



WORLD WETLANDS DAY-2018

Theme: Wetlands for a Sustainable Urban Future



Organized by



**Assam Forest Department
Government of Assam**

Sponsored by



**Ministry of Environment, Forest & Climate Change, Government of India
New Delhi**

WORLD WETLANDS DAY- 2018: A BRIEF REPORT

Background

Wetlands constitute essential part of the hydrological cycle, are highly productive ecosystems which support rich biodiversity, provide a wide range of ecosystem services e.g. 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. Wetlands are a part of our rich cultural heritage.

Several wetlands are threatened by reclamation and degradation through drainage and landfill, pollution, hydrological alteration, over-exploitation of natural resources resulting in loss of biodiversity and disruption in ecosystem services.

In view of the above, there is Global Concern for the Conservation of Wetlands. At the International Level Ramsar Convention is for the conservation & wise use of Wetlands. India is a signatory to this convention and 26 wetlands have been identified.

At the National Level Constitution of India stipulates that it shall be the duty of every citizen of India to protect & improve natural environment including forests, lakes, rivers & wildlife. The Environment (Protection) Act, 1986 provides protection & improvement of environment, including *inter-alia*, wetlands & for matters connected therewith. The National Environment Policy, 2006 recognizes the ecosystem services provided by wetlands & emphasizes the need to set up a regulatory mechanism for wetlands to maintain their ecological character & ultimately support their integrated management. The Wetlands (Conservation and Management) Rules, 2017 provide for integrated management of wetlands & their wise use, besides, restriction/prohibition/regulation of certain activities & Constitution of National Wetlands Committee and State Wetlands Authority.

The Wetlands (Conservation and Management) Rules, 2017 have definition of wetlands as below:

“Wetland” means an area of marsh, fen, peatland 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, but does not include river channels, paddy fields, human-made water bodies/tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation purposes.

The World Wetlands Day is observed on 2nd February every year all over the world to commemorate the signing of the Ramsar Convention on Wetlands of International Importance in 1971. This year, the theme of the World Wetlands Day-2018 was “Wetlands for a Sustainable Urban Future”.

The World Wetlands Day is celebrated by the Ministry of Environment, Forest & Climate Change at one of the identified wetlands/Ramsar sites of the country. This year the Ministry selected Deepor Beel, a Ramsar site in Assam for hosting the World Wetlands Day-2018 along-with a workshop on conservation of wetlands .

The Assam Forest Department organised the following programmes on the **theme “Wetlands for a Sustainable Urban Future”** for the celebration of World Wetlands Day-2018:

- I. Painting Competition for School students at Chakardo Deshbhakta Tarunram Phookan, M.E. School, Chakardo, Guwahati (near Deepor Beel) on 27th January, 2018
- II. Slogan Competition through ‘My Gov Portal’
- III. Workshop at Assam Administrative Staff College, Khanapara, Guwahati on 2nd February, 2018. Thereafter there was a field visit to the Deepor Beel along with Boat Ride and cultural programme with traditional Assamese folk dances.

I. **Painting Competition:** The Drawing/Painting competition was organized for School students at Chakardo Deshbhakta Tarunram Phookan, M.E. School, Chakardo, Guwahati (near Deepor Beel) on 27th January, 2018. A total of one hundred and twenty four students from Thirty four Schools in greater Guwahati area participated in the competition. The students took part with great enthusiasm in the Painting competition, in the sylvan surroundings of the Deepor Beel, accompanied by their Parents/Guardians. The Principal and teachers of Chakardo Deshbhakta Tarunram Phookan, M.E. School, besides, the Principal Chief Conservator of Forests & Head of Forest Force, Assam, Principal Chief Conservator of Forests, Wildlife and Chief Wildlife Warden, Assam, Principal Chief Conservator of Forests (Wetlands), Assam and other senior officials/staff of Forest Department, NGOs and the Press assisted to make the programme a success. A copy of the advertisement published in the newspaper Assam Tribune on 25th January, 2018 publicizing the event and the theme of World Wetlands Day-2018 urging the participation of students is given at **Annexure- I**

Four groups were formed for the Drawing/Painting competition and the group wise number of participants is given below:

Groups	Class Category	Number of participants
Group-A	Class I to IV	48
Group-B	Class V to VIII	52
Group-C	Class IX to XII	21
Group-D	Physically challenged	3
		Total 124



Painting competition

Participating students at Chakardo Deshbhakta Tarunram Phookan, M.E. School, Chakardo, Guwahati (near Deepor Beel)



In each group, three students (1st, 2nd and 3rd Position) were declared as winners. The detailed list of schools along with the names of the participating students (Group wise) and the list of winners in each group is enclosed as **Annexure-II**. Photographs of the painting competition and prize winning paintings are enclosed as **Annexure-III** and **IV** respectively.



Exhibition of Prize Winning Paintings

Prize winners of painting competition with Smt. Pramila Rani Brahma, Hon'ble Minister to the Govt. of Assam, Environment & Forest Dept. & Shri C. K. Mishra, IAS Secretary to the Govt. of India, MoEF & CC



II. **Slogan Competition:** An online slogan competition on the **Theme: Wetlands for a Sustainable Urban Future** was organised through the My Govt portal of Government of Assam on the occasion of World Wetlands Day 2018. A total of 63 participants participated in the Slogan Competition with 88 numbers of different Slogans. 4 Slogans were found duplication of entries and hence ignored.

A three members committee evaluated the Slogans and selected the winners in 1st, 2nd and 3rd Position for rewarding in the World Wetlands Day- 2018 function on 2nd February, 2018 at Assam Administrative Staff College, Khanapara, Guwahati. The prize winners were Shri Arun Kumar Sarma (1st Position), Shri Jitendra Deka (2nd Position) and Mazedul Islam (3rd Position). The prize winning slogans are enclosed as **Annexure-V**.



Shri Arun Kumar Sarma

Prize Distribution to Winners of Slogan Competition Smt. Pramila Rani Brahma, Hon'ble Minister to the Govt. of Assam, Environment & Forest Dept, Shri C. K. Mishra, IAS Secretary to the Govt. of India, MoEF & CC and Shri. Alok Kumar, IAS, Addl. Chief Secretary to the Govt. of Assam, Environment & Forest Department



Shri Jitendra Deka



Mazedul Islam

III. **Workshop:** A workshop on the Theme: Wetlands for a Sustainable Urban Future was organized on 2nd February, 2018 at Assam Administrative Staff College, Khanapara, Guwahati. The objectives of the Workshop were:

- To sensitise all stakeholders especially line departments, NGOs, children, JFMC/EDC members on the need for holistic approach for wise use & conservation of wetlands.
- To create awareness about importance of wetlands for a sustainable urban future.

The Workshop schedule had the Inaugural Session wherein Chief Guest was Smt. Pramila Rani Brahma, Hon'ble Minister to the Govt. of Assam, Environment & Forests Department, Soil Conservation, Welfare of Plain Tribes and Backward Classes, Mines & Minerals and Guest of Honour was Shri C. K. Mishra, IAS Secretary to the Government of India, Ministry of Environment, Forest & Climate Change. 162 participants comprising Forest Department Officers, Other Government Department Officers and Institutions, EDC & JFMC members, besides, School Children attended the Workshop as per details given at **Annexure-VI**. The Inaugural Session was followed by the Technical Session. A detailed Programme of the Workshop is enclosed as **Annexure-VII**.

The salient features of the Programme highlighting the message/issues raised by the speakers are given below:

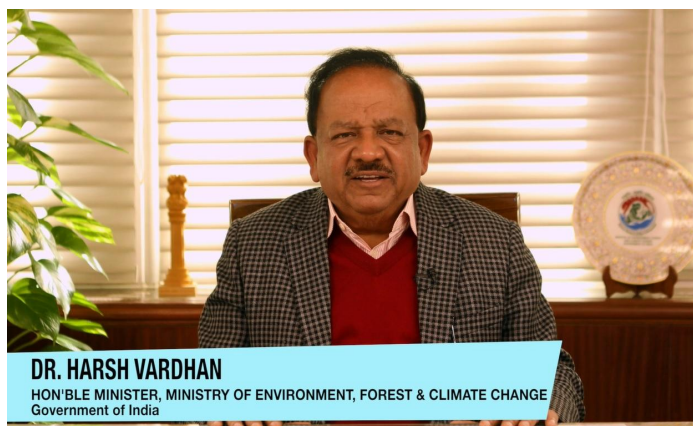
A. **Workshop: Inaugural Session**

Welcome Address by Shri N.K.Vasu, IFS, PCCF (Wildlife) & Chief Wildlife Warden, Assam:

- Extended gratitude to the Hon'ble Minister, Ministry of Environment, Forest & Climate Change, Government of India, for the video recorded message.
- Welcomed all the dignitaries, officers, JFMC/EDC members, students, parents, members of print and electronic media etc.



Video recorded message by Dr. Harsh Vardhan, Hon'ble Minister, Ministry of Environment, Forest & Climate Change, Government of India:



Dr. Harsh Vardhan, Hon'ble Minister stated that 2nd February of each year is celebrated as World Wetlands Day to mark the date of adoption of Ramsar Convention on Wetlands. India is endowed with a rich diversity of wetlands. As per the National Wetland Atlas nearly 4.7% of India's geographical area is under wetlands. Hon'ble Minister affirmed that World Wetlands Day-2018 theme **'Wetlands for Sustainable Wetlands Urban Future'** is apt as healthy wetlands make cities and towns livable through their role in ground water recharge, buffering floods, filtering waste water, enhancing landscape esthetics, providing income generation opportunities and ultimately supporting well being.

Hon'ble Minister, stated that India is on the course of rapid urbanization and it was disheartening to note that the expansion of urban spaces had created significant infrastructural and ecological overloads particularly on wetland ecosystems. As wetland decline in urban spaces so does the capacity of landscape to provide for ground water recharge, fresh water and buffer from floods. The Ministry of Environment, Forest & Climate Change as the Nodal Ministry for Wetlands Conservation has been assisting State Governments since 1985 in design and implementation of Integrated Management Plans for wetlands. The Ministry has also notified the Wetlands (Conservation and Management) Rules as the regulatory architecture for wetlands in the country.

Hon'ble Minister, emphasized that as general public we need to ensure that wetlands are not used as dumping grounds of solid waste and untreated sewage. We also need to ensure that wetlands are not encroached upon for housing and other purposes, besides, we need to ensure that natural water inflow and outflow patterns of wetland are not altered and habitats of water birds and fishes are not disturbed. Hon'ble Minister urged people from all walks of society to use World Wetlands Day as an opportunity to promote awareness about the significance of wetlands and hoped that people would join hands with the Ministry to strengthen efforts for conservation and wise use of all wetlands in the country.

**Introductory Address by Dr. (Smt.)
Ranjana Gupta, IFS, Principal Chief
Conservator of Forests:**

Dr. Ranjana Gupta, IFS highlighted the importance of wetlands and their role in maintenance of ecosystem services in general and for city dwellers in particular stating that wetlands are prized lands and not wastelands.



Dr. Ranjana Gupta, IFS dwelt at length about the theme of the World Wetlands Day 2018 – “Wetlands for a sustainable Urban future” giving a brief outline about the activities undertaken for celebration of World Wetlands Day-2018. She also discussed about the issues related to wetland conservation and the enabling conventions/legislation at Global, National and State level. Dr. Ranjana Gupta, IFS elaborated the importance of Deepor Beel and its rich biodiversity. She stated that the way forward for wetland conservation is to:

- Protect & conserve the forests & trees in urban areas.
- Plant & maintain natural vegetation around the wetlands/water bodies
- Practice sustainable land use
- Control weed infestation
- Keep Eco-sensitive zones/buffer zones around wetlands inviolate & free from encroachments /construction.
- Shift disaster management approach from ‘response & relief’ to ‘prevention & mitigation’.
- Undertake inventory & mapping of the wetlands
- Document biodiversity of every wetland with peoples participation
- Prepare & implement conservation & management plan.
- Reconstruct drains with improved designs keeping in mind future drain requirements.
- Plan & implement waste management strategy
- Monitor pollution & water quality
- Adopt a holistic, integrated & interdisciplinary approach in planning for aquatic ecosystems leading to sustainable use of natural resources.
- Strengthen the conservation regimes through
 - Development of bird sanctuaries &
 - Recreation centres promoting eco-tourism

Address by the representative of the Guwahati Metropolitan Development Authority (GMDA)- Tata Consulting Engineers Ltd. in association with ARCADIS:



- A presentation was given on the preparation of the Master plan for “Smart City” for Guwahati with emphasis on Deepor beel.
- The presenter stressed for inflow and outflow of clean water from Deepor Beel.
- Landownership exchange was discussed to create better land management regime.
- Separate strategies of development to be used for high and low water regime.
- New recreational areas such as nature interpretation centre and corridors for elephant movement connecting it to Rani Reserve Forests from Deepor Beel are proposed to be developed.
- The presenter urged for stoppage of landfill in Deepor Beel and also presented proposed model developing for Guwahati city including Deepor Beel areas connecting all the water bodies in the future.

Release of Books:

The following books were released:

- “Moi Hargilla”- by Smt. Purnima Devi Barman.
- Publications by Assam State Biodiversity Board:
 - “Wild Orchids of Assam” &
 - “Assam State Biodiversity Strategy and Action Plan”



Release of Book “Moi Hargilla”



Release of Book “Wild Orchids of Assam”



Release of Book “Assam State Biodiversity Strategy and Action Plan”

**Address by Smt. Purnima Devi Barman,
Winner of ‘Green Oscars’ on Caring for
wetlands for protection of biodiversity &
urban future:**



Major issues highlighted by Smt. Purnima Devi Barman in her presentation were as below:

- The main reason of the recent flash floods faced by all Guwahatians is reduction in number of wetlands which act as the reservoir of excess water, besides functioning as sponges and kidneys of our environment.
- While our cities are growing, most of our wetlands are disappearing.
- Values/Utilities of wetlands-
 - provide fresh water acting as purifier or natural filter.
 - absorb and retain heavy metals and harmful pesticides.
 - feed humanity.
 - rich ecosystems with high biodiversity.
 - fight climate change.
 - many coastal wetlands act as buffer to divert typhoons and tornados.
 - provide food for sustainable livelihoods.
 - urban wetlands make our cities livable.
- Action to save urban wetlands for a healthy life:
 - treat wetlands well.
 - integrate wetlands into planning and policies.
 - involve youth and local communities in management plans.
 - introduce awareness books on wetland conservation at schools.
 - reduce consumption of excess water and disposal of toxic materials that pollute wetlands.

**Remarks by Shri Bikash Brahma, IFS,
Principal Chief Conservator of Forest &
Head of Forest Force, Assam**

Shri Bikash Brahma, IFS, PCCF & HoFF, Assam stated that:

- It was a matter of pride and happiness that the Ministry of Environment, Forest & Climate Change had selected Assam for celebration of “World Wetland Day” 2018.
- Wetlands are important source of livelihood for many people and it is our duty to try and conserve our wetlands for posterity.



- We have seen that many wetlands of Guwahati city disappeared overnight due to development pressures that caused many unpleasant situation for the urban people especially the concurrent flash floods which became a routine every year.
- On the auspicious day of World Wetlands Day-2018, we should all pledge to conserve our wetlands for our future generations.

Address by Shri. Alok Kumar, IAS, Addl. Chief Secretary to the Govt. of Assam, Environment & Forest Department:

Shri. Alok Kumar, IAS expressed gratitude to Govt. of India for choosing Guwahati to host the celebration of World Wetlands Day 2018. The salient points of his address were:



- Development of urban areas is inevitable as in recent times most of the jobs are concentrated in the urban areas.
- Emphasis should be on adoption of proper policy and management plans in urbanization so that man and nature co-exist. Smart city planning should be good and is one of the alternatives.
- The need for making an integrated approach in city planning was stressed.
- An appeal was made for the conservation of Wetlands for our future generations.

Prize Distribution to the winners of Slogan Competition and Painting Competition:

Prize Distribution was done to the winners of Slogan Competition and Painting Competition by the Chief Guest Smt. Pramila Rani Brahma, Hon'ble Minister to the Govt. of Assam, Environment & Forests Department, Soil Conservation, Welfare of Plain Tribes and Backward Classes, Mines & Minerals and the Guest of Honour Shri C. K. Mishra, IAS Secretary to the Govt of India, Ministry of Environment, Forest & Climate Change.

Key Note Address by Shri C. K. Mishra, IAS Secretary to the Govt of India, Ministry of Environment, Forest & Climate Change

The highlights of the Key Note Address by Shri C. K. Mishra, IAS were:



- World Wetlands Day- 2018 was a day of commitment rather than celebration.
- Assam should take the lead in conservation of wetlands and biodiversity and Govt. of India would support the State Govt. in this noble endeavour.

- Urban setting is where we are losing our natural resources, therefore we must take up proper urbanization schemes such as “Smart City- Guwahati” project where there is provision even for over bridge corridors for elephants.
- Currently critical issues are:
 - Wetlands in India are declining and we are losing valuable resources.
 - If wetlands decline at this rate, there will be nothing left for our future generations.
- Therefore, need to generate mass awareness about the utilities of the wetlands and their value to us through Govt. agencies and NGOs.
- The school children present were urged to see two films on wetland conservation specially for childrens on the MoEF & CC website.
- In terms of the RAMSAR convention, emphasis was given to the phrase “Wise-Use” and people were urged to use only what is needed.
- Wetland conservation is not only about legal structure and policies but about “Wise-Use” that can be achieved through awareness about benefits of wetlands. This knowledge, we must pass on to the next generation.
- The dilemma of growth would continue, however, we must plan for “Sustainable Development”.

Shri C. K. Mishra, IAS thanked the organizers for successfully organizing the events for celebration of World Wetlands Day- 2018.

Address by Smt. Pramila Rani Brahma, Hon’ble Minister to the Govt. of Assam, Environment & Forests Department, Soil Conservation, Welfare of Plain Tribes and Backward Classes, Mines & Minerals



Smt. Pramila Rani Brahma, Hon’ble Minister emphasized on the need for conservation of wetlands and stated that it was unfortunate that one of the speakers (Smt. Purnima Devi Barman) in her presentation had shown pictures of flash-floods of Guwahati before the august gathering, including officers from Ministry. Hon’ble Minister compared the earlier Guwahati wherein wetlands were in plenty with the present Guwahati with flash floods that brought immense suffering to the people. Hon’ble Minister stated that this

situation is caused by the declining number of wetlands in the city, as it is expanding very fast, due to people coming and settling in the city for employment. Hon'ble Minister urged all to save our Wetlands.

Hon'ble Minister narrated the status of wetlands in Assam and their utilities in Assamese for the EDC and JFMC members present. All wetlands need protection and projects for conservation of Urapad Beel and development of Panidihing Beel may be taken up. Hon'ble Minister hoped that the Dutch Team handling the Smart City project of Guwahati will be able to minimize the problems of the people in future by developing proper management plans and help conserve "Deepor Beel", the only Ramsar site of Assam. Finally, Hon'ble Minister thanked the Ministry of Environment, Forest & Climate Change and the Organizers and ended her speech stating that there were lots of subject matter specialists present and there would be detailed discussions in the Technical Session.

Vote of Thanks by Shri. Abhay Kumar Johari, IFS, Principal Chief Conservator of Forests (Biodiversity & Climate Change)

Shri. Abhay Kumar Johari, IFS thanked Smt. Pramila Rani Brahma, Hon'ble Minister to the Govt. of Assam, Environment & Forests Department, Soil Conservation, Welfare of Plain Tribes and Backward Classes, Mines & Minerals for sparing her valuable time and gracing the occasion and her motivating address.



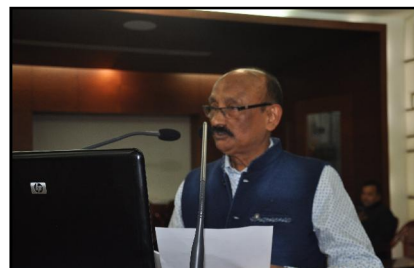
Shri. Abhay Kumar Johari, IFS thanked the Ministry of Environment, Forest & Climate Change for sponsoring the events related to the celebration of World Wetlands Day-2018. He thanked Dr. Harsh Vardhan, Hon'ble Minister, Ministry of Environment, Forest & Climate Change, Government of India for his video message and encouraging words. He thanked Shri C. K. Mishra, IAS the Secretary to the Govt of India, for gracing the occasion and delivering the Key Note Address. Shri Johari thanked Shri. Alok Kumar, IAS, Addl. Chief Secretary to the Govt. of Assam, Environment & Forest Department for sparing his valuable time and addressing the gathering. He thanked all the participants of the Painting Competition and Slogan Competition. Shri. Johari thanked all the distinguished speakers, Authors of the Books that were released and participants of the Workshop. He thanked the Electronic and Print Media for covering the programme and spreading the message of wetlands conservation.

B. Workshop: Technical Session

In the technical session Opening Remarks were given by Smt. Manju Pandey, Joint Secretary to Govt. of India, MoEF & CC. Thereafter following presentations were made:

- Dr. Prasanta Saikia, Department of Zoology, Guwahati University on **“Conservation of Deepor Beel Ramsar Site for Sustainable Urban Future”**

Dr. Prasanta Saikia stated that Deepor beel, the only Ramsar site and pride of State of Assam should be conserved and restored for a “Sustainable Urban Guwahati”.



Dr. Prasanta Saikia elaborated that the main issues of concern were the traffic, encroachments, broadgauge Railway line, land alteration and Garbage dumping. He highlighted the need for conservation of Deepor Beel that has very rich biodiversity, continuously supports large numbers of wetland biota, cleans the environment and provides food and livelihood to the population. The major conservation recommendations/measures proposed for conservation of Deepor Beel in his presentation were:

Specific Measures Proposed

- Halting of trains should be avoided within the boundary of Deepor beel Ramsar site and speed of the Train must be regulated within the Deepor beel Ramsar site area.
- Land adjacent to the Railway line should be kept free from any encroachment.
- To keep the noise level down, suitable plantations should be raised on either side of the Railway line. The recommendation given by the Deepor beel conservation committee before railway authority must be implemented.
- Any form of settlements should not be allowed within the low-lying parts of the beel, even if it is a private owned land.
- The existing construction should be removed by alternative arrangement if it is existed in a Myadi Patta land.
- Destruction of adjacent hilly forest should not be allowed and eco-restoration should be initiated immediately without modifying the natural landscape.

General Measures Proposed

- The existing area of the Deepor beel Bird Sanctuary should be increased from 4.14 km² to 40 km² by adding the highland and low-lying area up to Assam Engineering College Campus and Assam Police Radio Organization Campus in the northern boundary and Garbhanga Reserve Forest in the southern bank.

- This additional inclusion of land will help to support the nesting and roosting habitat of most of the residential and migratory waterfowl as well as mammals.
- Again, it will help to protect the entire Bird Sanctuary from various threats such as forest cutting, brick factory and stone quarries etc.
 - The effectiveness of the beel system as a storm water retention basin for Guwahati city should be preserved and the increasing pressure of storm runoff from the city to the beel should be lessened through creation of additional storage capacity in the naturally depressed areas within the greater metropolitan area.
 - Considering the urgency for solution of the water logging problem of the city, the use of the beel as a storm water reservoir should receive high priority and other uses of the beel system should be so planned as to compatible with this overriding objective.
- The city runoff, including sewage, should be treated before being discharged into the beel system.
- The Plantation Programme should be started in highland within the Ramsar Site/Bird Sanctuary area to create breeding ground of residential waterfowl.
- Plantation Programme along the Railway line by the side of the Bird Sanctuary should be initiated.
- The plant species such as Bamboos- *Bambusa tulda*, *B. balcooa*, *B. arundinacea* and tree species such as Kadam- *Anthrocephalus kadamba*, Simul-*Bombax ceiba* etc. should be included in the plantation list.
- Area should be preserved as a natural landscape.

➤ Dr. Anwaruddin Choudhury, IAS (Rhino Foundation), Commissioner & Secretary, Pension & Public Grievance, Hill Areas Department on **“Wetlands of Assam- Issues and Challenges”**

Dr. Anwaruddin Choudhury, IAS highlighted the important ecological role of the wetlands that are vital for fisheries, source of occupation for human population, habitat for wildlife and migratory birds.



Dr. Anwaruddin Choudhury, IAS also elaborated the major threats/conservation issues related to wetlands e.g. reclamation, siltation, garbage disposal, over fishing, pollutants from industries, agriculture, pesticides, chemical fertilizers, invasive weeds, fragmentation, eutrophication etc. The major recommendations of his presentation were:

- Some of the major wetlands outside the Protected Area network need to be declared as protected areas such as Community Reserve, Conservation Reserve or

Bird Sanctuary.

- Monitoring of major wetlands every year or every two years with latest satellite images, as that will reflect the changes in area. Alarming cases then could be intervened by concerned departments without delay.
- Various laws including guidelines should be strictly enforced so that reclamation by draining out water and earth filling could be controlled.
- Similarly pollution regulations should also be strictly enforced. The municipal dumping ground should be relocated from Deepor *beel* area.
- There may be selective de-siltation in parts of wetlands (not the entire water body at a time, which might jeopardise the food-chain and overall ecology).
- Fishing needs to be better regulated and monitored. Use of harmful fishing nets, fishing during breeding, poisoning and blasting should be prohibited and punitive action enforced.
- The exotic water hyacinth should be removed at regular intervals.
- Fragmentation should be avoided as far as possible.
- In-depth review is necessary while planning developmental activities near or on the wetlands so that it is not fragmented or polluted due to industrial or agricultural activities. Roads and railways should be avoided as far as possible, in the immediate vicinity of important wetlands.
- Eco-tourism activities including picnic need to be promoted but should be regulated with proper waste disposal mechanism.
- Community participation, awareness and motivation are also vital for wetland conservation.

➤ Dr. Devashish Kar, School of Life Sciences, Assam University, Silchar on **“Wetlands, Rivers and Fish Conservation in Northeast India with special emphasis on Assam”**

Dr. Devashish Kar, elaborated the diversity of wetlands in South Assam besides the role of wetlands in Pisciculture, Flood Management and re-habilitation of fishermen.



Dr. Devashish Kar highlighted the major issues related to wetlands e.g. siltation, construction of dams/inlet diversification/outlet diversification, paddy cultivation, excessive fishing, fish diseases, eutrophication, etc. The major remedies and recommendations proposed in his presentation were:

- Community based fisheries management.
- Awareness.
- Fishermen rehabilitation.
- Prevention of over-harvesting of fish resources.
- Desiltation and not to disturb the river substratum, particularly, in the upstream region.
- To retain connection of rivers with wetlands for breeding, feeding, auto-stocking, etc.
- To promote eco-tourism in regulated manner

- Dr. Pradip Sharma, Associate Professor, Dept. of Geography, Cotton University, Guwahati on “**Need of Wetland Conservation in Assam for Sustainable Economic Development**”



Dr. Pradip Sharma elaborated the importance of wetlands that was evident from the themes of the World Wetlands Day over the years.

Dr. Pradip Sharma described the wetlands ecosystem and the animals largely dependent on wetlands, besides, various uses of wetlands e.g. wetlands for agriculture, community fishing, reeds collection, drinking water, washing, etc. He stated that wetlands are one of the most threatened of all ecosystems in the country due to loss of vegetation, salinization, excessive inundation, water pollution, invasive species, excessive development and road building etc. He stated that the general causes of degeneration of the wetlands in Assam are inorganic bottom deposit, organic bottom deposit, blockade of feeder channels, unscientific construction of engineering structures, encroachment and cultivation in marginal areas, release of industrial and urban wastes, unscientific fishing methods and gears and poor governance. He highlighted the issues related to Deepor Beel and explained the working of wetlands. He also highlighted the policy and legislative measures for protection of wetlands. He urged all to conserve wetlands.

- The program concluded by Vote of Thanks by Chief Conservator of Forests, Central Assam Circle to the Ministry of Environment, Forest & Climate Change for sponsoring the programme. He thanked all the participants of the Workshop, distinguished speakers and all concerned.
- IV. Thereafter there was a field visit to the Deepor Beel along with Boat Ride and cultural programme of traditional Assamese Folk Dances i.e. Bihu and Bodo Dance that was graced by the presence of Smt. Pramila Rani Brahma, Hon'ble Minister to the Govt. of Assam, Environment & Forests Department, Soil Conservation, Welfare of Plain Tribes and Backward Classes, Mines & Minerals, Smt. Manju Pandey, Joint Secretary to the Government of India and other dignitaries. Photographs of the field visit to the Deepor Beel and cultural programme is enclosed as **Annexure-VIII**.
- V. **Media Coverage:** Photocopies of the newspaper reports are enclosed as **Annexure-IX**.
