



Sustainability of Conservation Agreements in IBAs from the North Western Ghats, India

Final Report to Conservation Leadership Programme (CLP)



**Project Location: Bhimashankar Wildlife Sanctuary,
Koyana Wildlife Sanctuary, Northern Western Ghats**

Project Period: 1st May 2016 – 31st March 2019

Report Completion Date: 10-06-2021

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Project Details

Project location

India, Bhimashankar Wildlife Sanctuary, Koyana Wildlife Sanctuary, northern Western Ghats

Project period - 1st May 2016-31st March 2019

Implementing partner

Applied Environmental Research Foundation (AERF)

Project Aim

Ensuring sustainability of incentive-based conservation mechanism in Important Bird Areas from the northern Western Ghats of India.

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Project partners and collaborators

The AERF project team worked closely with local communities from Bhimashankar Wildlife Sanctuary, hamlet- Talmachi wadi of Taleran village, Junnar block, local communities from village Talsar in Chiplun block (buffer zone of Koyana Wildlife Sanctuary), Shramik Sahayog- a non-profit working in Chiplun for community upliftment for implementing various activities of this project.

Summary

The project successfully surpassed its initial conservation target of 100 hectares by securing and sustainably managing over 150 hectares of forest within the buffer zones of Bhimashankar Wildlife Sanctuary (BWLS) and Koyna Wildlife Sanctuary (KWLS) in the Northern Western Ghats (NWGs). This included 56 hectares designated for sustainable harvesting of *Terminalia chebula* (Haritaki) in Bhimashankar and Talmachi, 15 hectares allocated for nature-based tourism promotion in BWLS, and approximately 80 hectares of community-owned forests brought under long-term (10-year) conservation agreements in Nechal, Talsar, Kolkewadi (KWLS buffer) and Nigdale (BWLS buffer). Comprehensive biodiversity assessments confirmed the presence of endemic and conservation-priority bird species across all sites, including new regional records of Nilgiri Wood Pigeon, Malabar Parakeet, and Nilgiri Flowerpecker in the northern Western Ghats. The initiative also facilitated the establishment of a biodiversity-based enterprise in Talmachiwadi, promoting sustainable harvesting, wild honey collection, eco-tourism, and value addition of Haritaki. By scaling up FAIRWILD-certified value chains and linking conservation agreements with market incentives, the project strengthened livelihood security for local communities while ensuring habitat protection. These outcomes attracted additional international funding, reinforcing the long-term sustainability and replicability of this community-led conservation model.



Image #1: Targeted Landscape from KWLS

Introduction

NWGs constitute one of the world's most important biodiversity hotspots, harboring exceptional levels of endemism and a high concentration of threatened species. Within this ecologically sensitive landscape, the present project was conceived to strengthen habitat protection for bird species of conservation concern in the buffer zones of BWLS and KWLS, both of which adjoin designated IBAs. Recognizing that significant biodiversity persists outside formally protected boundaries, the project adopted an incentive-based approach by entering into formal conservation agreements with local communities who are the legal owners and primary custodians of these forests. The objective was to secure ecologically valuable private forest patches through long-term, community-led stewardship. Biodiversity assessments conducted across three intervention sites documented 140 bird species, including 30 migratory species, eight Western Ghats endemics, two species listed as Vulnerable, and two categorized as Near Threatened. These findings underscore the high conservation value of privately owned buffer forests, which are frequently overlooked in conventional protected area planning. In addition to avifauna, the targeted IBA buffer forests supported several rare and conservation-priority wildlife species, reaffirming their broader ecological significance.

Scientific names	Endemic to WGs	IUCN status	WLP Act-1972	Scientific names	Endemic to WGs	IUCN status	WLP Act-1972
Flora				Mammal			
<i>Atalantia racemosa</i>	Endemic			<i>Manis crassicaudata</i>		EN	Schedule I
<i>Beilschmiedia dalzellii</i>	Endemic			<i>Panthera pardus</i>		EN	Schedule I
<i>Cynarospermum asperrimum</i>	Endemic			<i>Anathana ellioti</i>		LC	Schedule II
<i>Moullava spicata</i>	Endemic			<i>Rusa unicolor</i>		VU	Schedule III
<i>Cyathocline purpurea</i>	Endemic			<i>Macaca radiata</i>		VU	Schedule I
<i>Chlorophytum breviscopum</i>	Endemic			<i>Semnopithecus hypoleucos</i>		LC	Schedule II
<i>Dimorphocalyx lawianus</i>	Endemic			<i>Canis aureus</i>		LC	Schedule I
<i>Erinocarpus nimmonii</i>	Endemic			<i>Hystrix indica</i>		LC	Schedule II
<i>Ixora brachiata</i>	Endemic			Amphibians			
<i>Knema attenuata</i>	Endemic			<i>Pseudophilautus wynaadensis</i>	Endemic		
<i>Lagerstroemia microcarpa</i>	Endemic			<i>Pseudophilautus amboli</i>	Endemic		
<i>Mammea suriga</i>	Endemic			<i>Raorchestes bombayensis</i>	Endemic		
<i>Glochidion ellipticum</i>		EN		<i>Hoplobatrachus tigerinus</i>			Schedule II
<i>Dimocarpus longan</i>		NT		<i>Euphyctis cyanophlyctis</i>			Schedule II
<i>Sageraea laurifolia</i>	Endemic	NT		Butterflies			
<i>Pterocarpus marsupium</i>		VU		<i>Cirrochroa thais</i>	Endemic		
<i>Maytenus rothiana</i>	Endemic			<i>Graphium terebon</i>	Endemic		
<i>Dalbergia latifolia</i>		VU		<i>Chliaria othona</i>			Shedule I
Reptiles				<i>Euchryops cnejus</i>			Shedule II
<i>Varanus bengalensis</i>		NT	Schedule I	<i>Euchrsops cnejus</i>			Shedule II
<i>Python molurus</i>		NT	Schedule I	<i>Euthalia lubentina</i>			Schedule IV

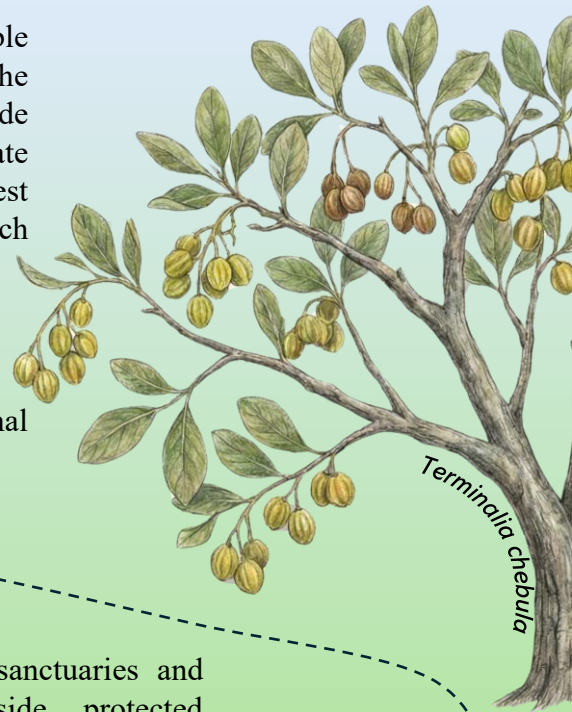
Table #1: List of other important wildlife species documented from targeted area



State Symbols of MAHARASHTRA

A major component of the project involved the sustainable management of 3,244 mature *T. chebula* trees at BWLS under the FAIRWILD certification protocol. These canopy trees provide critical habitat for the Indian giant squirrel, Maharashtra's State Animal, a habitat-specialist species dependent on intact forest structure. The forests also support emblematic state symbols such as

Lagerstroemia speciosa (State Flower),
Mangifera indica (State Tree),
Treron phoenicopterus (State Bird), and
Papilio polymnestor (State Butterfly), adding cultural and regional significance to their conservation.



Terminalia chebula




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Despite the presence of wildlife sanctuaries and IBAs, habitat degradation outside protected boundaries remains a persistent challenge. Communities often experience restrictions and wildlife-related losses without receiving direct conservation benefits and efforts have historically prioritized species monitoring over habitat protection. Declining populations of flagship species such as the Great Hornbill and Malabar Grey Hornbill reflect ongoing habitat fragmentation across the Western Ghats.




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To address these issues, the project identified biodiversity-rich community forests adjacent to IBAs, prioritized sites supporting endemic and migratory birds, and secured three locations under long-term conservation agreements. Simultaneously, it promoted sustainable harvesting and FAIRWILD certification of *T. chebula*, coupled with structured training in harvesting techniques, post-harvest processing, documentation, and compliance with organic standards. Approximately 200 members of the Mahadeo Koli indigenous community benefitted from processing 25 tons of sustainably harvested Haritaki, while additional livelihood diversification was achieved through eco-tourism and sustainable wild honey collection. These interventions directly linked habitat conservation with tangible economic incentives.



Image #2: Major threats to the landscape

About Study area

BWLS and KWLS were strategically selected due to their ecological and socio-economic contexts. BWLS supports a healthy population of Indian giant squirrels and forest-dependent Mahadeo Koli communities, while KWLS, part of the Sahyadri Tiger Reserve since 2009, is surrounded by extensive community-owned forests. Together, these landscapes span approximately 540 km² and encompass evergreen forest patches rich in endemic flora and fauna.

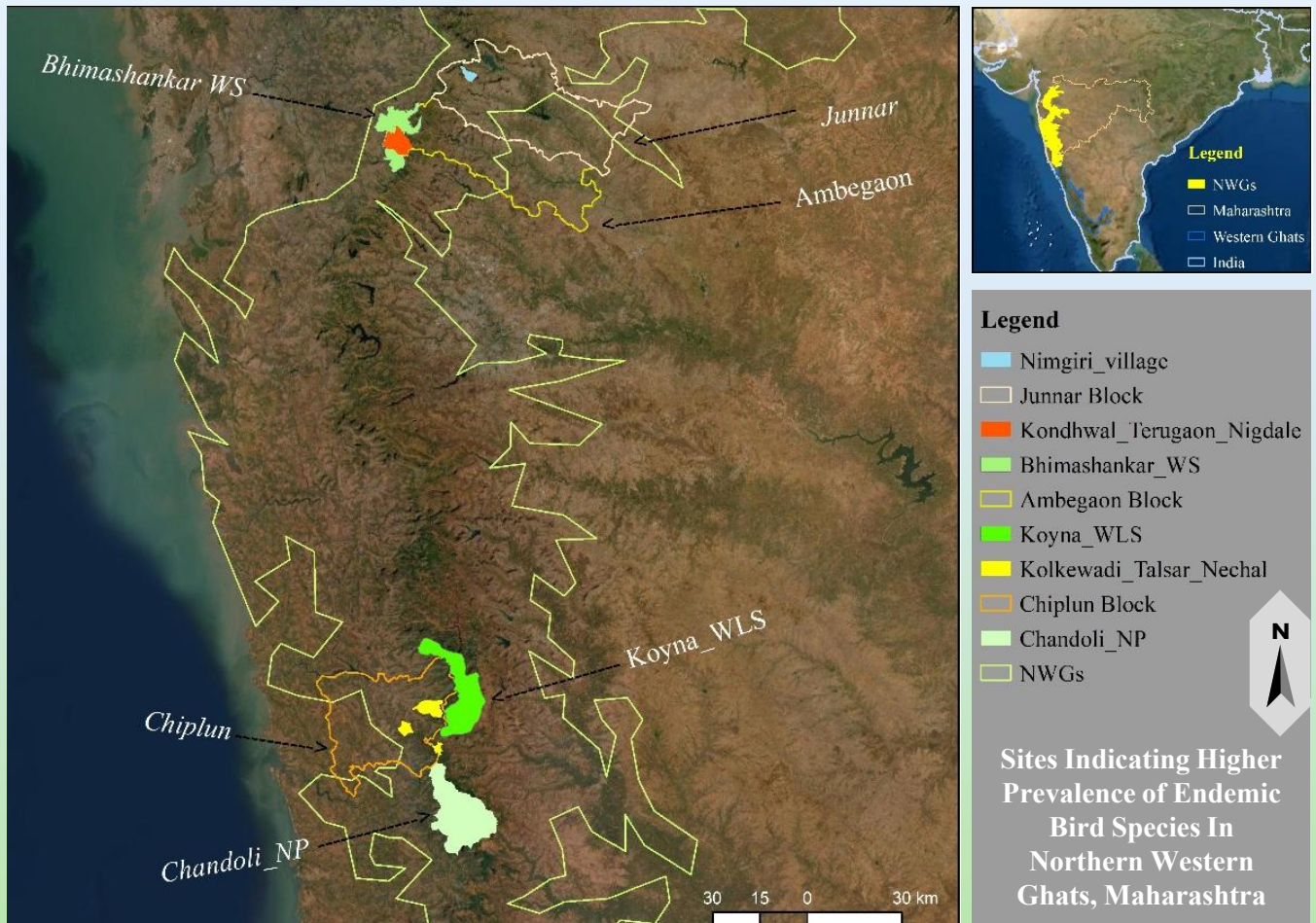


Image #3: Map showing targeted study area

Key partners for this project have been

The project's success relied on strong partnerships. Local communities played a decisive role by adopting sustainable practices and committing to conservation agreements. Market linkages were strengthened through the conservation enterprise "Nature Connect," ensuring demand for certified products. Institutional support from AERF and its partner Shramik Sahayog facilitated on-ground implementation, including the protection of critical Nilgiri Wood Pigeon habitat in Talsar. Collectively, the initiative demonstrates a scalable model integrating biodiversity conservation, community leadership, and sustainable enterprise in the Western Ghats.

Project members



Jayant Sarnaik (Team leader)

Jayant is a conservation practitioner with a cumulative experience of over 20 years in the field of conservation and entrepreneurship. He started his career in conservation as a plant collector at the Applied Environmental Research Foundation (AERF) in 1995 and is now a joint Director at the same institute. He has designed and developed many small and large grant projects related to biodiversity conservation, PES, Bio-energy for promoting sustainable management of biodiversity and forests in the Western Ghats of India. In the current project, Jayant was instrumental in scaling up the FAIRWILD certified operation in Bhimashankar Wildlife Sanctuary and Talmachi in Junnar.



Gunwant Mahajan (Team member)-

Gunwant holds a master's degree in economics from University of Pune and has over 12 years of cumulative experience in the field of environment education and biodiversity surveys. Gunwant has been associated with AERF since 2015 first as environmental educator. Over the years he has refined his skill as plant taxonomist and community coordinator. Gunwant played major role in scanning 500 hectares of forest patches for conservation prioritization, mapping populations of endemic and threatened plants and locating roosting sites of endemic birds especially Nilgiri Wood Pigeon.



Akshay Gawade (Team member)

Akshay is wildlife researcher by training, and he specializes in identifying ants and moths. He is also very good at spotting birds and butterflies. Project team used Akshay's these skills for identifying important bird areas/ sites outside IBAs. He along with other team members mapped the community forest of village Talsar, Kolkewadi and Talmachi and identified as many as 140 bird species as part of project work. Akshay has been associated with AERF as junior field researcher since Jan 2017.



Umesh Hiremath (Team member)

Umesh is an Entomologist by training and has been working with AERF since August 2011 as a senior field researcher. Umesh's contribution to the project is mainly around building the capacity of local communities in Bhimashankar and Talmachi in sustainable collection, FAIRWILD certification and enterprise development.

Aim & Objectives

Provide a statement of the main aim and underlying objectives of the project as described in initial project outline or explain any changes or adaptations to the original statement.

Project Goal

To secure Conservation interests of privately and/or community-owned forests in and around two Important Bird Areas from the Northern Western Ghats through scaling up of incentive-based conservation approach.

Project Objectives

- a) To ensure long-term protection of community forests through scaling up the community conservation agreement approach in and around two IBAs from NWG.
- b) To establish at least one biodiversity-based enterprise for the promotion of sustainable biodiversity use
- c) To build the capacity of local communities in the sustainable management of forests
- d) To test diverse mechanisms, viz., payment for ecosystem services (PSE) for ensuring the financial and social sustainability of the community conservation agreement model

Changes in plans

While there were no major changes to the original project plans, the CLP project team tried to identify community forests in the northern Western Ghats, whereby both the objectives of the project-saving habitats of endemic birds and creating sustainable livelihoods of local communities could be met. The team was successful in doing so and thus initiated the work of value chain-linked conservation agreement in Talmachi for saving the valley forest rich in endemic birds, and other threatened taxa outside a notified IBA but in well within a radius of 30 Kms from an IBA- BWLS.

Methodology

To achieve the stated project objectives, a combination of ecological, social, and enterprise-based interventions was implemented across the selected community forest sites adjoining Important Bird Areas (IBAs) in the northern Western Ghats

Objective A

Methodology/Activities: To identify ecologically significant community forest patches suitable for conservation agreements, the project team conducted rapid biodiversity assessments. Bird surveys were undertaken using the point count method across selected forest plots, with each count lasting 20 minutes followed by a 10-minute interval. Species were identified using standard field guides, and data on abundance, behaviors (feeding, roosting, nesting, etc.), and habitat use were recorded. Field binoculars, GPS devices, and photographic documentation were used to ensure accurate data collection. In addition to avifauna, economically important plant species and key habitat parameters, such as canopy cover, tree girth (GBH), and signs of animal presence—were documented. Parallel to ecological assessments, detailed social feasibility studies were carried out in villages including Nigdale, Terungan (in the landscape of Bhimashankar Wildlife Sanctuary), and Talmachi wadi (Taleran village). Participatory rural appraisal (PRA) tools such as focus group discussions, and livelihood baseline surveys were used to understand forest dependency, governance systems, and community willingness to enter into long-term conservation agreements. Based on ecological value and community readiness, sites were prioritized for formal Community Conservation Agreements.

Objective B

Methodology/Activities: The project promoted sustainable, biodiversity-based livelihood enterprises centered on non-timber forest produce (NTFP), particularly *Terminalia chebula* fruits and wild honey. Sustainable harvesting protocols were introduced and aligned with Organic and FAIRWILD certification standards to ensure ecological sustainability and better market value. The team facilitated structured training programs and supported annual third-party audits for certification compliance. By strengthening value chains—processing, grading, and collective marketing—the initiative helped establish viable forest-based enterprises that generate income while incentivizing habitat conservation.



Image #4: Illustration of metrology

Objective C

Methodology/Activities: Capacity-building interventions focused on equipping indigenous community members with practical skills for sustainable resource management. Regular training sessions (three annually) were conducted on sustainable harvesting techniques, post-harvest handling, quality control, and documentation required for certification processes. Hands-on, on-the-job training was provided for wild honey collection and eco-tourism management. Exposure visits and guided interactions with visiting nature enthusiasts and school groups were organized at the eco-tourism facility (established with support from the Kate Stokes Memorial initiative). These engagements enhanced community confidence, improved service delivery skills, and strengthened conservation-linked livelihood opportunities.

Objective D

Methodology/Activities: To strengthen the financial and social sustainability of the Community Conservation Agreement (CCA) model, the project explored incentive-based approaches linked to ecosystem stewardship. Revenue generated from certified NTFP enterprises and eco-tourism activities was integrated with conservation commitments under CCAs, thereby creating direct economic incentives for habitat protection. The project also assessed the feasibility of Payment for Ecosystem Services (PES) mechanisms by documenting ecosystem benefits—such as biodiversity conservation, habitat protection for endemic species, and maintenance of forest ecosystem services, to demonstrate the value of community-managed forests. These pilot efforts provided insights into scalable financial models that align livelihood security with long-term conservation outcomes.

Together, these methodologies ensured that ecological science, community participation, enterprise development, and innovative financial mechanisms were integrated into a holistic and scalable conservation framework.



Image #5: On-ground bee box setup training for community

Output and Results

1) Bird Diversity of IBA's buffer private forest

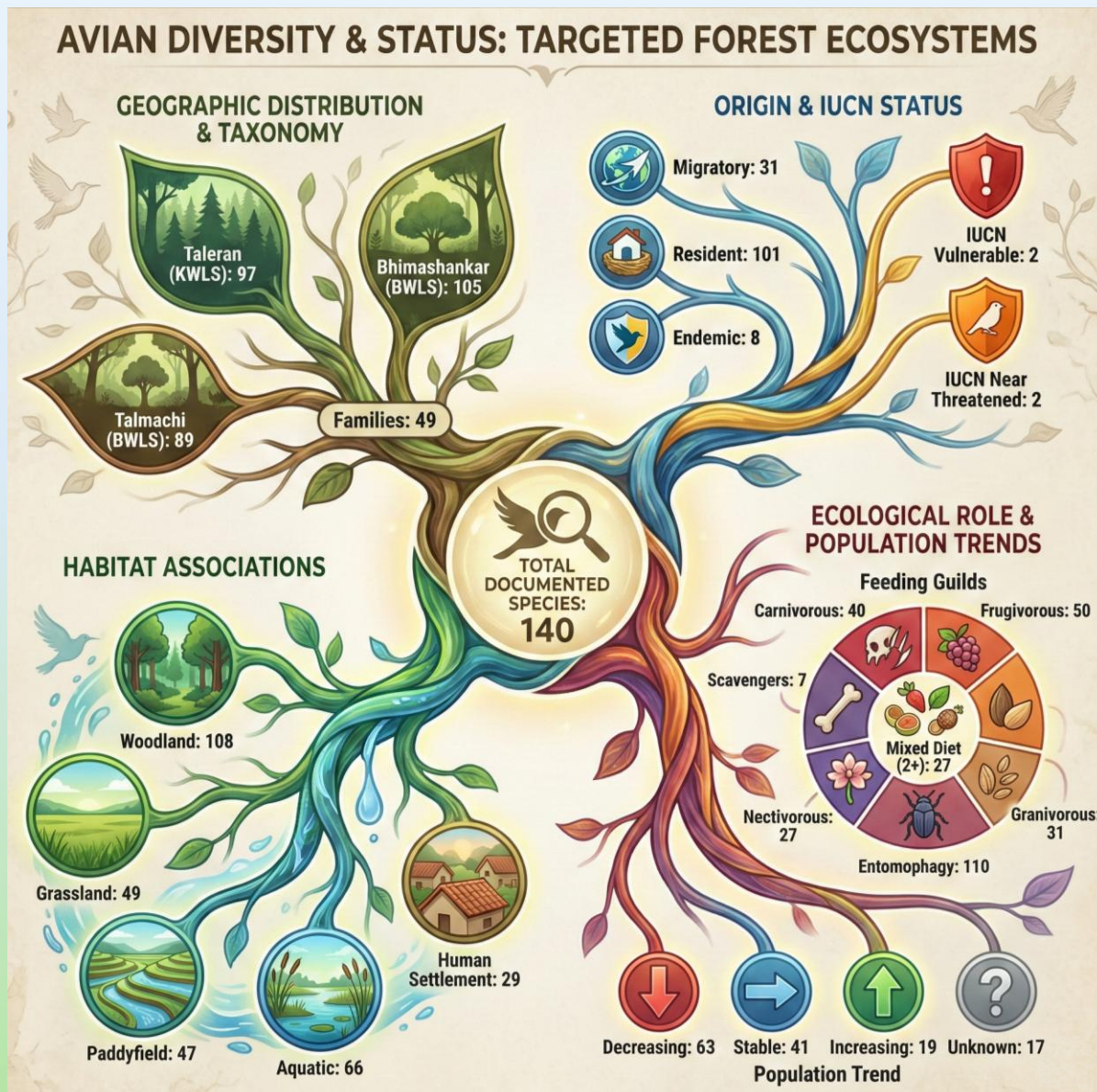


Image #6: Infographic of detailed Bird diversity
A complete checklist of recorded species is provided in Appendix I

Avifaunal surveys in privately owned forest patches adjoining Koyna Wildlife Sanctuary (KWLS) and Bhimashankar Wildlife Sanctuary (BWLS) confirmed the high ecological significance of Important Bird Area (IBA) buffer landscapes. Across Taleran, Bhimashankar, and Talmachi, 140 bird species representing 49 families were recorded. Bhimashankar documented 105 species, Taleran 97, and Talmachi 89, demonstrating that community-managed forest fragments sustain substantial biodiversity. The assemblage included eight Western Ghats endemics, 31 migratory species, and 101 resident species. Two species were categorized as Vulnerable and two as Near Threatened under the IUCN Red List. Notably, 63 species show declining global population trends, emphasizing the conservation importance of these privately owned buffer forests.

Habitat-wise analysis showed highest species richness in woodlands (108 species), followed by aquatic habitats (66), grasslands (49), paddy fields (47), and human settlements (29), reflecting a diverse ecological mosaic.

Functional guild analysis revealed 110 insectivorous species (biological pest control), 50 frugivores (seed dispersal), 27 nectarivores (pollination), 40 carnivores, and 7 scavengers (trophic regulation and nutrient cycling). Twenty-seven species exhibited multiple feeding guilds, indicating ecological resilience and functional stability.



Image #7: Nilgiri Wood Pigeon

2) Enterprise and Livelihood Outcomes

The biodiversity-based enterprise centered on *T. chebula* was significantly strengthened. FAIRWILD-certified collection sites expanded from 11 to 22 (100% increase). Around 80 households directly benefitted through sustainable harvesting, processing, grading, certification compliance, and wild honey production.

Key socio-economic results include:

- 90% increase in registered collectors
- 100% expansion in certified sites
- Estimated 480% growth in economic value through access to premium domestic and international markets

Certification ensured that non-timber forest produce (NTFP) extraction adhered to ecological safeguards, protecting forest **structure and regeneration**.

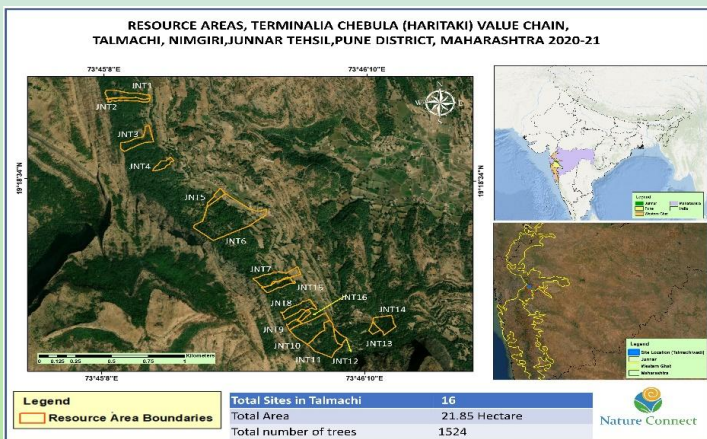


Image #8: Impacts of scaling up of value chain approach in Bhimashankar Wildlife Sanctuary during the project period

The Haritaki-based enterprise delivered measurable ecological and socio-economic results across 22 certified sites. Sustainably managed forests supported rare and endemic species, including IUCN Red List species, demonstrating that FAIRWILD and organic standards strengthened habitat conservation without compromising forest regeneration. The initiative achieved a 90% increase in registered collectors and doubled certified sites (11 to 22), generating an estimated 480% growth in economic value through premium markets. Community participation in value addition improved local ownership and supply chain engagement, effectively linking biodiversity conservation with sustainable livelihoods in the northern Western Ghats.

Outputs and Results

3) Conservation Agreements and Habitat Protection

The Community Conservation Agreement (CCA) model was expanded to Nechal (10 ha), Talsar (50 ha), and Nigdale (20 ha). In total, 10 agreements secured nearly 80 hectares (200 acres) of biodiversity-rich forest under 10-year protection commitments.

Additionally, a five-year value chain-linked conservation agreement was signed in Talmachi with 20 community members, covering 22 hectares and 1,600 mature Haritaki trees shortlisted for FAIRWILD certification. This model directly linked certified enterprise benefits with long-term conservation commitments.



Image #9: Signing Conservation agreement with community

Overall, the project successfully demonstrated that privately owned IBA buffer forests are ecologically vital landscapes. By integrating biodiversity science, certification-based enterprises, and long-term conservation agreements, the initiative delivered measurable ecological protection alongside tangible livelihood benefits, creating a scalable model for landscape-level conservation in the northern Western Ghats.

Communication & Application of results

The project team shared outcomes with potential buyers—Phalada Agro (Bangalore) and Pukka Herbs (UK)—and funders World Land Trust and Credit Suisse to secure purchase agreements and continued support for conservation-linked livelihoods. With Credit Suisse support, 100 households in Talmachi and Taleran adopted biomass gasifier stoves to reduce fuelwood pressure. A value chain-linked conservation agreement was signed in Talmachi, allowing sustainable NTFP collection, alongside plans for a low-carbon FAIRWILD processing unit. Phalada purchased 1.7 tons of non-certified Haritaki husk, ensuring market continuity and strengthening community confidence.



Image #10: Eco-chulah as a strategy to reduce pressure on forest

Food, air, water are all essential building blocks of life. It is unfortunate when they come at loggerheads with each other and man has to priorities between them. It is a battle set up for loss. The basis of our programme 'Cooking should not kill forests' is that we are removing the dichotomy of preparing food and cutting life-giving trees for cooking it. The means of doing this is through our improved cookstove (biostove / eco-chulhas) – which uses less fuel wood more efficiently to emit less smoke and ensure the health of the forests as well as the person preparing the food.

Monitoring and Evaluation

The project gained significant momentum through additional funding support, which enabled the continuation and strengthening of conservation and sustainable forest-based livelihood initiatives across the CLP intervention sites. This extended phase allowed the team to undertake updated biodiversity assessments, focusing not only on endemic bird species but also on other important taxonomic groups.

To enhance ecological monitoring, trail cameras were installed within community forests secured under conservation agreements. These camera traps helped document the presence of mammals and assess potential threats within these habitats. The monitoring efforts resulted in new records of several migratory bird species, particularly Warblers, marking their first documented occurrence in these sites.

Expanded field surveys also focused on amphibian diversity. The team recorded the presence of endangered amphibian species whose distributions were previously undocumented in this region, representing first-time scientific records. Recognizing the importance of these findings, AERF, as a member of IUCN, submitted the new amphibian distribution data to the IUCN Amphibian Specialist Group during the 2020 assessment cycle. Seventeen newly documented distribution records were reviewed, accepted, and incorporated into subsequent IUCN publications, with formal authorship and acknowledgment granted to the AERF team.

These outcomes further reinforce the ecological significance of the community-managed forest sites supported under the CLP project and highlight their contribution not only to local conservation action but also to global biodiversity knowledge and assessment processes.

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Amphibian Conservation Needs Assessments

Assessment Results

Pseudophilautus wynaadensis

Dark-eared Bush Frog

Order: Anura Family: Rhacophoridae
Synonym(s): Phyllomedusa wynaadensis, Philautus wynaadensis

Assessed for: India on: 09 Oct 2020 by: AARK/ASG India
Assessment Workshop
Authors: Akshay Gawade, Krishna Komanduri, Keerthi Krutha, Nikhil Modak and Seshadri K.S.
IUCN Global Red List: Endangered (EN)
National Red List: (not assessed)
Distribution: India
Evolutionary Distinctiveness score: 7.714789159

Recommended Conservation Actions:
In Situ Conservation ? In Situ Research ? Husbandry Research ? Conservation Education ?



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[AmphibiaWeb species account](#)

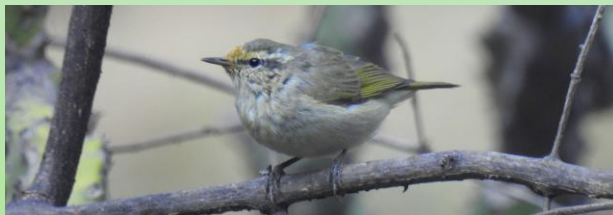


Image #11: Continuous biodiversity monitoring led to new species records and the inclusion of locally generated data in global scientific assessments.

Achievements and Impacts

The project has generated significant ecological, social, and institutional impacts across the northern Western Ghats by demonstrating an innovative model of community-led conservation beyond protected area boundaries. A total of 86 hectares of privately owned community forests were brought under long-term (10-year) community conservation agreements (CCAs) after documenting the presence of endemic and conservation-priority bird species in and around Important Bird Areas (IBAs). This represents one of the first structured efforts in India to protect habitats of endemic birds through an incentive-based mechanism that directly links conservation commitments with livelihood benefits. By formalizing agreements with local landholders, the initiative ensured sustained habitat protection in ecologically sensitive buffer landscapes that would otherwise remain outside formal conservation frameworks.

Complementing habitat protection, the project established a biodiversity-based enterprise centered on sustainable harvesting of *Terminalia chebula* (Haritaki) and other non-timber forest produce (NTFP). Through the adoption of the FAIRWILD ecolabelling mechanism, an approach implemented here for the first time in South Asia, the initiative ensured that harvesting practices complied with international sustainability standards while safeguarding broader forest biodiversity. This certification-based enterprise strengthened the economic resilience of approximately 100 indigenous households, enabling them to secure higher returns from NTFP collection. Additionally, around 30 families gained seasonal employment through local processing activities such as drying, grading, and value addition of forest produce. By reducing reliance on intermediaries and enabling participation in certified value chains, the project enhanced income stability while reinforcing conservation incentives.

Importantly, the initiative succeeded in establishing deforestation-free, community-managed certified value chains that directly support conservation agreements in IBAs of the Western Ghats. The integration of biodiversity documentation, long-term conservation contracts, certification-based enterprises, and market access created a self-reinforcing system in which ecological protection and livelihood enhancement are mutually dependent. Monitoring efforts further strengthened the scientific foundation of the project, documenting new distribution records of birds and endangered amphibians, some of which were formally recognized in IUCN assessments. Collectively, these achievements demonstrate a scalable and science-driven conservation model that aligns community stewardship, biodiversity protection, and sustainable economic development within globally significant hotspot landscapes.



Image #12: Endemic & Vulnerable Malabar Grey Hornbill

Capacity Development and Leadership capabilities

The project significantly strengthened the leadership, communication, and global engagement capacities of the core team members, enhancing their ability to mainstream biodiversity conservation at multiple scales. During the project period, team members Akshay Gawade and Umesh Hiremath participated in international Conservation Leadership Program (CLP) training events held in Canada and Brazil. These platforms provided exposure to global conservation practices, adaptive management approaches, and peer learning opportunities with practitioners from diverse ecological and socio-economic contexts.

The Team Leader, Jayant Sarnaik, presented the project's outcomes at the International Congress for Conservation Biology (ICCB) in Cartagena, Colombia (2017), positioning the initiative within the global conservation discourse. He further advanced the project's enterprise-linked conservation model by reaching the finals of the MoMo Challenge on impact investment and presenting a biodiversity-based business case at the Global Impact Investing Network (GIIN) annual meeting in Paris in November 2018.

These international engagements not only enhanced individual leadership skills but also elevated the visibility of community-led, certification-based conservation models emerging from the northern Western Ghats. Collectively, these experiences strengthened the team's strategic thinking, communication effectiveness, and ability to connect science-based conservation with innovative financial and policy mechanisms at both national and international levels.



Image #13: International training and global forums strengthened the team's leadership and visibility, positioning the Western Ghats community-led conservation model within the global biodiversity and impact investment discourse.



Conclusion

The project demonstrates that an incentive-based conservation strategy can effectively secure habitats of endemic and globally threatened species within Important Bird Area (IBA) buffer landscapes of the northern Western Ghats. Through 10-year conservation agreements covering 86 hectares of privately owned community forests, the initiative protected habitats supporting 140 bird species across 49 families, including Western Ghats endemics, migratory birds, and globally threatened species such as the Nilgiri Wood Pigeon. The high proportion of species with declining population trends underscores the ecological importance of these privately managed forests.

The two IBA landscapes required tailored approaches. In Bhimashankar, where Mahadev Koli communities depend heavily on forest produce, the project strengthened sustainable harvesting practices, introduced FAIRWILD certification, and developed biodiversity-based enterprises centered on *Terminalia chebula*, aligning livelihood enhancement with habitat conservation. In contrast, the Koyna landscape faced pressures from shifting cultivation and fuelwood extraction. Here, the project emphasized direct economic incentives to private landowners to maintain forest cover under formal conservation agreements rather than converting land for short-term gains.

These differentiated yet complementary strategies demonstrate that conservation agreements supported by financial and market-linked incentives can succeed under varied socio-economic contexts. By integrating biodiversity assessment, long-term protection agreements, certification-based enterprises, and community capacity building, the initiative presents a scalable, science-driven model for landscape-level conservation beyond protected area boundaries.



Image #14: Nilgiri Wood Pigeon—a Western Ghats endemic bird

Problems encountered and lessons learnt

- Which project activities and outcomes went well and why?

The incentive-based conservation model proved highly effective in securing critical wildlife habitats within privately owned forest patches. Communities living in and around protected areas have often borne the costs of conservation—such as crop depredation by wildlife and restricted access to forest resources—without receiving proportional benefits. By directly linking conservation commitments with tangible economic incentives, the project addressed this imbalance. The introduction of an internationally recognized certification mechanism (FAIRWILD) and access to premium national and international markets strengthened community confidence in sustainable resource use. This market-linked approach enhanced credibility, ensured better price realization, and fostered long-term community participation in conservation agreements.
 - Which project activities and outcomes have been problematic and in what way, and how has this been overcome?

Overall, the project achieved most of its intended outcomes without major operational setbacks. However, a key structural challenge in conservation initiatives is the requirement for sustained financial support, as measurable ecological and socio-economic impacts typically require a minimum of five years to become evident. Recognizing this, the team prioritized financial continuity and successfully secured additional funding for three years beyond the initial project period. This extension enabled continued biodiversity monitoring, strengthening of conservation agreements, and consolidation of sustainable livelihood interventions, thereby preventing premature discontinuation of conservation gains.
 - Briefly assess the specific project methodologies and conservation tools used.
- 1) Feasibility Study and Implementation of FAIRWILD Certification

The feasibility assessment and subsequent adoption of FAIRWILD certification addressed two central objectives: safeguarding habitats of endemic birds and ensuring financial sustainability of conservation agreements. By linking sustainable harvesting protocols with formal conservation contracts, the certification model integrated biodiversity protection with market incentives. The signing of value chain-linked conservation agreements in Talmachi provides strong evidence of the practical effectiveness of this approach.
 - 2) Incentive-Based Conservation Framework

The project employed a cost-benefit analysis to assess the opportunity costs of conserving forests on private lands. Following rapid biodiversity assessments and site prioritization, this analysis enabled the team to design context-specific incentive packages for landholders. This structured approach ensured that conservation commitments were economically viable and socially acceptable, thereby increasing long-term compliance and effectiveness.

Problems encountered and lessons learnt

Key lessons learned and recommendations

A critical lesson from the project is that building sustained community interest in conservation requires time, trust-building, and continuous engagement. Communities need adequate consultation periods to understand both ecological and economic benefits before committing to long-term agreements. Patience and consistent dialogue are essential components of successful conservation partnerships.

Another important insight relates to entrepreneurship and documentation capacity within local communities. Understanding the learning curve of community members in enterprise development, certification compliance, and record-keeping is vital for identifying local leaders capable of driving conservation enterprises forward.

Finally, the project demonstrates that well-designed conservation enterprises have the potential to generate landscape-level conservation outcomes. By aligning biodiversity protection with sustainable income generation and certified value chains, such models can attract private-sector investment and long-term financial support. Future initiatives should therefore strengthen business planning, market diversification, and blended financing mechanisms to further enhance sustainability and scalability.

In the Future

Building on the success of the current initiative, the project team has secured additional financial support from Credit Suisse and the World Land Trust (UK) to further scale up the value chain-based conservation model in the northern Western Ghats. The new phase of work will continue strengthening and expanding interventions at the CLP-supported sites, including the landscapes around Bhimashankar Wildlife Sanctuary and Talmachiwadi, with a focus on sustaining standing forests through market-linked conservation incentives. While the biodiversity-based enterprise approach has demonstrated strong potential, value chain-linked livelihoods such as non-timber forest produce collection remain seasonal and primarily benefit registered collectors associated with certified sites. To enhance long-term financial sustainability and ensure more equitable benefit-sharing, future efforts should explore monetization of additional ecosystem services, particularly forest carbon. Developing mechanisms for carbon credit generation and revenue distribution could provide year-round financial incentives and extend benefits to all community forest owners, not just those directly involved in certified harvesting activities.

Integrating forest carbon finance with biodiversity-based enterprises would strengthen the overall business case for conservation, diversify income streams, and create a more resilient, landscape-level incentive framework for community-led forest stewardship in the Western Ghats.



Image #15: Focusing on the next target—because the conservation journey must continue.

Bibliography

1) Appendix I: Checklist of Bird Species Recorded in IBA Buffer Forests.

Sr.No.	Common Name	Scientific Name	IUCN STATUS & Population Trend	OCCURANCE			Habitat Preferecne					Diet type					Taleran (KWLS)	Bhimashankar (BWLS)	Talmachi (BWSL)
				Ende mic	Migra tory	Recid ent	WL	GL	PA	AQ	HS								
1	Ashy Drongo	<i>Dicrurus leucophaeus</i>	LC Unknown			✓	✓	✓	✓					✓	✓		✓	✓	✓
2	Ashy prinia	<i>Prinia socialis</i>	LC Stable			✓	✓		✓					✓			✓	✓	✓
3	Asian Brown Flycatcher	<i>Muscicapa dauurica</i>	LC Decreasing		✓		✓			✓				✓			✓		
4	Asian Openbill	<i>Anastomus oscitans</i>	LC Increasing			✓			✓	✓				✓				✓	
5	Barn Swallow	<i>Hirundo rustica</i>	LC Decreasing		✓		✓	✓	✓	✓	✓			✓					✓
6	Bar-winged Flycatcher- Shrike	<i>Hemipus picatus</i>	LC Decreasing			✓	✓				✓			✓				✓	
7	Baya weaver	<i>Ploceus philippinus</i>	LC Stable			✓		✓	✓				✓	✓			✓		
8	Black Drongo	<i>Dicrurus macrocercus</i>	LC Unknown			✓	✓	✓	✓	✓	✓			✓	✓		✓	✓	✓
9	Black Eagle	<i>Ictinaetus malayensis</i>	LC Decreasing			✓	✓					✓					✓	✓	✓
10	Black kite	<i>Milvus migrans</i>	LC Stable			✓		✓	✓		✓	✓				✓	✓	✓	✓
11	Black naped monarch	<i>Hypothymis azurea</i>	LC Decreasing			✓	✓			✓				✓			✓	✓	✓
12	Black Redstart	<i>Phoenicurus ochruros</i>	LC Increasing		✓		✓	✓				✓	✓	✓			✓		
13	Black-headed Cuckooshrike	<i>Lalage melanoptera</i>	LC Decreasing			✓	✓					✓		✓				✓	
14	Black-hooded Oriole	<i>Oriolus xanthornus</i>	LC Stable			✓	✓				✓		✓	✓	✓		✓		
15	Black-rumped Flameback	<i>Dinopium benghalense</i>	LC Decreasing			✓	✓							✓				✓	
16	Black-winged Kite	<i>Elanus caeruleus</i>	LC Stable			✓	✓	✓	✓			✓		✓			✓	✓	✓
17	Blue Rock Thrush	<i>Monticola solitarius</i>	LC Unknown		✓	✓	✓			✓		✓	✓	✓			✓		
18	Blue-capped Rock Thrush	<i>Monticola cinclorhyncha</i>	LC Stable		✓		✓			✓		✓	✓	✓			✓		✓
19	Blyth's reed warbler	<i>Acrocephalus dumetorum</i>	LC Increasing		✓		✓			✓			✓	✓			✓	✓	✓
20	Bonelli's eagle	<i>Aquila fasciata</i>	LC Stable			✓	✓					✓					✓	✓	✓
21	Brahminy kite	<i>Haliastur indus</i>	LC Decreasing			✓		✓	✓	✓	✓	✓		✓		✓	✓		✓
22	Brown Fish Owl	<i>Ketupa zeylonensis</i>	LC Decreasing			✓	✓			✓		✓		✓				✓	
23	Brown Wood Owl	<i>Strix leptogrammica</i>	LC Decreasing			✓	✓			✓		✓		✓			✓		
24	Brown-cheeked Fulvetta	<i>Alcippe poioicephala</i>	LC Decreasing			✓	✓			✓				✓	✓		✓	✓	✓
25	Cattle Egret	<i>Bubulcus ibis</i>	LC Stable			✓		✓	✓	✓	✓	✓		✓		✓	✓	✓	✓
26	Chestnut-headed Bee-eater	<i>Merops leschenaulti</i>	LC Increasing			✓	✓	✓	✓					✓				✓	
27	Chestnut-shouldered Petronia	<i>Gymnoris xanthocollis</i>	LC Unknown			✓	✓	✓	✓		✓	✓		✓	✓		✓	✓	✓
28	Clamorous Reed-warbler	<i>Acrocephalus stentoreus</i>	LC Stable		✓		✓			✓				✓					✓
29	Common buzzard	<i>Buteo buteo</i>	LC Increasing		✓		✓					✓					✓		
30	Common Chiffchaff	<i>Phylloscopus collybita</i>	LC Stable		✓					✓				✓					✓
31	Common Hawk Cuckoo	<i>Hierococcyx varius</i>	LC Decreasing			✓	✓		✓	✓				✓				✓	✓
32	Common iora	<i>Aegithina tiphia</i>	LC Unknown			✓	✓					✓		✓	✓		✓	✓	✓
33	Common Kestrel	<i>Falco tinnunculus</i>	LC Decreasing		✓		✓	✓	✓			✓					✓	✓	✓
34	Common Kingfisher	<i>Alcedo atthis</i>	LC Decreasing			✓	✓			✓		✓		✓			✓	✓	✓
35	Common Myna	<i>Acridotheres tristis</i>	LC Decreasing			✓	✓			✓	✓	✓	✓	✓		✓	✓	✓	✓
36	Common pigeon	<i>Columba livia</i>	LC Unknown			✓				✓		✓	✓				✓	✓	
37	Common rosefinch	<i>Carpodacus erythrinus</i>	LC Decreasing		✓		✓						✓	✓			✓	✓	✓
38	Common Tailorbird	<i>Orthotomus sutorius</i>	LC Stable			✓	✓			✓	✓	✓	✓	✓	✓		✓	✓	✓
39	Common wood shrike	<i>Tephrodornis pondicerianus</i>	LC Decreasing			✓	✓			✓				✓			✓		✓
40	Coppersmith Barbet	<i>Megalaima haemacephala</i>	LC Increasing			✓	✓			✓	✓	✓					✓	✓	✓
41	Crested bunting	<i>Emberiza lathami</i>	LC Unknown		✓			✓	✓				✓				✓		
42	Crested Hawk Eagle	<i>Nisaetus cirrhatus</i>	LC Decreasing			✓	✓					✓						✓	✓
43	Crested Serpent Eagle	<i>Spilornis cheela</i>	LC Decreasing			✓	✓	✓				✓		✓			✓	✓	✓
44	Crimson-backed Sunbird	<i>Leptocoma minima</i>	LC Decreasing	✓			✓			✓	✓			✓	✓		✓	✓	✓
45	Dusky crag martin	<i>Ptyonoprogne concolor</i>	LC Increasing			✓	✓	✓						✓			✓	✓	✓
46	Emerald Dove	<i>Chalcophaps indica</i>	LC Unknown			✓	✓			✓		✓	✓	✓			✓	✓	✓
47	Eurasian Sparrowhawk	<i>Accipiter nisus</i>	LC Stable		✓		✓	✓				✓					✓	✓	
48	Forest Wagtail	<i>Dendronanthus indicus</i>	LC Decreasing		✓		✓							✓			✓		
49	Golden-fronted Leafbird	<i>Chloropsis aurifrons</i>	LC Stable			✓	✓			✓		✓		✓	✓		✓	✓	✓
50	Great Hornbill	<i>Buceros bicornis</i>	VU Decreasing			✓	✓					✓	✓					✓	
51	Green bee-eater	<i>Merops orientalis</i>	LC Increasing			✓	✓	✓	✓	✓	✓	✓					✓	✓	✓
52	Green wabler	<i>Phylloscopus nitidus</i>	LC Increasing		✓		✓			✓				✓			✓		✓
53	Greenish wabler	<i>Phylloscopus trochiloides</i>	LC Increasing		✓		✓			✓				✓			✓	✓	
54	Grey Junglefowl	<i>Gallus sonneratii</i>	LC Decreasing			✓	✓	✓	✓			✓		✓			✓	✓	✓
55	Grey Wagtail	<i>Motacilla cinerea</i>	LC Stable		✓		✓			✓				✓			✓		✓
56	Grey-breasted Prinia	<i>Prinia hodgsonii</i>	LC Decreasing			✓	✓							✓			✓	✓	
57	Grey-fronted Green pigeon	<i>Treron affinis</i>	LC Decreasing			✓	✓					✓						✓	
58	House Crow	<i>Corvus splendens</i>	LC Stable			✓			✓		✓	✓	✓	✓		✓	✓	✓	✓
59	House Sparrow	<i>Passer domesticus</i>	LC Decreasing			✓		✓	✓		✓		✓		✓		✓		
60	Indian blackbird	<i>Turdus simillimus</i>	LC Decreasing			✓	✓			✓				✓			✓	✓	✓
61	Indian Golden Oriole	<i>Oriolus kundoo</i>	LC Unknown			✓	✓				✓	✓		✓	✓		✓		
62	Large-billed Crow	<i>Corvus macrorhynchos</i>	LC Decreasing			✓			✓		✓	✓	✓	✓		✓	✓	✓	✓
63	Indian Paradise-flycatcher	<i>Terpsiphone paradisi</i>	LC Stable			✓	✓			✓				✓			✓	✓	✓
64	Indian Peafowl	<i>Pavo cristatus</i>	LC Increasing			✓		✓	✓			✓	✓	✓			✓		✓
65	Indian Pond Heron	<i>Ardeola grayii</i>	LC Unknown			✓			✓	✓	✓	✓		✓			✓	✓	✓



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