

WCB RESEARCH FOUNDATION
Adding Science to Conservation



2023-24

ANNUAL REPORT

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WCB RESEARCH FOUNDATION

Adding Science to Conservation

Wildlife and Conservation Biology (WCB) Research Foundation is a Non-profit organization registered with Government of India established in September 2020. The foundation is established with the goal of accelerating action-oriented research and enhances the capacity of students for research and development in the field of wildlife and conservation biology. We are committed to science-based conservation and outreach activities through research and development.

The major thrust areas of research at WCB are mammalian ecology and behavior, habitat evaluation and modeling, wetland biology and monitoring, biodiversity monitoring and environmental biotechnology. We are also engaged in consultancy work such as biodiversity monitoring, soil and water testing and green audits.

Since the establishment of the WCB Research Foundation, we have had many interns and dissertation students. We offer and encourage exchange programmes with organizations and institutes with similar interests and open for bilateral programmes related to wildlife and conservation biology.

Currently we have four ongoing research and conservation projects in different parts of the Gujarat state. Our future goal is to encourage young students to make their career in the field of wildlife and conservation and enhance the capacity through training and workshops. Apart from this, we publish scholarly research articles and observations focused on the field of wildlife and conservation biology in our triannual journal "Prithivya". Every year we announce the Dr M I Patel National Award for young wildlife biologists to encourage young researchers. We are also engaged in community services such as wildlife rescue, plantation, science-based restoration and biodiversity monitoring and assessment.

VISION

॥ आत्मवत् सर्वभूतेषु यः पश्यति स पण्डितः ॥
"जो सब प्राणी को स्वयं की भाँति (आत्मवत्)
देखता है वही पंडित है ।"

The one who sees every creature of nature as his own (self-self) is the real scholar.

MISSION

To conserve the wildlife and the natural resources through scientific research and to create the community of practice by enhancing capacity of conservation professionals through scientific training for effective conservation.

OBJECTIVES

- To conduct and promote research and monitoring on wildlife and habitats.
- To promote awareness for wildlife in society.
- To organize scientific gatherings.
- To organize capacity building programmes.
- Dissemination of scientific knowledge on wildlife and conservation.
- To generate skilled human resources through research training, internships and dissertations.
- To assist the local government and policy makers for wildlife management and habitat conservation.

DIRECTORS



DR. NISHITH DHARAIYA

FOUNDER;
HONORARY DIRECTOR OF
RESEARCH



MR. PRATIKKUMAR DESAI

CO-FOUNDER;
DIRECTOR
OF OPERATIONS

GOVERNING COUNCIL

DR. SAGARIKA DAMLE

RETIRED PROFESSOR

DR. NURIA SELVA

ASSOCIATE PROFESSOR;
POLAND

DR. RAJESH SENMA

ASSOCIATE PROFESSOR;
VANKAL, SURAT

DR. RUSHIKA PATEL

INDEPENDENT RESEARCHER

DR. SHIVANGI MISHRA

ASSISTANT PROFESSOR;
JAIPUR

MR. PRASAD PATIL

RANGE FOREST OFFICER;
GUJARAT FOREST DEPARTMENT

MS. JAHNVI PATEL

ADMIN OFFICER;
WCB RESEARCH FOUNDATION

ADVISORY BOARD

11

LIFE MEMBERS

19

TRI-ANNUAL MEMBERS

18

TEAM MEMBERS

5

MESSAGE FROM DIRECTOR

We are pleased to present the 2023–24 Annual Report of WCB Research Foundation, reflecting a year of steady progress in science-based conservation. Guided by our vision, Adding Science to Conservation, we focused on strengthening research, supporting field-based action, and promoting knowledge that informs practical conservation.

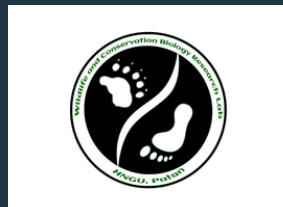
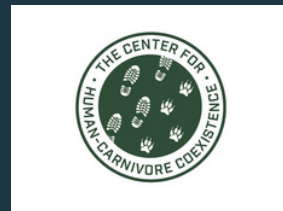
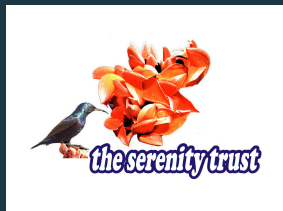
This progress has been possible through the shared efforts of our partners, members, and community collaborators. Their continued support has helped expand our programmes and ensure that our work remains relevant to on-ground conservation needs. Over the year, we emphasized training, outreach, and education, while engaging local communities as active participants in conservation. We firmly believe that lasting conservation outcomes emerge when scientific research is combined with community involvement. We thank our supporters, donors, staff, and volunteers for their trust and commitment. We invite you to explore this report and learn more about our work as we continue striving for a future where conservation is rooted in science and shared responsibility.

Dr. Nishith Dharaiya

Founder, Hon. Director of Research



DONORS & PARTNERS



A photograph of a waterfall cascading over a rocky ledge, surrounded by dense green foliage. The waterfall is the central focus, with water flowing down a mossy rock face. The surrounding forest is thick with various shades of green, and the sky is a pale, overcast blue.

**ONGOING
PROJECTS**

Evaluation & Monitoring of Ecological Corridors for Sloth bear in Central Gujarat

This ongoing project focuses on the evaluation and monitoring of ecological corridors for sloth bears in central Gujarat, particularly the landscape linking Ratanmahal and Jambughoda Wildlife Sanctuaries. The corridor passes through human-dominated areas where habitat fragmentation, resource dependence, and land-use change influence bear movement and increase the likelihood of human–bear encounters. The project seeks to understand how sloth bears use these non-protected landscapes and how corridor functionality supports connectivity between forest patches.

Fieldwork integrates systematic sign surveys, camera trapping, and scat analysis to document presence, habitat use, and dietary patterns. Secondary data on conflict incidents and local consultations are used to understand interaction patterns and community perspectives. By combining ecological and social information, the project is building a baseline dataset to identify high-use zones, assess habitat quality, and prioritize areas for corridor strengthening. The findings are intended to inform adaptive management, improve conflict-mitigation planning, and support long-term conservation of sloth bears in working landscapes.



Understanding and Mitigating Human-Sloth bear Conflicts

This project focuses on understanding and addressing human-sloth bear conflicts across sloth bear landscapes through a combination of data analysis, field engagement, and socio-economic assessment. It examines patterns and trends in conflict using secondary records to identify when and where interactions are most frequent. This helps build a landscape-level understanding of conflict hotspots and recurring risk factors.

A key component of the project is direct engagement with affected communities. The team conducts interviews with victims and local residents to gather first-hand accounts of encounters, understand local perceptions of sloth bears, and document circumstances surrounding attacks. These interactions also help integrate local knowledge into the development of practical mitigation measures.

The project further evaluates the social and economic impacts of conflicts. It considers medical costs, livelihood losses linked to agriculture and livestock, and broader effects such as reduced tourism and persistent fear among communities. By linking ecological realities with human dimensions, the project aims to inform balanced conflict-mitigation strategies that protect both sloth bears and local livelihoods.



Conservation Actions Project for Sloth bear

This conservation action project led by WCB Research Foundation focuses on practical, field-based measures to reduce human–sloth bear conflicts while improving habitat quality. The approach combines habitat management, non-lethal deterrents, and community-oriented actions to support coexistence in shared landscapes. One major component is the creation of water accumulation structures. Using hydrological modelling, suitable locations are identified where rainwater can be retained for longer periods. These structures help ensure water availability for sloth bears and other wildlife during dry seasons, reducing the need for bears to move into villages and farms in search of water and thereby lowering conflict risk. The project also promotes a traditional, non-lethal deterrent tool known as the “Ghanti Kathi.” This bear-deterrent stick produces sound while walking and includes blunt spikes for close-range protection. Designed from local knowledge, it offers a humane and practical method for people working in bear-prone areas to reduce surprise encounters.

In addition, habitat cleaning drives are being planned in collaboration with the Gujarat Forest Department to remove waste and improve habitat conditions. Together with plantation of fruiting trees in degraded areas, these efforts aim to enhance natural resources for sloth bears, discourage their movement into human-use areas, and strengthen long-term coexistence.





**COMPLETED
PROJECTS**

Conserving Sloth Bears in Central Gujarat through Community Outreach

This project focused on reducing human–sloth bear conflict in central Gujarat through a structured conservation education and community outreach programme. It combined ecological information with social understanding by documenting local perceptions, myths, and experiences related to sloth bears. The programme promoted coexistence by sharing scientific knowledge on bear behavior, safe practices in bear habitats, and conflict-avoidance measures. Activities included school education, village awareness meetings, educational materials in local languages, interviews with affected people, and capacity building of forest staff. The approach emphasized two-way learning, where local knowledge informed conservation messaging and planning.

Outreach efforts improved awareness and corrected misconceptions about sloth bears among local communities and students. Safety education and practical guidance helped people better understand how to avoid risky encounters. Engagement with schools, teachers, and frontline staff strengthened local participation in conservation. Distribution of booklets, posters, and activity materials increased reach and visibility. The programme encouraged more tolerant attitudes, fostered dialogue between communities and forest staff, and built a foundation for long-term coexistence and community-supported conservation.





NATIONAL TRAINING/WORKSHOP

Hands-on Workshop on Tools for Conservation Research

September 16-18, 2023

A three-day hands-on workshop on Tools for Conservation Research was conducted from 16–18 September 2023, jointly organized by the Department of Life Sciences, HNG University, Patan, and WCB Research Foundation. The workshop aimed to build practical research skills among students and early-career conservationists by introducing analytical and visualization tools widely used in ecological research.

The resource person, Mr. Ashish Jangid, delivered interactive sessions on the use of GIS and R for conservation research. Participants received step-by-step guidance on data handling, spatial analysis, and basic statistical workflows. The sessions emphasized how these tools can be used to analyze ecological data, create meaningful visualizations, and present results in a clear and impactful manner. The workshop helped participants understand how to turn raw field data into informative outputs that strengthen research communication and conservation decision-making.



Hands-on Workshop on Molecular Biology: A Tool for Wildlife Species Identification

January 8-13, 2024

A six-day Hands-on Workshop on Molecular Biology: A Tool for Wildlife Species Identification was held from 8–13 January 2024. It was jointly organized by the Department of Biotechnology, Sant Gadge Baba Amravati University, Amravati, and the Wildlife and Conservation Biology (WCB) Research Foundation, Patan, in association with Melghat Tiger Reserve (MTR), Amravati. The programme aimed to introduce participants to molecular approaches used in wildlife research and conservation.

The workshop combined field and laboratory training. Participants learned non-invasive field methods such as scat sample collection and preservation for genetic studies. Laboratory sessions covered DNA extraction from different sources including scat, blood, and tissue, followed by PCR amplification and basic sequencing workflows. The training highlighted how DNA-based tools support species identification, population studies, and forensic applications. Overall, the workshop strengthened practical skills and demonstrated the value of molecular techniques in modern wildlife research and conservation.

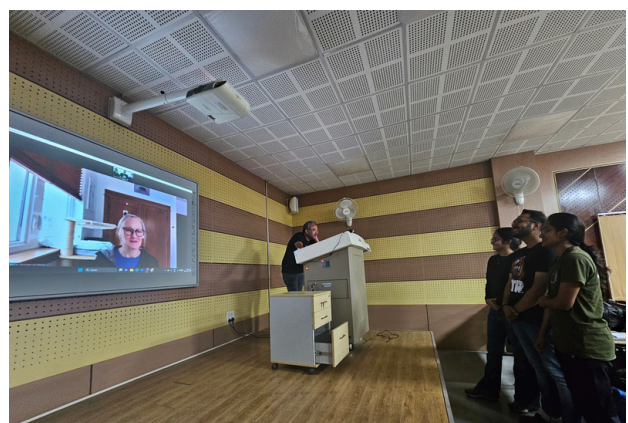


Field-Based Training on Advances in Wildlife Research with Special Emphasis on Sloth Bear Conservation in India

February 26-March 1, 2024

A field-based training programme on “Advances in Wildlife Research with special emphasis on Sloth Bear Conservation in India” was conducted from 26 February to 1 March 2024 under the IBA Experience and Exchange Grant. The programme was jointly organised by WCB Research Foundation and the Department of Forestry, Wildlife and Environmental Science, Guru Ghasidas Vishwavidyalaya, with support from the International Association for Bear Research & Management (IBA), USA. Classroom and field sessions were held at Guru Ghasidas Vishwavidyalaya and the Marwahi Forest Division.

The training aimed to build the capacity of young researchers in bear research and monitoring. It covered bear ecology, human–bear conflict mitigation, camera trapping, GIS and ecological modelling, genetics, microbiology, and grant writing. Participants received hands-on experience in preparing datasheets, using GPS, identifying bear signs, and deploying camera traps. The programme strengthened practical skills, encouraged science-based monitoring, and supported the development of new research ideas for sloth bear conservation.



Book Launch

જૈવ વિવિધતા

August 29, 2023

The book જૈવ વિવિધતા was launched on 29 August 2023 as an effort to make the concept of biodiversity accessible to a wider audience. Written in Gujarati in a clear and simple style, the book explains the diversity of life around us and highlights why biodiversity matters in our daily lives. It introduces readers to local plants, animals, and ecosystems, helping build a basic understanding of nature and conservation.

Authored by Dr. Rajesh Senma and published by WCB Research Foundation, the book serves as a valuable resource for students, educators, and nature enthusiasts. By presenting scientific ideas in an easy-to-understand language, it aims to inspire greater awareness and appreciation of biodiversity and encourage community participation in conservation.



Launch of National Bear Conservation Network (NBCN) Campaign

March 23, 2024



The National Bear Conservation Network (NBCN) was launched as a collaborative initiative to strengthen bear conservation efforts across India. It is a joint initiative of WCB Research Foundation and IUCN SSC Bear Specialist Group, created in response to the conservation needs of India's four bear species—Asiatic black bear, Himalayan brown bear, sloth bear, and Malayan sun bear—several of which are listed as Vulnerable.

The goal of NBCN is to promote science-based conservation and build a nationwide platform that connects bear biologists, researchers, forest managers, and conservation practitioners. The network aims to facilitate collaboration, encourage research on bear ecology and conservation, and raise public awareness about the ecological importance of bears and the threats they face. NBCN also seeks to support policymakers by providing scientific inputs for habitat management and conflict mitigation. By bringing together professionals and motivated volunteers, the network works toward coordinated, long-term conservation of bears and their habitats in India.

For further inquiry you may contact to
nbcn.india@gmail.com



Celebration of World Sloth bear Day

October 12, 2023

World Sloth Bear Day 2023 was celebrated at Kevdi in Chhota Udepur, Gujarat, in collaboration with the Forest Department to raise awareness about sloth bear conservation and safe coexistence. The programme brought together local communities and frontline forest staff for an interactive awareness event focused on reducing human–bear conflicts.

Informative videos on sloth bear ecology, behavior, and conservation were screened to improve understanding of the species. A video mime on sloth bear safety was presented to demonstrate appropriate responses during encounters in an engaging and easy-to-understand format for local audiences.

As part of the practical outreach, a live demonstration of the “Ghanti Kathi,” a traditional bear-deterrent stick, was conducted. These deterrent sticks were distributed to local residents and frontline forest personnel to support safer movement in bear-use areas. The event strengthened community awareness, promoted non-lethal conflict prevention, and encouraged local participation in sloth bear conservation.



ACHIEVEMENT

Our commitment to nature conservation is reflected in the recognition received by our Director, Dr. Nishith Dharaiya, who was honoured with the '**Prakruti Rakshak**' award by the Honourable Governor of Uttar Pradesh and former Chief Minister of Gujarat, Anandiben Patel. This award acknowledges his sustained contributions to wildlife research, conservation practice, and community engagement. The recognition highlights the importance of science-based conservation and serves as encouragement to continue working towards the protection of biodiversity and the promotion of human–wildlife coexistence.



PUBLICATIONS

- Mesaria S, Desai P, Patel S, Gadhavi D, Giordano AJ and Dharaiya N (2023), Livestock depredation by leopards, associated economic losses, and financial compensation to communities in Chhota Udepur district of central Gujarat, India. *Human-Wildlife Interactions*, 17(1), 8.
- Shah D and Dharaiya N (2023), A review on human-sloth bear conflicts in Gujarat: Identifying drivers and mitigation strategies, *Prithivya*, An Official Newsletter of WCB Research Foundation and WCB Research Lab, 3(2) 19-43.
- Shalu M, Shruti P, Pratik D and Nishith D. (2023), Food from the Neighbors: Sloth bear savoring the debris left by tourists and locals in Eco-sensitive zone of Chhota Udepur district, Gujarat, India. In *Proceedings of the Zoological Society*, 76(2), 202-204. New Delhi: Springer India.
- Sharp T, Dharaiya N and Satyanarayana K (2023), The inaugural world sloth bear day: an initiative supported by the BSG's sloth bear expert team. *International Bear News*, 32(1), 12-14.
- Desai P and Dharaiya N (2024), One more step towards sloth bear conservation: celebration of 2nd world sloth bear day. *International Bear News*, 33(1), 10-12.
- Khushboo, Desai P, Sasikumar K and Dharaiya N (2024), Can education and outreach help foster human-sloth bear coexistence? *CDPnews*, 27, 37-44.

We are now inviting

Student Membership

* For UG & PG Students

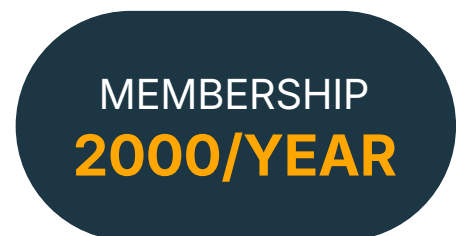
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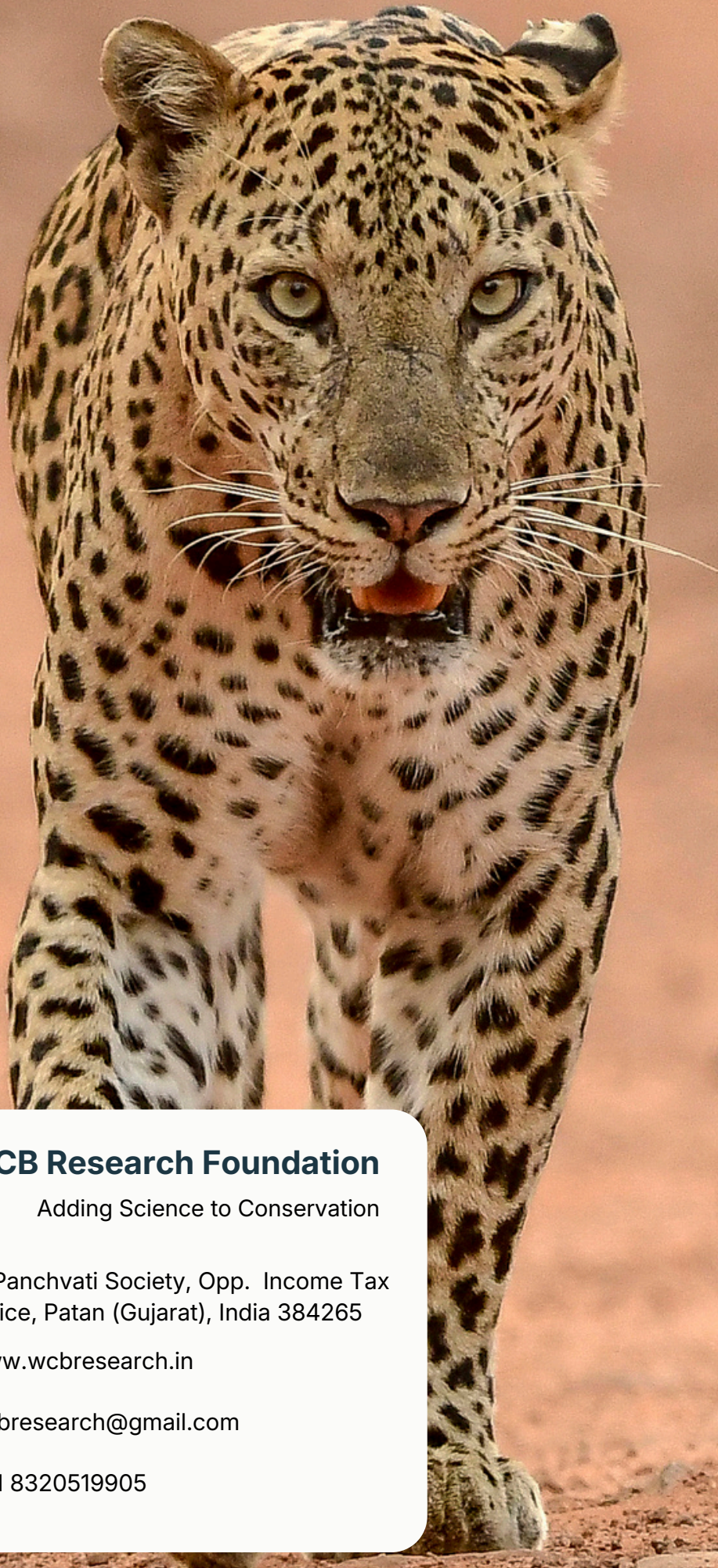
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WCB Research Foundation

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