



# Souvenir

## 2024







# दृढ़ता से आगे बढ़ती मध्यप्रदेश की जल संरक्षण यात्रा



डॉ. मोहन यादव, मुख्यमंत्री



नरेन्द्र मोदी, प्रधानमंत्री

## जल गंगा संवर्धन अभियान

30 मार्च से 30 जून, 2025



“ प्रधानमंत्री नरेन्द्र मोदी के जल संरक्षण अभियान से प्रेरित मध्यप्रदेश में सरकार और समाज की साझेदारी से वर्षा जल की बूंद-बूंद बचाने का “जल गंगा संवर्धन” अभियान प्रारंभ हुआ है। जन, जल, जंगल, जमीन और वन्य प्राणियों के संरक्षण के लिए संकल्पित मध्यप्रदेश का यह अभियान जन आंदोलन बन रहा है। ”

- डॉ. मोहन यादव, मुख्यमंत्री

- लघु एवं सीमांत किसानों के लिए बनाये जायेंगे 50 हजार खेत-तालाब
- 90 दिनों में 90 लघु एवं मध्यम सिंचाई परियोजनाओं का होगा लोकार्पण
- ऐतिहासिक, सांस्कृतिक एवं धार्मिक महत्व वाले जल स्रोतों एवं देवालयों की सफाई के साथ होगा जीर्णोद्धार
- 1000 नए तालाबों का निर्माण एवं 50 से अधिक नदियों के वॉटर शेड क्षेत्र में जल संरक्षण एवं संवर्धन के होंगे कार्य
- अनुपयोगी तालाब, चेक डैम एवं स्टॉप डैम का जीर्णोद्धार एवं हर दिन एक जल संरचना का होगा लोकार्पण
- नर्मदा परिक्रमा पथ का चिह्नांकन कर जल संरक्षण एवं पौधरोपण की योजना

- ग्रामीण क्षेत्रों में पानी चौपाल का आयोजन, प्रत्येक गांव से महिला-पुरुषों का चयन कर तैयार किए जाएंगे 1 लाख जलदूत
- सीवेज का गंदा पानी जल स्रोतों में न मिले, इसके लिए सोक पिट निर्माण को प्रोत्साहन
- 54 जल संरचनाओं का संवर्धन एवं नहरों को विलेज-मेप पर “शासकीय नहर” के रूप में किया जाएगा अंकित
- बांध तथा नहरें होंगी अतिक्रमण मुक्त, करीब 40 हजार किलोमीटर लंबी नहर प्रणाली की होगी साफ-सफाई
- सदानौरा फिल्म समारोह, जल सम्मेलन, प्रदेश की जल परंपराओं पर आख्यान, चित्र प्रदर्शनी समेत विभिन्न जन जागरूकता कार्यक्रम होंगे आयोजित

आइये,  
मिलकर सहेजें अपने  
जल स्रोतों को

जल दूत के रूप में  
सहभागिता के लिए

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पर पंजीयन करायें



**SOUVENIR 2024 : 2nd National Conference on Lesser Known Species of MP**

**Organized and Published by :** **Society of Nature Healers, Conservators and Local Tourism Development, Bhopal, MP**

**Venue :** **EPCO Conference Hall, Paryavaran Parisar, E-5, Arera Colony, Bhopal, MP**

**Organizing Board Members :** **Mr. R. Sreenivasa Murthy (IFS Retd)**  
Ex. Member Secretary, MP Biodiversity Board

**Mr. Jasbir Singh Chauhan (IFS Retd.)**  
Ex. PCCF Wildlife & CWLW, MP

**Dr. Atul Shrivastava (IFS Retd.)**  
Ex. PCCF Wildlife & CWLW, MP

**Mrs. Anuradha Shankar (IPS Retd.)**  
Ex. Special DGP Training, MP

**Mr. Narendra Singh Parmar, (IAS Retd.)**  
Ex. Secretary, Govt. of MP

**Mr. K Raman, (IFS Retd.)**  
Ex. APCCF, MP Forest

**Dr. Rajesh Saxena**  
Ex. Sr, Principal Scientist, MP Council of Science & Technology, Bhopal, MP

**Mr. Jagdish Chandra (IFS Retd)**  
Founder & Publisher, ME & MY Earth Magazine Bhopal

**Conference Coordinators :** **Mr. Vikas Singh Baghel**  
President SNHC India & Chief Editor SNHC Journal Bhopal

**Mr. Mohd. Khalique**  
Founder and President, Bhopal Birds

**Dr. Sangeeta Rajgir**  
Founder and Member Secretary, Bhopal Birds

**Designed & Printed by :** **IMAGINATION**

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## About the conference

With the vision of Nature Conservation (wildlife conservation preferably) and Sensitisation to youth as well as people in action i.e. in the field we started organising a 2-day National conference on “**Lesser known species of MP**”, to plan and highlight conservation efforts and management challenges of those species. The first Conference was organized in **Jan 2023**; Topic was the first of its kind to be organized in India, followed by the second in **Jan 2024**.

The expected outcome of the conference is to come up with better conservation action plans and management strategies for lesser known species through utilisation of available research data on these species focusing on their current status, conservation issues and way forward i.e. recommendations received from the Scientists, Researchers and other experts from the concerned departments to execute on the field and if data is deficient on any such species then may plan and call for its proper and detailed research to collect scientific data to analyse the same, because without that nothing can be figured out.

We got more than **450 physical participants and around 2000 online (You Tube Live)** in total in both the conferences from around 17 states of India and a good number from (Outside India) abroad as well, more than 60% of them being Youth (Students, Researchers and Nature Enthusiasts). They previously knew Madhya Pradesh for being a Tiger, Leopard, Gharial, Vulture and Cheetah state but now they also know about the small and less prolific species as well which are equally important like these flagship species, also came to know about their role in Ecosystem and how their declining numbers and absence can majorly disturb it.

The main purpose of this conference was to highlight the conservation efforts and management challenges of lesser-known faunal diversity, lesser known as in the species with low distribution or declining numbers, less researched or endangered as per IUCN. We are mostly data deficient in those species, not even baseline in the majority of them. In Nature every species has their role to play in Ecosystem the impact of declining numbers cannot be figured out without proper study or research.

In 2 days of the conferences, about 15 technical sessions in each were held in which speakers shared their rich experience and hard work in the field and threw light on different aspects of Biology to Ecology, from conservation challenges to conservation strategies. People active in the field of nature conservation came together under one roof to plan and act for the way forward in conservation of these lesser-known species of Madhya Pradesh.

**SNHC India** is trying to fill the conservation gap and strengthen the conservation community of Central India by highlighting very important and much needed topics of lesser-known species that are equally important as flagship species of Madhya Pradesh. We in Collaboration with **MP State Biodiversity Board** are coming up with the 3rd edition of the conference in Jan 2025 to push the conservation efforts of lesser known species of Madhya Pradesh.













### Mr. Aditya Joshi

Head, Conservation Research,  
Wildlife Conservation Trust, Mumbai



He is a trained wildlife biologist with a Master's in Wildlife Biology and Conservation from the National Centre for Biological Sciences-TIFR. As part of his master's thesis, he carried out one of the first studies on the connectivity of tiger populations using a combination of conservation genetics and landscape ecology, substantiating long-range dispersal by tigers. He is a recipient of the Karanth J. Paul Getty Award 2010 for academic and conservation excellence. He has worked extensively on occupancy surveys of tiger corridors and tiger monitoring outside Protected Areas. He works on projects focusing on the ecology and conservation of lesser-known species like the Indian pangolin and the Eurasian otter. He is a member of the IUCN - SSC Pangolin Specialist Group and IUCN - WCPA Connectivity Conservation Specialist Group. He currently heads the Conservation Research vertical of the Wildlife Conservation Trust.

# Indian Pangolin Conservation: Ecology and Conservation

## Key Takeaways

1. Pangolin are data deficient Endangered Species so need to encourage more study and research.
2. It is one of the most trafficked wildlife species for their body scales.
3. Ecology based studies needed.
4. Post release monitoring through Radio Telemetry
5. Sensitising and engaging local communities and forest department about their ecology and behaviour.





### Ms. Anam Ahsan

PhD. Candidate University  
of Missouri, USA



She is PhD. candidate at the University of Missouri, USA, specializing in wildlife sciences, holding a Master's in Remote Sensing and GIS applications and an MSc in Wildlife Sciences (Gold Medalist). She served as a biologist in the Corbett Tiger Reserve, and made significant contributions to tiger conservation in Kanha and Pench Tiger Reserves, with a specific focus on monitoring and preserving vital tiger corridors. Currently, she is engaged in cutting-edge research at the intersection of environmental science and GIS technology in the Indravati TR and Kanger Valley National Park, Chhattisgarh her research employs a multidisciplinary approach, utilizing GIS techniques to assess and manage diverse ecosystems within these reserves. She is an active biologist member of the Bhopal-based NGO known as TINSA Ecological Foundation. Currently, she contributes as a team member at SMEW company, serving as a GIS expert and ecologist. She is driven by the passion to contribute meaningfully to wildlife sciences and GIS technology, aiming to make a lasting impact on the sustainable coexistence of ecosystems and human communities.

# Carnivores (Small and Medium) in the rapidly changing landscape of MP

## Key Takeaways

1. Need to study the status and distribution of small and medium sized cats outside protected areas.
2. Fast changing landscapes are effecting these species.
3. To develop and create mosaic landscapes outside protected areas.
4. Engaging and sensitising local communities especially residing in and near protected areas.



## Dr. Pratyush P Mohapatra

Scientist E, Zoological  
Survey of India, Kolkata



He is Scientist-E in the ZSI with broad interests in the fields of animal taxonomy, evolution and conservation. He also specialises in wildlife conservation and Protected Area management. He completed his Masters in Zoology from Utkal University in 2002 and a Ph.D. in Systematics and Biogeography of snakes of Eastern Ghats ranges of Orissa in 2009. He works on varied faunal groups specifically on reptiles, amphibians, and scorpions, and has described 13 new species of reptiles, amphibians and Cicadas in collaboration with researchers from India and abroad. He is in-charge of the National Zoological Collection of Reptiles in the Zoological Survey of India where some 37000 reptile collections are housed from 1835 onwards. In the field of conservation, he has contributed information on more than 150 species of South Asian reptiles and amphibians in the IUCN Red List assessments. He has contributed information on Reptiles of India in the Wild Life (Protection) Amendment Act, 2022. He is currently involved in the preparation of management plans for exotic species of reptiles in India. He has total of 244 publications comprising 12 books, 62 in peer-reviewed journals, 40 book chapters and 130 IUCN peer-reviewed publications.

# Fascinating Reptiles of Central India

## Key Takeaways

1. Research and studies of reptiles need to be promoted.
2. Radio Telemetry study is advised for many reptiles and amphibians to know more about their ecology and behaviour.
3. Need to work on education of local communities for identification and mitigation of Human Snake Conflict.
4. Proper guidelines for snake rescuers need to be made.
5. Need to work on guidelines of management of Exotic Species of reptiles and amphibians.

















## Dr. Salvador Lyngdoh

Scientist-E, Wildlife  
Institute of India



A Wildlife Biologist and carnivore ecologist has over 15 years of experience of working on carnivores in North eastern, Western and Trans-Himalayan region of India. He has been studying habitat interactions in the field of mammalian ecology in Northeast state of Assam with respect to many large and small mammals through a DST funded program on Ecology of Clouded Leopards (*Neofelis nebulosa*) in Manas National Park. He has been studying population estimation techniques, foraging behaviour as well as assessing wildlife human conflict with respect to large carnivores, particularly dholes in Western Arunachal Pradesh, India. He has also been associated with the Ecology and conservation of Himalayan Wolf (*Canis lupus*) project in states of Jammu and Kashmir, Himachal Pradesh, Uttarakhand and Sikkim. He has worked on Landscape ecology on aspects such as investigating drivers of land-use change in a semi-arid region of Sariska TR. Currently, he is a Scientist 'D' at the Dept of Animal Ecology and Conservation Biology in WII, Dehradun. He has studied wolf movement ecology, snow leopard foraging ecology, small cats and clouded leopard activity patterns in selected sites and has expertise in population estimation, behavioural ecology tracking, immobilisation and radio-collaring of such animals. Recent project that have been supervised by him also include studies on vigilance architecture in tropical bats (*Pteropus giganteus*) and conservation of endangered primates.

# Wolves in India: Ecology and Conservation

## Key Takeaways

1. Habitat loss due to rapid increase in human population, Farm Lands and land use pattern.
2. Decreasing prey base in PA's, competition with other Carnivores forcing them towards human in habitations for food like poultry and other waste.
3. Increase of feral dog population is also increasing conflicts and making them more expose to diseases.
4. Population and Ecology based surveys are needed on regular intervals.
5. We have to plan and act differently for grassland species.





### Jasbir Singh Chouhan

IFS, Retd, Former PCCF  
Wildlife, MP



An IFS of 1987 batch after training, was posted in Madhya Pradesh. In 1995, he took over as Dy Director of the Kanha Tiger Reserve, during his three-year tenure, his contribution to the consolidation of the reserve's management was significant. The initiative he took in the relocation of eight permanent cattle camps from Phen Wildlife Sanctuary in

1996 paved the way for the restoration of the sanctuary's habitat. His contributions to wildlife protection in MP includes enforcing strict protection measures, regulating tourism activities and streamlining the tourist guide system. In 1998, he was posted as DFO, Kuno Wildlife Sanctuary, where he took over Asiatic Lion Reintroduction Project in Kuno Wildlife Sanctuary. A very vital aspect of this project includes the voluntary relocation of the 24 villages from sanctuary. He, working with the district administration and NGOs, has supervised the re-housing of over 1,400 families from 23

villages. The remarkable response to such efforts has been a virtual explosion of natural regeneration in Kuno, where the prey base has risen and water regimes already show marked signs of improvement. He attributes such successes to departmental support, teamwork among Kuno's frontline staff and the cooperation of NGOs. The 345 sq. kms. Kuno Sanctuary has been liberated from the pressure of over 10,000 migratory cattle that used to be brought in from Rajasthan and nearby villages annually. As PCCF Wildlife and CWLW Madhya Pradesh he has executed the "Cheetah" reintroduction project in a very precise way following the Cheetah Action Plan with dedicated and non stop hard work from frontline staff, he says this programme a historic event in wildlife conservation.

# Role of Translocation in conservation of Endangered/Lesser Known Faunal Species

## Key Takeaways

1. Translocation of wild animals is extremely important for wildlife population management and species recovery programs.
2. It Saves species from extinction.
3. It Avoids situations like having all your eggs in one basket, and helps in Re-Colonising the lost ground.
4. It Ensures uniform distribution of species & optimum habitat utilisation
5. There is a need to protect wildlife habitat from degradation.
6. Need for protection of the native flora and fauna from Invasive Alien Species.













**Ms. Parveen Shaikh**

Scientist C, BNHS, Mumbai



She currently works as a Scientist 'C' with the Conservation Department, Bombay Natural History Society. Her interests are behavioural ecology, conservation biology, conservation through community participation and citizen science. She presently works at Chambal understanding the nest survival and conservation needs of Indian Skimmer and Black-bellied Tern. She along with her team at BNHS are conserving Indian Skimmer along with other riverine nesting birds at Chambal through a 'Guardians of the Skimmer' project which is a community-based conservation initiative.

## Tales of Terns: Status, Distribution and Conservation needs of Black Bellied Tern at Chambal

Black-bellied Tern (*Sterna acuticauda*) is a riverine nesting species. It is a small tern species measuring approximately 33 cm. Breeding adults have orange bill, black cap and nape, dark grey breast and blackish belly and vent. Non-breeding birds show a whitish belly and lack tail streamers and the orange bill has a dark tip. This species is listed as 'Endangered' on the IUCN Red list. The population is undergoing rapid decline due to degradation of nesting habitat. Presently BBT's range in India remains widespread but in de-



Image courtesy: Mr. Sachin Matkar





Image courtesy: Ravi Kumar Kanav

cline. It occurs also (with likely no more than 30 individuals in each) in Pakistan, Nepal and Bangladesh, and was recently confirmed to persist in Myanmar (Bird-Life International 2023). The species is now thought to be extirpated in South-East Asia away from Myanmar: with no records for over a decade from Thailand, Laos, Cambodia or VietNam. The small population in Yunnan, China is thought to be now extinct also. Despite its large range the population is now estimated to number only 800-1,600 mature individuals, representing a substantial depletion given it was previously described as an abundant species throughout most of its erstwhile range.

At present in India the species is widely distributed and it has been recorded from 22 states and Union Territories namely Himachal Pradesh, Uttarakhand, Punjab, Delhi NCT, Haryana, Rajasthan, Madhya Pradesh, Uttar Pradesh, Bihar, Arunachal Pradesh, Assam, West Bengal, Odisha, Gujarat, Maharashtra, Goa, Karnataka, Kerala, Andhra Pradesh, Chhattisgarh, Telangana and Tamil Nadu (www.ebird.org). Present breeding records are from River Chambal (Shaikh et al. 2018), River

Son (P. Shaikh in litt 2021) and River Mahanadi (Debata et al. 2018). River Godavari, River Yamuna, River Ganga, River Krishna, River Sutlej and River Beas are other potential river systems where the species may be breeding but there are no present records. National Chambal Sanctuary is a critical stronghold of the species with more than 100 birds breeding in this river system. At Chambal during the pre-nesting survey in February 2021 and 2022, we encountered more than 150 observations of Black-bellied Terns at around 100 locations respectively. During the nesting period in March, we recorded around 20 locations where nesting was observed. Most of the nests were seen on sandbars along with other riverine birds like Indian Skimmer, River Tern, Little Tern, and Small Pratincole. But we did observe some solitary nests on

the bank. Most of the nesting locations had only one or two pair of Black-bellied Terns. The key threat for the species were identified as compromised flow regimes of rivers causing the islands to be connected to the bank which leads to predation of eggs and chicks by free-ranging dogs, trampling of clutches by domestic livestock, habitat destruction through sand mining and disturbance from people. The development of a conservation plan for reducing the habitat loss at nesting sites and improving the nesting success can help in species conservation at Chambal.













## Mr. Debadityo Sinha

Sr. Resident Fellow & Lead Climate & Ecosystems Vidhi Legal, New Delhi



Debadityo Sinha is a Senior Resident Fellow and Lead, Climate & Ecosystems team at Vidhi Centre for Legal Policy, New Delhi. With over 12 years of professional experience, he has dedicatedly worked on legal and policy matters concerning the protection of the environment, forests, and wildlife. In recognition of his conservation efforts, he was honoured with the Sanctuary Wildlife Service Award in 2019.

He is also a member of IUCN-Species Survival Commission's Bear Specialist Group and Founder of Vindhyan Ecology & Natural History Foundation.

# Conservation of Lesser Known Species Outside Protected Areas

India boasts a network of 1,014 Protected Areas (PAs), including 106 National Parks, 573 Wildlife Sanctuaries, 115 Conservation Reserves, and 220 Community Reserves, covering a total of 175,169.42 square kilometres. This accounts for approximately 5.32% of the country's geographical area. Most of these PAs are small, isolated patches of relatively well-managed and secure land, surrounded by forests, human settlements, and various infrastructures. According to the latest Indian State of Forest Report (ISFR) 2021, the total forest cover of the country is 713,789 square kilometres, constituting 21.72% of its geographical area. A significant portion of wildlife, especially lesser-known species, resides in these forests and other open natural ecosystems. These areas provide ideal habitats but are often less protected and threatened by neglect and apathy. Wildlife does not adhere to human-imposed political boundaries. Their ecological boundaries rarely align with the political borders we create. Wild animals use spaces outside PAs for habitat, foraging, seasonal dispersion, and exploring new territories. Thus, landscape

continuity between PAs and habitats outside them is essential for species survival. However, there are no specific laws to protect these habitats outside PAs. These areas are often protected under policies and guidelines issued under existing legislation such as the Environment (Protection) Act 1986, the Biological Diversity Act 2002, and the Indian Forest Act 1927, by designating them as Eco-Sensitive Zones (ESZs), Biodiversity Heritage Sites, or Reserve Forests respectively. The Importance of Eco-Sensitive Zones (ESZs) ESZs are particularly crucial as they were originally designed to protect the landscapes adjoining PAs, acting as shock absorbers and ensuring landscape connectivity. In January 2002, the National Board for Wildlife (NBWL), previously known as the Indian Board for Wildlife, proposed that a 10 km buffer zone around National Parks and Wildlife Sanctuaries be desig-

nated as eco-fragile zones under Section 3(v) of the Environment (Protection) Act, 1986. However, this recommendation saw limited cooperation from the States. The National Wildlife Action Plan (2002-2016) further emphasised the need to protect areas outside the PA network to prevent habitat fragmentation and maintain ecological corridors. It advocated using the Environment (Protection) Act, 1986, to declare these areas as 'ecologically fragile zones'. In March 2005, the NBWL agreed that Ecologically Sensitive Zones (ESZs) should be site-specific and serve a regulatory rather than prohibitory





function. Despite this agreement, State progress was minimal. In December 2006, the Supreme Court intervened, mandating that until the states declare ESZs, any environmental clearance proposals within 10 km of PAs must be referred to the Standing Committee of the NBWL. This directive aimed to ensure oversight and protection for these critical areas pending formal ESZ declaration. In 2011, the Ministry of Environment, Forest, and Climate Change (MoEFCC) issued guidelines for the declaration of ESZs around PAs. In December 2018, the Supreme Court ruled that for PAs lacking notified ESZs, a 10 km perimeter around their boundaries would be considered as deemed ESZs on a provisional basis. In 2023, the Supreme Court prohibited mining within the 1 km zone, leaving it to the states to determine the extent of ESZs. Nevertheless, the provisional 10 km deemed ESZ remains in effect for PAs with no notified ESZs. Despite this, nearly two-thirds of the PAs where ESZs are declared have zero-kilometre ESZ on some portion of their boundaries, often due to overlapping with state boundaries, which contradicts MoEFCC guidelines. Challenges and Recommendations Ecologists, scientists, conservationists, and the government often view wildlife conservation through the narrow lens of PAs, neglecting the broader imperative for the declaration and management of ESZs. The concept of ESZs suffers from a lack of understanding and insufficient training for State departments, complicating its implementation. Many PAs lack finalised ESZs, with states often undecided on multiple draft proposals. ESZ declarations are notably absent along interstate borders, despite ecological continuity. Uniform ESZs, typically agreed upon without sufficient delib-



Image courtesy: Mr. Manish Shukla

erations and scientific assessments, fail to meet their intended purpose due to the neglect of field surveys and guidelines set by the MoEFCC. Additionally, intra-departmental conflicts hamper the management of ESZs. The oversight of the ESZ process is lacking, with no public data on Zonal Master Plans or ESZ Monitoring Committees. There is significant pressure to develop tourist infrastructure around PAs, which undermines the functionality of ESZs and influences ESZ notifications. Mining and tourism lobbies often fuel public protests against ESZs to protect their commercial interests.

There is a need to recognise and manage wildlife-rich areas outside PAs as part of Conservation or Community Reserves. This should include Reserve Forests, stepping stone habitats, ecological corridors, and crucial landscape features like catchment areas and floodplains. The Working Plans of the Forest Department in non-PA divisions should incorporate wildlife censuses and map critical habitats, such as grasslands and watersheds, to ensure their natural conservation. The central government must provide technical and financial support for wildlife habitats and movements across state

lines. Building the capacity of Biodiversity Management Committees set up under the Biological Diversity Act is crucial for surveying and conserving habitats on common and revenue lands. Similarly, enhancing capacity and training for Range staff in non-PA Forest Departments is necessary for effective wildlife management. Often, open forests, grasslands, and scrub forests are used for plantation activities, which destroy habitats and the natural regeneration ability of the forest. The Forest Department must ensure that afforestation schemes include provisions for habitat improvement and biodiversity offsetting, considering local ecological history and not just planting trees. There is also a great need to manage the population of free-ranging dogs and ensure that ecotourism activities have a low ecological footprint, adhering to carrying capacity assessments. Civil society and government departments must work coherently and in consultation with local people to ensure regulatory decisions are well-informed and relevant. Landscape changes should be mapped at a regional scale to facilitate better planning at the landscape level and address potential threats.



### Mr. Jailabdeen A

Project Manager, GEP  
Madras Crocodile Bank Trust



Mr. Jailabdeen is currently working as Project Manager of Gharial Ecology Project under Madras Crocodile Bank Trust leading the field works in National Chambal Sanctuary, which is the last strong-hold population of critically endangered gharials. Also, he is perusing a PhD in Animal Science from Bharathidasan University on acoustic and chemical signalling in gharials. Through his research he has learned about the unique POP acoustic signature signals in male gharials, communication between rival males, females during courtship season and adult-hatching communication in post-hatch season.

# Conservation of Gharials- Past & Present Story of National Chambal Sanctuary

## Key Takeaways

The gharial, a crucial river species, serves as a top predator in the riverine food chain. Currently, the largest self-sustaining population of gharials is found in the National Chambal Sanctuary, which is the only protected river sanctuary in India, housing approximately 425 individuals. Chambal not only provides a habitat for gharials but also for other endangered species such as turtles, dolphins, Indian skimmers, and Otters.

However, this habitat is threatened by human activities and developmental projects. Unregulated extraction of water and sand leads to habitat loss and destruction. The forest department, in collaboration with the Gharial Ecology Project, conducts long-term behavioral research on gharials, increasing our understanding of the species and their preferred habitat. Protecting the river habitat is essential for conserving gharials and the diverse flora and fauna that call the Chambal River home.





### Dr. Atul Bodkhe

Principal, J. D. Patil  
College, Amravati, MH



He is Principal at J. D. Patil Sangludkar Mahavidyalaya, Daryapur, Amravati (MS), India. He has completed a project entitled Diversity of Spiders from Lonar Crater Sanctuary, funded by UGC, New Delhi. He has established Spider Research Lab (SR-Lab) in collaboration with Evolutionary Zoology Laboratory Slovenia, according to the terms and conditions of this MOU collage developed a spider research laboratory for developing the interest in spider research between student and research scholars and another aim of the development of this lab to introduce spiders as a bio pesticide in agriculture and train the farmers about rearing of spiders.

He has completed the Fast Track Young Scientist Fellowship entitled “Natural history and systematics of spiders from Lonar Crater Sanctuary”, Funded by SERB, Department of Science and Technology, New Delhi, Govt. of India. He also completed the project titled “Diversity and microhabitat utilization pattern of spiders from Satpura landscape”, funded by the MOEF and CC, Govt. Of India. In 2018 his three new species published in the book faunal discovery of India which was released by Hon’ble Prime Minister of India on the occasion of World Environment Day at New Delhi. He also released the first spider song of India “EK PAHELI”. He is also the Founder Secretary of the Indian Society of Arachnology, a Member of the International Society of Arachnology and a Member of the European Society of Arachnology.

## Why are Spiders important?

### Key Takeaways

1. Spiders are friends of farmers and play an important role in agriculture.
2. More study on Spider taxonomy is advised to understand their role and how they can help us in different ways.
3. Spiders are data deficient species in almost all parts of India. We have to encourage more spider research and surveys including PAs.
4. Their fascinating abilities, such as silk production and complex hunting tactics, are often overshadowed by their common perception as pests.



### Dr. Sujit Narwade

Asst. Director, BNHS,  
Mumbai



with a PhD in Zoology at Mumbai University through BNHS on Topic - "Status, distribution, habitat use and conservation of birds of Deccan region of Maharashtra, India, with special reference to Great Indian Bustard" he is Working in BNHS since 2004 and at present coordinating projects on Conservation of endangered bird Lesser Florican in Ajmer-Kekri landscape, Rajasthan, critically endangered bird Great Indian Bustard (GIB) with community engagement in the Thar Desert.

Other than Rajasthan he is also engaged in Conservation of critically endangered Lesser Florican and associated grassland species in Bidar district, Karnataka, supported by Karnataka Forest Department also the Status assessment of Blackbuck in Bidar, Karnataka. He is also EIACP Resource Partner in Avian Ecology, BNHS India, supported by the Ministry of Environment and Climate Change (MoEF&CC).

# Conservation of grassland birds in Central India

## Key Takeaways

1. Habitat loss due to rapid increase in human population and land use pattern.
2. Increase of the feral dog population is also increasing attacks on nests and themselves.
3. Engaging and sensitising local communities and emphasising on community based conservation.
4. Under grounding of High tension electrical lines to prevent collision injuries and death.
5. Plan to protect Grassland birds outside PA's.
6. Need to check diversion of grasslands for development and Farming.
7. May sensitise and promote farmers for grassland bird friendly agriculture.





**Dr. Rajat Bhargava**  
Sr. Ornithologist, BNHS



A ornithologist by profession and passion, working with BNHS as an Assistant Director his main interest is conservation of threatened endemic Indian birds, with his favorite Finn's Weaver and Green Munia. Grew up as an aviculturist, his interest lies in Conservation Breeding.

# In-situ and Ex-situ Conservation Green Avadavat in central India

## Key Takeaways

Green Avadavat also known as Green Munia is an “endemic” bird of India with small fragmented distribution in central India. It is classified as “Vulnerable” by International Union for Conservation of Nature (IUCN) because it has a rapidly declining population, owing to widespread trapping for the cage-bird trade, compounded by habitat loss and degradation through agricultural intensification.

Green Avadavat is a protected bird, listed in Schedule I of the Indian Wildlife (Protection) Act, 1972 and Appendix II of Convention on International Trade in Endangered Species of Flora and Fauna (CITES) to prevent trade of this beautiful little (10 cms) finch, nevertheless illegal trade and capture for pet trade remains

one of the biggest threats to Green Avadavat. The best populations are known to still survive in Rajasthan, Odisha, Madhya Pradesh, in and around central Indian states particularly outside protected areas, although few birds have been reported from some protected areas and Important Bird Areas. The major aim of the BNHS project is to conduct field work spread across the range state of this species; to collect ecological data, breeding success and population estimate of Green Avadavat, along with prevailing threats. BNHS would also like to initiate a state of art conservation breeding with the various state governments on the lines of Rajasthan Forest Department at Udaipur Zoo and Madhya Pradesh Forest Depart-

ment at Van Vihar Bhopal to bolster wild population in former distribution areas subject to permission from Range states / Central government and Central Zoo Authority.

Creating awareness and education in main distribution areas to prevent trapping and trade and a comprehensive conservation action plan / status report on the state-wide status, distribution and prevailing threats and mitigations measures for Green Avadavat conservation in India highlighting the plight of this endemic, Vulnerable species, and its conservation requirement for long term survival is the ultimate goal of the ongoing BNHS study.









### Ms. Aishwarya Laghate

Project Officer - Raptor  
Conservation Programme,  
WWF India



Her passion for birds and wildlife at a young age inspired her to become an accomplished birdwatcher. Recognizing the critical importance of understanding the connections between habitats and species, she decided to pursue a career in wildlife research and conservation. With a particular interest in vultures, She moved to action after reading case studies about declining vulture populations and the importance of protecting natural ecosystem cleaners. After completing graduation in environmental sciences from Fergusson College, Pune and receiving her M.Sc. in Wildlife Conservation and Action from the Institute of Environment Education & Research, Bharati Vidyapeeth, Pune, she joined WWF-India in 2021 as a Project Officer in the Raptor Conservation Programme. She has been actively involved in vulture nest monitoring, raptor hotspot monitoring, education outreach, capacity building, community involvement and advocacy in Central India.

# Endangered/Lesser Known Raptor Conservation-Present Status, Conservation Challenges, How to Revive

## Key Takeaways

1. Use of NSAID's to be checked in animals.
2. Extensive use of pesticides and weedicides.
3. Lack of monitoring and study of Vultures specially outside PA's.
4. It is essential to study home range and migration patterns.
5. Training of frontline staff of forest for study and monitoring.





## Ms. Bhavna Menon

Independent Conservationist  
& Freelance writer Pune



Bhavna Menon is an independent conservationist and a freelance writer. Having worked in the conservation sphere for almost 15 years, she has been in charge of planning and executing projects in line with conflict mitigation, creation of alternative livelihoods in tandem with community members living around protected areas and capacity building/training with the Forest Department frontline staff.

She also contributes to different publications, with a strong focus on covering conservation stories and people. Apart from working with organisations in capacity of a communications Consultant, she has been appointed as the Director (conservation) at Aaranyachar, a wildlife tourism outfit where she is in charge of promoting and curating ecotourism activities (community related) for guests travelling to different protected areas.

# Communities in Conservation and responsible communication

## Key Takeaways

1. Communities are and have been an integral part of forest since the beginning of civilization and they are the most important pillar of conservation.
2. Outreach programs are necessary to help communities know the importance of forest and wildlife and how they are connected to their livelihoods.
3. Regular training programs on communities on how to deal with wildlife and how to seek help during unexpected encounters with them.
4. Sometimes the discussions, talks and sensitisation lower down their rage over wildlife and forest department and help restore their belief in conservation and coexistence.









## Day03 - Field Visit











SNHC India with registered name Society of Nature Healers, Conservators and Local Tourism Development is a Non-Profit Organization (NGO) founded in Year 2019 in capital city of MP i.e. Bhopal with a vision of healing (restoring) Mother Nature in natural and effective ways and conserving its beauty, the beautiful species of birds, animals, stunning and wide varieties of plants including conservation and promotion of Heritage & Culture which is handed over to us from our ancestors.

Through our publication i.e. SNHC Journal – A Quarterly English magazine of central India on sensitising people for Nature, we are reaching Educational institutions at National Level, all forest divisions of India, libraries of different Govt. departments, NGO's and people in nature conservation etc. We have been publishing this since February 2020 and have received very good responses and commendations from all over India and some parts of the world as well. We have 38500+ E - distributions (Including Email & What's App) & 2500+ Hard Copies distributions all over India and abroad which is increasing per volume.

With the vision of Nature Conservation (wildlife conservation preferably) and Sensitization to youth as well as people in action i.e. in the field we started organizing a 2-day National conference on “Lesser known species of MP, to plan and highlight conservation efforts and management challenges of those species. The first Conference was organized in Jan 2023 followed by the second in Jan 2024.

Our NGO - SNHC India through this annual conference is basically focusing on Nature Conservation & Restoration, Lesser Known /Endangered Species Conservation, Forestry, Wetlands, Organic Farming, Environment Degradation, Climate change, Community Development, Green Initiatives and works, Sustainable Living, Wildlife and Ecosystems like lakes, ponds, rivers etc.

To push the conservation efforts we are coming up with the 3rd edition of the conference Dated 17-18 & 19th of January 2025 which will help in consistent planning for conservation of lesser known species of MP and in reviewing ongoing research & conservation action plans for them.



India being a party to Convention on Biological Diversity (CBD) enacted Biological Diversity Act in 2002. A three tier structure has been established for implementation of Biological Diversity Act, 2002 with National Biodiversity Authority (NBA) at the apex, State Biodiversity Boards (SBBs) at provincial level and Biodiversity Management Committees (BMCs) at the local body level. As per the provisions of BD Act, 2002, Madhya Pradesh State Biodiversity Board was constituted on 11th April, 2005. The objectives of the Board are Conservation of biodiversity, Sustainable use of its components and Equitable sharing of benefits arising out of the use of biological resources and associated traditional knowledge.

Madhya Pradesh State Biodiversity Board has an advisory role in promoting Biodiversity concerns amongst various stakeholders. One of the focus areas of the Board includes promotion of research & documentation on various facets of biodiversity and advocating policy in gap areas. The lesser-known faunal species is one such gap area which needs focus and action. MPSBB has supported research projects on some important and lesser-known faunal species like Caracal, Forest Owlet, Lesser florican, Vultures, Red-Crowned Roofed Turtle(Batagur Kachuga), Mahseer, Malabar Pied Hornbill and four horned antelope to improve the understanding of these species.



Image courtesy: Mr. Nitish Agrawal





डॉ. मोहन यादव, मुख्यमंत्री



उद्योग  
एवं  
रोज़गार  
वर्ष  
2025

अनंत संभावनाएं



नरेन्द्र मोदी, प्रधानमंत्री

प्रदेश के कृषि फीडर्स को  
सौर ऊर्जाकृत करने का अभियान



नवीकरणीय ऊर्जा से समृद्ध होता  
मध्यप्रदेश



व्यापक निवेश अवसर

# सूर्य मित्र कृषि फीडर योजना

## योजना के प्रमुख उद्देश्य

- मध्यप्रदेश पावर मैनेजमेंट कंपनी को कम मूल्य पर बिजली की उपलब्धता सुनिश्चित कराना
- ट्रांसमिशन हानि कम करना एवं सीधे खपत स्थल पर बिजली पहुंचाना
- 33/11 केवी उपकेंद्रों पर ओवरलोडिंग, लो-वोल्टेज और पावर कट की समस्या कम करना
- किसान को सिंचाई के लिये दिन में बिजली उपलब्ध कराना

## नवीकरणीय ऊर्जा का विस्तार

- सब-स्टेशन की 100% क्षमता तक की परियोजनाओं की स्थापना
- परियोजनाओं को पीएम कुसुम-सी योजनांतर्गत उपलब्ध केंद्रीय अनुदान का लाभ लेने का विकल्प
- 1900 से अधिक विद्युत सबस्टेशन एवं 14500 मेगावॉट क्षमता सौर परियोजनाओं के चयन हेतु उपलब्ध
- पीएम कुसुम योजना में 3.45 लाख पम्प का लक्ष्य
- वोकल फॉर लोकल - स्थानीय उद्यमियों के लिए निवेश एवं रोज़गार सृजन का उचित अवसर
- वित्त पोषण की सुगमता के लिए बैंकों से समन्वय
- परियोजनाओं में AIF के तहत 7 वर्षों तक 3% ब्याज में छूट
- Reactive Power प्रबंधन से अतिरिक्त आय



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Central Zoo Authority  
केन्द्रीय चिड़ियाघर प्राधिकरण

