biogeographic region.
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Vachellia nilotica</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Supports populations of plant species important for maintaining the biological diversity of a particular biogeographic region.

### 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>Birds</b>																	
CHORDATA/AVES	<i>Anastomus oscitans</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		The site provides adequate nesting and foraging habitat to this species.
CHORDATA/AVES	<i>Ardea alba</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		The site provides adequate nesting and foraging habitat to this species.
CHORDATA/AVES	<i>Ardea cinerea</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		The site provides adequate nesting and foraging habitat to this species.
CHORDATA/AVES	<i>Ardea purpurea</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		The site provides adequate nesting and foraging habitat to this species.
CHORDATA/AVES	<i>Ardeola grayii</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		The site provides adequate nesting and foraging habitat to this species.
CHORDATA/AVES	<i>Bubulcus ibis</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Representative species, significantly helps in maintaining the biodiversity of the region.
CHORDATA/AVES	<i>Egretta garzetta</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		The site provides adequate nesting and foraging habitat to this species.
CHORDATA/AVES	<i>Microcarbo niger</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Representative species, significantly helps in maintaining the biodiversity of the region.
CHORDATA/AVES	<i>Pelecanus philippensis</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"/>	136	2020-2022	3.4	NT	<input type="checkbox"/>	<input type="checkbox"/>		The site provides adequate nesting and foraging habitat to this species.
CHORDATA/AVES	<i>Platalea leucorodia</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Representative species, significantly helps in maintaining the biodiversity of the region.
CHORDATA/AVES	<i>Threskiornis melanocephalus</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"/>	236	2020-2022	2.36	NT	<input type="checkbox"/>	<input type="checkbox"/>		Representative species, significantly helps in maintaining the biodiversity of the region.

1) Percentage of the total biogeographic population at the site

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

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Water bird community	<input type="checkbox"/>	The area has rich Avifauna diversity especially water birds and they are important in maintaining the biological diversity of the area. Bird species such as Spot billed Pelican and Painted Stork breed in huge numbers in the area .	The water bird community present in the area consists of 4 Near Threatened species of water birds which are protected under the Schedule IV of Wildlife Protection act 1972 .

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

### 4.1 - Ecological character

Chitrangudi Bird Sanctuary is located inside 15 m high embankments of the community irrigation tank in Chitrangudi village with embankments as long as 4.010 km. The sanctuary starts at a northern point where an aqueduct from Gundar River flows in. There are five sluices that drain water to the agricultural lands. Excess flood water is let out towards Chitrangudi village through a sluice gate 0.5 km from the inlet aqueduct and helps avert overflooding. The main source of water for the wetland is rainfall, groundwater, and surrounding runoff from the catchment area and from the Vaigai and Gundaru Rivers. Therefore, water is mostly of intermittent in nature with frequent occasions of drying which help in replenishing the groundwater. A range of external drivers such as nutrient and sediment inflows which are a function of climatic variables and land use in the catchment drive much of the nutrient water cycle of the wetlands. Though being an inland wetland, it is situated biogeographically near the coastal region. Collective characteristics of nutrient and sediment inflows put together facilitate sediment trapping and provide stabilization of the shoreline. The sanctuary receives 715.2 mm of rainfall throughout the year supporting rich flora and fauna. The vegetation belongs to the Tropical Dry Deciduous Forest type. The most remarkable feature of the sanctuary is the prominent growth of Babul (*Acacia nilotica*) trees, with the first Babul plantation done by the Farm forestry division in the year 1979. Other species are *Prosopis juliflora*, Bermuda grass, and *Dichanthium foveolatum*. Tamarind, Silk, Fig, Portia and Neem trees, Palmyra palms, and Drumstick trees are within the irrigation tank bund and areas outside the tank. The sanctuary is also rich in medicinal plants like *Ocimum sanctum* and *Gloriosa superba*. Chitrangudi is an ideal habitat for winter migratory birds (herons and colonial birds), providing an extensive nesting site. Other birds sighted include Spot-billed Pelican, Little egret, Large egret, Open billed stork, Grey, Purple, and Pond herons. The wetland is surrounded by agricultural fields, where different crops are grown throughout the year. Plant remains and grains scattered after harvesting along with the water in the wetland allures avifauna to the regions. The wetland supports a number of fishes, amphibians, molluscs, aquatic insects, and their larvae which form a good food source for arriving birds and waterbirds. 50 species of birds belonging to 30 families have been reported in a 2016 study, of which 47 were water birds and 3 terrestrial. Order Passeriformes is represented by many families of waterbirds, while the highest number of species represent Turdidae followed by Ardeidae families. The village has open dug wells and borewells for regular needs. Groundwater is extracted for irrigation around and within the wetland. While fishery is not permitted, fish is cultured to provide for the birds in the sanctuary. The wetland plays the primary role of buffering by acting as a sponge during events of floods and extreme rainfall and is the major source of groundwater recharge. There is significant runoff from surrounding catchment areas and the wetland acts as a sink for sediments. The wetland is frequented by nature enthusiasts.

### 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
2: Ponds	Kanmoli	1	260.47

### 4.3 - Biological components

#### 4.3.1 - Plant species

##### Invasive alien plant species

Phylum	Scientific name	Impacts
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Prosopis juliflora</i>	Potential

##### 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 providing certain provisioning services such as 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.

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

##### Invasive alien animal species

Phylum	Scientific name	Impacts
CHORDATA/ACTINOPTERYGII	<i>Cyprinus carpio</i>	Potential
CHORDATA/ACTINOPTERYGII	<i>Hypophthalmichthys molitrix</i>	Potential

##### Optional text box to provide further information

The presence of these two carps make 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)

### 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.

The river basins are: Vaigai, Gundar, Varshalei, Pambar, Kottakkarai and Cauvery-Palar basins.

### 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	<input checked="" type="checkbox"/>	No change
Water inputs from surface water	<input checked="" type="checkbox"/>	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 average depth of the water in the wetland is 1.5 meters. The elevation of the wetland is 33 to 36 meters (asl). Main source of water for the wetland is rainfall, groundwater, the surrounding runoff from the catchment area and from the Vaigai and Gundaru Rivers. The water is mostly of intermittent nature with frequent occasions of drying, as the wetland is mostly dependent on the rainfall and runoff waters. This also helps in replenishing the groundwater. During normal rainfall the wetland can hold water upto 3 to 5 months. If excess water gets accumulated it is diverted towards Chitrangudi 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

(ECD) Water turbidity and colour **Water turbidity is 96 NTU and colour is brownish green**

(ECD) Water temperature **Average temperature = 28.8 C**

#### 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 7.5.

#### 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

Please provide further information on salinity (optional):

The water is categorized as fresh water as the salinity level is 0.174 ppt.

#### 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:

Chitrangudi is a part of Chitrangudi village, Mudukulathur Talukh, Ramanathapuram district, Tamil Nadu, India. The Sanctuary is 5 km away from Mudukulathur and 25 km away from Paramakudi, in a drought prone area. Villages that surround the wetland include Chitrangudi, Ponghanpulli, Erachikulam, Keelakanchanakulam.

The total population of the village consists of 2350 males and 2850 females. Maximum population is located in Chitrangudi village followed by Eraichikulam, SP Kottai and Pondampuli. Total number of households in all the villages is 910 and nearly 818 households own land. However, more than half of the total households (690) are below poverty line. Agriculture and allied activities such as livestock rearing, poultry are the major sources of economy for the people living in the proposed Eco Sensitive Zone. Brick making and charcoal making also contribute to their livelihood.

### 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
Biological control of pests and disease	Support of predators of agricultural pests (e.g., birds feeding on locusts)	High
Hazard reduction	Flood control, flood storage	High
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 microorganisms, 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:

Outside the site:

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

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 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

Two temples and religious institutions along its bank. A few cultural activities are organized around the wetland during festivals.

#### 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 checked="" type="checkbox"/>

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

The wetland comes under the jurisdiction of Tamil Nadu Forest Department, Ramanathapuram division.

#### 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, Ramanathapuram District

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

Mr. Abishek Tomar, Wildlife Warden (WLW), Ramanathapuram

Postal address:

O/o Wildlife Warden Ramanathapuram, Opposite to Govt. ITI, Mandapam Road, Ramanathapuram, PIN-623 503

E-mail address:

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

Water regulation

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

Agriculture and aquaculture

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

Biological resource use

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

Human intrusions and disturbance

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

Natural system modifications

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

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien species	Medium impact		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Pollution

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

## Climate change and severe weather

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

## 5.2.2 - Legal conservation status

## Regional (international) legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Other international designation	Chitrangudi Bird Sanctuary	<a href="http://www.keybiodiversityareas.org/site/factsheet/18385">http://www.keybiodiversityareas.org/site/factsheet/18385</a>	whole

## National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
A Draft Notification was released by the Ministry of Environment and Forests & Climate Change MoEFCC in 2018	Chitrangudi Bird Sanctuary	<a href="http://moef.gov.in/wp-content/uploads/2018/05/chitrangudi.pdf">http://moef.gov.in/wp-content/uploads/2018/05/chitrangudi.pdf</a>	whole
Comes under the Indian Wildlife Protection Act, 1972	Chitrangudi Bird Sanctuary	<a href="https://legislative.gov.in/sites/default/files/A1972-53_0.pdf">https://legislative.gov.in/sites/default/files/A1972-53_0.pdf</a>	whole

## Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Chitrangudi Bird Sanctuary	<a href="http://datazone.birdlife.org/site/factsheet/chitragudi-and-kanjirankulam-bird-sanctuary-iba-india">http://datazone.birdlife.org/site/factsheet/chitragudi-and-kanjirankulam-bird-sanctuary-iba-india</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

&lt;no data available&gt;

## 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

RIS for Site no. 2491, Chitrangudi Bird Sanctuary, India

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

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

5.2.6 - Planning for restoration

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

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Soil quality	Proposed

## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Bird Life International (2021) Important Bird Areas factsheet: Chitrangudi and Kanjirankulam Bird Sanctuary. Downloaded from <http://www.birdlife.org> on 08/09/2021.

Collar N.J., Andreev A.V., Chan S., Crosby M.J., Subramanya S., Tobias J. A., Rudyanto. and Crosby M.J. (2001) Spot-billed pelican (*Pelecanus philippensis*) Threatened birds of Asia, Birdlife International (2001) Threatened birds of Asia: the Birdlife International Red Data Book. Cambridge, UK: Birdlife International, Page 68-103, ISBN 0 946888 442.

Johnson, J. M., Perennou, C and Crivelli, A (1993) Towards the extinction of Spot-billed Pelican (*Pelecanus philippensis*) pp 92-94 in M.Moser and J.van Vessems eds., Wetland and waterfowl conservation in south and west Asia. IWRB Spec. Publ.no.25, AWB Publ.no.85, Slimbridge, U.K International Waterfowl and Wetlands Research Bureau.

Kannan V. and Ranjit Manakadan (2005) The status and distribution of Spot-billed Pelican *Pelecanus philippensis* in Southern India. Forktail. 21: 9–14.

Murali Krishnan S., Arun Nagendran N. and Pandiaraja D. (2017) Survey of Birds in Chitrangudi and Kanjirankulam Village ponds in relation to vegetation: An Avian paradise of South India. Journal of Entomology and Zoology Studies. 5(1): 407-412.

Prasad S.N., Jaggi A.K., Kaushik P., Vijayan L., Muralidharan S. and Vijayan V.S. (2004) Inland wetlands of India, Conservation Atlas. Salim Ali Centre for Ornithology and Natural History. Coimbatore, India, 222.

Roopa Bandekar., Roshni Kutty., Shantha Bhushan, Kaustubh Moghe., Batool Balasinorwala. and Tasneem Balasinorwala. (2009) Community conservation in Tamil Nadu, Kalpavriksh 2009, Page 1-30.

Vaithianathan Kannan. and Jeganathan Pandiyan. (2012) Nesting Ecology of the Spot-Billed Pelican *Pelecanus Philippensis* in Southern India. World Journal of Zoology. 7(4): 295-302.

Vijayan V.S., Narendra Prasad S., Lalitha V. and Muralidharan S. (2004) Inland wetlands of India: Conservation Priorities. SACON. pp. 532

Wetlands International (2002) Strategy 2002-2005.

#### 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

<1 file(s) uploaded>

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

Please provide at least one photograph of the site:



Chitrangudi Bird Sanctuary ( Tamil Nadu Forest Department, 05-10-2021 )



A flock of Bar-headed Geese ( Tamil Nadu Forest Department, 05-10-2021 )



Release of fingerlings forming food for birds ( Tamil Nadu Forest Department, 05-10-2021 )

#### 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation