F. No. W-12/02/2024-WTL
Government of India
Ministry of Environment, Forest and Climate Change
(Wetlands Division)

Indira Paryavaran Bhawan,
Jor Bagh, New Delhi-110003-
Dated: 25.05.2026

To,

The Member Secretary,
Maharashtra State Wetland Authority, New Administrative Bhavan, 15th Floor, Madame Cama Road, Mantralaya, Mumbai- 400 032, Maharashtra

Reference: Grievance vide registration number: PMOPG/E/2026/0088984 dated 24/05/2026-reg.

Sir,

This is with reference to the grievance received vide registration number: PMOPG/E/2026/0088984 dated 24/05/2026 **(copy enclosed).**

2. The content of complaint is reproduced below:

Hon'ble Prime Minister Sir,
Greetings in advance on World Environment Day – 2026.
We wish to raise a matter of serious national concern regarding the continuing degradation and monetisation-driven treatment of wetlands, mangroves, mudflats and flamingo habitats across the Mumbai Metropolitan Region (MMR). A disturbing trend has emerged wherein ecologically sensitive wetlands are increasingly viewed merely as developable land parcels. For instance, CIDCO seeks to monetise the biodiversity-rich 12-hectare DPS Flamingo Lake parcel — presently under consideration for Conservation Reserve status — at an estimated valuation of approximately ₹3,600 crore. To reverse this trend, we request the govt to launch: "A National Urban Blue Carbon Mission" and "A Globally Pioneering Flamingo Blue Carbon Urban Complex" across MMR integrating wetlands, mangroves, flamingo habitats, carbon sequestration, eco-tourism and nature-based climate finance. Scientific evidence from the IPCC, UNEP, IUCN and global Blue Carbon studies establishes that mangroves and tidal wetlands are among the most carbon-dense ecosystems on Earth, while also functioning as critical flood-buffer and climate-resilience systems. The devastating Mumbai floods of 26 July 2005 demonstrated the enormous economic consequences of ecological degradation and drainage disruption. RTI information reportedly showed that the government had to pay nearly ₹4 crore in compensation in an area that had not witnessed flooding for over two decades — losses believed to be largely avoidable had wetlands and natural drainage systems been protected. However, the ongoing pursuit of short-term financial gains may permanently destroy this ecological and climate opportunity. We therefore seek urgent intervention for protection of MMR wetlands, scientific blue-carbon valuation, prevention of ecological fragmentation and recognition of wetlands as strategic national climate infrastructure. A detailed White Paper is attached herewith.

3. The valuable suggestion for conservation of MMR wetlands by Shri B N Kumar has been appreciated.

4. This PG is being forwarded to Maharashtra State Wetland Authority for necessary action to address the grievance put forth by the complainant on priority basis. Action taken report may be directly sent to the applicant with copy to the MoEF&CC.

Yours faithfully,

Encls. As above

(Pankaj Verma)
Scientist 'F'

Copy to:

Shri B N Kumar, 501-A Neelkanth Arcade, Plot 94 Sector-17 Kopar Khairane Navi Mumbai, Maharashtra- 400709, Email: thenatureconnect@gmail.com

Details for registration number : PMOPG/E/2026/0088984

Name	B N Kumar
Date of receipt	24/05/2026
Address	501-A Neelkanth Arcade, Plot 94 Sector-17 Kopar Khairane Navi Mumbai
District name	Thane
State name	Maharashtra
Mobile no	9820128332
Email Id	thenatureconnect@gmail.com
Grievance description	

Environment, Forest and Climate Change >> Environment related >> Wetlands

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Hon'ble Prime Minister Sir,

Greetings in advance on World Environment Day – 2026.

We wish to raise a matter of serious national concern regarding the continuing degradation and monetisation-driven treatment of wetlands, mangroves, mudflats and flamingo habitats across the Mumbai Metropolitan Region (MMR).

A disturbing trend has emerged wherein ecologically sensitive wetlands are increasingly viewed merely as developable land parcels. For instance, CIDCO seeks to monetise the biodiversity-rich 12-hectare DPS Flamingo Lake parcel — presently under consideration for Conservation Reserve status — at an estimated valuation of approximately ₹3,600 crore.

To reverse this trend, we request the govt to launch:

"A National Urban Blue Carbon Mission" and

"A Globally Pioneering Flamingo Blue Carbon Urban Complex" across MMR integrating wetlands, mangroves, flamingo habitats, carbon sequestration, eco-tourism and nature-based climate finance.

Scientific evidence from the IPCC, UNEP, IUCN and global Blue Carbon studies establishes that mangroves and tidal wetlands are among the most carbon-dense ecosystems on Earth, while also functioning as critical flood-buffer and climate-resilience systems.

The devastating Mumbai floods of 26 July 2005 demonstrated the enormous economic consequences of ecological degradation and drainage disruption. RTI information reportedly showed that the government had to pay nearly ₹4 crore in compensation in an area that had not witnessed flooding for over two decades — losses believed to be largely avoidable had wetlands and natural drainage systems been protected.

However, the ongoing pursuit of short-term financial gains may permanently destroy this ecological and climate opportunity.

We therefore seek urgent intervention for protection of MMR wetlands, scientific blue-carbon valuation, prevention of ecological fragmentation and recognition of wetlands as strategic national climate

infrastructure.

A detailed White Paper is attached herewith

Name of organisation(s) where grievance is pending	**1. Wetland Division**
Type of receipt	**Takenup**

INDIA'S OPPORTUNITY FOR
A NATIONAL URBAN BLUE CARBON MISSION &
A GLOBALLY PIONEERING
FLAMINGO BLUE CARBON URBAN COMPLEX

A Policy White Paper for the Prime Minister of India

Ahead of World Environment Day – 2026

Presented by NatConnect Foundation

Executive Summary

India has an unprecedented opportunity to launch a National Urban Blue Carbon Mission and position the Mumbai Metropolitan Region (MMR) as a globally pioneering Flamingo Blue Carbon Urban Complex — a metropolitan-scale ecological and climate-resilience framework integrating wetlands, mangroves, mudflats, tidal creeks and migratory flamingo habitats.

Globally, coastal ecosystems are increasingly recognised not merely as biodiversity zones, but as strategic "Blue Carbon" assets because of their exceptional capacity to absorb and store atmospheric carbon dioxide while simultaneously providing flood protection, heat mitigation, biodiversity support and climate resilience.

The Mumbai Metropolitan Region still retains one of the world's most extraordinary urban tidal ecosystems stretching across:

- Thane Creek
- Sewri mudflats
- Uran wetlands
- Navi Mumbai mangroves

- Panvel Creek
- Vasai Creek
- Dharamtar estuarine systems
- Coastal Raigad wetland corridors

These ecosystems collectively support one of Asia's most visible flamingo populations and function as a connected tidal carbon system.

Scientific evidence from the Intergovernmental Panel on Climate Change (IPCC), particularly the Sixth Assessment Report (AR6), identifies mangroves, tidal marshes and coastal ecosystems as critical nature-based climate mitigation systems.

The United Nations Environment Programme (UNEP) describes blue-carbon ecosystems as "among the most intense carbon sinks on Earth" and highlights their role in climate adaptation, coastal protection and carbon sequestration.

The International Union for Conservation of Nature (IUCN) and the Blue Carbon Initiative have repeatedly emphasised that mangroves, tidal wetlands and seagrass ecosystems provide disproportionately high ecosystem-service value through long-term carbon storage, biodiversity support and coastal resilience.

The Ramsar Convention on Wetlands has similarly recognised wetlands as critical infrastructure for climate resilience, biodiversity conservation and sustainable urban development.

This paper proposes that India launch a **National Urban Blue Carbon Mission** anchored around the Mumbai Metropolitan Region as a globally visible demonstration project integrating:

- Wetland conservation
- Carbon-credit monetisation
- Biodiversity-linked finance
- Eco-tourism
- Flood resilience
- Urban climate adaptation
- Sustainable coastal economics

1. Scientific Foundation: Wetlands as Climate Infrastructure

For decades, wetlands were viewed as unproductive or reclaimable land. Climate science has fundamentally changed this understanding.

According to **UNEP**:

"Blue carbon ecosystems are among the most intense carbon sinks on Earth."

Mangroves, salt marshes and tidal wetlands absorb carbon through biological productivity and store it in anaerobic sediments where decomposition is extremely slow.

The IPCC Sixth Assessment Report identifies mangroves and coastal wetlands as critical nature-based climate solutions.

Key scientific findings include:

- Mangroves can store three to five times more carbon per hectare than tropical forests
- Mature mangrove ecosystems may contain between 500 and 3,000+ tonnes of CO2 equivalent per hectare
- Indian mangroves are estimated to hold approximately 386 tonnes of carbon per hectare, equivalent to nearly 1,416 tonnes CO2 equivalent
- Annual sequestration rates in healthy mangrove systems average approximately 6–10 tonnes CO2 equivalent per hectare annually

The majority of this carbon is stored underground in sediment systems. Disturbance through reclamation, dredging or construction can release centuries of accumulated carbon back into the atmosphere.

Wetlands therefore function not merely as ecological spaces but as living carbon vaults.

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2. Why Flamingos Matter

Flamingos are not merely symbolic birds. They are ecological indicator species deeply dependent on healthy tidal systems, saline mudflats and algal ecosystems.

The Bombay Natural History Society (BNHS) and multiple ecological studies have linked flamingo abundance in the Mumbai region to:

- Tidal flushing
- Salinity balance
- Algal productivity
- Sediment stability
- Nutrient cycling
- Healthy wetland hydrology

Declining flamingo numbers therefore indicate broader ecological stress in wetland systems that also function as major carbon sinks.

The flamingos of MMR move across an interconnected network of creeks, mudflats, mangroves and wetlands transcending municipal boundaries. Scientifically, these ecosystems function as a single integrated tidal metabolism.

This makes MMR uniquely suited to become a globally pioneering Flamingo Blue Carbon Urban Complex.

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3. Carbon Credit Monetisation Potential

Carbon credits are financial instruments representing one tonne of carbon dioxide equivalent avoided, removed or stored.

Blue-carbon ecosystems are increasingly attracting premium pricing because they combine:

- Carbon sequestration
- Biodiversity conservation
- Coastal resilience
- Community benefits
- Climate adaptation

Current international market estimates indicate:

- Low-quality generic credits: USD 2–10 per credit

- High-integrity blue-carbon credits: USD 20–50 per credit
- Biodiversity-linked nature credits: USD 80–150+ per credit

Healthy mangrove ecosystems may generate approximately 6–10 carbon credits per hectare annually.

This implies that large-scale wetland conservation across MMR could generate recurring ecological revenue while simultaneously protecting Mumbai from climate vulnerability.

The future of climate finance is increasingly moving toward "stacked ecological finance" where ecosystems are monetised not only for carbon but also for:

- Biodiversity
- Resilience
- Flood buffering
- Tourism
- Ecosystem services

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4. International Lessons

Kenya – Gazi Bay Mangrove Carbon Project

The Gazi Bay project demonstrated that mangrove conservation can generate verified carbon credits while financing local livelihoods and ecological restoration.

Abu Dhabi Blue Carbon Research

Studies in Gulf tidal systems demonstrated that even arid mudflats and saline coastal ecosystems can contain substantial sediment carbon stocks.

This has direct relevance for Mumbai's mudflats, salt pans and estuarine systems.

Global Shift Toward Nature Finance

Countries including Indonesia, Colombia and Senegal are integrating:

- Blue-carbon finance
- Biodiversity credits

- Adaptation finance
- Coastal resilience economics

India now has an opportunity to lead this movement at metropolitan scale.

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5. Wetlands versus Conventional Real Estate

Indicative Ecological-Economic Value of MMR Wetland Systems

Ecological Function	Indicative Long-Term Economic Value
Carbon sequestration & blue-carbon credits	Recurring annual climate-finance revenue
Stored sediment carbon	Ecological asset value potentially running into several thousand crores across MMR
Flood buffering & drainage support	Major reduction in urban flood losses
Heat mitigation	Reduced urban heat-island costs
Biodiversity & flamingo habitats	Eco-tourism and biodiversity-finance potential
Coastal resilience	Reduced infrastructure vulnerability
Public health & air quality	Lower long-term environmental burden
ESG & climate finance	Access to international green funding

Flood Mitigation and Economic Losses

The devastating Mumbai floods of 26 July 2005 demonstrated the enormous economic and human costs of ecological degradation, drainage obstruction and wetland loss. Multiple assessments estimated that the floods caused economic losses running into several thousand crores of rupees across Mumbai Metropolitan Region through infrastructure collapse, business disruption, transport paralysis and loss of life.

Wetlands, mangroves, floodplains and tidal ecosystems function as natural drainage and flood-buffer systems. Their fragmentation and reclamation significantly increase urban flood vulnerability.

RTI information obtained from revenue officials reportedly showed that the government had to pay nearly ₹4 crore in compensation to flood victims in an area that had not witnessed inundation for more than two decades. Environmental observers pointed out that such payouts came from taxpayers' money and were largely avoidable had wetlands and natural drainage systems been protected.

This demonstrates that destruction of wetlands creates not merely environmental damage, but recurring public financial liabilities.

Reframing Wetlands as National Climate Infrastructure

The prevailing approach of valuing wetlands solely through short-term land monetisation frameworks risks underestimating their long-term strategic ecological and economic value.

In contrast to one-time reclamation gains, functioning wetland ecosystems provide recurring benefits through:

- Climate resilience
- Carbon storage
- Flood mitigation
- Biodiversity
- Eco-tourism
- Public safety
- Avoided disaster expenditure

The Mumbai Metropolitan Region therefore presents India with a rare opportunity to pioneer a globally significant model where ecology, climate resilience and sustainable urban economics are integrated rather than treated as competing objectives.

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6. Policy Recommendations

A. Launch a National Urban Blue Carbon Mission

India should establish a dedicated national mission focused on:

- Mangroves
- Wetlands
- Mudflats
- Estuarine systems
- Urban coastal biodiversity

B. Create the Mumbai Flamingo Blue Carbon Urban Complex

The Government of India, Maharashtra Government and regional agencies should jointly designate MMR's tidal ecosystems as an integrated ecological infrastructure region.

C. Establish an India Blue Carbon Registry

A national carbon-accounting and monitoring framework should be developed with participation from:

- ISRO
- TERI
- National Centre for Sustainable Coastal Management
- IITs
- BNHS
- Maharashtra Mangrove Cell

D. Build a Metropolitan Ecological Finance Model

The MMR project should integrate:

- Carbon credits
- Biodiversity finance
- Eco-tourism
- ESG investment
- Climate adaptation finance
- Resilience bonds

E. Position India Globally

India should present the Mumbai Flamingo Blue Carbon Urban Complex at international climate and biodiversity forums as a model for:

- Urban climate resilience
- Nature-based infrastructure
- Ecological finance
- Biodiversity-linked development

Conclusion

The future of climate economics lies not only in reducing emissions but in recognising ecosystems as strategic national infrastructure.

The wetlands, mangroves and flamingo habitats of the Mumbai Metropolitan Region are not wastelands. They are living climate systems that store carbon, buffer floods, reduce heat stress, support biodiversity and enhance long-term urban resilience.

Flamingos are the most visible biological indicators that these systems are still alive.

India now has a rare opportunity to become among the first nations to develop a metropolitan-scale Flamingo Blue Carbon Urban Complex integrating ecology, climate finance, tourism and sustainable urban development.

Ahead of World Environment Day – 2026, such an initiative would demonstrate India's capacity to lead the world in combining environmental stewardship with long-term economic and climate security.

Select Scientific and Institutional References

1. IPCC Sixth Assessment Report (AR6), Working Group III
2. UNEP Blue Carbon Ecosystems Framework
3. IUCN Blue Carbon Initiative Reports
4. Ramsar Convention on Wetlands

5. TERI Blue Carbon and Coastal Ecosystems Studies
6. BNHS observations on flamingo ecology in Mumbai Metropolitan Region
7. Nature-based Solutions Initiative – Gazi Bay Mangrove Carbon Project
8. Abu Dhabi Blue Carbon Demonstration Project
9. National Centre for Sustainable Coastal Management publications
10. Peer-reviewed studies on mangrove carbon sequestration and tidal sediment carbon storage