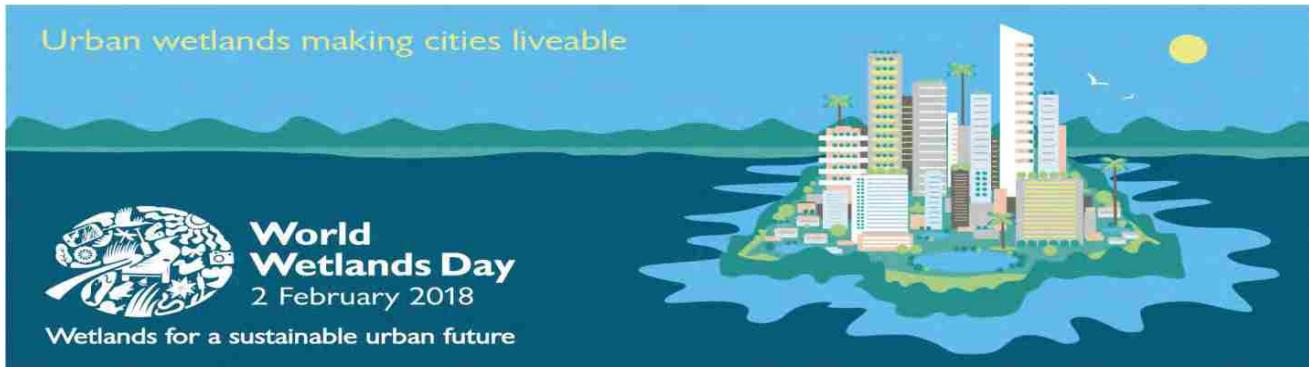


# Wetlands of Gujarat



Wetlands, the home of water animals, birds and amphibians, cover diverse and heterogeneous assemblage of habitats such as lakes (Jheels), ponds, rivers, river floodplains, inter-tidal areas, estuaries, mangroves, coral reefs and other related ecosystems. Wetlands constitute a vital link in the hydrological cycle. They provide a multitude of services such as purification and regulation of flows, fisheries, habitat provisioning to plants, animals and micro-organisms, providing opportunities for recreation and tourism etc.

**Inland wetlands** are important water resources replenishing groundwater and sub-soil aquifers.

**Coastal wetlands**, including mangroves, estuaries and coral reefs, are key habitats for marine life and often function as natural barriers against saltwater intrusion, protecting coastal land and inland water habitats.

India harbours a substantial area of the global wetlands. India has about 1,50,174 sq. km (6.9% of the total geographical area) of wetlands, with the highest share of Gujarat. About 1/4<sup>th</sup> of fascinating wetlands are in Gujarat where millions of colourful water-birds decorate the landscapes. Waterfowl concentration in Gujarat during the winter is one of the highest in the country as the area falls on the migratory route of birds. Migratory birds from eastern Europe and western Asia pass through the western part of the country on their way to the Indian plateau. Many stay in Gujarat for the entire winter season and some move to Deccan plateau. Again, during their reverse migration in March and April, birds stay at wetlands for some time before they depart to their breeding grounds. The two gulfs - Kachchh and Khambhat and the two Ranns - Great and Little, cover a vast area of coastal wetlands and mixed sea and freshwater wetlands, making this part of the land incomparable in the country.

## Wetlands as Protected Areas

In Gujarat, the coastal and inland wetlands cover 35.8 % and 6.0 % of the total wetland area respectively. The state constituted nine Protected Areas - one national park, seven sanctuaries and one conservation reserve to preserve a total area of 13,052 sq. km. Additionally, eight wetlands of national

conservation significance have been identified and notified by the MoEF&CC, GoI for their conservation in partnership with the local communities.

#### **Important wetlands as Protected Areas:**

- (i) Great Rann Wildlife Sanctuary
- (ii) Wild Ass Sanctuary in Little Rann
- (iii) Marine National Park
- (iv) Marine Sanctuary
- (v) Nalsarovar Bird Sanctuary
- (vi) Thol lake Bird Sanctuary
- (vii) Porbandar Bird Sanctuary
- (viii) Khijadia Bird Sanctuary
- (ix) Chharidhund Conservation Reserve

#### **Wetlands of national conservation significance:**

Under the National Wetland programme, eight wetlands have been notified as wetlands of National Conservation Significance

- (i) Greater Rann of Kachchh
- (ii) Little Rann of Kachchh
- (iii) Khijadia lake in Jamnagar
- (iv) Pariej lake in Anand
- (v) Vadhwahan lake in Vadodara
- (vi) Thol lake in Mehsana
- (vii) Nalsarovar lake in Ahmedabad and Surendranagar
- (viii) Nani-Kakarad in Navsari

#### **Rare and threatened fauna in Gujarat**

A large number of birds, amphibians and other fauna are dependent on the health of wetlands. These are threatened due to the loss of habitat or their poaching, and some of them are on the verge of extinction. The threatened wetland fauna in Gujarat are as follows:

**Birds** • Indian Sarus • Pink-headed Duck • Marbled Teal • Baikal Teal • Spot-billed Pelican • Lesser Adjutant • Black necked Stork • Black Stork • Baer's Pochard • Over half dozen Raptors like • White-bellied Sea Eagle • Indian skimmer

**Reptiles and amphibians** • Green Sea Turtle • Olive Ridley Turtle • Leather-backed Turtle • Marsh Crocodile • Indian Flap-shelled Turtle • Indian Soft shelled Turtle • Indian Python

**Marine life - Sea Horse and corals**

## **Area (in sq. km) of wetlands**

Gujarat contributes 23.1 % of total wetlands of the country.

<b>Categories</b>	<b>India</b>	<b>Gujarat</b>
<b>Inland wetland</b>	<b>1,05,649</b>	<b>6,679</b>
<b>Coastal Wetland</b>	<b>41,401</b>	<b>28,071</b>
<b>Total</b>	<b>1,47,050</b>	<b>34,653</b>
<b>Wetlands &lt;2.25ha</b>	<b>5,556</b>	<b>97</b>
<b>Grand total</b>	<b>1,52,606</b>	<b>34,750</b>

## **Categories and areas of wetlands in Gujarat**

<b>Inland</b>	<b>Area (sq. km)</b>	<b>Coastal</b>	<b>Area (sq. Km)</b>
Natural lake	154	Mangroves	1,031
Water logged	289	Coral reefs	130
Reservoirs	1,394	Mudflat	21,954
Tanks/ponds	198	Salt pans	460
Others	57	Others	1,587
<b>Total</b>	<b>2,092</b>	<b>Total</b>	<b>25,162</b>

## **What are urban wetlands?**

Wetlands are land areas that are flooded with water, either seasonally or permanently. Urban wetlands are found in and around cities or their suburbs. They include rivers and their floodplains, lakes, and swamps as well as coastal variants such as salt marshes, mangroves and coral reefs.

## **Urban wetlands: prized land, not a wasteland**

About 4 billion people live in urban areas today. It will reach to 66% as people move to cities in search of jobs and a vibrant social life by 2050. Urban expansions and the correspondingly lower groundwater levels put pressure on wetlands and wet nature around the world. Wetlands buffer some of the runoff from precipitation and slow the rate at which it drains away.

### **A. Reduce flooding**

Act as giant sponges that absorb flood waters. Rivers, ponds, lakes and marshes soak up and store heavy rainfall. In coastal cities, salt marshes and mangroves work as a buffer against storm surges.

### **B. Replenish drinking water**

Groundwater aquifers, rainwater and rivers are the sources of drinking water. Wetlands filter the water that seeps into aquifers, helping to replenish the water source.

Protecting rivers and limiting harmful runoff also helps safeguard the water supply.

#### C. Filter waste and improve water quality

The silt-rich soil and abundant plants in wetlands function as water filters, which absorb some harmful toxins, agricultural pesticides and industrial waste. These also help treat sewage from households.

#### D. Improve urban air quality

It radiates moist air thanks to their high water levels and lush plant life. This naturally cools the air in the local surroundings.

#### E. Promote human well-being

When preserved as green spaces in cities, these offer residents a space for recreation and access to a diversity of plant and animal life. Studies confirm that interacting with nature reduces stress and improves our health.

#### F. Enable people to earn a living

Many types of fish spawn and breed in wetlands, making them popular fishing grounds. These provide reeds and grasses for weaving, medicinal plants and fruits. Wetlands also attract tourism, another important source of jobs.

### Retain and restore: practical ways to manage and preserve urban wetlands

Urban planners and decision-makers face a practical dilemma: how to meet the increasing demand for land in the cities while still preserving the natural environment. Urban wetlands play a vital role in making cities safe, resilient and sustainable; the objective of **Sustainable Development Goal 11**.

1. **Involve local residents in wetland planning**
2. **Integrate wetlands into policy and planning**
3. **Restore urban wetlands**
4. **Reduce excessive water consumption and harmful runoff**
5. **Organize community wetland cleanups**

Wetlands provide values that no other ecosystem can. Protecting wetlands can protect our safety and welfare.

## Glance of Important wetlands in Gujarat

### 1. Great Rann Wildlife Sanctuary



### 2. Wild Ass Sanctuary in Little Rann



### 3. Marine National Park, Jamnagar



### 4. Marine Sanctuary





## 5. Nalsarovar Bird Sanctuary



## 6. Thol lake Bird Sanctuary



## 7. Porbandar Bird Sanctuary



## **8. Khijadia Bird Sanctuary**



## **9. Chhardhund Conservation Reserve**



# Birds

Indian sarus



Pink-headed Duck



Marbled Teal



Baikal Teal



Spot-billed Pelican



Black-necked Stork



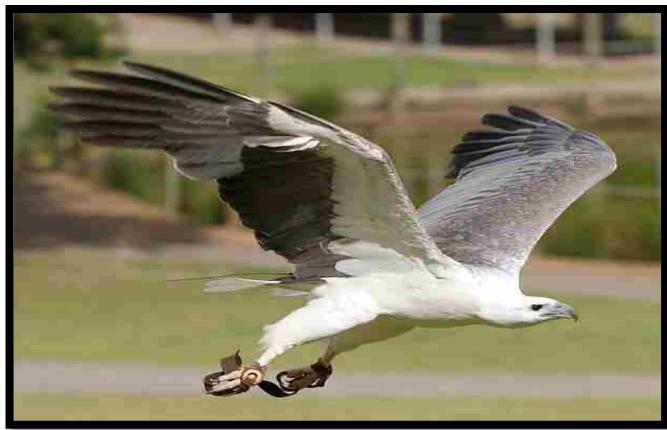
**Black Stork**



**Baer's Pochard**



**White-bellied Sea Eagle**



**Indian skimmer**



## Reptiles and amphibians

**Green Sea Turtle**



**Olive Ridley Turtle**



**Leather-backed Turtle**



**Indian Flap-shelled Turtle**



**Marsh Crocodile**



**Indian Soft shelled Turtle**



**Indian Python**



**Source:**

1. [https://forests.gujarat.gov.in/writereaddata/images/pdf/38\\_Wetlands-of-Gujarat.pdf](https://forests.gujarat.gov.in/writereaddata/images/pdf/38_Wetlands-of-Gujarat.pdf)
2. <http://www.worldwetlandsday.org>