ABSTRACT

Forests – Budget Announcement 2021-2022 –Tamil Nadu Wetlands Mission – Administrative and Financial sanction for the years 2021-22 and 2022-23 - Orders - Issued.

Environment, Climate Change & Forests (FR.9) Department

G.O.(Ms.) No.59

Dated: 25.03.2022
பிலவ, பங்குனி – 11
திருவள்ளுவர்ஆண்டு, 2053

Read:

From the Additional Principal Chief Conservator of Forests and Member Secretary, Tamil Nadu State Wetland Authority, Letter No. TNSWA1/29359/2021, dated 04.10.2021 and 29.12.2021.

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ORDER :

Wetlands offer a multitude of ecosystem services which have significant impact on the socio-economic sphere of our lives. Millions of people depend on wetlands for their livelihood. They play a critical role in water purification, ground water replenishment, drought and flood management. Conservation of wetlands is essential for water and food security. Role of wetlands has become even more important in the light of adverse and serious impact of climate change. Wetlands are particularly impacted by climate change, especially sea-level rise, coral bleaching as a result of increased sea surface temperatures, and changing hydrology in inland waters. Wetlands are known to be repositories of carbon and are considered as "carbon sinks".

2. Wetlands are considered to be natural climate regulators as they play an important role in maintaining water balance in an ecosystem. Innumerable plant and animal species thrive in wetlands. Wetlands also offer refuge to millions of migratory and resident birds and are hotspots for biodiversity. Importance of wetlands as tourist attraction is also well known. Protection of wetlands and their conservation is therefore essential for survival of living beings.

3. The Climate Change is altering hydrological regimes and leading to increasing vulnerability of the wetlands, while encroachment, solid waste dumping, unsustainable tourism infrastructure development and pollution are degrading the health of the wetlands impacting the lives and livelihoods of the people. It is also widely acknowledged that global climate change is likely to increase the likelihood of potentially abrupt changes in wetlands which can be large in magnitude and impossible to reverse. Thus, the wetlands being an important Carbon and Methane sink and has the potential for reversing the global warming related climate vulnerabilities and risk to the environment and human lives.

4. Government of Tamil Nadu is committed to protect its wetlands through a comprehensive conservation and management plan. During the Budget Speech for the year 2021-22, the Hon'ble Minister for Finance and Human Resources Management has made the following Announcement among others;

> *"Under the leadership of Hon'ble Chief Minister, this Government will launch the 'Tamil Nadu Wetlands Mission' with the objective of ecological restoration of wetlands in Tamil Nadu. The Mission will identify and map 100 wetlands in 5 years and restore the ecological balance with focus on livelihood options at a cost of Rs.150 crores"*

5. Accordingly, Government of Tamil Nadu have decided to implement the 'Tamil Nadu Wetlands Mission', for a period of five years from 2021-2022 to 2025-2026 for an amount of Rs.115.15 crores, with the following broad objectives :-

5.1 Objectives of the Mission

i) Identify, map and inventorise wetlands in the State of Tamil Nadu.

ii) Prepare extensive documentation viz., Integrated Wetlands Management Plan for Notification of identified wetlands under the Wetlands (Conservation and Management) Rules, 2017.

iii) Notification of identified wetlands under the Environment (Protection) Act, 1986 and Rules framed there under for their protection and conservation.

iv) Undertake comprehensive eco-restoration of wetlands in accordance with proven scientific strategies and evidence based methodologies.

v) Raise awareness on wetland conservation through public awareness campaign.

vi) Promote research, inventory and monitoring of wetland resources for effective management.

vii) Promote and support sustainable livelihood options in order to ensure productivity while protecting wetland resource.

viii) Promote stakeholder participation for effective management of wetlands.

ix) Conserve wetland biodiversity through community based approaches.

5.2 Strategies

The implementation strategies for devising an appropriate Wetland Management Plan are detailed as below:

Strategies	Activities
Boundary delineation and demarcation	1. Boundary mapping and delineation including coastal wetlands 2. Removal of encroachments 3. Mapping of wetlands in TN
Catchment conservation	1. Afforestation and aided regeneration 2. Small scale engineering measures (gully plugging, check dams, gabion structures etc.
Water management	1. Selective dredging and desilting to improve hydrological connectivity 2. Interception, diversion and treatment of point sources of pollution 3. Construction and operation of hydraulic structures for maintenance of water regimes and flood control 4. Balancing water allocation for human and ecological purposes
Biodiversity conservation	1. Habitat evaluation and improvement 2. Improvement and maintenance of migratory route 3. Maintenance of breeding and spawning grounds for key species 4. Management of Invasive species
Sustainable resource development and livelihood improvement	1. Microenterprise development for reducing dependence on wetland resources for livelihoods 2. Sustainable fisheries development 3. Sustainable agriculture development

Institutional development	1. Setting regulatory regimes 2. Development of monitoring and evaluation system 3. Communication and Outreach

5.3 Components of the Mission

Sl. No.	Components of the Mission
1.	Identification, digital inventorization and mapping of natural wetlands on watershed basis in each district
2.	Preparation of Draft Notification documents
3.	Preparation of Final Notification documents
4.	Preparation of Brief Documents
5.	Preparation of Integrated Management Plan (IMP) for ecological restoration of natural wetlands
6.	Preparation of Ramsar Wetlands Proposal
7.	Ecological restoration of wetlands based on the research study outcomes • Habitat improvement through greening. • Protection and Maintenance • Outreach activities • Incorporating Waste Mgt strategies
8.	Documentation and Publication of Various Knowledge products

5.4 Timeline:

The time line stipulated for the above Mission will be for 5 years from 2021-2026.

5.5 Outcomes Expected:

i. Minimising the rate of loss of natural wetlands and wherever feasible enforce "net zero wetland degradation" with the help of Government, Experts, NGO's and local communities or the wetland mitras.

ii. Notification of a minimum of 100 wetlands in the State aligning the Wetlands (Conservation and Management) Rules, 2017

iii. Declaration of minimum 50 wetland sites of international significance as RAMSAR sites for affording highest order of protection to such wetlands for sustainable flow of the ecosystem benefits for the sustenance of human lives and future generations.

iv. Preparation of additional 500 Brief Documents for prioritising new set of wetlands for the purpose of new Notification and RAMSAR site designation

v. Preparation of 100 Integrated Wetland Management Plans (IMPs) of the

identified wetlands including the RAMSAR sites. The IMPs shall detail on the biodiversity, ecosystem services and value of wetlands for the current and the future periods.

vi. Restoring 100 prioritized wetland ecosystems and deriving the Total Economic Valuation of wetland ecosystem benefiting the local communities in the State.

vii. Improvement in water-related ecosystem services, such as clean drinking water, water for agriculture and flood regulation, erosion control, sediment deposition, carbon sequestration, increase in agricultural production, inland fisheries and tourism activities.

viii. Inclusive, safe, resilient and sustainable cities and human settlements by ensuring that the wetlands act as natural sponges absorbing rainfall, provide protection against coastal and river flooding and partially offset the need for man-made infrastructure.

ix. Reduction in the incidences of drought, protection of coastal area for fisheries, nursery ground for more fish production, sediment stabilisation of coastal zones through green recovery by way of restoring 10 sq.km mangroves, sea grasses and coral rehabilitation for sustaining marine ecosystems.

x. Reduction in incidences of nutrient enrichment from current level of 100% to 25% by promoting organic farming adjoining the wetlands by the end of 5 years

xi. Reduction in the waste accumulation adjoining marine and fresh water ecosystems from 100% to 25% by promoting Circular Economy (CE), keeping the local communities (Rag Pickers) in the loop for the successful CE solutions. Efforts will focus on first preventing degradation of riparian areas, as its degradation will lead to dumping of wastes that slowly gets expanded to the inland and coastal wetlands.

xii. Introduction of Carbon Credit System in the wetlands restoration programme and involve local communities for reaping the benefits of future voluntary Carbon market

xiii. Promoting sustainable ecological restoration of wetlands by Flood zonation mapping, real time monitoring of irrigation and cropping patterns, water quality analysis and modelling, mapping of surface water bodies and wetlands by using Remote sensing and Geographic Information System (GIS)

xiv. Generate widespread awareness amongst the people and communities on the ecosystem value of the wetlands and the need for its conservation and wise use for the sustenance of future generations.

xv. Integration of Wetland Conservation into Sectoral Development Plans for avoiding urbanization on green and blue assets preventing further wetland degradation.

5.6 Monitoring and Evaluation

The Project shall undertake a concurrent evaluation of the Mission activities. Following parameters for wetland monitoring shall be deployed:

Wetland feature	Management objective	Performance Indicator #	Means of measurement
Area	Maintain wetland area	Wetland area which has not been altered for non-wetland usages	Area estimated from analysis of remote sensing images and ground truthing
Catchments	Reduction in silt load from catchment	Siltload	Monitoring pilot watersheds
Hydrological regimes	Reduce pollution and Enhance hydrological connectivity within wetlands complex	Biological Oxygen Demand, Chemical Oxygen Demand or any other water quality parameter assessed against a threshold and Area of wetland complex inundated during high floods period	Water quality monitoring and Analysis of remote sensing data and hydrological surveys
Biodiversity	Maintain and enhance habitat of water birds	Area of wetland used by water birds	Physical survey
	Reduce area under invasive macrophyte	Area under invasive macrophyte	Analysis of remote sensing images and ground truthing
	Maintain fish species richness	Fish species richness	Sampling
Socio-economics	Reduce use of harmful fishing practices	Number of destructive fishing gear used in the wetland	Survey
	Reduce direct dependence of communities on capture fisheries	Reduction in percentage of income derived from wetland	Socio economic surveys

***# Performance Indicators:** For each performance indicator, a base line value at the beginning of management plan implementation may be specified. These values should be tracked over the course of management plan implementation to assess whether management objectives are being met*

6. The Additional Principal Chief Conservator of Forests & Member Secretary, Tamil Nadu State Wetlands Authority has, therefore requested the Government to accord administrative and financial sanction for a sum of Rs.1627.71 lakhs (Rupees Sixteen crores twenty seven lakh and seventy one thousand only) for setting up of the Project Management Unit (PMU), incurring the cost towards preparation of brief documents and final notification of the natural wetlands, preparation of proposals for the RAMSAR sites, creation of wetland conservation centre at Muthupet, Tiruvarur District etc., as envisaged under the Action Plan for the Tamil Nadu Wetland Mission for the year 2021-2022. The composition of the technical team is given in the Annexure.

6.1 Activities proposed in the first year and subsequent years

Activities proposed in the first year and subsequent years are divided in two areas:

1. Core Project Activities
2. Non- Core Project Activities

Core Project Activities

- Identification, digital inventory of wetlands
- Preparation of Brief Documents
- Preparation of Draft and Final Notification
- Preparation of Integrated Management Plan of Wetlands
- Ecological Restoration

Non-Core Project Activities

- PTT establishment
- State of Art GIS Cell establishment
- High Speed Network Hub
- PC, Laptops, and all electronic accessories
- Field materials, equipment, Field Kits etc.
- Web designing and periodic updation
- Process and Video Documentation of the project
- Monitoring and Evaluation
- Exposure Visits (National and International)

7. Fund requirement:

S.No.	Year	Rupees in Crores
I	Amount required for year 2021-22 (February-March, 2022)	1.03
II	Amount required for the year 2022-2023	13.74
III	Amount required for the year 2023-2024	36.44
IV	Amount required for the year 2024-2025	34.71
V	Amount required for the year 2025-2026	28.73
VI	Amount required for the year 2026-2027	0.50
	Total	**115.15**

8. The Government after careful examination, accord administrative sanction for an amount of Rs.115.15 crores for a period of five years from 2021-2022 to

2025-2026 for implementation of core and non-core activities under the Tamil Nadu Wetlands Mission as below:

(Rs. in crores)

Year	Core Activities	Non - Core Activities	Sanction
2021 – 2022	0.71	0.32	1.03
2022 – 2023	11.94	1.80	13.74
2023 – 2024	35.19	1.25	36.44
2024 – 2025	33.71	1.00	34.71
2025 – 2026	27.73	1.00	28.73
2026 – 2027	0.50	-	0.50
Total	**109.78**	**5.37**	**115.15**

The Government also accord financial sanction for an amount of Rs.14.75 Crore (Rupees Fourteen Crore and Seventy Five Lakhs only) for the years 2021–2022 and 2022–2023 by making necessary provisions in the Budget Estimates 2022-2023.

9. The amount sanctioned in para 8 above shall be debited under the following head of account:-

"2406 Forestry and Wildlife – 01 Forestry – 001 Direction and Administration – State's Expenditure – AA- General Direction – 09 Grants-in-Aid – 03 Grants for Specific Scheme
(DP Code 2406-01-001-AA-30903)"

10. Necessary funds had been provided in Budget Estimate 2022-23.

11. The Principal Chief Conservator of Forests (Head of Forest Force) and Principal Chief Conservator of Forests and Chief Wildlife Warden (FAC) is authorized to draw and disburse the above sanctioned amount to the Tamil Nadu State Wetlands Authority in order to meet out the current year expenditures related to the implementation of the Tamil Nadu Wetlands Mission.

12. This order issues with the concurrence of Finance Department vide its U.O No.76/FS/P/2022, dated 9.2.2022.

SUPRIYA SAHU
ADDITIONAL CHIEF SECRETARY TO GOVERNMENT

To
The Principal Chief Conservator of Forests (HoFF), Chennai-15.
The Additional Principal Chief Conservator of Forests & Member Secretary, Tamil Nadu State Wetlands Authority, Chennai-15.
The Special Personal Assistant to Hon'ble Chief Minister, Chennai-9.
The Private Secretary to Secretary-IV to Hon'ble Chief Minister, Chennai-9.
The Senior Personal Assistant to Hon'ble Minister (Forests), Chennai-9.

The Special Personal Assistant to Hon'ble Minister (Finance & Human Resources Management), Chennai -9.
The Principal Accountant General (A&E), Chennai-18.
The Accountant Genera, Chennai-18.
The Pay and Accounts Officer (South), Chennai – 35.
The Resident Audit Officer, Chennai-9.

Copy to :

The Office of the Chief Minister, Chennai-9.
The Water Resources Department, Chennai-9.
The Revenue & Disaster Management, Chennai-9.
The Tourism, Culture & Religious Endowments Department, Chennai-9.
The Finance Department, Chennai-9.
The Private Secretary to Additional Chief Secretary to Government, Environment, Climate Change & Forest Department, Chennai-9.

// Forwarded By Order //

P. Selvi
25.3.22
SECTION OFFICER

ANNEXURE

The composition of the Technical Team:

1	Consultant-B (Consultant)	**GIS Expert** M.Tech Remote Sensing with 9 years experience (or) M.E. Remore Sensing with 10-11 years experience having good knowledge of MS Office &GIS Softwares	1
2	Consultant-A (Junior Consultant)	**Environment Science Expert (Pollution)** Ph.D Environmental Science specialized in pollution studies with 5 years experience (or) M.Sc Environmental Science specialized in pollution studies with 8 years experience having good knowledge of MS Office	1
3	Consultant-A (Junior Consultant)	**Climate Expert** Ph.D Environmental Science specialized Climatology with 5 years experience (or) M.Sc., Environmental Science specialized in Climatology with 8 years experience having good knowledge of MS Office	1
4	Consultant-A (Junior Consultant)	**Hydrology** Ph.D Water Management specialized in Hydrology with 5 years experience (or) M.Sc. Forestry specialized in Silviculture with 8 years experience having good knowledge of MS Office	1
5	Consultant-A (Junior Consultant)	**Civil Engineer** M.E. Civil Engineer with 7 years experience having good knowledge of MS Office	2
6	Young Professional-II	**Geology** M.SC. Geology with 5 years experience having good knowledge of MS Office	1
7	Young Professional-II	**Economics** M.Sc., Economics with 5 years experience having good knowledge of MS Office	1
8	Young Professional-II	**Life Sciences** M.Sc. Life Sciences with 5 years experience having good knowledge of MS Office	1
9	Young Professional-II	**Fisheries Expert** M.Sc. Fisheries Science with 5 years experience having good knowledge of MS Office	1
10	Young Professional-I	**Technical Assistant** B.E. Environmental Management (or) B.Sc / Botany / Zoology with 2 years work experience having good knowledge of MS Office	1

11	Young Professional-II	**System Analyst** MCA with 3 years experience (or) B.Tech Computer Science with 4-5 years experience having good knowledge to manage Hardware, Software as well as designing website	1
12	Young Professional-I	**Data Entry Operator** BCA Computer Science with 3 years experience (or) B.Sc. Computer Science with 4-5 years experience having good knowledge of MS Office, Database Management and designing website	1
13.	Young Professional-II	**Legal Expert** Bachelor's Degree in Law (LLB/BL) with 4-5 years experience having good knowledge of MS Office	1
14	Young Professional-III	**Accountant** CA / ICWA / with 2 years experience having good knowledge of MS Office and all Accounts related Softwares	1

SUPRIYA SAHU
ADDITIONAL CHIEF SECRETARY TO GOVERNMENT

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P. Sahi
25.3.22

SECTION OFFICER