



A Report of

National Conference

on

शाश्वत सृष्टि संरक्षण

SHASHWAT SRISHTI SANRAKSHAN

"A Pledge for Protecting World against Natural Hazards: Agro-Biotechnological Approach"

23-24 August, 2024 | ICAR-CAFRI, JHANSI, U.P.



SAVE THE ENVIRONMENT KOLKATA / GURUGRAM **Organized by**





ICAR-CENTRAL AGROFORESTRY RESEARCH INSTITUTE Jhansi, Uttar Pradesh



Indian Society of Agroforestry Jhansi, Uttar Pradesh

In Association with



The Society for Science of Climate Change and Sustainable Environment (SSCE), New Delhi



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Inaugural session

National conference on SHASWAT SHRISTI SANRAKSHAN: A pledge for protecting world against natural hazards – Biotechnological approach commenced with a warm welcome of gathering by Dr. Kshipra Mishra, President of Save The Environment (STE) and the Director of ICAR-CAFRI, Dr. A. Arunachalam, who highlighted present threats in form of natural hazards to the environment and how scientific collaborative efforts can mitigate the losses followed by the welcome of chief guest, Dr. Arvind Kumar Shukla, the Vice-Chancellor of Rajamata Vijayaraje Scindia Krishi Vishwa Vidyalaya, Gwalior, the guest of honour Dr. W. Selvamurthy, President, ASTIF and Dr. Madhu Vats, Chairperson, Sarvhit Kalyan Seva Samiti, Meerut. During the inaugural session, the chief guest appreciated the activities of STE and ICAR-CAFRI, Jhansi and its role in ensuring the sustainability of the environment. The chief guest and other dignitaries released the conference souvenir and CAFRI publications. While releasing the document on the spiritual plantations, the guest of honour appreciated the initiatives of ICAR-CAFRI. The organising secretary of the conference Dr. R.P. Dwivedi, Principal Scientist, ICAR-CAFRI, Jhansi formally thanked the dignitaries, and the technical session began subsequently.



Day I Summary and Highlights

There were two technical sessions preceded by a keynote address by the Dr. W. Selvamurthy, President, ASTIF. In the first technical session, three invited talks were delivered, and their detailed outcomes are mentioned, Dr, Vijay Kumar Bharti, a Scientist from DRDO-Defence Institute of High-Altitude Research (DIHAR) delivered the lecture on Addressing High-Altitude North-Western Himalayan Water Quality Challenges: Collaborative Solutions and Future Prospect. He said their study observed the gradual decline of water quality in terms of heavy metals, coliform bacteria, and physicochemical characteristics. Besides this, they found seasonal variations in different water resources and the interrelationship in the bioavailability of minerals in plants and livestock. He gave emphasis on immediate need for joint and collaborative efforts for high-altitude water research, development of high-altitude based water technology, preventive community, and public health measures, management of the Himalayan water ecosystem, and environmental protection. Among these Himalayan state government departments, water science researchers, engineers, academic and research institutions, NGOs, local communities, and national and global bodies, which will help in protecting these water resources and improving water quality.



Dr. Dina Nath Pandit delivered the lecture on the Length-Weight Relationship and Condition Factor of a Threatened Climbing Perch (*Anabas testudineus*) from Arrah (Bihar), India during the Non-Breeding Season. He emphasized that fish consumption should not be done during fish's breeding season. He said that the study will be useful in providing pertinent information for understanding fish biology, estimating fish conditions in its environment, and assessing the population dynamic parameters. Dr. Madhu Vats, Chairperson Sarvhit Kalyan Seva Samiti Meerut UP, delivered the lecture on "Eco physiological Impact of SPM on flora and fauna. She said more focus should be given to scientific plantations with good design. She said that their study found that Kaner and Bougainvillea are to prominent species that can be planted near the roadside She also discussed scientific solid waste management strategies.

At the end of the session, the distinguished speakers were facilitated for their excellent presentation followed by the facilitation of the Chairperson, Co-Chairperson, and Session Coordinator. In the second technical sessions 5 oral presentations and 10 poster presentations were delivered.



Day II Summary and Highlights

There were three technical sessions on day two. The first technical session was chaired by Dr. Manish Srivastav, Dean, College of Horticulture & Forestry, RLBCAU, Jhansi and cochaired by Sh. Suresh Ramanan, S., Scientist, ICAR-CAFRI, Jhansi and coordinator and rapporteur was Mr. Bijoy Chanda, Scientist, ICAR-CAFRI, Jhansi. Two invited talks and four oral presentations were delivered in this session. Dr. S.K. Dwivedi, Scientist G, Director DoP, DRDO delivered the lecture on "General Issues and Water Treatment Gadgets". He discussed how DRDO works as a research wing. He also discussed about water purification technologies and water testing kit for northeastern India. Prof. Deepa Dwivedi, Professor, Ambedkar University, Lucknow delivered the lecture on "Wetland Horticulture". She emphasized the benefits of wetlands in agriculture and horticulture. Dr. Ashok Yadav delivered lecture on "Neglected and Underutilized Horticultural Crops of Bundelkhand Region: Status, Importance, Conservation, and their Traditional Knowledge" and discussed about different underutilized fruit crops. Mr. Ankit Verdiya delivered lecture on "Choices of Tree Species for Deregulation: A Case Study". Dr. Sovan Debnath delivered lecture on "Conservation agroforestry exaggerates the benefits of agroforestry on soil fertility enhancement in Bundelkhand region". Ms. Akanksha Jain delivered lecture on "Perspective of Jainism on the Socio-Cultural and Environmental Values of Sacred Trees".



The second technical session was chaired by Dr. Ram Kewal Singh, Dean, College of Agricultute, RLBCAU, Jhansi, co-chaired by Dr. Priyanka Singh, Scientist, ICAR-CAFRI, Jhansi and coordinated by Ms. Syamili M.S., Scientist, ICAR-CAFRI, Jhansi. One invited talk and two oral presentations were delivered in this session. Dr. Sushil Kumar Singh, Solid State Physics Lab, DRDO, Delhi delivered the invited talk on "Technology Innovations behind the Sericulture". He talked about developing synthetic structure such as self-sustainable zero emission house inspired from the functional properties of asymmetric structure of silkworm cocoon membrane. Dr. K. Rajarajan, Senior Scientist, ICAR-CAFRI, Jhansi discussed the potential of marker-assisted selection in identifying candidate genes for tree breeding purposes in Agrofrestry. Dr. Badre Alam, Principal Scientist, ICAR-CAFRI, Jhansi created awareness about the ecosystem services provided by *Pongamia pinnata* with special mention on the microclimate regulation potential in the rapidly changing climate scenario.



The third technical session was chaired by the Dr. S. K. Dwivedi, Scientist G, Director, Directorate of Personnel, DRDO, New Delhi and co-chaired by the Dr. Venkatesh YN, Scientist, ICAR-CAFRI, Jhansi. Prof. N.P. Melkania delivered an invited talk and provided various recommendations for sustainable environmental action plan. Total 5 oral presentations were delivered on various topics of plant protection, biodiversity and geospatial approaches. At the end, distinguished speakers, Chairperson, Co-Chairperson, and Session Coordinator were facilitated for the smooth conduct of the technical sessions.



Valedictory Session

The programme was Chaired by Dr. A.K. Singh, Vice Chancellor, RLBCAU, Jhansi who also affirmed the importance of the conference and took note of the conference proceedings.



Key Recommendations

Based on the deliberations in various sessions of the conference, the following recommendations are drawn as key action points:

Recommendation

• The Miyawaki plantation should be adopted in the industrial premises to meet carbon neutrality and, choices of the tree species can be made as per the pollution loads of the established industry.

- Tree-crop interactions depend on many factors such as tree species, age of trees, direction, tree canopy etc. *Melia dubia* is a fast-growing tree species and in the initial years, crops can be successfully grown with melia spaced at 5m*4m spacing.
- Shade tolerant lines can be developed by exploiting positive and negative regulators of shade avoidance traits of the crops.
- Equal emphasis to be given on all components of agroforestry such as fruit trees, fodder, livestock in addition to timber trees to harness the full potential of agroforestry
- To work on the restoration potential of agroforestry and strengthening and streamlining the agroforestry extension framework for more technological and input support to upscale the agroforestry area in the country.
- There is need for an institutional arrangement for quality management and public private partnership for enabling accelerated quality input and output delivery for enhance the overall tree-based farming in the country.
- Western Uttar Pradesh suitability for Agro-eco-tourism spot
- More focus on lakes in cities to create conducive micro hydrological climate to curb the air pollution
- Self-sustainable economic dependency for overall development of the country in waste management and resource utilization

The program ended with formal vote of thanks.

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SAVE THE ENVIRONMENT (STE) was founded and registered on 19th November 1990. In 1992 with the collaboration of WWF (India), the organization started working to combat arsenic poisoning problem of water in the arsenic prone areas of West Bengal. Since then STE has been involved in various projects related to combat arsenic problem in India.

Our Vision

To protect present and future generations from various environmental hazards.

Our Mission

To create awareness and motivation among rural communities & provide cost effective, energy efficient & environment friendly technologies.

OurActivities

Conducting interactive sessions, workshops/ seminars, awareness programs, field operations through projects, science fairs, posters & quiz competitions.

Please join us and become part of our family by enrolling yourself as Life Member of STE Family

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