REPORT ON

ECOSYSTEM APPROACHES FOR REDUCING THE CLIMATE VULNERABILITIES FOR THE COASTAL COMMUNITIES

Wise use of wetlands for coastal resilience, livelihood protection and climate change adaptation

10th October 2023

INTRODUCTION

Workshop on "Ecosystem-Based Approaches for Reducing the Climate Vulnerability and Wise Use of Coastal Wetlands Through Community Participation" concentrating Wise use of wetlands for coastal resilience, livelihood protection and climate change adaptation was conducted on 10.10.2023 at Leela Palace, Chennai. The Workshop was piloted for government officials from various sectors – Environment, Climate and Forest Department, Tamil Nadu, Water Resource Department, Rural Development and Panchayat Raj, Tamil Nadu Governing Council on Climate Change, NGO's, Environmentalists and Civil Societies, etc., The main objective of this exclusive "Experts – Local Community" Collaborated workshop is to carry out the science-based restoration of coastal wetlands for disaster risk reduction and climate change mitigation & adaptation based on Community Participation.

Annexure-I highlights the agenda of the training Programme and Annexure-II provides the list of participants attended the training Programme

SESSION 1: WELCOMING THE DIGNITARIES ON DIAS

WELCOME ADDRESS

Thiru. Yogesh Garg, IFS., Assistant Mission Director, Tamil Nadu Wetlands Mission welcomed the Chief Guest: Tmt. Supriya Sahu, I.A.S., Additional Chief Secretary, Department of Environment, Climate Change and Forest, Government of Tamil Nadu, Thiru. Subrat Mohapatra, IFS., Principal Chief Conservator of Forest (HOFF), Thiru. Srinivas R. Reddy, I.F.S., Principal Chief Conservator of Forest and Chief Wildlife Warden, Thiru. Deepak Srivastava IFS., Principal Chief Conservator of Forest and Member Secretary, Tamil Nadu State Wetland Authority, Dr. Ritesh Kumar, Director, Wetlands International South Asia, Mr. Avanish Kant, Senior Environmental Specialist, World Bank, Experts from various Departments, NGOs, Local Communities and other Participants of the workshop

Thiru. Yogesh Garg, IFS., Tamil Nadu Wetlands Mission delivering the welcome speech

INTRODUCTORY REMARKS

Thiru. Deepak Srivastava IFS., Principal Chief Conservator of Forest and Member Secretary, Tamil Nadu State Wetland Authority explained in detail about the programme's Objective. He stated the Importance of Communities' Participation in restoration of coastal wetlands.

Thiru. Deepak Srivastava IFS., Principal Chief Conservator of Forest and Member Secretary, Tamil Nadu State Wetland Authority delivering Introductory Remarks

SPECIAL ADDRESS

Dr. Ritesh Kumar, Director, Wetlands International South Asia and Mr. Avanish Kant, Senior Environmental Specialist, World Bank delivered the Special address.

PRESIDENTIAL ADDRESS

Tmt. Supriya Sahu, I.A.S., Additional Chief Secretary, Department of Environment, Climate Change and Forest, Government of Tamil Nadu delivered the Presidential address. In her address, she put forth a suggestion to the team responsible for managing the wetlands in Tamil Nadu. The suggestion entailed considering the surrounding area of the wetland in terms of factors such as biodiversity and livelihood. The team was directed by her to find a total of 20 wetlands and proceed to map them by actively engaging local communities in the process. The proposal put forth by Madam includes the development of a Visualization Tool/Mobile Application as part of the Mission. This tool aims to provide a visual representation of the movement of water inflow and outflow of wetlands in the Tamil Nadu region, displayed on a map.

The individual in question has expressed gratitude for the media's focus on the Pallikaranai wetland and has subsequently made a plea for comparable attention to be directed towards other wetland areas. The presence of a governing board in Pallikaranai, consisting of civil society experts, is in accordance with the order of the high court. Pallikaranai receives a weekly influx of approximately 2000 visitors. Hence, it is imperative to disseminate this information to all remaining wetland ecosystems.

The issues encountered by the Tamil Nadu Wetland Authority and the Tamil Nadu Forest Department subsequent to the notification of wetlands with respect to ownership were deliberated upon by the speaker. The primary concern revolves around the perception of assuming control over land ownership. According to her statement, the resolution of this issue necessitates the participation of panchayats and MLAs through the establishment of authority led by the District Collector and local communities. This approach aims to effectively tackle the significant difficulty associated with wetland management. She stated that wetlands must

be recognized, inventoried, mapped, and transferred to the local governing body, with the District Collector potentially participating in this process.

Tmt. Supriya Sahu, I.A.S., Additional Chief Secretary, Department of Environment, Climate Change and Forest, Government of Tamil Nadu delivered the Presidential address

SESSION 2: TECHNICAL SESSION ON SCIENCE-BASED RESTORATION OF COASTAL WETLANDS FOR DISASTER RISK REDUCTION AND CLIMATE CHANGE MITIGATION & ADAPTATION.

Principal Chief Conservator of Forest proudly said that, so far, we have conducted workshops involving field experts, biodiversity experts and water experts only and this workshop is one of its kind as local communities were invited for the first time.

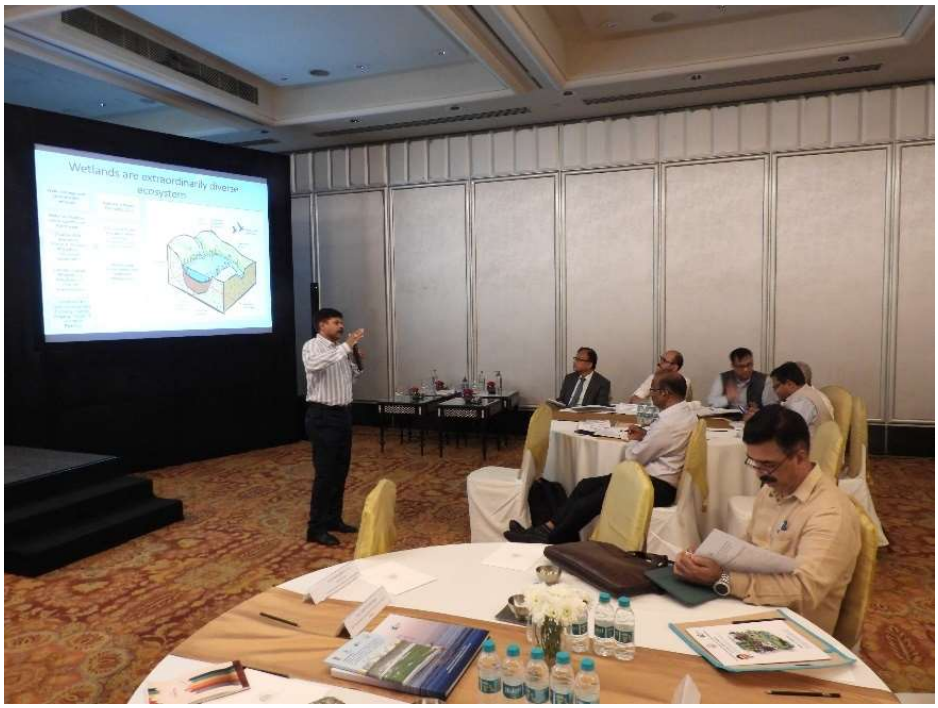
The presentation encompassed a comprehensive discussion on various aspects of wetland ecology and conservation. Principal Chief Conservator of Forest began by emphasizing the paramount importance of wetland ecology, shedding light on the delicate balance of these ecosystems. He further delved into the projected impacts on key water-based systems and resources, considering changes in temperature and

precipitation patterns. In his address, Principal Chief Conservator of Forest also highlighted the problem areas identified in wetlands conservation, management, and ecological restoration, underscoring the urgency of addressing these challenges. He shared insights on the major invasive species that have been recorded in and around Tamil Nadu's wetlands, totaling 17 in number, signifying the need for proactive management strategies. Principal Chief Conservator of Forest then provided an overview of the baseline inventory of wetlands, with a focus on aspects like wetland connectivity and ecological, edaphic, and hydrological parameters, laying the foundation for data-driven conservation efforts.

The discussion expanded to cutting-edge technology, where Principal Chief Conservator of Forest introduced a pilot study involving drone-based LIDAR survey for the Pallikaranai Marsh Land, employing unmanned aerial vehicles to enhance wetland assessment and monitoring.Principal Chief Conservator of Forest also outlined the restorative process underway in various districts, emphasizing the significance of integrated development for inland and coastal wetlands. He proudly mentioned Tamil Nadu's international recognition through the Ramsar Convention, particularly in the context of coastal wetlands, highlighting the global importance of these sites.

He further elaborated on specific restoration efforts, including mangrove restoration in Muthupet and invasive species clearing at Vaduvoor bird sanctuary, showcasing practical measures for wetland conservation. Principal Chief Conservator of Forest then touched upon the ecosystem services provided by wetlands, illustrating both their high and medium impacts on environmental and human well-being.Summarizing the anticipated outcomes of these endeavors, Principal Chief Conservator of Forest underscored several key deliverables. These include achieving zero wetland degradation by 2022, introducing a carbon credit system (specifically, blue carbon credits) to incentivize wetland preservation, promoting sustainable ecological restoration through flood zonation mapping, ensuring widespread awareness among people and communities, integrating wetland

conservation into sectoral development plans, and preparing comprehensive Integrated Wetland Management Plans (IMPs). These goals reflect a steadfast commitment to the conservation and sustainable management of Tamil Nadu's diverse wetlands.Principal Chief Conservator of Forest suggested the experts that the Integrated Management Plan should be changed as Integrated Environment and Natural Resource Management Plan as Integrated Management plan is too generic.



Thiru. Deepak Srivastava IFS., Principal Chief Conservator of Forest and Member Secretary, Tamil Nadu State Wetland Authority

Dr. Ritesh Kumar, Director of Wetlands International South, provided an overview of the various methodologies employed in the delineation of wetland areas. He proposed the implementation of a standardized inventory system to mitigate the degradation of wetland ecosystems. The individual maintained that the depletion of natural ecosystems mostly stems from an exclusive emphasis on Mangrove plantations, neglecting the significance of salt marshes. Therefore, he proposed considering the entirety of the coastal ecosystem when undertaking the development of an inventory.

Furthermore, a crucial recommendation put out by him is to transition from a focus on structure to an emphasis on functions. The size of the mangrove region is inconsequential. Merely knowing the extent of wetland coverage is insufficient; it is imperative to also comprehend the specific species present, the depth of the wetlands, the distances involved, and other relevant factors. The primary focus of this discussion pertains to the evaluation of wetland quality and the necessary criteria for the restoration of wetland ecosystems. The individual presented a case study on the implementation of Permeable structures in Indonesia, which contributed to the effective restoration efforts through the examination of sediment composition and hydrological patterns in the region. Similarly, in Odissa, local people engaged in the development of Pattachitra art within a school setting as a means of promoting awareness and understanding.

Dr. Ritesh Kumar, Director, Wetlands International South

During the discussion, Dr. Ajit Pattnaik, a retired Indian Forest Service officer who formerly served as the Principal Chief Conservator of Forest and currently holds the position of Vice President at Wetlands International, South Asia, provided insights on the topic of Ecosystem-based Climate Change Adaptation. He specifically referenced the restoration efforts undertaken at Chilika lake. The speaker made reference to the development of a new estuary in Chilika lake, a process that involved the active participation of local

populations and spanned a duration of 10-15 years, as indicated in the slide on the augmentation of biodiversity. In addition to various other advantages, it was observed that the presence of native species contributed to the natural suppression of invasive species, hence fostering the development of a resilient ecosystem. The restoration effort commenced by conducting an investigation on migratory Sea Bass fish, which exhibit a spawning behavior in marine environments, with just a minute fraction of 0.001% returning to the wetland habitat subsequent to reproduction. The process of tagging bass fish was conducted, accompanied by the provision of monetary incentives to local communities for capturing the tagged fish from the sea. Subsequently, the local community actively participated in this endeavor. Additional incentives, such as the provision of insulated bags, were offered to towns that lacked refrigeration facilities for storing their catch. This measure resulted in an increase in the revenue of fishermen, so further stimulating the overall process.

The development of dolphin viewing protocol includes collaboration with local communities to ensure the preservation of dolphin populations and their involvement in ecotourism activities. A designated sanctuary area was established, accompanied by a prohibition on fishing activities, resulting in the emergence of conflicts between the local inhabitants and the governing authorities. Another location was chosen for the study of the ecology, facilitated by the establishment of the sanctuary. A research study was undertaken in collaboration with participatory communities, wherein the research team conducted periodic assessments of the area every 30 days. To facilitate this, the team opted to hire boats from local fisherman instead of use official boats. This approach not only provided an opportunity for the fishermen to earn income but also allowed them to actively participate in the research study.

Dr. Ajit Pattnaik, I.F.S., (Rtd.) Former Principal Chief Conservator of Forest, Vice President, Wetlands International, South Asia

The significance of connectedness to the wetland environment was underscored by Mr. C Rajgopal Singh, a Senior Water Resources Specialist, owing to the varying levels of salt present. The individual expressed that the TN Shore project is now engaged in the construction of a comprehensive framework pertaining to Coastal Zone Management. This framework will serve the purpose of distinctly delineating areas designated for development and those designated as non-development zones. Wetlands are designated to be located within non-development zones. During the process of development in designated zones, it is essential to overlay a feasibility map in order to comprehensively assess the potential impact of disasters in such areas.

Mr C Rajgopal Singh, Sr Water Resources Specialist

SESSION 3: COMMUNITY DRIVEN ECOLOGICAL RESTORATION OF COASTAL WETLANDS FOR DISASTER RISK REDUCTION.

Ms. Nirmala Raja, Chairperson, RAMCO community services, Member, Tamil Nadu Governing Council on Climate Change provided an elucidation of the restoration process undertaken, which was primarily informed by an in-depth examination of the cultural heritage of the area. Additionally, she highlighted the effective execution of the restoration efforts pertaining to the revitalization of water resources.

Ms. Nirmala Raja, Chairperson, RAMCO community services, Member, Tamil Nadu Governing Council on Climate Change

The study undertaken by Dr. P. Subramaniam of the Dhan Foundation focused on the proliferation of Prosopis species near Point Calimere, which was attributed to the presence of a significant goat population. The occurrence of the Gaja cyclone resulted in significant destruction to the mangrove ecosystems in the affected region. Out of a total of 128 creeks, a mere 20 were found to be active, while it was noted that all of the repaired creeks remained in a functional state.

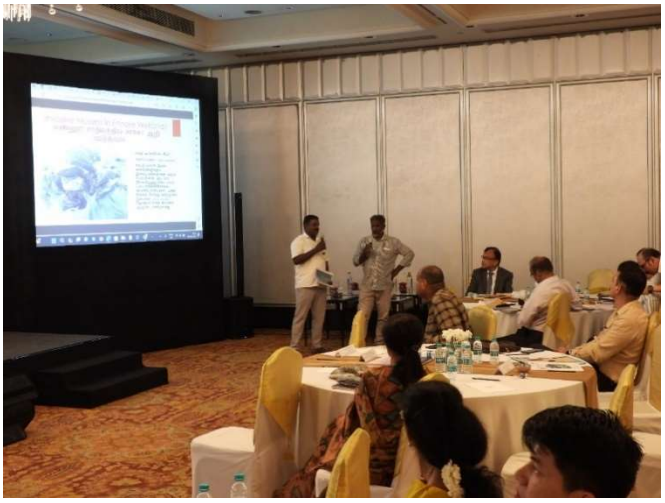
Dr P Subramaniam – Dhan Foundation

Mr. Nimal Raghavan showcased his efforts in the restoration of 188 waterbodies in the state of Tamil Nadu. The individual expressed a need for assistance from the Tamil Nadu Wetlands Mission in obtaining authorization from district authorities, as this presents a significant obstacle in the execution of restoration efforts.

Mr. Nimal Raghavan and Panchayat President, Thanjavur District

The community representatives from Ennore - Kosathalaiyar provided an account of the challenges pertaining to wetlands in their locality, namely siltation, debris disposal, deposition of fly ash, and the proliferation of an invasive mussel species known as "kaaka aazhi." They highlighted the adverse impacts of these issues on the local ecosystem and the fishing activities conducted in the river. The request for financing from the World Bank was made through the Tamil Nadu Wetlands Mission.

Samyukta Ayyanar, hailing from the village of Odaiyur in the region of Edaikazhinadu The Odaiyur region, which surpasses Pichavaram in size, has been brought to attention due to its unfortunate neglect while experiencing a seven-month dry period annually, necessitating urgent restoration efforts. In addition, she expressed a need for necessary repair assistance and put out a proposition to restore the Buckingham canal, which has experienced a displacement of 4km from its original location.



Community Representatives from Ennore

Samyukta Ayyanar

SESSION 4: TECHNICAL SESSION ON STRENGTHENING THE CAPACITY OF WETLAND MANAGERS, COMMUNITY AND STAKEHOLDERS FOR ENHANCING THE RESILIENCE OF THE COASTAL WETLANDS.

Dr. Avantika Bhaskar, Forestry and Biodiversity Advisor, GIZ introduced a Climate Risk Assessment tool that incorporates a classified scoring system for evaluating the susceptibility of a given location. Through a comprehensive analysis of this subject matter, one might infer the suitability of the region for adaptation. The individual stated that the tool operates on an eight-step module that evaluates climate hazards, which may be incorporated into the implementation of an Integrated Management Plan.

Dr Avantika Bhaskar, Forestry and Biodiversity Advisor, GIZ

P. Maria Antony, representing the Ashoka Trust for Research in Ecology and the Environment (ATREE), delivered a presentation on the Wetland Rovers Program. The program focuses on the development of a comprehensive hands-on educational curriculum for kids, encompassing many levels.

P. Maria Antony, ATREE

SESSION 5: TECHNICAL SESSION ON BASELINE INTERVENTIONS FOR IMPROVING ECOLOGICAL, BIODIVERSITY AND ECOSYSTEM SERVICES IN THE COASTAL WETLANDS

The presenter, Mr. Abhishek Tomar, who holds the position of Indian Foreign Service (IFS), provided an overview of the diverse projects that have been implemented in Point Calimere. The speaker underscored the notion that a uniform strategy is not universally effective across all locations. Despite being an invasive species, the elimination of Prosopis at Point Calimere would result in the loss of the protected habitat it offers for the local spawning in the region. The proposal entails the establishment of research stations at all Ramsar Sites in order to facilitate the collection and standardization of data.

During her presentation, Dr. Kanmani, the Director of the Centre for Environmental Studies, underscored the significance of doing sediment analysis, physical measurements, and comprehending watershed areas and other associated components. The author has additionally elucidated the electric pump system devised by the institution, which achieves a complete disinfection rate of 100%. She has added that the

Adyar Poonga Project in which the centre was one of the parties involved by conducting a study on ecological monitoring and acted as knowledge management in the restoration project.

During his presentation, Mr. Kavi Kumar proposed that it may not be advisable to excessively prioritize climate resilience in the process of ecosystem restoration. The understanding of coastal marine ecosystems is currently limited, and it is crucial to evaluate the demand placed on these ecosystems in order to enhance comprehension. It is also recommended to place greater emphasis on the significance of diseased ecosystems, since this will enhance the potential for restoration.

The officials from Kovalam Village delivered a presentation regarding the current condition of the lakes in their vicinity and the lack of access to potable water, despite the village's status as a prominent tourist destination in close proximity to Chennai. Additionally, they have expressed a desire for the restoration of lakes within the vicinity.

During the presentation, Mr. Venkatachalam, MIDS, emphasized the importance of investigating the ecological significance of wetlands, encompassing factors such as the provision of sustenance, potable water, and livelihood opportunities. The individual proposed the collection of organized data from the field and recommended directing attention towards smaller wetlands, as the restoration and extension of such wetlands yields greater ecological benefits within a compressed timeframe. Approximately Rs. 17,500 Crores can be obtained with the restoration of 80 wetlands, with an anticipated cost of Rs. 250 Crore for the restoration process.

Among the total of 42,000 wetlands within the State, around 20,000 have experienced desiccation, leaving a residual 22,000 wetlands that possess potential for restoration. It is recommended that a comprehensive study on periodic economic value be undertaken.

Dr. Venkatachalam, Officiating Director and RBI Chair Professor Madras Institute of Development Studies

Mr. Darwin Annadurai delivered a presentation on his lake restoration project at Agaramthen, wherein he appealed for assistance in both safeguarding the project and facilitating the implementation of similar initiatives.

In a similar vein, Ms. Sujitha, representing the MEGA Foundation, provided an overview of their diverse restoration and tree plantation endeavors. Furthermore, community participation was highlighted as a key priority, with a specific request for support in delivering training to local populations. Additionally, she has emphasized that the community's awareness efforts had greater strength. The monitoring and evaluation procedure of the sponsor-funded initiative is mostly conducted by the communities involved. The acquisition and utilization of Local Environment Knowledge (LEK) holds significant importance in the successful execution of project implementation. Due to the predominant nature of their projects as corporate social responsibility (CSR) efforts, the budget allocated for performing a needs study of a project area is not included. If a knowledge institution assumes responsibility for conducting these studies, the ability to propose such projects to sponsors will facilitate the project implementation process. I am inquiring about the availability of

free access to research data as well as the possibility of attending workshops. The user has expressed a desire for increased coordination between governmental entities and non-governmental organizations (NGOs), citing the challenges they have in obtaining permissions for repair projects.

PANEL DISCUSSION

According to Dr. Ramesh Ramachandran, Advisory Member, Tamil Nadu Governing Council on Climate Change, a mapping exercise was conducted to identify ecologically sensitive areas, and the results were subsequently provided to the Ministry of Environment (MoE). This was done to ensure that future contracts are created in accordance with the recommended rules. Additionally, it was mentioned that a comprehensive study was conducted, which involved the collection of 350 core samples of mangroves.

During the discussion, Thiru. Sunderrajan Co-ordinator, Poovulagin Nanbargal, Member, Tamil Nadu Governing Council on Climate Change, raised the issue of local populations being displaced for the purpose of development in Kailanji. He further highlighted the potential negative impact on the coastal environment due to the installation of offshore windmill projects, specifically emphasizing the detrimental effects on the shoreline resulting from the necessary placement of cables and main infrastructure on the coastline.

Thiru. Oppili, The Times of India, Newspaper provided information regarding the damages incurred as a result of granting license for film shooting activities at Pichavaram. He subsequently advised that these approvals should be prohibited.

World Bank representative concluded that the TN shore project involves the development of a Shoreline Management Plan (SMP), which aims to designate locations where civil structures cannot be constructed. As part of the National Coastline project, which falls under the jurisdiction of the Ministry of Ports, a pilot initiative has been proposed to undertake greening efforts in five ports along with their adjacent villages.

SUMMARY BY DR RITESH

Dr. Ritesh's comprehensive approach to wetland conservation underscores the importance of various interconnected actions.

Firstly, he emphasizes the necessity of creating a detailed inventory and a functional database. This inventory should catalog and analyze how wetlands contribute to different government departments. Such a database serves as an invaluable tool for informed decision-making and policy development in the context of wetland preservation. By understanding the myriad ways in which wetlands impact different sectors, it becomes possible to develop more effective strategies for their conservation.

Moreover, Dr. Ritesh underscores the significance of community-based management in this endeavor. By involving local communities in the stewardship of wetlands, the conservation efforts are more likely to be sustainable over the long term. This approach encourages active participation by the people who live in proximity to these wetland areas, instilling a sense of ownership and responsibility for their protection. Dr. Ritesh also highlights the importance of uniform documentation, ensuring that data about wetlands is consistently recorded and shared. This promotes collaboration and knowledge exchange among the various stakeholders involved in wetland conservation.

Capacity building within diverse communities emerges as another vital component of Dr. Ritesh's strategy. By providing knowledge and skills to the people living near wetlands, it empowers them to take an active role in the conservation and sustainable use of these ecosystems. This not only benefits the wetlands themselves but also strengthens the connection between local communities and their natural environment.

In terms of communication and outreach, Dr. Ritesh suggests the establishment of permanent stations at key wetland sites, such as Point Calimere, and the creation of knowledge generation points, like Pallikaranai. These serve as hubs for education and engagement, raising awareness about the importance of wetlands and inspiring communities to get involved in their protection. The campaign-led approach he recommends

mobilizes community participation and facilitates the collective effort needed to safeguard these delicate ecosystems.

In summary, Dr. Ritesh's approach is a holistic and multifaceted strategy for wetland conservation, addressing the need for data, community involvement, capacity building, and outreach to ensure the long-term well-being of these critical natural resources.

TMT. SUPRIYA SAHU, I.A.S., ADDITIONAL CHIEF SECRETARY, DEPARTMENT OF ENVIRONMENT, CLIMATE CHANGE AND FOREST, GOVERNMENT OF TAMIL NADU - WAY FORWARD:

As articulated by Tmt. Supriya Sahu, I.A.S., Additional Chief Secretary, Department of Environment, Climate Change and Forest, Government of Tamil Nadu, our trajectory forward is marked by a resolute commitment to wetland conservation and sustainable development, generously supported by the World Bank.

At the forefront of our vision is the establishment of the International Standard Wetland Conservation Center in Pallikarnai, a beacon of excellence that will stand as a testament to our dedication to preserving wetlands. Simultaneously, we press forward with our plans for the International Bird Center in Marakanam, with the Detailed Project Report well underway. Furthermore, our sights are set on creating a Mangrove Conservation Center in the ecologically diverse Pichavaram region.

Our approach to these initiatives is grounded in the successful GTM model, which involves connecting plant nurseries with schools to empower and engage local communities actively. This strategy fosters a sense of shared responsibility for our wetland ecosystems and ensures that every individual understands their role in their preservation.

In tandem with these efforts, we embark on a comprehensive analysis of 30 wetlands, a vital step that will arm us with the data needed for strategic planning and informed decision-making.We must never forget that the core of wetland conservation lies with the Panchayats and local communities. This intrinsic connection between people and wetlands is undeniable, and it underscores the necessity of their active involvement. The mere designation of wetlands as protected areas is insufficient without the wholehearted commitment of the communities who live alongside these precious ecosystems.

To strengthen our endeavors, we envision the establishment of Conservation Centers in every district, serving as incubation hubs that nurture innovation, digital knowledge, and technical expertise. This network of centers will facilitate the exchange of ideas and the development of cutting-edge conservation strategies.

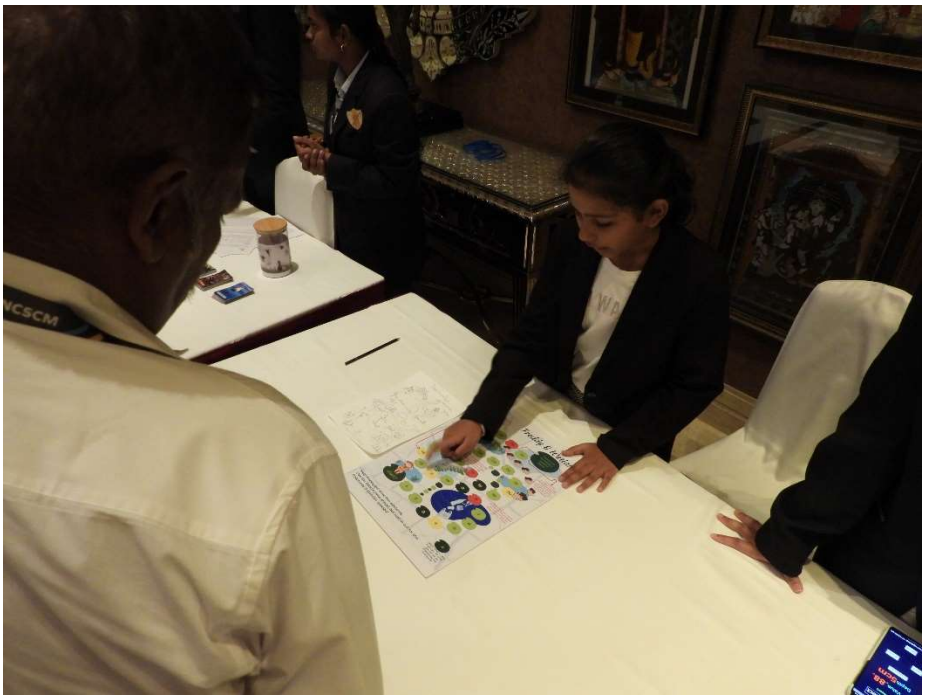
Recognizing the pivotal role of technology in modern conservation, we plan to collaborate with leading authorities, including institutions in London, to remain at the forefront of best practices and innovations in the field.

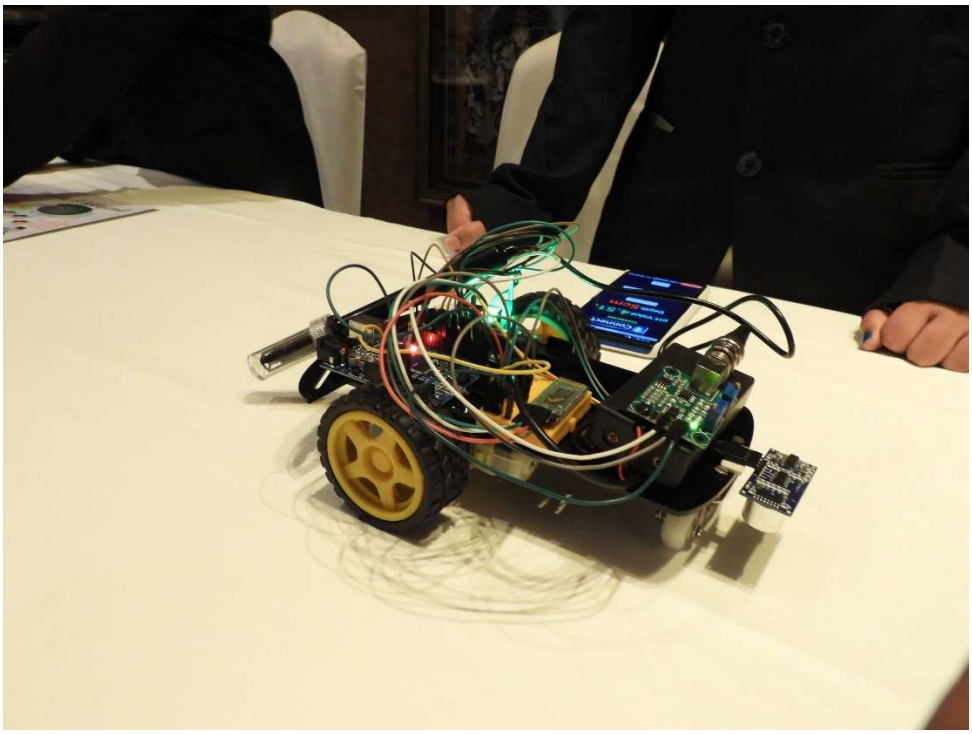
In partnership with TN Skill Development and Startup TN, we are devoted to tirelessly developing innovative solutions for the restoration and preservation of our wetlands. These collaborations will be instrumental in addressing the evolving challenges faced by wetland ecosystems.

Lastly, we are contemplating the establishment of permanent centers at four to five strategic sites, which will act as enduring symbols of our unwavering commitment to the cause. These centers will serve as hubs for education, research, and community engagement, marking a significant leap forward in our dedication to wetland preservation and sustainable development. As we move forward, we do so with renewed vigor and an unyielding focus on creating a harmonious balance between environmental conservation and human progress.

Tmt. Supriya Sahu, I.A.S., Additional Chief Secretary, Department of Environment, Climate Change and Forest, Government of Tamil Nadu Felicitated Velammal school children for their innovative findings that they showcased during the workshop.

Velammal school students Demonstrating their inventions related to Wetland





Velammal school students Demonstrating their inventions related to Wetland

Annexure I

ECOSYSTEM APPROACHES FOR REDUCING THE CLIMATE VULNERABILITIES FOR THE COASTAL COMMUNITIES

Wise use of wetlands for coastal resilience, livelihood protection and climate change adaptation

10th October 2023

Venue: - The Leela Palace, Chennai

Tentative Agenda		
Time	**Programme**	**Responsibility**
09:30 – 10:00 A.M	Registration of participants	Tamil Nadu Wetlands Mission Technical Team
10:00 – 10:05 A.M	Welcoming the dignitaries on Dias	(i) Tmt. Supriya Sahu, I.A.S., Additional Chief Secretary, Department of Environment, Climate Change and Forest, Government of Tamil Nadu (ii) Thiru. Subrat Mohapatra, IFS., Principal Chief Conservator of Forest (HOFF) (iii) Thiru. Srinivas R. Reddy, I.F.S., Principal Chief Conservator of Forest and Chief Wildlife Warden (iv) Thiru. Deepak Srivastava IFS., Principal Chief Conservator of Forest and Member Secretary, Tamil Nadu State Wetland Authority (v) Dr. Ritesh Kumar, Director, Wetlands International South Asia (vi) Mr. Avanish Kant, Senior Environmental Specialist, World Bank

10:05 – 10:10 A.M	Tamil Thai Vazhthu	School students
10:10 – 10:15 A.M	Welcome address	Thiru. Yogesh Garg, IFS., Assistant Mission Director, Tamil Nadu Wetlands Mission
10:15 – 10:25 A.M	Introductory remarks	Thiru. Deepak Srivastava IFS., Principal Chief Conservator of Forest and Member Secretary, Tamil Nadu State Wetland Authority
10:25 – 10:35 A.M	Special address	Dr. Ritesh Kumar, Director, Wetlands International South Asia
10:35 – 10:45 A.M	Special address	Mr. Avanish Kant, Senior Environmental Specialist, World Bank
10:45 – 10:55 A.M	Presidential address	Tmt. Supriya Sahu, I.A.S., Additional Chief Secretary, Department of Environment, Climate Change and Forest, Government of Tamil Nadu
10:55 – 11:15 A.M	Tea Break	
11:15 – 12:45 P.M	Technical session on science-based restoration of coastal wetlands for disaster risk reduction and climate change mitigation & adaptation.	❖ Tmt. Supriya Sahu, I.A.S., Additional Chief Secretary, Department of Environment, Climate Change and Forest, Government of Tamil Nadu ❖ Thiru. Deepak Srivastava IFS., Principal Chief Conservator of Forest and Member Secretary, Tamil Nadu State Wetland Authority ❖ Dr. Ritesh Kumar, Director, Wetlands International South Asia ❖ Dr. Ajit Pattnaik, I.F.S., (Rtd.) Former Principal Chief Conservator of Forest, Vice President, Wetlands International, South Asia.

		❖ Mr. Avanish Kant, Senior Environmental Specialist, World Bank ❖ Mr C Rajgopal Singh, Sr Water Resources Specialist
12:45 – 1:30 P.M	Community driven ecological restoration of coastal wetlands for disaster risk reduction.	❖ Tmt. Nirmala Raja, Chairperson, RAMCO community services, Member, Tamil Nadu Governing Council on Climate Change ❖ Dr. P. Sivasubramanian, Senior Team Leader, Dhan Foundation ❖ Tmt. Mangayarkarasi, Reform ❖ Thiru. Nimal Ragavan, Founder, MEGA Foundations and community representative (2 Nos) ❖ Coastal Panchayat Representative of Ennore, Odiyur and Kovalam (3 Nos).
1:30 – 2:15 P.M	Technical session on strengthening the capacity of wetland managers, community and stakeholders for enhancing the resilience of the coastal wetlands.	❖ Dr. Avantika Bhaskar, Forestry and Biodiversity Advisor, GIZ ❖ Dr. Venkatachalam, Officiating Director and RBI Chair Professor Madras Institute of Development Studies ❖ M. Mathivanan, Sr. Research Associate & Coordinator, Ashoka Trust for Research in Ecology and the Environment, Agasthyamalai Community Conservation Centre ❖ Tmt. Sujitha, Project Manager, MEGA Foundations
2:15 – 3:00 P.M	Lunch	
3:00 – 03:45 P.M	Technical session on baseline interventions for improving ecological, biodiversity and ecosystem services in the coastal wetlands	❖ Thiru. Abhishek Tomar, Wildlife Warden, Nagapattinam ❖ Dr. Kanmani, Professor & Director, Centre for Environmental Studies, Anna University, Chennai ❖ Thiru. Kavi Kumar, Professor & Dean of Academic Affairs Madras School of Economics

		❖ Ms. Maithreyi (Team member of PS. Raman) ❖ Thiru. Darwin Annadurai, Eco Society India
03:45 – 03:55 P.M	Technical session on mapping and digital inventorization	❖ Dr. Saraswathy, GIS Expert, Tamil Nadu Wetlands Mission
03:55 – 4:10	Tea Break	
4:10 – 4:55 P.M	Panel discussion on the significance of coastal wetlands in the context of TN shore project - towards a shared vision and convergent action	❖ Dr. Ramesh Ramachandran, Advisory Member, Tamil Nadu Governing Council on Climate Change ❖ Dr. Jayshree Vencatesan, Trustee, Care Earth Trust ❖ Tmt. Niyati Sareen, Project Director, Water and Education, Hinduja Foundation ❖ Dr. P. Sivasubramanian, Senior Team Leader, Dhan Foundation ❖ Thiru. Sundarrajan, Co-ordinator, Poovulagin Nanbargal, Member, Tamil Nadu Governing Council on Climate Change ❖ Thiru. Oppili, The Times of India, Newspaper ❖ Thiru. Kumar Raja, Convenor, Save Pallikaranai Marsh Forum
4:55 – 5:00 P.M	Vote of Thanks	❖ Dr. Saraswathy, GIS Expert, Tamil Nadu Wetlands Mission
National Anthem		