



KERALA STATE BIODIVERSITY BOARD

EKAA

Environment. Kerala. Awareness. Action
Quarterly - Newsletter of the Kerala State Biodiversity Board

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IB DAY

NBA EXPO

ENVIRONMENT DAY

YOGA DAY

International Day for Biological Diversity 2024

Kerala State Biodiversity Board (KSBB) organized a comprehensive State Level Day Workshop on “Bioinvasion Regulatory Framework

– In Line with Kunming-Montreal Global Biodiversity Framework: Target 6.” As part of the International Day for Biological Diversity 2024 celebration on 22.05.2024 at KTDC Grand Chaithram, Thiruvananthapuram, Kerala State. Dr. V. Balakrishnan (Member Secretary, KSBB) welcomed the audience. Sri. K.V. Govindan presided over the meeting.

Dr. Rathan U. Kelkar IAS, (Secretary, Electronics & Information Technology and Environment Department, Government of Kerala & Chairman (i/c) KSBB), inaugurated the program online. During the inaugural address, the chairman specified the need to manage the bioinvasions in native ecosystems. Dr. V. Balakrishnan (Member Secretary, KSBB) presented a draft policy framework on “Status and strategies for control and management of priority invasive species in terrestrial and aquatic ecosystems’ prepared by KSBB, to be submitted to the Government of Kerala. Dr. K. Satheeshkumar and Dr. T.K. Hrideek delivered felicitations and Dr. T.S. Swapna proposed a vote of thanks. Around 80 participants, including experts, policymakers, and stakeholders from 28 line departments (Virtual Biodiversity Cadres), other

distinguished guests, staff of KSBB, representatives from Biodiversity Management Committees, etc., participated in the one-day consultative workshop. The whole participants were initially grouped into three sectors, (1) Agrobiodiversity, (2) Aquatic, and (3) Forest for the Identification of key Indicators, Means and methods of implementation, and Policy recommendations based on Target 6 of KMGFBF.



BE PART OF THE PLAN
International Day
for Biodiversity
2024

Based on the above sessions, a set of key indicators for assessing the Bioinvasions were suggested by the participants. The three groups discussed the means and methods of implementing various strategies to regulate the bioinvasions in Kerala’s agrobiodiversity, aquatic, and forest sectors. Panel discussions were done based on the relevant policy recommendations suggested by each team. The chairmen of the groups presented the key indicators of bioinvasion identified, the means and methods of implementation, and the policy recommendations. Dr. K. Satheeshkumar (Member, Kerala State Biodiversity Board) chaired the session. The chairs of each session consolidated and presented a comprehensive report/action plan based on the points and ideas that evolved in the group discussion and concluded the session with remarks.



Inauguration by Dr. Rathan U. Kelkhar IAS



'A draft policy framework of Bioinvasions' - Presentation by Dr. V. Balakrishnan



Presidential address by Sri K.V. Govindan



Felicitation by Dr. K. Satheeshkumar



Vote of Thanks by Dr. T.S. Swapna



KSBB team with participants of the workshop

“Kavinu Kavalay” A Sacred grove conservation campaign organized in all districts

As part of the celebration of International Day for Biological Diversity 2024, the Kerala State Biodiversity Board in association with the National Biodiversity Authority has organized a sacred grove conservation program named “Kavinu Kavalay” in association with selected Biodiversity management Committees, biodiversity clubs, citizen scientists, etc in each district. The program comprised of selection of a sacred grove in the locality, biodiversity inventory preparation of the selected sacred grove, Identification and management of bioinvasives in the sacred groves, and removal of plastic wastes in the study site. The program was conducted in all 14 districts in the state with a good number of stakeholder participation.



Thiruvananthapuram, Mangalapuram



Kollam Mathira Kavu



Mallapuzhassery, Pathanamthitta

GPS Map Camera

8M4Y+JMJ, Mallapuzhassery, Kerala 689643, India



Erattanal Kavu, Elakkadu, Kottayam

Flackad



Thirunagamkulangara Kavu, Vayalar, Alappuzha

GPS



Thottathil kavu, Kothamangalam, Ernakulam



Muthuthala Muthassiyar Kavu, Palakkad

GPS

Palakkad, Kerala 679303, India



Ariyallur Serpent- Kav, Vallikkuunu Bmc, Malappuram



Kadalundi BMC, Kozhikode



Kannur Deviyyott Kav



Wayanad Edavaka

GPS Map Camera

Wayanad, Edavaka, Kerala 070645, India



Thodupuzha, Kerala, India
VMRR+85F, Amramkavu Kolani, Thodupuzha, Idukki
Lat 9.890464°



KSBB became part of the National level Biodiversity Day celebrations organized by NBA at Visakhapatnam

KSBB member secretary Dr. V. Balakrishnan and officials Mr. Vishnu T. And Mr. Sudheesh Lal actively participated in the National level Seminar and Exhibitions respectively, being organized by NBA at Visakhapatnam during 22-23 May 2024. The national-level seminar was held at the Andhra University convention center on May 22. PCCF Chiranjiv Choudhary was the chief guest. The Guest of Honour was Prof. Hanchinal Rayappa Ramappa, Non Official Member of the NBA. Member secretary of Andhra Pradesh B.V.A Krishna Murthy offered an IB Day message and Vice Chancellor of Andhra University inaugurated the 'Biodiversity Expo' by various line departments and selected State Biodiversity Boards.

KSBB exhibited selected GI-tagged Rice varieties, seaweed products, value-added products from indigenous crops, and videos and posters depicting the major achievements of KSBB. Hundreds of curious participants from across the country visited the KSBB exhibition stall at Visakhapatnam.



World Environment Day 2024 celebrated

State level Seminar on "Land restoration, Desertification and Drought resilience" and inauguration of Orumikkam Aruvikkayi-Stream Conservation campaign

The Kerala State Biodiversity Board conducted a one-day seminar on "Land restoration, Desertification, and Drought resilience" at Krishna Menon Memorial Government Women's College, Kannur. Dr. K.T Chandramohan (Member, Kerala State Biodiversity Board, and Principal Krishna Menon Memorial Government Women's College, Kannur) delivered the welcome speech. The function was presided over by Sri. KV Govindan (Member, Kerala State Biodiversity Board). He has specifically mentioned that "Orumikkam Aruvikkayi", the Stream conservation campaign initiated by KSBB as part of World Environment Day is a program that is in close alliance with this year's World Environment Day theme. The program was inaugurated by the District Collector Sri. Arun K. Vijayan IAS. The collector mentioned the role of youth in the conservation of biodiversity. The Environment Day Message and the Key Note speech were given by Prof. Sabu A. (Kannur University). The Govt. intervention in the climate action policies and the contribution of various sectors especially students in conservation was also highlighted in the keynote address. The Tree planting program was inaugurated by Sri. Arun K. Vijayan IAS, by planting *Saraca asoca*. Saplings of *Aegle marmelos*, *Azadirachta*

indica, *Garcinia gummi-gutta*, *Phyllanthus emblica*, *Cinnamomum verum*, *Wrightia tinctoria*, *Gmelina arborea* were also planted as part of the program. Vote of thanks given by Dr. Nidheesh KP, NSS Program Coordinator, KMM Govt. College, Kannur. Students and teachers of the college, biodiversity club members and biodiversity management committee representatives participated in the program.



Inauguration of the program by the District Collector Sri. Arun K. Vijayan IAS



Presidential address by Sri K. V. Govindan (Member, KSBB)



Keynote speech by Dr. Sabu A. (Kannur University)

World Environment Day 2024 celebration of KSBB in association with Dept. Of Botany, University of Kerala, Thiruvananthapuram

Kerala State Biodiversity Board Organized a State Level workshop on World Environment Day 2024 in Association with Department of Botany, University of Kerala, Thiruvananthapuram, focused on the theme of "Land Restoration, Desertification, and Drought Resilience". The event was marked by insightful speeches, educational lectures, and a significant tree planting ceremony. Dr. T.S. Swapna, Professor, Department of Botany, University of Kerala and Member Kerala State Biodiversity Board (KSBB) commenced the event with a warm welcome to all attendees. She emphasized the significance of World Environment Day and how it serves as a reminder of our responsibilities towards nature.

In his presidential address, Dr. E A Cyril, Professor and Head, Department of Botany, University of Kerala spoke about the pressing environmental challenges today. Dr. Cyril urged the audience to adopt sustainable practices in their daily lives and to support policies that promote environmental protection. Dr. K. Satheeskumar (Member, KSBB) officially

inaugurated the event and delivered the lead speech in the World Environment Day 2024 event. In his speech, he underscored the importance of collective action and community involvement in environmental conservation. The highlight of the event was the special invited lecture by Dr. R. Ajaykumar Varma, Chairman, State Expert Appraisal Committee (SEAC), Govt. of Kerala. Dr. Varma, provided an in- depth analysis of the current state of the environment and the urgent need for restoration efforts. Dr. N. Mohanan, Scientist (Retd.) JNTBGRI, conducted an enlightening session on the Red Listing of plants.

In a symbolic and impactful gesture, Dr. R. Ajaykumar Varma planted a sampling of the critically endangered plant *Madhuca balakrishnanii* (Sapotaceae) in the campus. The event concluded with a vote of thanks delivered by Dr. Akhila S. Nair, Senior Research Officer, KSBB. A total of 100 participants comprise of researchers and teachers of University of Kerala, participated in the program.



Tree planting as part of WED at University of Kerala



Invited speech by Dr. Ajaykumar Varma



Inauguration of the program by Dr. K. Satheeshkumar



Welcome speech by Dr. T.S. Swapna



Experts with participants of the seminar

‘Orumikkam Aruvikkaay’ -Stream conservation campaign organized by KSBB

‘Orumikkam Aruvikkaay’, a stream conservation campaign organized by KSBB to address World Environment Day celebrations at BMC levels. The campaign include the selection of a stream in the BMC, biodiversity inventory preparation of the stream, restoration initiatives such as planting saplings in its banks, identification and management of bioinvasives associated with the selected stream and plastic waste management in and around the stream. A number of BMCs in all the districts organized stream restoration program in association with Biodiversity clubs and citizen scientist of the locality and made the

campaign a big success.



Amboori BMC, Thiruvananthapuram



Elamdesam Block Panchayat, Idukki



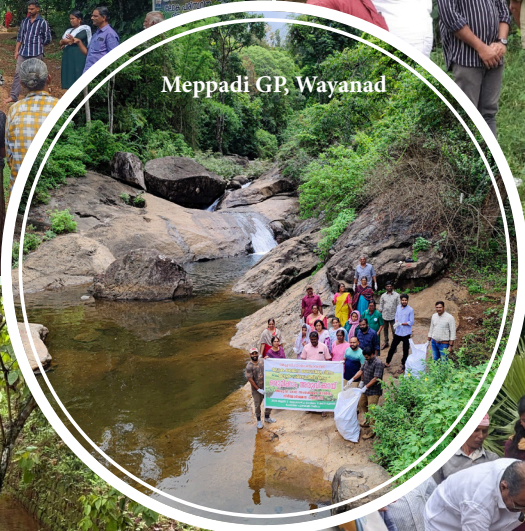
Kanjikuzhy BMC, Alappuzha



Chithara GP, Kollam



Anicadu, Pathanamthitta



Meppadi GP, Wayanad



Kuttiattoor GP, Kannur



Vadavannur BMC, Palakkad



Kodiyathur BMC, Kozhikode



Kalikavu Block Panchayath, Malappuram



Mulanthuruthy GP, Ernakulam



Padne GP, Kasargode

International Yoga Day Celebrated

Kerala State Biodiversity Board has celebrated the International Day of Yoga 2024. On 21/06/2024, at 11 AM KSBB organized a Yoga demonstration session at the Biodiversity Museum of Kerala State Biodiversity Board, by Smt. Silpa Mohan, an eminent trainer in the field of Yoga practice. The trainer explained the role of Yoga in sustainable life. She has given a training session with demonstrations of different 'ASANAS' for a healthy body and a peaceful mind. She has also explained the role of Pranayamam for a stress-free mind. According to the trainer, traditional food culture is one of the best methods for a fit mind and body. She has requested the Participants to avoid junk food culture and move ahead with a traditional cuisine with is rich with the agro-biodiversity heritage of Kerala. Dr. Akhila S. Nair, Senior Research Officer of Kerala State Biodiversity Board welcomed the audience and Dr. K. Sreedharan, Research Officer of KSBB expressed a vote of thanks. School students,

Teachers, and Biodiversity Board staff attended the event. KSBB has initiated a campaign named 'Yoga for sustainable life' and several BMCs and Biodiversity clubs organized events in association with the Yoga Day celebration..

Glimpses of Yoga Day



Earth Day celebrations

Perungadavila BMC, Thiruvananthapuram District

Earth Day celebration was organized by Perungadavila BMC on April 22nd at 10 am. The function was presided over by Vice President S.Bindhu and inaugurated by BMC President S. Surendran. The president has emphasized the ways to restore harmonious life with nature and embrace sustainable production and consumption. Assistant Secretary T Robert, Jr. Superintendent SR. Pramila, BMC Member Mr. Venugopal addressed the gathering. Biodiversity Working Group Vice Chairman S Velukuttipilla took an environment awareness session. Painting, drawing, quiz, and poetry competitions were held for the participants. Prizes were distributed to the

participants. BMC convenor Thuvayoor Vikraman Nair delivered the vote of thanks.



Earth day @Perungadavila BMC

Marayoor Grama panchayat, Idukki

Release of updated PBR of Marayoor BMC was carried out by Sri K.V. Govindan, The Board member of KSBB. BMC chairperson Smt. Deepa Aruljyothi presided over the function State biodiversity Board members Dr. K Satheesh Kumar delivered the introductory speech and Dr. K T Chandramohan delivered the keynote address respectively on the occasion. KSBB district coordinator Smt. Aswathi and BMC representatives greeted the event. Gram Panchayat vice president Sri. Jomon Thomas welcomed the audience and ward member Sathyavathi Palaniswami Expressed a vote of

thanks.



Release of updated PBR @ Marayoor BMC

Release of PBR second volume Thazhakkara BMC, Alappuzha District.

Thazhakkara BMC, Alappuzha district became the first BMC of the district who have prepared and released the second volume of the People's Biodiversity Register (PBR). The gap areas in the first volume of PBR were identified by the technical experts and the second volume was modified accordingly with the technical support from KSBB. The release of the PBR second volume was done by Sri M.S. Arun Kumar MLA in a grand function at the Panchayat conference hall on 22/06/2024. Later the BMC chairperson Mrs. Sheeba Satheesh handed over the PBR second volume to Dr. V. Balakrishnan, The member secretary of KSBB at

the Headquarters of KSBB at Thiruvananthapuram on 26/06/2024.



Submission of PBR second volume to KSBB

Success stories of Human wildlife conflict management By Manisha U.K., NBA Intern, KSBB

Man-wildlife conflict occurs when both human needs and wildlife conflicts overlap with each other. As the human population increases their needs also increase which leads to over-exploitation of resources. An increase in developmental activities can lead to the destruction of forest areas leading to habitat fragmentation. Due to the loss of habitat and food, animals enter human settlements for their survival. They will destroy those that obstruct their way which can be agricultural fields, human shelters, etc. To reduce such conflicts it is necessary to adopt measures that are socially, ecologically, and economically sustainable. Some of the examples are given below:

- 1. Lion Guardians, Kenya:** In regions like Amboseli and Maasai Mara, local communities have implemented programs where Maasai warriors are employed as "Lion Guardians." These individuals monitor lion movements, warn communities of potential conflicts, and promote coexistence through education and awareness programs. This has significantly reduced retaliatory killings of lions by local communities.
- 2. Coexistence in Snow Leopard Habitat, Nepal:** In places like the Annapurna Conservation Area in Nepal, initiatives have been launched to reduce livestock depredation by snow leopards. This includes predator-proofing livestock pens and compensating herders for any losses. These measures have helped reduce conflict and improve local attitudes towards snow leopards.
- 3. Crop Insurance Schemes, India:** In parts of India, particularly where elephants roam, innovative crop insurance schemes have been implemented. Farmers are compensated for crop damage caused

by elephants, which reduces the economic impact on local communities and minimizes retaliatory killings of elephants.

- 4. Wildlife Overpasses and Underpasses, Various Countries:** In regions where roads and highways intersect wildlife habitats, wildlife overpasses and underpasses have been constructed. These structures allow animals to cross safely over or under roads, reducing vehicle collisions and human-wildlife conflicts.
- 5. Human-Elephant Conflict Mitigation, Sri Lanka:** In Sri Lanka, where human-elephant conflicts are prevalent, electric fences combined with early warning systems (using technology like SMS alerts) have been implemented. This helps farmers protect their crops and alert them to the presence of elephants, reducing confrontations and killings.

India has several notable success stories in managing human-wildlife conflict, employing a variety of strategies ranging from community involvement to technological innovations. Here are some examples:

- 1. Gir Lion Conservation:** The Gir Forest National Park in Gujarat is home to the last remaining Asiatic lions. Conservation efforts here have involved relocating villages from core lion habitats, compensating villagers for livestock losses, and promoting eco-tourism to provide alternative livelihoods. These efforts have helped stabilize and increase the lion population while reducing conflicts with local communities.
- 2. Project Tiger:** Launched in 1973, Project Tiger is a major conservation initiative aimed at protecting the Bengal tiger and its habitat.

It involves relocating communities from tiger reserves, establishing buffer zones, and providing compensation for livestock losses. The success of Project Tiger has led to the recovery of tiger populations in many reserves across India.

3. **Elephant Corridors in Karnataka:** In the southern state of Karnataka, efforts have been made to create and protect elephant corridors that allow elephants to move between fragmented habitats safely. This includes securing pathways, establishing warning systems, and compensating farmers for crop damage.
4. **Conservation Initiatives in Kaziranga:** Kaziranga National Park in Assam is renowned for its population of Indian one-horned rhinoceroses and other wildlife. Conservation efforts here include anti-poaching measures, community involvement in protecting the park, and relocating villages from flood-prone areas.
5. **Snow Leopard Conservation in Ladakh:** In Ladakh, efforts to conserve the endangered snow leopard have included predator-proofing livestock pens, providing insurance for livestock losses, and involving local communities in monitoring and conservation efforts. These initiatives have helped in reducing retaliatory killings of snow leopards and improving local attitudes towards their conservation.

Kerala, located in the southwestern part of India, faces various human-wildlife conflicts due to its rich biodiversity and human population density. Here are some examples of successful initiatives in managing these conflicts:

1. **Elephant Rehabilitation Centers:** Kerala has established rehabilitation centers like the Elephant Rehabilitation Centre at Kottoor, near Thiruvananthapuram. This center rescues and rehabilitates injured, orphaned, or displaced elephants. By providing proper care and habitat, these centers reduce human-elephant conflicts by reintegrating elephants into safe environments away from human settlements.
2. **Human-Leopard Conflict Management in Wayanad:** The Wayanad district in Kerala has implemented several successful strategies to manage conflicts with leopards. These include setting up camera traps to monitor leopard movements, educating local communities about leopard behavior, and establishing rapid response

teams to address conflict situations promptly. These efforts have helped reduce incidents of livestock predation and human-wildlife conflicts.

3. **Community-Based Conservation Initiatives:** Several community-based conservation initiatives in Kerala have proven successful in mitigating conflicts with wildlife. For example, in areas like Periyar Tiger Reserve and Parambikulam Tiger Reserve, local communities are involved in eco-development programs. These programs include promoting sustainable livelihoods, such as eco-tourism and organic farming, which reduce dependency on forest resources and minimize conflicts with wildlife.
4. **Marine Turtle Conservation:** Along Kerala's coastline, efforts to conserve marine turtles have been successful in reducing conflicts related to human activities such as fishing. Conservation initiatives include establishing protected nesting beaches, implementing turtle excluder devices (TEDs) in fishing nets, and conducting awareness programs among fishermen. These efforts have helped in increasing turtle nesting success and reducing accidental capture in fishing gear.

These success stories demonstrate that proactive measures involving local communities, innovative technologies, and policy interventions can effectively mitigate human-wildlife conflicts while promoting conservation efforts and improving livelihoods.

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Dr. Rathan.U. Kelkhar IAS

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1. **Principal Secretary, Environment Department**
2. **Agriculture Production Commissioner**
3. **Principal Secretary, Fisheries Department**
4. **Principal Secretary, Forest and wildlife Department**
5. **Executive Vice President, KSCSTE**
6. **Dr. K. Satheesh Kumar**
7. **Sri. K.V. Govindan**
8. **Dr. T.S. Swapna**
9. **Dr. K.T. Chandramohan**
10. **Sri. Pramod G. Krishnan IFS**

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