उत्तराखण्ड जैवविविधता बोर्ड
UTTARAKHAND BIODIVERSITY BOARD

UTTARAKHAND BIODIVERSITY BOARD

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उत्तराखंड जैव विविधता बोर्ड द्वारा हरेला पर्व 2025 पर वृक्षारोपण कार्यक्रम का आयोजन

उत्तराखंड जैव विविधता बोर्ड ने 16 जुलाई, 2025 को हरेला पर्व के अवसर पर वृक्षारोपण अभियान का सफल आयोजन किया। देहरादून के सहसपुर ब्लॉक के राजावाला गांव में आयोजित यह कार्यक्रम पर्यावरण संरक्षण और जैव विविधता को बढ़ावा देने के प्रति बोर्ड की अटूट प्रतिबद्धता का प्रमाण है।

एक सहयोगात्मक सामुदायिक प्रयास

यह पहल उत्तराखंड जैव विविधता बोर्ड के सदस्य सचिव, श्री नीतीश मणि त्रिपाठी के मार्गदर्शन में संपन्न हुई। इस वृक्षारोपण कार्यक्रम में विभिन्न हितधारकों ने उत्साहपूर्वक भाग लिया, जिनमें बोर्ड के सभी कर्मचारी, स्थानीय समुदाय के सदस्य और राजावाला जैव विविधता प्रबंधन समिति (बीएमसी) की अध्यक्ष श्रीमती देवकी देवी बिष्ट शामिल थीं।

इस सहयोगात्मक प्रयास में लगभग 30 व्यक्तियों ने मिलकर प्रकृति के प्रति एक साझा जिम्मेदारी की भावना को बढ़ावा दिया। प्रतिभागियों ने विभिन्न प्रकार के स्थानीय पौधे लगाने के लिए एक साथ काम किया। इस कार्य ने न केवल क्षेत्र को हरा–भरा करने में योगदान दिया, बल्कि एक स्वस्थ पारिस्थितिकी तंत्र को बनाए रखने में स्थानीय

वनस्पतियों की महत्वपूर्ण भूमिका के बारे में जनमानस में जागरूकता भी बढ़ाई।

वृक्षारोपण का विवरण

हरेला पर्व के कार्यक्रम में, पारिस्थितिकी संतुलन और स्थानीय जैव विविधता को बढ़ावा देने के लिए स्थानीय वृक्ष प्रजातियों के विविध पौधो का चयन किया गया। इस अभियान के दौरान आनंद वन नर्सरी से कुल 50 पौधे लाकर लगाए गए।

चुनी गई प्रजातियों में विभिन्न प्रकार के फलदार पेड़ शामिल थे, जैसे: अमरूद (*Psidium guajava*), आंवला (*Emblica officinalis*), अंगूर (*Vitis vinifera*), जामुन (*Syzygium cumini*), आड़ू (*Prunus persica*), नींबू (*Citrus limon*), नाशपाती (*Pyrus domestica*), प्लम (*Prunus domestica*), और शहतूत (*Morus alba*)।

इसके अतिरिक्त, हरड़ (*Terminalia chebula*), सिल्वर ओक (*Grevillea robusta*), पिलखन (*Ficus virens*), कचनार (*Bauhinia variegata*), और इमली (*Tamarindus indica*) जैसी प्रजातियाँ भी लगाई गई। भूमि कटाव रोकनें के लिए, बांस (*Bambusa vulgaris*) भी रोपित किया गया।

इसके अतिरिक्त सरस्वती विद्या मन्दिर, माण्डूवाला, देहरादून में हरेला पर्व के अवसर पर वृक्षारोपण किया गया, जिसमें स्कूल के छात्रों एवं स्कूल प्रशासन के द्वारा प्रतिभाग किया गया। इस कार्यक्रम में पर्यावरण पर पड़ने वाले प्रभावों पर छात्रों के साथ चर्चा की गयी एवं वृक्षों को बचाने हेतु संकल्प लिया गया।

यह कार्यक्रम न केवल एक वृक्षारोपण अभियान था, बल्कि एक शैक्षिक अवसर भी था। समस्त प्रतिभागियों को वृक्षारोपण के महत्व और बंजर हो चुकी भूमि को ठीक करने में उनकी भूमिका के बारे में जागरूक किया गया। स्थानीय पारिस्थितिकी तंत्र के पुनर्निर्माण की यह प्रतिबद्धता वन्यजीवों के आवास को बेहतर बनाने और क्षेत्र की समग्र जैव विविधता में सुधार लाने में मदद करेगी। पौधो की प्रजातियों का सावधानीपूर्वक चयन यह सुनिश्चित करता है कि नए लगाए गए पेड़ पनपेंगे और आने वाले वर्षो तक स्वस्थ पर्यावरण में योगदान देंगे।

एक स्थायी भविष्य को बढ़ावा देना

हरेला पर्व वृक्षारोपण अभियान की सफलता, संरक्षण प्रयासों में स्थानीय समुदायों को शामिल करने के लिए बोर्ड के रणनीतिक दृष्टिकोण को रेखांकित करता है। पारंपरिक सांस्कृतिक उत्सवों को आधुनिक पर्यावरणीय पहलुओं के साथ जोड़कर, उत्तराखंड जैव विविधता बोर्ड इस क्षेत्र के लिए एक अधिक टिकाऊ और जैव विविध भविष्य के निर्माण के उद्देश्य से मजबूत साझेदारी बनाना जारी रखेगा। इस कार्यक्रम की सफलता भविष्य के सहयोग के लिए एक मिसाल कायम करती है, जो यह दर्शाती है कि सामूहिक कार्रवाई से कितने सकारात्मक पर्यावरणीय परिणाम मिल सकते हैं।

हरेला पर्व 2025: जैव विविधता संरक्षण पर एक सहयोगात्मक ऑनलाइन संगोष्ठी

17 जुलाई, 2025 को उत्तराखंड जैव विविधता बोर्ड ने भारतीय वनस्पति सर्वेक्षण (उत्तरी क्षेत्रीय केंद्र) और ग्राफिक एरा विश्वविद्यालय के सहयोग से हरेला पर्व मनाने के लिए एक वेबिनार का सफलतापूर्वक आयोजन किया।

संगोष्ठी की शुरुआत भारतीय वनस्पति सर्वेक्षण में वैज्ञानिक–F और कार्यालय प्रमुख डॉ. सुशील कुमार सिंह द्वारा 'ग्रीन वेबिनार श्रृंखला' के संक्षिप्त परिचय के साथ हुई।

प्रथम प्रस्तुतीकरण, डॉ. कुमार अविनाश भारती, वैज्ञानिक–D, भारतीय वनस्पति सर्वेक्षण द्वारा दिया गया, जिसका शीर्षक "पारंपरिक ज्ञान का महत्व और भारत में अनुसंधान की स्थिति" था, उनका संवाद पारंपरिक ज्ञान की परिभाषा और महत्व पर केंद्रित था। डॉ. भारती ने पारंपरिक ज्ञान अनुसंधान में हाल के घटनाक्रमों पर चर्चा की। चर्चा के प्रमुख बिन्दु निम्न थे।

- संरक्षण: जर्मप्लाज्म संरक्षण, बीज और मिट्टी परीक्षण।
- आर्थिक पहलू: औषधीय खोज और जनजातीय, ग्रामीण बाजारों का अध्ययन।
- सांस्कृतिक प्रासंगिकता: पारंपरिक प्रथाओं का सांस्कृतिक महत्व और पारिस्थितिकी तंत्र संरक्षण से उनका संबंध।

उन्होंने भारत में पारंपरिक ज्ञान अनुसंधान पर एक ऐतिहासिक परिप्रेक्ष्य भी प्रदान किया, जिसमें स्वतंत्रता–पूर्व और स्वतंत्रता–पश्चात् दोनों काल शामिल थे। प्रस्तुति का समापन पवित्र उपवनों के प्रदर्शन के साथ हुआ, जिसमें उनके पारिस्थितिक महत्व पर जोर दिया गया।

इसके बाद, ग्राफिक एरा विश्वविद्यालय में वरिष्ठ परियोजना सहयोगी डॉ. वंदना मेहरवार ने 'हिमालयी पारिस्थितिकी तंत्र और जैव विविधता को बनाए रखने के लिए संरक्षण दृष्टिकोण' पर अपनी प्रस्तुति दी। डॉ. मेहरवार की बातचीत में हिमालयी पारिस्थितिकी तंत्र के सामने आने वाली प्रमुख चुनौतियों को रेखांकित किया गया। उन्होंने पारंपरिक ज्ञान और प्रभावी संरक्षण रणनीतियों की महत्वपूर्ण भूमिका पर जोर दिया और प्रासंगिक केस स्टडीज के माध्यम से अपने बिंदुओं को समझाया।

विश्व सर्प दिवस 2025 पर ऑनलाइन संगोष्ठी

ईआईएसीपी – वन्यजीव संस्थान, देहरादून ने दिनाँक17 जुलाई, 2025 को उत्तराखंड जैव विविधता बोर्ड के साथ मिलकर विश्व सर्प दिवस मनाने के लिए एक ऑनलाइन संगोष्ठी का आयोजन किया। '21वीं सदी में भारतीय सर्प विविधता पर ज्ञान में हालिया प्रगति (2000–2025)' नामक इस कार्यक्रम का उद्देश्य भारतीय सरीसृप विज्ञान के क्षेत्र में हुई नवीनतम खोजों पर प्रकाश डालना था।

इस संगोष्ठी का मुख्य भाषण डॉ. एस.आर. गणेश ने दिया, जो कलिंग फाउंडेशन के अनुसंधान निदेशक और सरीसृप विविधता पर एक सम्मानित विशेषज्ञ हैं।

प्रस्तुति की मुख्य बातें

डॉ. गणेश ने भारतीय सर्प जैव विविधता का एक विस्तृत अवलोकन प्रस्तुत किया, जिसमें पिछले ढाई दशकों में हुई महत्वपूर्ण प्रगति पर विशेष ध्यान दिया गया। उनकी प्रस्तुति में कई नई प्रजातियों की खोज पर प्रकाश डाला गया, जिनमें निम्न शामिल हैं।

- भेड़िये–जैसे साँप (Wolf snakes)
- लकड़ी–जैसे साँप (Wood snakes)
- कोलुब्रिड्स (Colubrids)

- पिट वाइपर (Pit vipers)
- शील्ड–टेल (Shield & tail) प्रजातियाँ

उन्होंने इस बात पर जोर दिया कि ये खोजें पूरे देश में समान रूप से नहीं हुई, बल्कि विशिष्ट क्षेत्रीय हॉटस्पॉट में केंद्रित थी। पश्चिमी घाट एक विशेष रूप से समृद्ध क्षेत्र के रूप में उभरा, जहाँ 29 नई प्रजातियों की खोज हुई, जबकि पूर्वोत्तर हिमालय क्षेत्र में 23 नई प्रजातियाँ पाई गई।

डॉ. गणेश ने इस उल्लेखनीय विविधीकरण का श्रेय भौगोलिक अलगाव को दिया, जो विशिष्ट प्रजातियों के विकास में एक महत्वपूर्ण भूमिका निभाता है। उन्होंने आधुनिक अनुसंधान पद्धतियों के महत्व को रेखांकित किया, विशेष रूप से एकीकृत रूपात्मक और आनुवंशिक विश्लेषणों के उपयोग पर जोर दिया, जो नई प्रजातियों की सटीक पहचान और वर्गीकरण के लिए पारंपरिक भौतिक विशेषताओं को अत्याधुनिक डीएनए अध्ययनों के साथ जोड़ते हैं।

देश भर के विभिन्न कॉलेजों के 60 से अधिक प्रतिभागियों ने इस कार्यक्रम के लिए पंजीकरण कराया। उन्होंने विश्व सर्प दिवस के बारे में अपने अनुभव और ज्ञान साझा किए। चर्चाएँ ज्ञानवर्धक थीं, जिन्होंने साँपों और उनके पारिस्थितिक महत्व के प्रति गहरी सराहना को बढ़ावा दिया। प्रतिभागियों ने आम भ्रांतियों और संरक्षण प्रयासों के महत्व पर भी बात की। इस कार्यक्रम ने भविष्य के संरक्षणवादियों को सफलतापूर्वक शिक्षित और प्रेरित किया।

A webinar organised on the occasion of International Day for the Conservation of Mangrove Ecosystems

On July 25 and 26, 2025, the Uttarakhand Biodiversity Board and the EIACP Center, Wildlife Institute of India collaborated to host a webinar in observance of the International Day for the Conservation of the Mangrove Ecosystem. The session brought together four experts from various fields to discuss the vital role of wetlands and mangroves in protecting biodiversity and mitigating climate change.

Shri Abhimanyu (Divisional Forest Officer, Chakrata) spoke on the management and conservation of Uttarakhand's wetlands. Given his role as a DFO in a state known for its unique high-altitude and riverine wetlands, his presentation likely focused on the specific challenges and strategies involved in managing these fragile ecosystems, including controlling human impact and protecting local biodiversity.

Dr. S.K. Barik (Government of Bihar) addressed the conservation, restoration, and sustainable use of Ganga floodplain wetlands. He emphasized the importance of sustainable practices to ensure these areas continue to support livelihoods while providing essential ecological services like water purification and flood control.

Miss Neha Tamhankar (Forest Research Institute) highlighted the role of mangroves as "coastal warriors." Her discussion would have focused on their physical function in preventing coastal erosion, serving as a natural barrier against storm surges, and their immense capacity to sequester carbon, thus acting as a key tool in the fight against climate change.

Dr. Debajit Datta (Jadavpur University) presented social-ecological strategies for restoring mangroves in the Sundarbans.

His focus on the Sundarbans, the world's largest mangrove forest, underscores the complex relationship between human communities and these ecosystems. He discussed how to integrate the needs of local populations with scientific restoration efforts to create a sustainable model for conservation that benefits both nature and people.

Over 50 attendees from various institutions and organizations participated in this event, and a discussion was held among all the participants to achieve the best possible outcome from the webinar.

Appointment of new Member Secretary

In compliance of the order No 1439/ X-1-2025-14(01)/ 2023 issued by the Uttarakhand government, dated 25 August , 2025. Shri T.R. Bijulal, IFS took over the charge as Member Secretary, Uttarakhand Biodiversity Board on 02.09.2025.

National Moth Week 2025

Spilarctia spp. © P.C. Rahul Kala

Diaphania indica © P.C. Rahul Kala

From July 26–28, 2025, *Titli Trust, Doon Nature Walks* and Uttarakhand Biodiversity Board, Dehradun jointly conducted annual moth surveys at Malsi, Lacchiwala, and Kaduapani as part of the global *National Moth Week* event.

Key Findings

- The 2025 surveys recorded a preliminary checklist of 101 moth species.
- Some were identified at the genus level, while others were confirmed at the species level.

39 प्रजातियों के 69 पतंगों की हुई पहचान

- Kaduapani showed the highest diversity with 48 species, followed by Lacchiwala (38) and Malsi (36).

A summary of 2025 surveys is mentioned below.

Location	Date	Time	No. of macromoth species identified in 2025	No of individuals 2025 (macromoths)
Malsi	26 Jul 2025	7:00 - 10:00 pm	36	69
Kaduapani	27 Jul 2025	7:00 - 10:30 pm	48	211
Lacchiwala	28 Jul 2025	7:00 - 10:30 pm	38	134

Ecological Importance of Moths

Moths are considered vital bio-indicators, as their diversity reflects the health of ecosystems. A high variety of moth species often points to a thriving habitat rich in plant life, which supports broader biodiversity.

They play multiple crucial ecological roles:

- **Pollinator** – especially for night-blooming plants.
- **Food Source** – supporting birds, bats, and other nocturnal/diurnal animals.
- **Monitoring** – their population trends provide insights into plant health and ecosystem balance.

Conclusion

The assessment of moth diversity in Dehradun not only contributes valuable data for long-term ecological monitoring, but also strengthens the global citizen science movement dedicated to understanding and conserving these essential creatures.

Uttarakhand Biodiversity Board hosted a special online session on International Tiger Day-2025

On July 29, 2025, the Uttarakhand Biodiversity Board in Dehradun hosted a special online session to commemorate International Tiger Day. The event focused on tiger conservation through two insightful sessions led by distinguished experts.

Session 1: "Prowling Through Corbett"

The first session was led by Shri Ranjan Kumar Mishra, IFS, PCCF, CWLW Uttarakhand, & Former Field Director, Corbett Tiger Reserve, Drawing on his extensive experience, he shared firsthand accounts and strategic insights from his time managing the reserve, which boasts India's highest tiger density.

He highlighted successful conservation strategies, including anti-poaching initiatives and habitat management. The discussion also touched upon the critical challenge of human-wildlife conflict and emphasized how vital community involvement is to conservation success.

Session 2: "Stalking the Secrets of the Tiger State"

This session featured Shri Sreenivasa Murthy Rangaiah, IFS, Retd, Former Member Secretary, Madhya Pradesh Biodiversity Board.

He explained the scientific monitoring techniques and dedicated efforts of the forest staff that led to

this remarkable recovery. He stressed that sustainable tiger conservation requires long-term political commitment, scientific management, and adaptive strategies to address evolving challenges.

The event, which saw the participation of over 30 attendees from various institutions and organizations.

A webinar organised on the occasion of World Ranger Day 2025

On August 4, the Uttarakhand Biodiversity Board, Dehradun hosted a webinar to commemorate World Ranger Day, an annual event globally celebrated on July 31st.

The keynote speaker was Shri Vikram Tomar, a retired Assistant Conservator of Forests (ACF) and a consultant with WWF-India. He

presented on "Role of Field Forest Staff in Protecting Forest Areas," sharing insights from his extensive experience.

Key Points

- Rangers are not just a "post" but include all frontline staff: forest guards, watchers, foresters, deputy rangers, and rangers.
- Forest fires are among the biggest threats, often man-made, and cause severe loss to biodiversity.
- Conservation should go hand-in-hand with development, but forests must remain a priority for ecological balance.
- Illegal logging and poaching can only be controlled through strong community intelligence networks.

Role of Rangers & Field Staff

- Patrolling & Surveillance
- Wildlife Protection
- Forest Fire Management
- Community Engagement
- Use of Technology

More than 26 people from various organizations joined the event. The session concluded with a Q&A, where participants engaged in a discussion to understand the difficult conditions forest rangers encounter in field.

Inception Meeting for Development of State Biodiversity Strategy and Action Plan for Uttarakhand

The Inception meeting was organized on 6, August, 2025 to initiate the process of updating the State Biodiversity Strategy and Action Plan (SBSAP) for Uttarakhand in line with the National Biodiversity Framework and the Kunming-Montreal Global Biodiversity Framework. It was emphasized that Uttarakhand's SBSAP, approved in 2018, requires revision due to evolving global and national commitments. The focus of the updated plan will move beyond merely controlling biodiversity loss to actively reversing it, with a strong emphasis on *in-situ* conservation supported by ex-situ measures. The discussions highlighted the need for inter-departmental collaboration, recognizing that biodiversity conservation is not limited to forests but also extends to agriculture, horticulture, animal husbandry, and fisheries. Specific concerns such as balancing productivity with indigenous horticultural species, protecting native cattle breeds like Badri, conserving trout and mahseer spawning grounds, and preserving local crop varieties such as rajma were discussed. The role of Biodiversity Management Committees and farmers was underlined as central to grassroots-level conservation efforts.

The keynote address outlined India's biodiversity strategy, which now incorporates the Kunming-Montreal Protocol's four global goals and 23 targets adapted to the national context. These include ecosystem restoration, management of genetic diversity, addressing invasive species, reducing pollution, strengthening ecosystem services, promoting sustainable agriculture and fisheries, mainstreaming biodiversity in policies, and ensuring inclusive and gender-sensitive governance.

The meeting concluded with clear action items. UNDP and ICLEI South Asia will provide technical support to align the updated plan, while the State Biodiversity Board will conduct policy analysis across departments. Line departments are expected to contribute inputs on indigenous species and biodiversity-linked schemes, and BMCs will be mobilized for in-situ conservation. ICLEI South Asia will also facilitate consultations and workshops to support the drafting process, after which the revised SBSAP will be finalized and submitted to the National Biodiversity Authority and the State Government.

In closing, the Member Secretary, Uttarakhand Biodiversity Board expressed gratitude to all dignitaries, partners, and participants, stressing the importance of collaborative efforts for achieving the updated biodiversity goals.





STATE BIODIVERSITY STRATEGY
AND ACTION PLAN FOR
UTTARAKHAND



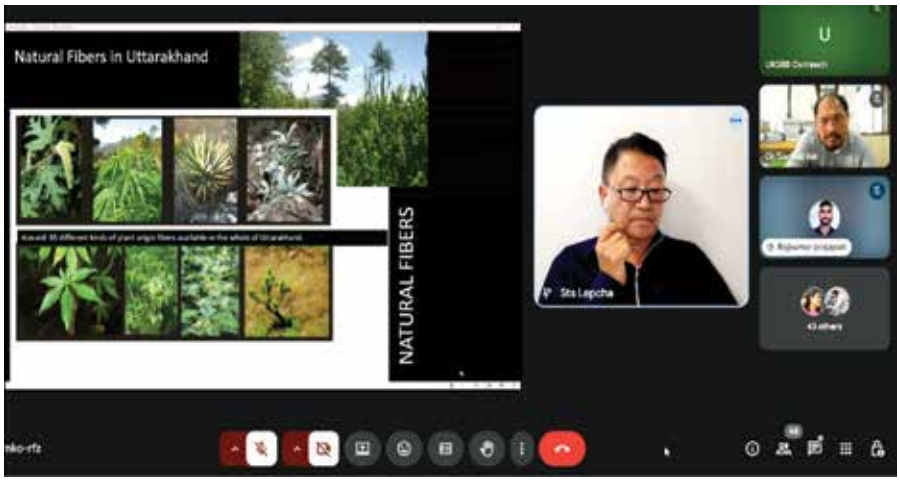






A Webinar for National Handloom Day 2025

On National Handloom Day (August 7, 2025), an interactive webinar titled "Exploring Uttarakhand's Natural Fibers and Handlooms" highlighted the crucial role of forest-based fibers in supporting local livelihoods. The event was jointly organized by the Uttarakhand Biodiversity Board and the EIACP Centre, Forest Research Institute, Dehradun.



The keynote address was delivered by Shri S.T.S. Lepcha (IFS, Retd.), a veteran forester and expert in non-timber forest products. Drawing upon his vast experience, he emphasized the immense potential of Uttarakhand's natural fibers in creating sustainable economic opportunities for rural and tribal communities.

Highlights

Rich Biodiversity of Fibers: Surveys across Uttarakhand have identified over 95–100 fiber-yielding species, with many hotspots in the Garhwal and Kumaon regions. The state's wide altitudinal range (subtropical to alpine) supports diverse ecological zones for these species. Focus is being placed on four to five major fiber species for sustainable development.

Key Fiber Species

Rambas (Bamboo): Valued for its fiber in handloom use, while its sap residue offers bio-insecticidal properties. It also acts as a natural barrier against forest fires, benefiting both conservation and local livelihoods.

Bhimal: A deciduous tree whose bast fibers are traditionally used for ropes and high-quality paper. It also provides fodder and fuelwood, making it a multipurpose species for Himalayan communities.

Industrial Hemp: Historically important in Himalayan culture, it provides durable fibers for textiles, dyes, and ropes. Today, it is being explored for modern applications in high-value fabrics and sustainable products.

Himalayan Nettle (*Girardinia diversifolia* / Bichhu Ghaas): Known for its smooth, lightweight, and insulating fibers, suitable for both summer and winter wear.

Policy and Institutional Gaps: Although policies were drafted in 2009 to promote selected fibers, provide subsidies, and encourage entrepreneurship, implementation has remained limited.

Innovation and Entrepreneurship: Beyond government initiatives, NGOs and individual enterprises have begun conducting research and launching businesses in natural fiber-based products.

Notable examples include Chipu Studio and Alai Design Studio, which have successfully developed product lines using Himalayan fibers.

The primary challenge for the industry is the absence of a comprehensive ecosystem that integrates the entire value chain, from raw material sourcing (seed/plant) to the final consumer product. To address this, the speaker recommended establishing a dedicated institute or a collaborative consortium to streamline research, production, and market access.

Over 40 attendees from various institutions and organisations participated in this event. After the session concluded, a question and answer segment took place, allowing for a healthy discussion among all webinar participants. They collectively took important steps to encourage the use of natural fibers and handloom products to help local people in Uttarakhand.

World Lake Day Webinar: Jointly organized by Uttarakhand Biodiversity Board, Dehradun & Wetlands International South Asia

On August 28, 2025, the Uttarakhand Biodiversity Board and Wetlands International South Asia organized a webinar for World Lake Day 2025. The two speakers presented a presentation about lake conservation.

Speaker 1: Dr. A.K. Patnayak (IFS, Retd. Former PCCF, Odisha) shared his vast experience and several important insights in celebration of World Lake Day, emphasizing global, national, and local perspectives on lake management and restoration.

- India drove the global policy milestone on sustainable lake management, leading to the UN resolution recognizing lakes as critical ecosystems in 2022.
- Emphasized the concept and necessity of "Integrated Lake Lenticular Basin Management" (ILLBM), advocating for the holistic management of lakes, rivers, wetlands, and coastal systems as connected entities.
- Highlighted issues like fragmented governance, lack of integrated hydrological assessment, weak local institutions, and the need for statutory authority and better data integration.
- Advocated nature - based solutions and use of traditional ecological knowledge, restoration, and not just mechanical removal.

Speaker 2: Dr. Ritesh Kumar, Director of Wetlands International South Asia, provided a detailed historical perspective on wetland governance in India, highlighting its evolution from traditional community-led protection and usage.

- Stressed the complexity and diversity of wetlands and lakes, noting that they defy easy classification and their management challenges stem from their land-water interface.
- Provided a historical overview of wetland governance in India, including local collective management traditions and the transition to modern policy frameworks like Ramsar designation and Wetlands Conservation Rules.
- Warned that urbanization and canal irrigation have led to extensive wetland loss; noted that for every square kilometer of new urban area, five hectares of wetlands disappear.
- Pointed to sectoral and policy confusion regarding definitions and management priorities, especially for small wetlands.
- Urged community stewardship, informal education, behavior-change campaigns, and involvement of all sectors and society, not just government, to achieve meaningful wetland conservation.
- Cautioned that technical fixes are not enough; basic actions like protecting inflows/outflows, preventing pollution, and linking conservation to local benefits are key.

The webinar called for collaborative action by governments, communities, researchers, and organizations to raise awareness, promote sustainable management, restore degraded lakes, and protect freshwater biodiversity for current and future generations. It also underscored the importance of integrating traditional knowledge, community participation, and science-based policies to ensure resilient, healthy lake ecosystems that benefit both nature and people.

The webinar was attended by a focused group of 24 participants, enabling meaningful interaction and detailed discussions. This intimate setting fostered an engaged environment where attendees could actively participate in the sessions, ask questions, and gain valuable insights from the expert speakers. Such a turnout reflects the targeted and specialized nature of the webinar, ensuring quality engagement and a productive exchange of knowledge.

Uttarakhand Biodiversity Board and WWF India jointly organized a webinar for International Vulture Awareness Day 2025

On September 8, 2025, the Uttarakhand Biodiversity Board and WWF India hosted a webinar for International Vulture Awareness Day. The event, presented by environmental science scholar Mr. Sunny Joshi, focused on the biology, ecology, and conservation of vultures, highlighting their critical role as "cleaners of the ecosystem" by consuming decaying carcasses and preventing disease spread.

Vulture Ecology and Threats

Vultures are raptors that act primarily as scavengers. They are long-lived, can nest on rocky cliffs, and are slow breeders with low survival rates. India is home to nine species of vultures, with four categorized as Critically Endangered by the IUCN, and only one species (the Eurasian Griffon) listed as Least Concern.

The primary cause of the catastrophic decline in their populations is Diclofenac poisoning. When vultures feed on the carcasses of livestock treated with this non-steroidal anti-inflammatory drug (NSAID), they experience fatal renal failure. Although the veterinary use of Diclofenac was banned in 2006, the illegal use of human-grade diclofenac remains a threat. Other threats include electrocution from power lines and competition for food with other scavengers like stray dogs, which can also pose a risk to human health. Another harmful NSAID, Ketoprofen, was also recently banned for veterinary use.

Conservation Efforts and Solutions

WWF India, in collaboration with the Forest Department and other partners, is actively working on vulture conservation. Their efforts include:

- **Nest Monitoring:** Nest monitoring plays a crucial role in vulture conservation by providing vital information on breeding success, population trends, and habitat use. It involves regular observation of nesting sites—often located on cliffs, tall trees, or power structures—to record data on egg laying, hatching rates, and fledgling survival. Monitoring helps identify disturbances, predation risks, and environmental threats affecting reproductive success. Trained field staff and researchers use non-intrusive methods, such as binoculars and camera traps, to minimize disturbance. The data collected through these efforts guide conservation actions, such as protecting critical nesting habitats, managing food availability, and ensuring the safety of breeding colonies.
- **Satellite Telemetry:** Satellite telemetry is a modern tracking technique used to study the movement, migration, and behavior of vultures in real time. By fitting lightweight GPS transmitters to the birds, researchers can monitor their flight paths, feeding ranges, and roosting sites over large geographical areas. This technology provides valuable insights into migration routes,

habitat preferences, and potential threats such as poisoning hotspots or collision zones with power lines. The data gathered through satellite telemetry helps in designing effective conservation strategies, identifying critical habitats, and ensuring better protection for vulture populations across regions.

- **Capacity Building & Community Awareness:** Training forest staff and conservationists to identify and monitor vulture populations. By empowering local stakeholders and strengthening institutional capacities, capacity building ensures more effective implementation of conservation programs and long-term sustainability of vulture protection efforts. Educating rural communities about the dangers of harmful drugs and promoting safer alternatives for livestock.

Conservation challenges were also discussed during the Q&A session. To prevent electrocution, power lines can be retrofitted with insulation and carcass dump sites should be moved away from them. 41 individuals, concluded with a discussion on future conservation steps.

Big Butterfly Month celebration 2025

Big Butterfly Month: India's Citizen Science Spectacle

The Big Butterfly Month (BBM) is India's annual flagship citizen science program, held every September, dedicated to the celebration, monitoring, and conservation of butterflies, which are vital pollinators. The event capitalizes on the peak butterfly activity during the monsoon-post-monsoon transition, transforming ordinary citizens into active field scientists. Participants engage in structured activities like guided walks and photo submissions to generate a robust, real-time dataset that is instrumental for ecological research and conservation policy.

1. Species Diversity
2. Population Trends
3. Habitat Health
4. Climate Change Impacts (Phenology)

The BBM is a comprehensive learning ecosystem making conservation science accessible to all, welcoming diverse audiences like beginners and children with no prior knowledge required. Expert mentors provide live guidance, constructive feedback, and crucial identification support. This is all facilitated through BBM's interactive digital platforms.

BBM is more than a fleeting event; it is a profound journey for participants, allowing them to:

- Sharpen Observation & Identification Skills
- Learn About Ecology
- Connect with Community
- Inspire Local Action

The urgency of this initiative cannot be overstated. With over 1,300 butterfly species in India, many populations are under severe pressure due to habitat loss, accelerated urbanization, and unpredictable climate shifts. By participating, your individual sightings are directly transformed into actionable science—data that helps:

- Track ecological changes.
- Protect vulnerable ecosystems.
- Shape the future of biodiversity policy.

Dehradun Dances with Butterflies: BBM 2025 Recap

Uttarakhand, a recognized biodiversity haven home to over 460 recorded butterfly species, celebrated the Big Butterfly Month with unparalleled enthusiasm in September 2025. This year, the Uttarakhand Biodiversity Board, the Titli Trust, and Doon Nature Walks collaborated to host a series of vibrant Butterfly Walks across Dehradun's celebrated trails.

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Three enchanting Sunday Butterfly Walks unfolded across Dehradun's emerald trails:

Trail	Species Spotted
Shikhar Falls	32
Sahastradhara	20
Thano	12

The successful BBM 2025 walks in Dehradun concluded with significant community engagement and valuable field observations. A total of 55 participants—a mix of families, students, and committed nature lovers—joined the expert guides across the three trails.

Participants were afforded the opportunity to marvel at some of the region's most captivating species, including the striking Orange Oakleaf, the elegant Indian Nawab, and the common yet vital Common Rose.

Participants were able to uncover key ecological processes firsthand: Nectar Trails and Feeding Behavior, Host Plant Relationships and Pollination Secrets.

Crucially, every observation reinforced the urgent call to action for habitat conservation.

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Webinar on Himalayan Day 2025: Focus on "Himalaya and Disasters"

A webinar on 9th September 2025, Jointly organized by EIACP Resource Partner on Forestry & Forest Related Livelihoods Forest Research Institute, EIACP Hub UKPCB & Uttarakhand Biodiversity Board Dehradun, Uttarakhand. The central theme, "Himalaya & Disasters," highlighted the significance of the Himalayas as the "Water Tower of Asia" and the lifeline for millions. The discussion underscored the growing vulnerabilities of this vital region due to climate change, natural hazards, and mounting human pressures, emphasizing the urgent need for sustainable solutions.

The webinar featured four expert speakers, each sharing valuable insights drawn from their specialized knowledge and experience.

Microplastics and Micropollutants:

Dr. S.S. Suthar of Doon University spoke about the rising threat of microplastics and micropollutants in Himalayan rivers. He explained that pollutants from pharmaceuticals, personal care products, and plastics are entering river systems, threatening ecosystems and human health. These contaminants, which include microplastics and triclosan, are a major concern because they are persistent, can enter the food chain, and aren't effectively removed by current wastewater treatment methods. The primary sources of this pollution are rapid urbanization, tourism, and inadequate waste management. Dr. Suthar stressed the need for stricter policies, better waste infrastructure, and increased public awareness to address this issue.

Himalayan Disasters and Vulnerability:

Dr. Rakesh Bhutani provided an overview of the disasters affecting the Himalayas, categorizing them as Natural hazards (e.g., earthquakes and floods) and Anthropogenic hazards (e.g., deforestation and unplanned construction). He highlighted specific disasters such as earthquakes, landslides, floods, and Glacial Lake Outburst Floods (GLOFs), which are all worsened by climate change and human activities like unregulated development. Dr. Bhutani emphasized that effective disaster management requires early warning systems, strict regulations on construction, and community training to improve preparedness.

Natural Farming and Sustainable Agriculture:

Dr. Anoop Badoni's presentation focused on Natural farming as a sustainable solution for plant growth and soil improvement. He explained that sustainable agriculture is crucial for food security and environmental health, as it relies on farming techniques that conserve natural resources and improve soil fertility without synthetic chemicals. Dr. Badoni detailed natural agro-products like Beejamrita and Jeevamrita, which are used to treat seeds and enhance soil health. He also highlighted government initiatives like the National

Mission for Sustainable Agriculture (NMSA) and the Paramparagat Krishi Vikas Yojana (PKVY), which aim to promote these eco-friendly farming methods despite challenges like a lack of awareness and concerns about yields.

Conserving the Himalayan Ecosystem:

Dr. Rajkumar Chaturvedi concluded the webinar by stressing the importance of conserving the Himalayan ecosystem. He described the Himalayas as the "lifeline of North India," explaining that the health of the vast Indo-Gangetic plains is directly linked to the stability of the mountains. He warned that unchecked urbanization, tourism, and infrastructure development threaten the fragile environment. Dr. Chaturvedi called for a multifaceted conservation approach involving policy interventions, research-based planning, and active community participation. He concluded by emphasizing that the Himalayas are a global environmental heritage that requires collective protection to ensure their sustainability for future generations.

Memorandum of Understanding (MOU)

This Memorandum of Understanding (MoU), signed on September 12, 2025, formalizes a five-year partnership between the Nature Science Initiative (NSI) and the Uttarakhand Biodiversity Board (UBB). The collaboration aims to promote biodiversity conservation, sustainable development, and ecological research in Uttarakhand.

Scope and Responsibilities

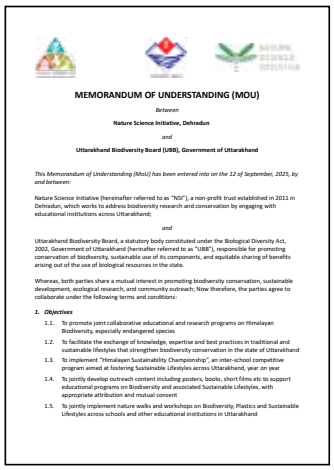
The collaboration will involve co-hosting webinars, seminars, and training programs, as well as sharing data and publications from joint projects. Both parties will also support fieldwork for biodiversity documentation and capacity-building workshops.

NSI's responsibilities include:

- Developing and maintaining a bilingual website, www.naturevidya.org, to support biodiversity and sustainability education.
- Providing trained personnel for the implementation of joint programs.
- Facilitating the participation of students, teachers, and local communities in conservation activities.
- Supporting the development of People's Biodiversity Registers (PBR) and submitting regular reports on joint activities to the UBB.

UBB's responsibilities include:

- Providing technical support and guidance in line with state biodiversity priorities.
- Facilitating access to resources such as Biodiversity Monitoring Committees (BMCs) and PBRs.
- Assisting with permissions and logistical support for fieldwork and events.



MEMORANDUM OF UNDERSTANDING (MOU)

Between

Nature Science Initiative, Dehradun

and

Uttarakhand Biodiversity Board (UBB), Government of Uttarakhand

This Memorandum of Understanding (MoU) has been entered into on the 12 of September, 2025, by and between:

Nature Science Initiative (hereinafter referred to as "NSI"), a non-profit trust established in 2011 in Dehradun, which works to address biodiversity research and conservation by engaging with educational institutions across Uttarakhand;

and

Uttarakhand Biodiversity Board, a statutory body constituted under the Biological Diversity Act, 2002, Government of Uttarakhand (herinafter referred to as "UBB"), responsible for promoting conservation of biodiversity, sustainable use of its components, and equitable sharing of benefits arising out of the use of biological resources in the state.

Whereas, both parties share a mutual interest in promoting biodiversity conservation, sustainable development, ecological research, and community outreach; Now therefore, the parties agree to collaborate under the following terms and conditions:

1. *Objectives*
   - 1.1. To promote joint collaborative educational and research programs on Himalayan Biodiversity, especially endangered species
   - 1.2. To facilitate the exchange of knowledge, expertise and best practices in traditional and sustainable lifestyles that strengthen biodiversity conservation in the state of Uttarakhand
   - 1.3. To implement "Himalayan Sustainability Championship", an inter-school competitive program aimed at fostering Sustainable Lifestyles across Uttarakhand, year on year
   - 1.4. To jointly develop outreach content including posters, books, short films etc to support educational programs on Biodiversity and associated Sustainable Lifestyles, with appropriate attribution and mutual consent
   - 1.5. To jointly implement nature walks and workshops on Biodiversity, Plastics and Sustainable Lifestyles across schools and other educational institutions in Uttarakhand

Both organizations have defined roles: NSI will provide trained personnel, develop a dedicated website (www.naturevidya.org), and facilitate community participation. UBB will offer technical guidance and logistical support. The partnership emphasizes shared resources, with intellectual property from joint projects being shared with proper attribution. The MoU can be extended or terminated with mutual consent.

A Webinar on World Bamboo Day 2025

On September 18, 2025, World Bamboo Day an interactive webinar Presentation Topics "Prospects in bamboo and government initiatives and towards bamboo development" and "Livelihood creation with locally easily available natural resources" highlighted the importance of bamboo and his organization's efforts to promote it. The event was collaboration between the Uttarakhand Biodiversity Board and the Uttarakhand Bamboo & Fiber Development Board.

Mr. Dinesh Joshi, Project Officer, Uttarakhand Bamboo & Fiber Development Board, highlighted the prospects of bamboo and government initiatives for its promotion. The Board focuses on resource development, skill training, design innovation, entrepreneurship, and marketing of bamboo products.

Bamboo, an eco-friendly and fast-growing resource, prevents soil erosion, absorbs high levels of carbon dioxide, and provides ecological benefits by supporting species like the musk deer, Himalayan Monal, and elephants.

Its applications range from housing and agricultural structures to handicrafts, furniture, jewellery, biodegradable crockery, activated charcoal, and innovative products like bamboo salt. At the industrial level, India's first bamboo-based ethanol plant in Assam processes 5 lakh tonnes annually. Additionally, the National Bamboo Mission offers subsidies of up to 50% for nurseries, plantations, and projects, encouraging growth in the bamboo sector.

Ms. Neera Sarmah, fondly known as the Bamboo Lady of India, is a pioneer in bamboo jewellery and

sustainable entrepreneurship. For more than two decades, she has championed the use of bamboo to create eco-friendly products, proving its potential as a sustainable alternative to conventional materials. Her work not only demonstrates the environmental benefits of bamboo such as reducing deforestation and promoting conservation but also empowers marginalized communities, especially women, by generating livelihood opportunities.

A Webinar on World Tourism Day 2025

On September 29, 2025, the Uttarakhand Biodiversity Board hosted a webinar on world tourism day. The theme of this webinar was "Regenerative tourism :A promise for recovery of the environmental and local communities". The event, presented by former HoFF, Dr. Rajeev Bhartari. He is a retired Indian Forest Service officer from the 1986 batch. Regenerative tourism is a form of travel that aims to restore and improve destinations rather than just reduce harm. It supports local communities, protects ecosystems, and promotes cultural preservation. Travelers actively contribute to environmental and social well-being, leaving a positive impact and fostering meaningful connections with nature and people.

He shares insights about how the Corbett Tiger Reserve has witnessed a remarkable boom in tourism and related economic activities since the formation of Uttarakhand state. This growth is primarily evidenced by the increase in dedicated tourism zones within the reserve, which have expanded from three to eight, including additions like Jhirna (1996), Durga Devi (2005), Dhela (2014), and Gargia (2020), with several more zones created in the surrounding landscape. Consequently, visitor arrivals have surged from 75,000 to over 3 lakh annually, driving the park's revenue up by an astounding 23 times to more than 23 crores. This surge in tourism has also led to an explosion in infrastructure outside the

reserve, with the number of resorts increasing from only 7 in year 2000 to 170 today—the highest among all Tiger Reserves. Despite this extensive growth and development, the text proudly notes that Corbett maintains its status as home to the single largest tiger population and one of the highest tiger densities, suggesting a successful balance has been struck between tourism expansion and conservation efforts. Contrasting Realities of Growth and Decline: Spectacular tourism growth, with hotels charging upwards of 10,000 per room night, contrasts sharply with nearby buffer zone villages like Bali and Jamria, where agriculture has stopped, livelihood options are few, and residents are forced to migrate for survival. Power Dynamics in Traditional Tourism: In the traditional tourism model, the real power is not with the visitors or the community but is wielded by "brokers," government officials, and the tourism industry, who set the stage for development. Critique of Sustainable Tourism: The speaker argues that current "sustainable tourism" has been co-opted to support endless economic growth, resulting in environmental degradation and increased social inequalities, making the practice insufficient. Defining Regenerative: Tourism Regenerative tourism is presented as a radical alternative where activities are interventions to build the capacities of both places and communities in harmony with the ecological system. Its purpose is to build communities and create conditions for people and places to thrive, in contrast to sustainable tourism's goal of "do a little less harm". Starting Point for Regenerative Development: A core principle of the Jamria project is that the process must begin by asking: "What does this place need?" and "What are the desires of the community?"—using these answers to determine how tourism can contribute, rather than starting with global goals or preconceived baggage. Vision for Regeneration: The vision for the Ramganga River Eco-lodge and Jamria village includes using visitors' costs to enhance river flow and enrich biodiversity, while also revitalizing agriculture, restoring traditional houses, preserving cultural heritage, and achieving reverse migration.

31 attendees wrapped up with a discussion on Sustainable Tourism and Related Economic activities.

Guidance

Shri R.K. Sudhanshu, IAS, Principal Secretary,
Forest, Environment Protection & Climate Change

Direction

Dr. S.P. Subudhi, IFS, Chairperson

Shri T.R. Bijulal, IFS, Member Secretary

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