



Webinar Report

World Wetland Day 2022

‘Wetlands Action for People and Nature’



Organized By:

JNU ENVIS Resource Partner on Geodiversity & Impact on Environment

School of Environmental Sciences, Jawaharlal Nehru University,

New Delhi - 110 067

In Collaboration with:

ENVIS Resource Partner on Ecotourism

Sikkim State Council of Science & Technology, Vigyan

Bhawan, Deorali, Gangtok, Sikkim - 737 102

Sponsored by: Ministry of Environment, Forest & Climate Change, Govt. of India

February 02, 2021

World Wetlands Day, 2022

Theme: 'Wetlands Action for People and Nature'

The School of Environmental Sciences celebrated World Wetlands Day on February 02, 2022 following the theme of the year: 'Wetlands Action for People and Nature', also observed as a United Nations International day, following its adoption by the General Assembly on 30 August 2021 in a resolution co-sponsored by 75 member states. On this occasion, a webinar was organized by JNU ENVIS Resource Partner in collaboration with ENVIS Resource Partner on Ecotourism, SCS&T, Sikkim under Ek Bharat Shreshtha Bharat scheme.

The panel included very eminent International and National researchers such as **Dr. Rupesh K Bhomia** [Scientist, Center for International Forestry Research (CIFOR), CGIAR], **Dr. Sanjeev Sharma**, [Assistant

Professor, Centre for the Study of Regional Development (CSR), SSS, JNU], **Ms. Yangchenla Bhutia** (Project Scientist RS & GIS, Vigyan Bhawan, Gangtok, Sikkim), **Prof. Paulraj R.** (Dean SES & JNU ENVIS Coordinator), **Dr. Usha Mina** (ENVIS Co-coordinator & Associate Professor SES, JNU, New Delhi) and **Ms. Swati Singh**, Programme Officer, ENVIS, SES executed the programme.

Dr. Usha Mina, moderated the panel discussion. It was attended by more than 340 participants, through Google-Meet and Facebook Live platforms. The participants included university students, researchers, faculty members and the general public from different parts of the country.

Speakers	Time
Welcome address by Prof. Paulraj R. , ENVIS Coordinator & Dean, SES, JNU	11:00 AM - 11:05 AM
Introduction of Panelists by Dr. Usha Mina , ENVIS Co-coordinator & Associate Professor, SES, JNU	11:05 AM - 11:15 AM
Dr. Rupesh K Bhomia , Scientist, Center for International Forestry Research (CIFOR), CGIAR	11:15 AM - 11:35 AM
Shri. D.T. Bhutia , Director cum Coordinator, ENVIS RP on Ecotourism, SCS&T, Sikkim	11:35 AM - 11:45 AM
Dr. Sanjeev Sharma , Assistant Professor, Centre for the Study of Regional Development (CSR), SSS, JNU	11:45 AM - 12:05 PM
Vote of thanks by Ms. Swati Singh , Programme Officer, JNU ENVIS RP on Biodiversity & Impact on Environment.	12:05 PM - 12:10 PM

Fig.1: Poster and Schedule of the Webinar widely circulated on the social media platform.

Prof. Paulraj R., Dean SES & JNU-ENVIS Coordinator - Prof Paulraj R. welcomed all the speakers & participants. He talked about the importance of this day. He indicated the beneficial role of the wetlands for sustainable life process i.e., from domestic, agricultural, industrial usage etc. and protection from storms, floods, soil erosion, water related problems like nutrient, purification, storage etc. Also talked about his experience visiting a man made wetland at Keola-Deo National Park, Bharatpur in Rajasthan and referred to wetlands not just the waterbody but as a Biological Supermarket as it provides all the variety of services to the ecosystem. He suggested why there is a need to raise global awareness to protect wetlands in order to reverse the rapid loss as nearly 90% wetlands have been degraded since 1700 globally & we are losing wetlands three times faster than the forested ecosystems.



Fig.2: Prof. Paulraj R., Dean SES & ENVIS Coordinator, JNU

Introduction of Panelists by Dr. Usha Mina, ENVIS Co-coordinator & Associate Professor, SES, JNU

- Dr Usha welcomed and introduced all the panelists, guest and participants in the webinar.



Fig.3: Dr. Usha Mina, ENVIS Co-coordinator & Associate Professor, SES, JNU

Dr. Rupesh K Bhomia, Scientist, Center for International Forestry Research (CIFOR), CGIAR -

Dr Bhomia introduced wetlands not just as water meets land but as a key interaction between water, soil, biota and other physical factors that imparts special attributes to these ecosystems where water plays important role in controlling, regulating & modifying the environment & associated plant and animal life forms in diverse landscape forms such as, mangroves, peatland, marshlands, rivers, delta, floodplains and even rice/paddy fields. Wetlands help us provide food, surface water storage, in many cases wastewater treatment & management, maintenance of flow regimes and buffers for extreme events i.e., floods and drought etc. Yet they are considered as arteries & veins of the landscape, rich in nature and vital to human living. One of the biggest services they provide is natural storage/sink for carbon.

He relates wetlands' vital role to SDGs setup by the UN in 2015 and the target to achieve in 2030 which covers all facets of life, environment, women & society. He talked about aspects of the Science action in wetland and how it has a key role to make policies. The larger

contemporary challenge is pretty much recognised globally is the role of GHGs in Climate Change, predominantly emission of carbon dioxide (CO₂), methane (CH₄) & Nitrous Oxide (N₂O). Wetlands are one of the prominent nature-based solutions by sequestering carbon in different pools- above-ground & belowground.



Fig.4: Dr. Rupesh K Bhomia, Scientist, Center for International Forestry Research (CIFOR), CGIAR

He also mentioned his work done under scientific research project- 'Sustainable Wetlands Adaptation & Mitigation Program (SWAMP)' on peatlands & mangroves in 25 countries and carbon stocks protocols/methodology work. Restoring Coastal Landscape for Adaptation Integrated Mitigation

(ReCLAIM):- It highlights the Mangrove Socio-Ecological system in which not only carbon sequestration but the social components also covers by wetlands to communities around the world as following three aspects:

1. Climate Change Mitigation
2. Climate Change Adaptation
3. Health and Nutrition

Concluding remarks:

1. Wetland Science (peatlands & mangroves etc.) should be promoted & expanded.
2. Important to tackle complex challenges imposed by climate change.
3. Researchers & scientists have a major role to play.
4. Communicating knowledge generated from science is a key to inform public-making processes:- One important component of scientific research and communication is outreach to the general public, training and capacity building as the theme suggested this year- 'Wetlands Action in People & Nature' clearly indicates that people have to be involved in the process with very active participation.

Ms. Yangchenla Bhutia Project Scientist RS & GIS, Vigyan Bhawan, Gangtok, Sikkim-

Ms. Bhutia presented the high altitude wetlands of Sikkim state, in eastern Himalayan region. She described wetlands as crucial ecosystems that are inundated with water permanently or seasonally and are globally important for survival of human and other living beings. India has lost nearly one-third of its natural wetlands to urbanisation, agricultural expansion and pollution over the last four decades. Forests are called the 'Lungs of earth'; wetlands are the 'Kidneys that regulate water and filter waste from landscape'. It is the primary source of freshwater, livelihood, food, home to biodiversity and buffers of flood and droughts, recycler of nutrients and are inextricably intertwined with our culture and identity.

Wetlands of Sikkim:

Ms. Bhutia indicated Sikkim as one of the tremendous biodiversity hot-spots in the Eastern Himalayas, covering just 0.2 % of the geographical area of India. The State is endowed with rich floral and faunal diversity. Agriculture is still the mainstay of the rural population (64% dependent on agriculture) of Sikkim. Sikkim was declared as an organic state in 2003 and agriculture is practiced in approximately 11% of the total geographical area of the State.

smaller rivers and streams. Any change to the dynamics of these wetlands, can severely affect that could reach all the way downstream impacting fish populations, agriculture, river infrastructure, flood cycles and communities in those river basins. The high altitude wetlands that showed growth in their area over the decade such as, the Gurudongmar lakes A&B (5277m), the Khangchung Lake (5300m), the South Lhonak Lake, the Lhonak, the Changsang, the Khangchung Lake (5000m) in Sikkim state. Melting of glaciers due to rise in temperature could be one of the primary reasons. The South Lhonak Lake has been recorded as one of the fastest and largest growing Glacier in Sikkim Himalaya, around 55ha. Overall calculated ~6559.09 ha of wetlands using the LISS-IV 2017-18 data, adding around 92.4% of total geographical area of Sikkim. The HAW formed the dominant wetland types, accounting around 92.24% of total wetland area in the state. For conservation & mitigation measures in Sikkim, with the ongoing studies on climate change and wetland, 14 wetlands could be potentially vulnerable in terms of Glacial Lake Outburst Flood (GLOF); these wetlands need the detailed vulnerability assessment studies associated with each of these water bodies. Loss of wetlands for people causes water scarcity, exposure to flooding and extreme weather events, lost livelihoods and well-being, food insecurity and for the planet causes biodiversity decline, increased carbon and methane emissions, loss of natural freshwater filtration etc.



Highly significant Himalayan Wetlands

Himalayan wetlands play an important role in the hydrological regime of mighty rivers like the Ganges, Brahmaputra and Indus and act as a buffer between glacial melt waters and outflows to smaller rivers and streams.

Any change to the dynamics of these wetlands, can severely affect that could reach all the way downstream impacting fish populations, agriculture, river infrastructure, flood cycles and communities in those river basins.

Wetlands of Sikkim



Figure: Wetlands of Sikkim, India. The blue line represents wetlands >2,20ha, and the red dots represents the wetlands <2,20ha.



Fig.5: Ms. Yangchenla Bhutia (Project Scientist RS & GIS, Vigyan Bhawan, Gangtok, Sikkim)

Ms. Bhutia showed the significance of wetlands in her presentation that Himalayan wetlands play an important role in the hydrological regime of mighty rivers like the Ganges, Brahmaputra and Indus and act as a buffer between glacial melt waters and outflows to

Dr. Sanjeev Sharma, Assistant Professor, Centre for the Study of Regional Development (CSR), SSS, JNU -

Dr Sharma presented his work on High Altitude Wetlands (HAWs) & participatory conservation initiative connecting people/communities in western & central part of Indian Himalayan Regions (IHR): Himachal Pradesh, Ladakh & Uttarakhand. High altitude wetlands are crucial for biodiversity, sustainable economic growth and regulating microclimate conditions at local/regional level. HAWs (3000 m asl)

are unique productive ecosystems as the headwater areas for many important rivers and have a direct impact on the freshwater systems downstream. Mountain communities depend on wetlands directly/indirectly for their livelihoods as it represents unique flora/fauna, endemic, medicinal plants etc, also major attractive spots for tourists & pilgrims.

Dr Sharma indicated major concern to degradation of wetland, facing growing impact of tourism which adds significantly to the biotic pressure on the ecosystems. The degradation can be checked through proper management of the tourism, controlling the grazing pressure and sustainable development. Glacier retreating also has direct or indirect impact on wetlands and their conservation such as, Chandra river originated from Chandratall lake which has source from glaciers nearby and water level declining depends on the same. From a cultural or religious point of view the HAWs are considered as sacred lakes to the local communities in the Himalaya and protected as a critical important part of their livelihood.

There are lots of wetlands in the region that need to be recognised and protected to include in proper documentation. Awareness and capacity building programs have been done in the region to sensitize local communities about the importance of these wetlands. Various conservation measures and initiatives have been taken (waste collection etc.) and anthropogenic activities such as littering, grazing etc. have been stopped to conserve wetlands and keep them clean. Target stakeholders are school students, youths, army persons, local communities, committees etc. to raise awareness to conserve these high altitude wetlands in the region.



Fig.6: Dr. Sanjeev Sharma, Assistant Professor, Centre for the Study of Regional Development (CSRD), SSS, JNU

Vote of thanks by Ms. Swati Singh, Programme Officer, JNU ENVIS RP on Geodiversity & Impact on Environment - She thanked all the speakers, participants, students and the faculty for making the event successful. Special thanks was extended to the ENVIS RP Ecotourism SCS&T, for being collaborative partners in the Webinar and the competition under the EK Bharat Shreshtha Bharat Scheme of the Government of India.

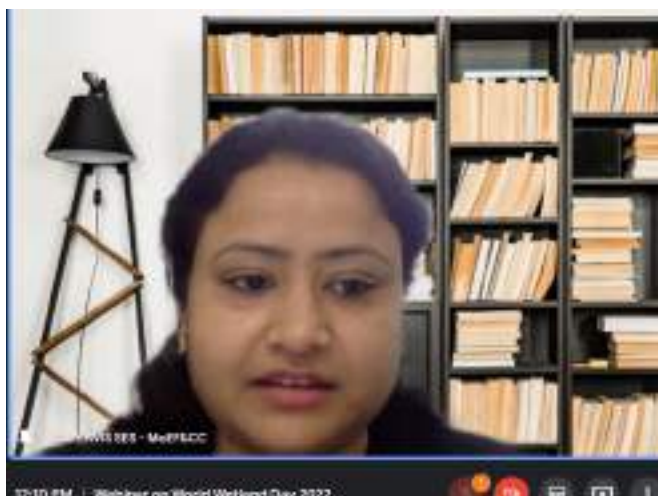


Fig.7: Ms. Swati Singh, Programme Officer, JNU ENVIS RP on Geodiversity & Impact on Environment

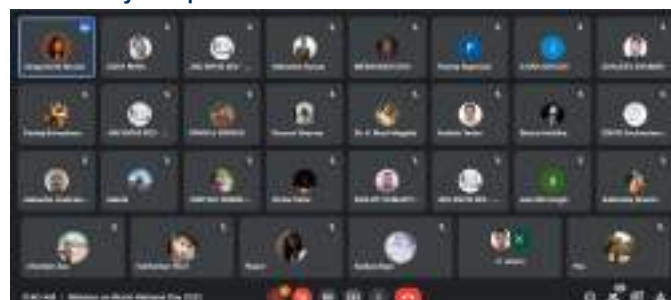


Fig.8: Panelists & Participants of the Panel Discussion

The session came to an end with the distribution of e-certificate to all the participants. This is to mention that a very positive feedback has been received from the participants about the event.

Recommendations:

1. To protect & preserve wetlands there is a need to raise global awareness about wetlands.
2. Capacity of wetlands as potential carbon sink should be enhanced.
3. Research should be promoted in areas of wetlands as nature based solutions for above-ground & below-ground carbon sequestration.
4. Wetland science; peatlands and mangroves should be promoted and expanded.
5. Important to communicate knowledge products generated by science to common people, policy makers etc.
6. Awareness and capacity building programs should be done for local inhabitants.

Online Poster Making Contest and Result on 'Wetlands Action for People & Nature':

Online Poster Competition | Theme: 'Wetlands Action for People & Nature'

Feb 02, 2022

World Wetlands Day

Submission Last Date: 31st January, 2022

Instructions to be followed:

- 1) Participant can select any of the Ramsar Site in India & prepare an infographic (Digital/handmade) for the contest.
- 2) Maximum two entries per participant.
- 3) Submit your entries in pdf format.
- 4) Work should be original and not copied or plagiarised.
- 5) Please upload your photo holding your submitted poster.
- 6) At the bottom of your work your name and submitted to JNU-ENVIS RP for #WWD2022
- 7) Eligibility- Competition is open for all School/College Students, Researchers, Faculty, Working Professional & General Public.
- 8) Participants can provide suitable heading/Slogan for Posters.

Registration Link: <https://forms.gle/19KX1ue8RmG6m6GT>

Contact Details:
 Email id: envis@jnu.ac.in
 Phone No: 011-26195276

Result will be declared online on 02nd February, 2022
 E-certificates will be provided to the participants

Organized by: PUC ENVIS Resource Partner on Goodiversity & Impact on Environment, School of Environmental Studies, JNU, New Delhi - 110067

In Collaboration With: ENVIS Resource Partner on Ecosystems, M.K. State Council of Science & Technology, Department of Science & Technology, Vignana Bhawan, New Delhi, India - 110002

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

Result of Online Poster Contest | Theme: Wetlands Action for People & Nature

Infographic Poster on #WWD2022

FIRST POSITION:
Nivertha E.
Annamalai University, Tamil Nadu

SECOND POSITION:
Akshay Kale
Dept of Computer Science,
SGBAU, Anandnagar, Maharashtra

THIRD POSITION:
Paromita Debnath,
Guru Nanak Instt of
Pharmaceutical Science &
Technology, West Bengal

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

Result of Online Poster Contest | Theme: Wetlands Action for People & Nature

Painting Poster on #WWD2022

FIRST POSITION:
Aisha Panda
Bani Jagabandha English
medium School, Odisha

SECOND POSITION:
Thyakshwa Sureshkumar
SRDA School & Junior
College, Tamil Nadu

THIRD POSITION:
Ashirbad Das
Day Public School, Angul, Odisha
Nishigandha Nivargiri
T.Jaka, Karnataka

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

Result of Online Poster Contest | Theme: Wetlands Action for People & Nature

Poster (Technical) on #WWD2022

FIRST POSITION:
Deepak Patle
JNKVV, Jabalpur,
Madhya Pradesh

SECOND POSITION:
Deepanjan Saha
Institute of Genetic
Engineering, West Bengal

THIRD POSITION:
Debarghita Saptarshi Bera,
Guru Nanak Instt of
Pharmaceutical
Science & Technology, West Bengal

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Feedbacks:



Very nice presentation.

नदियों, झीलों और तालाबों आदि की खराब होती हुई दशा को देखते हुए वर्ष 1971 में 2 फरवरी को ईरान के रमसर में बेटलैण्ड सम्मेलन को अपनाया गया था। आज भारत सरकार के पर्यावरण, वन और जलवायु परिवर्तन मंत्रालय ने खास कदम उठाए हैं, और इससे लोगों को काफी हद तक जागरूक भी किया जा रहा है। इसी सन्दर्भ में जवाहर लाल नेहरू विश्वविद्यालय (JNU) नई दिल्ली के पर्यावरण सूचना प्रणाली (Envis Center) द्वारा भी व्यापक प्रयास किए जा रहे हैं, जो कि काफी हद तक सफल साबित होंगे।

Very Informative session.

Very nice and informative session.

It was very helpful for us to get to know the situation of the wetlands problems which is completely ignored by us. It was nice interacting with different teachers and also we got to know different measures to be taken to prevent these wetlands as it comprises an ecological importance.

Thanks for conducting

Webinar again awake me about 1000G which are global concern today scenario. Its relevance must be show in our lives. Thinking to much

Very informative and awesome session

Overall webinar was excellent and very informative Thank you

Save environment today for better tomorrow recharge ground water

It was a very interesting session and I would like to thank the organizing committee for the arranging. Also I'd like to thank all the speakers for sharing their work and motivating us. Thank you

Really thankful to the organizer for giving me a chance to participate and sharing very useful and informative knowledge from different experts in the related field and giving the importance of wetlands on the World Wetland Day 2022.

Wetland awareness of an hour was indeed an informative session.

Informative webinar!

I am also from a wetland area, I have learnt lot of things about wetland. The webinar was excellent.

Informative session

Webinar is very nice and very helpful

Very knowledgeable & informative webinar

Very nice session.

Webinar was excellent

Excellent

Webinar gave us new reference about conserving wetland

Good to attend and informative

This webinar was very informative and many unknown information has known from this webinar.

very relevant and very informative

This webinar is very nice and very helpful on

Good

It was a wonderful experience for me I was aware of the wetlands and their roles a bit...because of this webinar I got to know about them a bit closure

This webinar was very informative and I learnt a lot about the conservation and management of wetlands.

Awwsome

Webinar give us new reference about conserving wetland

It was really a enjoyable, interesting, knowledgeable session!

Inspightful, roguitive presentations with examples and practical approaches to wetland issues in modern era.

Very informative because it helps to know how important are the wetland.

Increase my knowledge regarding wetlands and their role in sustainable development and the importance

this is very useful webinar

Outstanding

I got to know about importance of wetlands. And the webinar was organized in proper and systematic way.

I am very impressive about this webinar, I have gain lot of knowledge from this webinar.	It was very informative and pleasure to here from Indian expert on Wetland.
Aside from the occasional network glitches, everything was up to the mark.	Very good informative session
Wetlands	Informative webinar
Successful and Experienced Session ☺☺	All is well
Informative	It was nice session
The webinar was very informative. We are looking forward to join more such webinars.	The webinar was excellent, it gives a new perspective towards wetlands management
Very knowledgeable	Wonderful session and informative talk.
ALL IS WELL	Knowledgeable webinar
Good knowledge about the wet land	Informative excellent webinar
Very Nice, Awesome, Informative and Experienced Session	
Nice presentation	
Very nice, relevant and informative webinar.	
Nice webinar	
Informative session about Wetlands Eco system & Extraordinary Knowledgeable Speakers	
very informative	
Very interesting webinar with speakers, who included very worthwhile demonstrations about wetlands. I learned a lot about wetlands from the webinar, and it was extremely helpful in understanding wetlands. I'd like to request you to organize similar informative webinars on various environment related topics. Thank you to the organising committee and all of you.	
I am very impressive about this webinar, I have gain lot of knowledge from this webinar.	

Webinar Live Session on the FB page: <https://fb.watch/b4JOWA4sX3/>

Webinar Video on the Official Youtube Channel: <https://www.youtube.com/watch?v=XhxLHpmxbwk>
