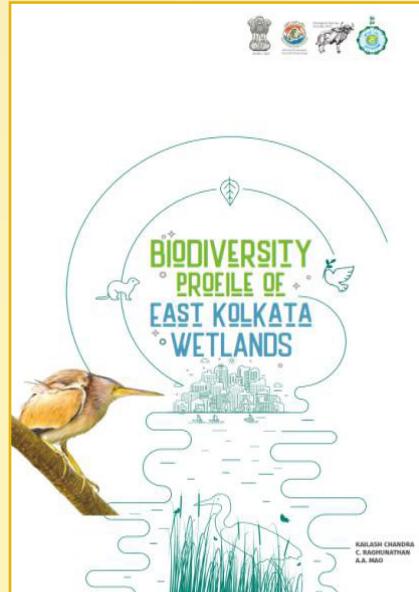


➤ Demolition of unauthorised two storied structure in Mouza Dhapa Manpur on date.



Publication of Biodiversity Profile of East Kolkata Wetlands.

EKWMA has published the Biodiversity Profile of East Kolkata

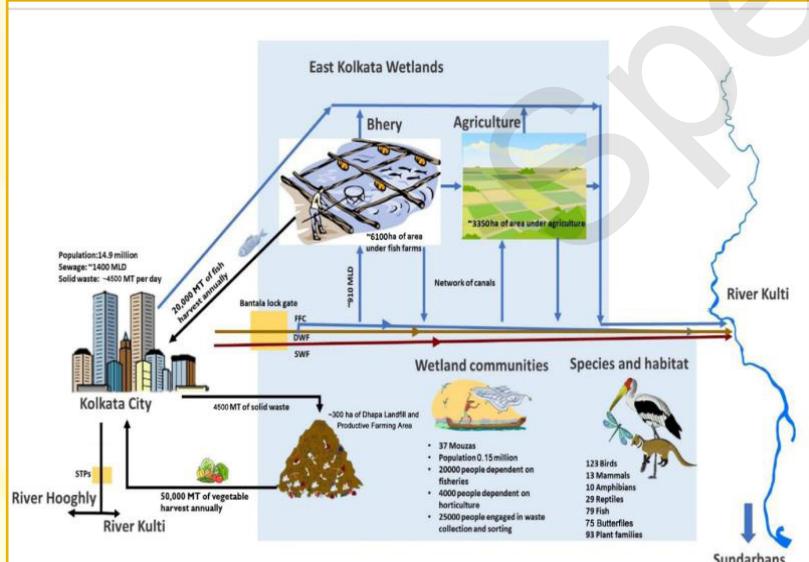
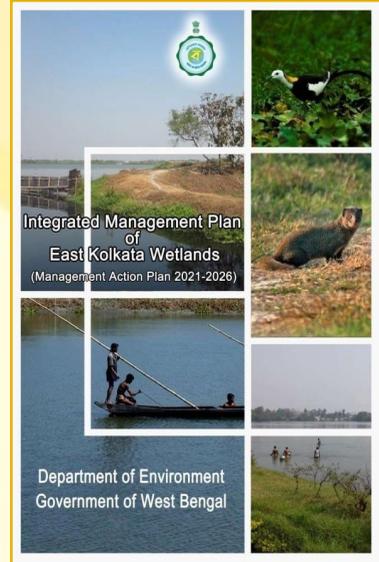


Sl. No.	Group	Number of species
Faunal Groups		
1.	Protozoa: Free-living Ciliates	22
2.	Protozoa: Free-living Testate Amoebae	42
3.	Rotifera	37
4.	Nematode	36
5.	Acari: Mites	51
6.	Arachnida: Spiders	32
7.	Crustacea: Cladocera	24
8.	Crustacea: Ostracoda	3
9.	Crustacea: Copepoda	9
10.	Crustacea: Crabs and Shrimps	24
11.	Apterygota	55
12.	Odonata: Dragonflies and Damselflies	27
13.	Orthoptera: Grasshoppers and Crickets	92
14.	Isoptera: Termites	7
15.	Hemiptera: Terrestrial	45
16.	Hemiptera: Aquatic and semi aquatic bugs	32
17.	Hymenoptera: Formicidae: Ants	50
18.	Hymenoptera: Vespidae	11
19.	Hymenoptera: Chalcididae	11
20.	Hymenoptera: Encyrtidae	17
21.	Coleoptera: Beetles	77
22.	Lepidoptera: Butterflies	75
23.	Lepidoptera: Moths	205
24.	Diptera: True flies	64
25.	Molluscs: Gastropods and Bivalves	22
26.	Pisces: Fishes	79
27.	Herpetofauna	39
28.	Aves: Birds	87
29.	Mammalia: Mammals	13
Subtotal		1288
Floral groups		
1.	Macro-fungi	50
2.	Freshwater Algae	130
3.	Bryophytes	16
4.	Agro-flora	60
5.	Flora	381
Subtotal		637
TOTAL		1925

Wetlands along with ZSI and it was found that EKW hosts a total of 1925 species- including 637 species of flora and 1288 species of fauna. Also, Pictorial Guide to Amphibians, Reptiles and Mammals of East Kolkata Wetlands has been published.

Preparation of Integrated Management Plan of East Kolkata Wetlands

Integrated Management Plan of East Kolkata Wetlands for five years has been prepared as per the National Plan for Conservation of Aquatic Ecosystems (NPCA) guidelines with a total estimated budget of Rs. 110.72 Crore.



**EAST KOLKATA WETLANDS MANAGEMENT AUTHORITY
ENVIRONMENT DEPARTMENT
GOVERNMENT OF WEST BENGAL**



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WETLANDS AND ITS SIGNIFICANCE

What are wetlands?

Wetlands are transitional lands between terrestrial and aquatic ecosystems where the water table is usually at or near the surface, or the area is inundated with shallow water permanently or seasonally.

Wetland is a generic term used for waterbodies and hydrological entities such as lakes, rivers, floodplains, estuaries, marshes, swamps, tidal flats, mangroves, coral reefs and other related ecosystems. The abundance of water at least for a part of the year is the single dominant factors for defining wetlands.

Wetlands as per Ramsar Convention:

The Convention on Wetlands, an intergovernmental treaty adopted on 2 February 1971 in the Iranian city of Ramsar, defines wetlands as: conservation of wetlands:

“Areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters”.

Importance of wetlands:

Wetlands are highly productive ecosystems which support rich biodiversity and provide a wide range of ecosystem services such as water storage, water purification, flood mitigation, erosion control, aquifer recharge, microclimate regulation, aesthetic enhancement of landscapes while simultaneously supporting many significant recreational, social and cultural activities.

Peri-urban wetlands in Kolkata city:

During the 2014 floods of Chennai, South India more than 400 people died and about 1 lakhs people were displaced. However, residents of Kolkata city are fortunate to have 12,500 ha wetlands, which rescue the city from flooding during rainy season and also recharges the ground water against depletion during summer.

These wetlands are called East Kolkata Wetlands.

East Kolkata Wetlands:

East Kolkata Wetlands (EKW), located on the eastern fringes of Kolkata, are one of the largest assemblages of sewage-fed fish ponds of varying sizes ranging from > 1 ha to over 100 ha. Situated between 22°25' N to 22°35' N and 88°20' E to 88°35' E, the wetlands spread over an area of 12,500 ha.

The unique system of EKW has evolved through trial and practice over about a hundred years and is an excellent example of wise use of marshy land at the city fringes.

Chronological history of East Kolkata Wetlands:

- 1992: The Hon'ble Calcutta High Court banned any reclamation, conversion or change in land use and ruled to maintain the nature of wetlands.
- 2002: The wetlands were designated as 'Wetlands of International Importance' (Ramsar Site).
- 2006: Government of West Bengal legislated the East Kolkata Wetlands (Conservation and Management) Act, 2006 and constituted the East Kolkata Wetlands Management Authority (EKWMA) under the Department of Environment.
- 2010: Government of India framed the Wetlands (Conservation and Management)

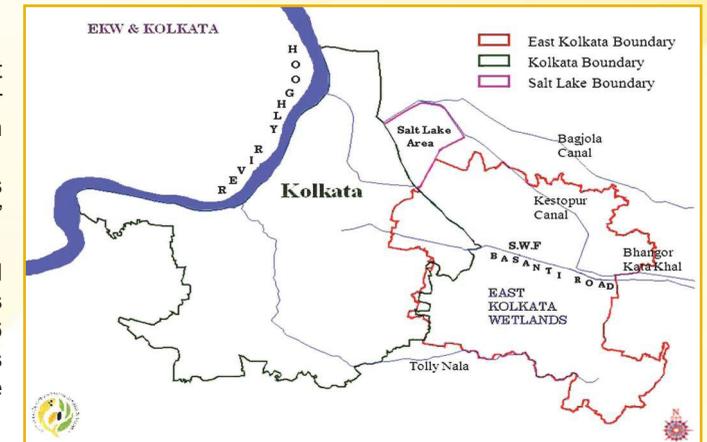


Figure 1 : Location of East Kolkata Wetlands

Rules, 2010 under the Environment (Protection) Act, 1986.

- 2017: Government of India notified Wetlands (Conservation and Management) Rules, 2017 by supersession of the earlier Rules, 2010.
- 2021: EKWMA prepared the Integrated Management Plan of East Kolkata Wetlands.

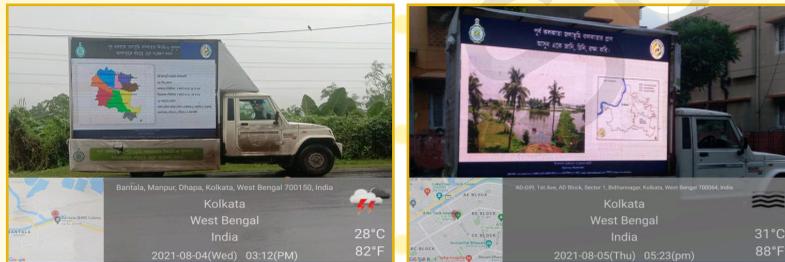
Ecological and socio-economic benefits in preservation of this unique ecosystem:

- The EKW naturally recycles nearly 910 MLD of sewage water generated from Kolkata city. For this natural filtration process, the EKW deserves the description of being **'Kolkata's kidney'**.
- This extensive natural wastewater purification system not only saves the river Ganga from being polluted with the city's sewage but also obviates the need for setting up of Sewage Treatment Plans saving the exchequer from capital expenditure of approximately Rs. 460 crore.
- It produces in the range of 22,000 tons fish per year and 150 tonnes vegetables per day and 16000 MT paddy per year.
- The wastewater treatment and fresh food supply from EKW, makes Kolkata an **ecologically subsidised city**.
- The unique system of cultivating fish, vegetables as well as paddy through liquid and solid waste developed by the local people through ages is called the **resource recovery system**.
- The EKW is also part of **Kolkata's lungs system**, since 60 percent of carbon found in the wastewater is sequestered by the plant and animal life of the wetlands, thus acting as a carbon sink and keeping the net GHG emission from Kolkata at a lower level.
- It reduces urban heat island effect.
- It provides livelihood opportunities for a large population of 0.15 million living in the 37 revenue villages (locally called mouza) within its boundaries.
- It saves Kolkata from flooding and inundation during heavy rains and storms as it provides a basin where the city's excess rainwater drains naturally, thus saving a huge financial cost apart from the human misery of urban submergence.
- It harvests rainwater in its vast water bodies and make for an excellent groundwater recharge system assuring the burgeoning metropolis of a steady and sustainable source of drinking water.
- It creates a diverse range of flora and fauna essential to maintain biological diversity in addition to serving as a staging ground for migratory birds. A total of 1925 species- including 637 species of flora and 1288 species of fauna have been recorded in the EKW.

Snapshots of significant achievements of the East Kolkata Wetlands Management Authority

Awareness generation on importance of the wetlands

- An audio-visual campaign on EKW is being displayed through LED-mounted mobile vans within the EKW and its surroundings. The message is being displayed on the website (www.ekwma.in) and other social media.



- Celebration of World Wetlands Day (2nd February)



- Erecting of banners and hoardings.



- Study tours (Participants: Students, Teachers, Trainees, Researchers, etc)

Afforestation within the East Kolkata Wetlands

Planted 5,269 saplings in the last monsoon covering the area of Bamanghata, Kheadaha 1 and Tardaha Gram Panchayats of the EKW area. All are protected by tree guard and are under maintenance for one year including watering, manuring, casualty replacement, etc. Boards displaying a message of the plantation programme is erected in all plantation locations.



Demarcation of EKW boundary

400 boundary pillars have been erected in mouza Pratapnager, Garal, Samukpota, Nayabad, Kantipota, Ranabhutia, Atghara, Mukundapur, Jagatipota, Bhagabanpur, Karimpur, Chak Kalar Khal, Chowbaga of South 24 Parganas and Dhapa Manpur of North 24 Parganas.

Law enforcement

- Filed 358 FIRs against violations in the EKW area.
- A waterbody was restored in 2022 after demolition of a boundary wall constructed over the filled-up waterbody in Mouza Dhalenda.

