

Focus Group Discussions and Dialogues on Human-Elephant Conflict Resolutions between Village folk and State Forest Department at Bannerghatta National Park

The Karnataka Forest Department of the Bannerghatta National Park (BNP), in collaboration with A Rocha India, a conservation NGO conducted a series of focus group discussions on the issue of Human-Elephant Conflict (HEC) and its mitigation, for residents and farmers around the Bannerghatta National Park. We have collected qualitative data from the four wildlife ranges of BNP; Bannerghatta, Anekal, Harohalli, Kodihalli via focus group discussions giving us insights on the current challenges experienced by the local communities who are affected by HEC, what are some root causes, patterns of conflict and issues faced by the local village folk within the region. Over 500 local stakeholders participated in 4 workshops, representing roughly 36 villages from the area. This article gives a comprehensive understanding of the challenges faced by HEC across the 4 ranges of BNP and the proposed efforts taken by the Karnataka Forest Department to mitigate them. Respondent feedback from attendees for every wildlife range have been categorized into the most common/general concerns, making it easy for management to address each concern systematically. Some of common concerns with regards to HEC were with regards to movement of elephants through villages, disbursement of ex-gratia and breaches in elephant proof barriers (EPB) near villages.

Key words : Bannerghatta National Park, Human elephant conflict, Karnataka Forest Department

Introduction

It has been estimated that in 2022-23 approximately 313 human (injuries and deaths) and 71 elephant deaths took place in the state of Karnataka due to HEC (KFD Annual report 22–23–page no. -133). Bannerghatta National Park (BNP) is an elongated, yet narrow fragment of the larger Mysore elephant range of Southern India, and according to recent estimates, it is home to approximated 127 elephants (Asian elephant (*Elephas maximus*) population size and structure estimates for Karnataka – interim report, August 2023). As a consequence of its close proximity to the major metropolitan city of Bengaluru and a large number of village hamlets surrounding it, fringe areas around BNP experience human-elephant conflict. Being an endangered species, the Asian elephant is a top conservation priority in India, but any good strategy for conservation must consider the people who coexist with it (Taylor, 1999).

In the year 2022-23 a sum of 375.83 lakh rupees has been disbursed by the state as *ex-gratia* for crop loss in the Bengaluru circle alone (K.F.D., 2022-23 and Karnataka Evaluation Authority, 2022). There have also been reports of human fatalities since the beginning of the year (2023) due to HEC and the state forest department has been proactive in addressing these issues. Apart from traditional conflict mitigation practices, recent efforts by BNP include implementation of a Primary Response Team (PRT) in collaboration with A Rocha India which would focus on curtailing conflict incidents by gathering information and acting

*Deliberations on
human-elephant
conflict with park-edge
communities and state
forest department of
Karnataka.*

PRABHAKAR PRIYADARSHI¹,
G.S. HARRINGTON DEVA²,
DILIP KUMAR², PRIYA JAMES² AND
AVINASH KRISHNAN²
Email: avinash.krishnan@arocha.org

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¹Bannerghatta National Park, Karnataka Forest Department (Bangalore), Karnataka.

²A Rocha India, Bannerghatta Post - 560083 (Bangalore)

as first responders. Other measures included conducting village level sensitization workshops for the forest fringe communities that are most affected by HEC. These workshops were pivotal as they incorporated a vital dialogue component with the local people regarding their main concerns, issues and threats pertaining to HEC and understanding what are some of their perspectives, outlooks and possible solutions that would help them cohabitate with elephants.

The village sensitization workshops were conducted with the aim to help actively mitigate HEC by spreading awareness on conflict prevention among the agrarian communities around the National Park and to understand key issues and concerns faced by them and to assess the effectiveness of mitigation measures implemented thus far. Over 500 participants of varying socio-economic backgrounds, representing different conflict villages abutting these 4 wildlife ranges took part in an insightful engagement with the forest department officials and the A Rocha India team. A theory session was conducted at each of the workshops, informing the participants about HEC, general information about elephants like their ecology, behavior and habitat preferences, the significance of the Bannerghatta ecosystem, and an introduction to the recent PRT project. Next, the floor was opened to the participants and many came forward to report issues and discuss their on-going difficulties caused by HEC. There were suggestions made to the forest authorities which were taken into consideration and actions were implemented immediately wherever possible.

A major component of elephant conservation in India involves dealing with HEC and associated attitudes of the local people affected by it. These HEC village sensitization workshops provide a way of understanding conflict at a grassroots level and correctly informing the stakeholders to help minimize conflict, improve infrastructure, enhance safety measures, and foster harmonious coexistence between humans and elephants in the affected areas.

Materials and Method

Bannerghatta National Park (BNP) has been a designated protected area since 1974 (Mumtaz 2018). The park comprises four distinct administrative wildlife ranges; Anekal, Harohalli, Kodihalli and Bannerghatta Wildlife range. Currently, the national park spans over an area of 260.51 km², making it one of the smaller national parks in the country in close proximity to India's 3rd populous city; Bangalore. To facilitate the discussion, residents affected by HEC from various villages (Range wise) were invited to the Jungle Lodges - Bannerghatta Nature Camp.

Over the course of 1 month, forest department officials met with villagers impacted by HEC from each wildlife range, overall conducting 4 sensitization workshops and focus group discussions. The group

discussions were conducted with the participation of over 500 villagers (an average of 120 participants from four wildlife ranges) from various regions affected by HEC (Fig. 1). These participants comprised of people from various villages surrounding BNP, ensuring a diverse representation of perspectives. The discussion sessions took place at the Jungle Lodges, a suitable and neutral venue situated in proximity to the Bannerghatta National Park. Two focus group discussions were done during the 1st half of the day *i.e.* 10 am to 12 pm and the other focus group discussion was done during the second half of the day *i.e.* 2 pm to 4 pm. The organization of the discussion was carried out by the Karnataka Forest Department, and an awareness presentation was delivered by A Rocha India. The discussions were documented as notes, capturing key points, and photographs were taken for reference. As a token of appreciation for their participation, refreshments, including beverages and food, were provided to the participants at the conclusion of each focus group discussion.

Range level-dialogues on HEC

In the month of June 2023, Deputy Conservator of Forests (Karnataka Forest Department of the Bannerghatta National Park) along with A Rocha India, organized a, BNP conducted a series of range-wise village-level sensitization workshops at Jungle Lodges (Bannerghatta Nature Camp). Four workshops were conducted for the 4 different wildlife ranges of the Bannerghatta National Park (BNP) *viz.*, Anekal (24/05/2023), Harohalli (08/05/2023), Kodihalli (14/05/2023) and Bannerghatta (21/05/2023) involving village communities affected by HEC.

Results

During the course of the focus group discussions, we collected valuable qualitative insights and on perspectives towards HEC from participants belonging to over 36 select conflict villages, of the 4 wildlife ranges of BNP. There are consistencies when it comes to the issues faced by these communities across all ranges. The main concerns are about movement of elephants through the villages, disbursement of *ex-gratia* and breaks in elephant proof barriers (EPB) near the villages.

Participants from Bannerghatta and Anekal wildlife ranges raised concerns about gaps in railway barricades as they believe these to be the best barrier system in place. Participants from all ranges reported that railway barricades had brought down the conflict situation in their villages. Kodihalli range reported presence of problematic crop raiding bulls and again cited the issue as gaps in EPB's. Most of the concerns and issues recorded were common to all ranges. In opinion of people, solar fencing seems to be preferred less than railway barricades. Although railway barricades have proven to be effective in their opinion, uneven surfaces

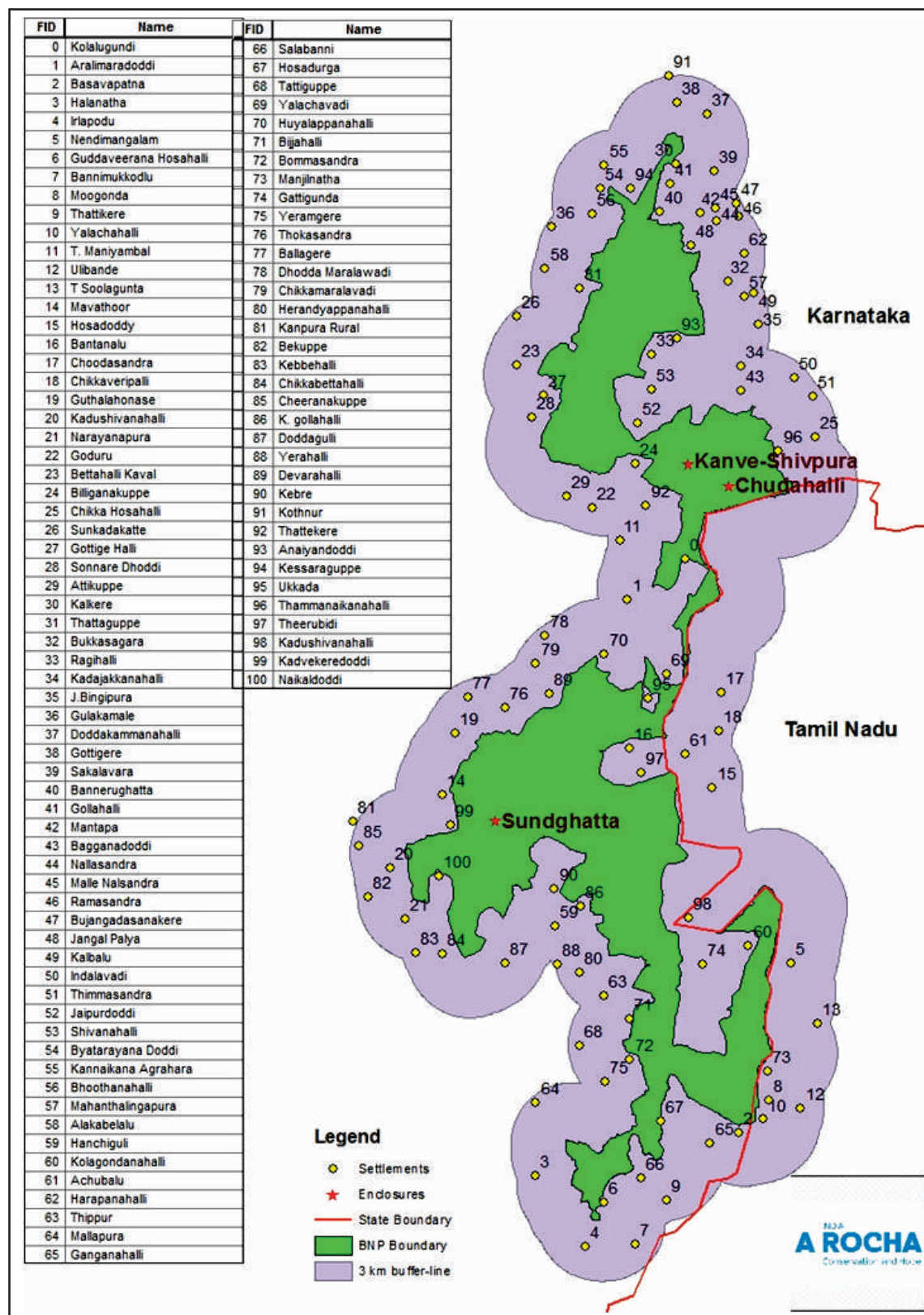


Fig. 1: Map of human elephant conflict villages around Bannerghatta National Park

pose a challenge to the installation of railway barricades, limiting their effectiveness in some areas (Saklani *et al.*, 2018). Alternative measures, such as early-warning systems and solar tentacle fences, are implemented in locations where railway barricades are impractical. There is a demand for additional night time watchers and improved surveillance to enhance the safety of villagers. This was also reflected in another study done in the villages of BNP about local perspectives on HEC by Venkataramana *et al.* in 2015. Our report highlights the persistent challenges and complex dynamics of human-elephant conflict in BNP. The Karnataka Forest Department's efforts, including the establishment of the

Elephant Task Force (ETF), an exclusive mobile squad to manage elephant depredations and ongoing mitigation initiatives to address conservation concerns, demonstrate a commitment to safeguarding both wildlife and the livelihoods of local communities. These collaborations with the local communities also play a vital role in informing their perspectives and trying to eliminate pessimistic attitudes towards the elephant and its conservation (Prabal *et al.*, 2008 and Dickman, 2010). Effective mitigation strategies will require a multi-pronged approach, ongoing collaboration, open dialogue, and adaptive measures to foster coexistence between humans and elephants in this region. A more

Table 1: Range-wise highlights from focus group discussion with village respondents regarding HEC in Bannerghatta National Park

S. No.	Wildlife Range (WLR)	HEC Villages	Feedback from village respondents on HEC	Response from forest department	General concerns
1.	Anekal WLR	Jaipurdoddi, Biliganakuppe, Tattekere, Chudahalli	<ul style="list-style-type: none"> Consider Railway barricades to be effective to restrict movement of elephants through the villages. Solar fencing was reported to be less effective in their opinion. Alternate mitigation measures suggested include: <ul style="list-style-type: none"> use of alarm systems & solar fences where railway barricades cannot be installed Demand for additional night time watchers & increased surveillance. 	The DCF has instructed the concerned authorities of the forest department to install solar tentacle fences in some of these villages.	<ul style="list-style-type: none"> Movement of elephants through the villages. Skepticism about previously installed EPBs
2.	Harohalli WLR	Terubeedi, Sundaghatta, Hanumantanad oddi, Bachallidoddi, Benjakaldoddi	<ul style="list-style-type: none"> Request for installation of more EPBs like solar fences & railway barricades to prevent elephants from entering villages. Request for night watchers and increased surveillance. 	<p>The DCF stated that the compensation amount has been raised as per latest government order.</p> <p>The DCF has informed them that the forest department has already made provisions for taking up more effective EPB's like STF & RB in coming period</p>	<ul style="list-style-type: none"> Movement of elephants through villages. Requests for more EPBs and other effective HEC mitigation measures.
3.	Kodihalli WLR	Anakadaburu, Manjunatha, Chickbettahalli, Aarkere, Keralsandra, Kaduvekeredoddi, Bilidale, Bijhalli,	<ul style="list-style-type: none"> There is an increased movement of elephants in the villages. There are complaints of elephant incursions from Tamil Nadu. Complaints about problematic behavior of adult males' 	The DCF has instructed the concerned authorities of the forest department to make provisions to install solar tentacle fences in a few of	<ul style="list-style-type: none"> Movement of elephants through villages. Disbursement of ex-gratia

S. No.	Wildlife Range (WLR)	HEC Villages	Feedback from village respondents on HEC	Response from forest department	General concerns
		Muneshwarnad oddi, Srinivananahalli, Yaramkare, RD Betta, Salbanni, Hanchgulli, Naikaldoddi	<ul style="list-style-type: none"> Request for installation of solar fencing, solar tentacle fencing, EPTs Special request for a 7 km stretch of solar tentacle fencing for crop protection from Keralsandra village. There were complaints that ex-gratia payment not being disbursed on time. 	these villages immediately.	
4.	Bannerghatta WLR	Kasuvanakunt aeBegihalli, Hakkipikki Colony, Thattuguppe, Muninagara, Annaianoddi, Ramanayakand oddi, Basavanadoddi, Mukodalu, Muninagara, Grotehehalli, Gullattikaval	<ul style="list-style-type: none"> Requests for night watchers and increased surveillance in villages. Request to shut down a pig farm in Begihalli village as it has been spreading an odious smell in the area. The villagers have expressed confidence in the railway barricade EPBs and have noticed a decrease in the movement of elephants in areas where it is installed. However, certain gaps in the railway barricade, due to unsuitable terrain & execution errors, remain problematic. Their suggestion is to cover these gaps with solar fencing. Conflict issues with other wildlife like leopards, spotted deer, wild pigs and sloth bears were raised. They have requested installing gates in certain villages to deal with the issue 	The DCF has announced the establishment of a task force known as the Elephant Task Force (ETF), along with the implementation of a dedicated control room, aimed at providing assistance to the local villagers.	<ul style="list-style-type: none"> Gaps in existing EPBs Disbursement of ex-gratia
			<ul style="list-style-type: none"> Installation of solar fencing requested in certain villages 	The DCF has informed them that the forest department has already made provisions for it.	

detailed range-wise outline of the discussion is presented in the table below (Table 1).

Conclusion

The focal group discussions from the four ranges of Bannerghatta National Park, showcase a summary of the challenges posed by HEC in this landscape. Forest fringe communities constitute one of the most important stakeholders in conservation narratives throughout the country. A crucial management task for the forest department is to liaise

with locals, having their opinions heard and their needs addressed. The efforts taken by the Karnataka Forest Department of BNP to host these workshops is an excellent example of working with the community to mitigate HEC and increasing tolerance towards vulnerable species like the Asian elephant. Such open dialogue can have far reaching impact for conservation in the long term and must be replicated throughout areas where Human – Wildlife conflict exists. This current work showcases that the FGD workshops method can become a vital tool for aligning and re-aligning

management goals, fostering good relations between stakeholders and it serves as a channel for knowledge sharing among stakeholders.

बन्नेरघट्टा राष्ट्रीय उद्यान में गांव के लोगों और राज्य वन विभाग के बीच मानव-हाथी संघर्ष समाधान पर फोकस समूह चर्चा और संवाद

प्रभाकर प्रियदर्शी, जी.एस. हैरिंगटन देव, दिलीप कुमार, प्रिया जेम्स और अविनाश कृष्णन

सारांश

बन्नेरघट्टा नेशनल पार्क (बीएनपी) के कर्नाटक वन विभाग ने एक संरक्षण गैर सरकारी संगठन ए रोचा इंडिया के सहयोग से आसपास के निवासियों और किसानों के लिए मानव-हाथी संघर्ष (एचईसी) और इसके शमन के मुद्दे पर फोकस समूह चर्चा की एक श्रृंखला आयोजित की। बन्नेरघट्टा राष्ट्रीय उद्यान। हमने बीएनपी की चार वन्यजीव श्रेणियों से गुणात्मक डेटा एकत्र किया है; फोकस समूह चर्चाओं के माध्यम से बन्नेरघट्टा, अनेकल, हारोहल्ली, कोडिहल्ली हमें एचईसी से प्रभावित स्थानीय समुदायों द्वारा अनुभव की जाने वाली वर्तमान चुनौतियों पर अंतर्दृष्टि प्रदान करते हैं, कुछ मूल कारण, संघर्ष के पैटर्न और क्षेत्र के स्थानीय गांव के लोगों द्वारा सामना किए जाने वाले मुद्दे क्या हैं। 500 से अधिक स्थानीय हितधारकों ने 4 कार्यशालाओं में भाग लिया, जो क्षेत्र के लगभग 36 गांवों का प्रतिनिधित्व करते थे। यह लेख बीएनपी की 4 श्रेणियों में एचईसी के सामने आने वाली चुनौतियों और उन्हें कम करने के लिए कर्नाटक वन विभाग द्वारा किए गए प्रस्तावित प्रयासों की व्यापक समझ देता है। प्रत्येक वन्यजीव क्षेत्र के लिए उपस्थित लोगों की प्रतिक्रिया को सबसे आम/सामान्य चिंताओं में वर्गीकृत किया गया है, जिससे प्रबंधन के लिए प्रत्येक चिंता को व्यवस्थित रूप से संबोधित करना आसान हो गया है। एचईसी के संबंध में कुछ सामान्य चिंताएं गांवों के माध्यम से हाथियों की आवाजाही, अनुग्रह राशि के वितरण और गांवों के पास हाथी प्रतिरोधी बाधाओं (ईपीबी) के उल्लंघन के संबंध में थीं।

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