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**Project Completion Report on Strengthen Human Elephant Co-existence (HECx) in Nepal**

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**Submitted to International Elephant Foundation (IEF)**



DECEMBER, 2020

Submitted BY: Mr. Ashok Kumar Ram, Nepal

## 1. Introduction:

Asian elephant (*Elephas maximus*) is an endangered mega herbivore in Nepal. It is continuously threatened by habitat loss, habitat fragmentation, human elephant conflict (HEC) in Nepal. Nepal bears about 250 wild elephants and ~210 captive elephants. Nepal has established a comprehensive network of protected areas for conservation of rare and endangered flora and fauna including Rhinoceros, Tiger, Indian Bison, Wild Water Buffalo and Asian Elephant. Human elephant conflict is one of the serious threats to both the elephant and human in Nepal. 10-12 people killed each year along with 2-3 elephant retaliation in Nepal. Elephant attack to human is most common in highest conflict prone areas where 67% of attacks were found fatal. Recent data shows that there are 150-170 people killed during elephant attacks since last 15 years and >20 elephants were killed in retaliatory killings by human. Elephant is present 20 district of lowland Nepal, which showed that elephant distribution is increased in the landscape level compared to late 1990s. Most of the cases happened due to human negligence and inadequate knowledge about the behavior of the wild elephants. Therefore this project was developed to assess the status of HEC in Nepal and strengthen knowledge on elephant conservation among the local people so that long term human elephant co-existence could be developed. The report highlights the major progress made by the IEF supported project which was implemented between January -December 2020.

### Goal and objectives:

The project goal is to strengthen human elephant co-existence in Nepal. Specific objectives are:

- Assess status of Human Elephant Conflict (HEC) in Nepal
- Develop Local Resource Persons (LRPs) on Human elephant co-existence and conduct HECx trainings and awareness among the local people to increase their tolerance towards wild elephants

## **MIDTERM PROGRESS**

### **Objective 1. Assess status of HEC in Nepal**

#### **Activity 1.1 Assess status HEC and community's tolerance towards elephants in Nepal**

Human elephant conflict (HEC) has been identified as one of the major challenges on elephant conservation in Nepal. Conservation has to be backed up by good science and knowledge. To deal with HEC and to increase the tolerance about wild elephants one has to understand the level of HEC, how communities are perceiving HEC, what practices are being carried out to manage the HEC, what is the level of tolerance towards elephants and what should be carried out to further strengthen their tolerance.

For this purpose, as planned first we developed a set of questionnaire and field tested in Chitwan-Parsa complex with 10 households. Once the questionnaire set is ready then 5 university graduates and 5 local citizen scientists from different clusters were selected as enumerators. They were trained for two days

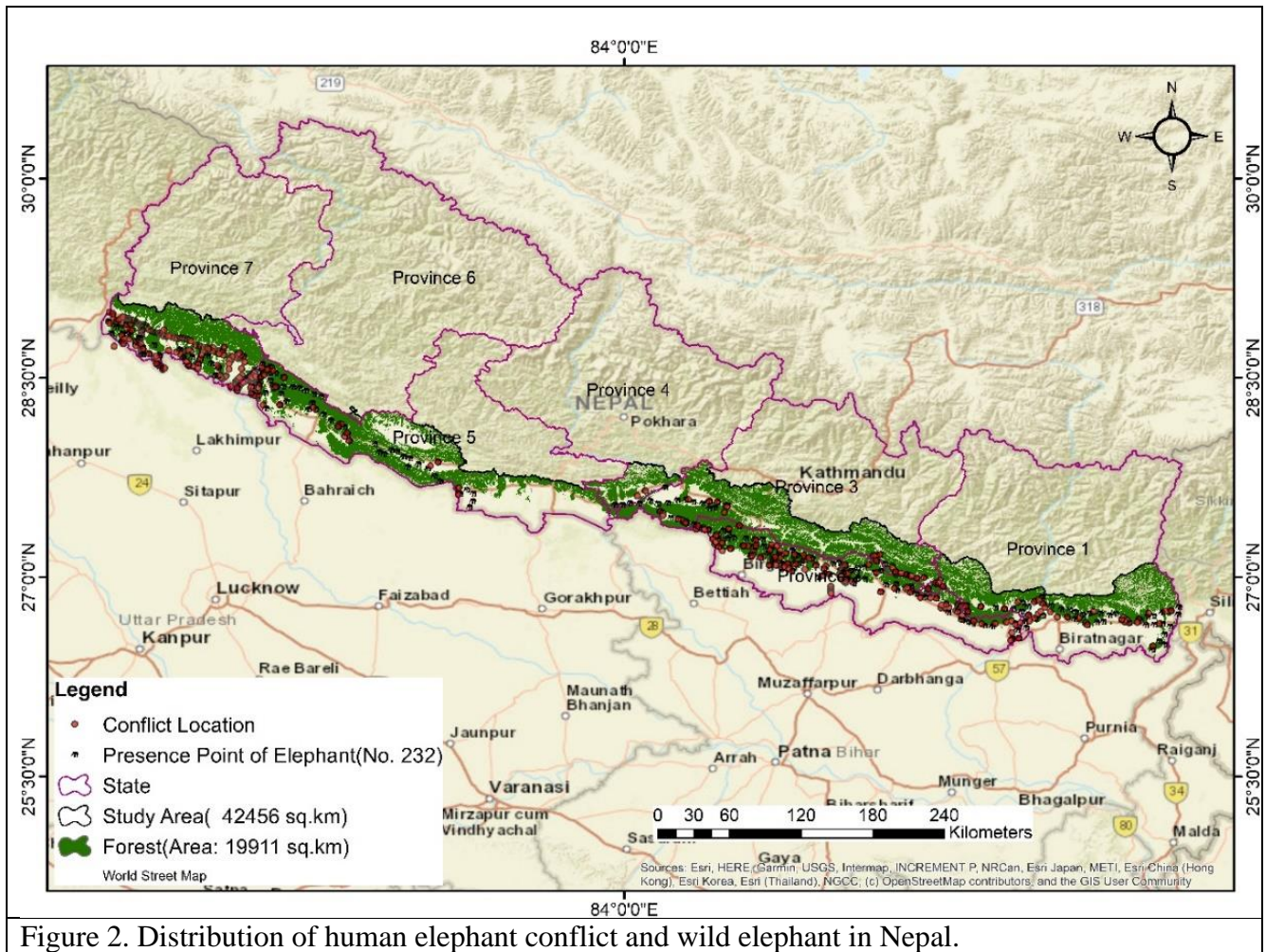
on questionnaire survey with examples and field practical sessions. First 25 household surveys were carried out under the supervision of principal researcher and then 5 teams consisting 2 trained persons in one group formed and sent for field survey on HEC. The principal researcher joined all teams for few days and supervised and assisted them on survey. The HEC survey carried out on 70 elephant affected villages across Nepal Terai.

A total of 490 households were surveyed with questionnaires. The survey data has been entered into the database and preliminary analysis has been completed. A manuscript is under preparation based on the findings of the HEC survey. The paper will be soon published and circulated among stakeholders.



Figure 1. HEC survey in progress with elephant affected farmers





Out of 490 respondents most of them (>85%) were farmers with small landholdings (<0.8ha average land holding/family). Among the total respondents about 77% had faced HEC in any form (property damage, crop damage, attacks etc). About 47% of the respondents had basic knowledge on HECx but 53% of the respondents were not aware about the behavior of the wild elephants and methods of responding them when farmers encounter with the elephants. About 57% of the respondents were positive on elephant conservation while rest were not positive on elephant conservation. The perception of the respondents are mostly affected by the HEC cases they faced in the past. Overall, the HEC survey suggests that i) the efforts to minimize HEC has to be effectively implemented; ii) Still there is low level of awareness among the local farmers towards elephant conservation iii) low number of farmers are aware about HECx and behavior of the elephants. Therefore, the projects that are devised for elephant conservation have to focus on minimizing HEC and strengthen HECx in Nepal.

Objective 2: Develop local resource person (LRPs) on Human elephant co-existence and conduct HECx trainings.

### Activity 2.1 Develop local resource persons (LRPs) through ToT on HECx

Conservation education is a most important way to educate local people in the community level to reduce HEC. Local people who were residing near the close vicinity of forest or within 1km of the forest boundary, mostly they are poor, landless, marginalized and uneducated. These people have very little knowledge about the elephant behavior and their attacking positions and most of the casualties happened due to fatal interaction between human and elephant. Originally, we aimed to conduct Trainers Training (ToT) on Human Elephant Coexistence (HECx) for 16 youths from 4 clusters (east, central, west and far west) that have high human elephant conflicts. But due to COVID-19 pandemic there were some travel restrictions and therefore we decided to conduct ToT in two events. We organized a ToT for 16 youths (Table 1) from central and eastern clusters for 4 days at Parsa National Park during 13-16 June 2020. A second phase of ToT targeting to youths from western Nepal was organized in Bardia National Park between 14-16 September 2020. A total of 24 youths took part on the training. We used a HECx training manual developed by National Trust for Nature Conservation. The training was facilitated by Dr. Naresh Subedi, Ashok Kumar Ram, Ramesh Kumar Thapa and Dr. Rabin Kadariya. The trainers were trained on human behavior, elephant behavior, elephant ecology, distribution, nature and extent of human elephant conflict, importance of elephant, ways to maintain HECx, handling problem elephants, ways of behaving with elephants and how to communicate with people about HECx with practical sessions. During the closing sessions Chief Warden of Parsa and Bardia National Park emphasized the need of such HECx trainings followed by village level HECx awareness camps and thanked to IEF and participants.

Table 1. List of HECx ToT participants for the eastern and central landscapes, Nepal.

SN	Name	Gender	Address
1	Sanjeeb kumar budhathoki	M	Katari 9, Udaypur
2	Narmdev Prasad Yadav	M	Parsagadhi Napa 4, Parsa
3	Suman magar	M	Triyuga 8, Udaypur
4	Kameswor chaudhari	M	Lalbandi 3, Sarlahi
5	Megh Bahadur pokharel	M	JitpurSimara 1, Bara
6	Surendra chaudhary	M	Gujara 1, Rautahat
7	Mukesh Chaudahari	M	Hariyoun 7, Sarlahi
8	Ramesh Kumar Gupta	M	Bahadurmai 9, Parsa
9	Santosh Kumar Yadav	M	Balwa 5, Mahotari
10	Binod Singh	M	Hariwan 4, Sarlahi
11	Sital karki	M	Parsa National Park, Bara

12	Raju Parajuli	M	Madhyabindu 6, Nawalpur
13	Uday Pudasaini	M	Makwanpurgadhi 4, Makwanpur
14	Manpuran Chaudhari	M	Parsa National Park, Bara
15	Sarswoti Ranamagar	F	Paterwa sugauli 3, Parsa
16	Parwati Tiwari	F	JitpurSimara 1, Bara

<b>List of participants of ToT on Human elephant coexistence</b>				<b>14-16</b>
<b>September, 2020</b>				
<b>SN</b>	<b>Name</b>	<b>Institution</b>	<b>Designation</b>	<b>Sex</b>
1	Manju Mahatara	Hattisar CBAPU Unit	President	F
2	Rabina Chaudhary	Chitkaiya CBAPU Unit	President	F
3	Sabitri Tharu	Chitkaiya CBAPU Unit	Member	F
4	Shanti Buda	Chitkaiya CBAPU Unit	Member	F
5	Krisna Tharu	Chitkaiya CBAPU Unit	Member	F
6	Puspa Shahi	Chitkaiya CBAPU Unit	Member	F
7	Bal Kumari Chaudhary	Khusalpatuwa CBAPU Unit	Member	F
8	Phulmaya Tharu	Khusalpatuwa CBAPU Unit	Member	F
9	Saraswoti Tharu	Khusalpatuwa CBAPU Unit	Member	F
10	Basanti Baraili	Betahani CBAPU Unit	Member	F
11	Rajesh Tharu	Gobrela CABPU Unit	Member	M
12	Nirma Chaudhary	Betahani CBAPU Unit	Member	F
13	Aarati Tharu	Betahani CBAPU Unit	Member	F
14	Asmita Tharu	Bhudkayaiya CBAPU Unit	Member	F
15	Shantosh Tharu	Betahani CBAPU Unit	Member	M
16	Prakash Chaudhary	Gobrela CABPU Unit	Member	M
17	Hari Prasad Chaudhary	Gobrela CABPU Unit	Member	M
18	Suman Kumar Chaudhary	Bhudkayaiya CBAPU Unit	Member	M
19	Saugat Tharu	Gobrela CABPU Unit	Member	M
20	Sandip Tharu	Gobrela CABPU Unit	Member	M
21	Samrakchan Chaudhary	Gobrela CABPU Unit	Member	M
22	Anas Ram Tharu	Banugaun CBAPU Unit	Member	M
23	Narayan Chaudhary	Kusalpatuwa CBAPU Unit	Member	M
24	Ram Bahadur Tharu	Banugaun CBAPU Unit	Member	M





Figure 3. HECx ToT on progress for the participants from eastern and central complex, Nepal



Figure 4. HECx ToT participants and organizing team at western Terai, Bardia

## **Activity 2.2. Village level HECx trainings to local communities (35 events)**

We conducted 35 events of community level HECx trainings were carried out in different part of Nepal having high level of HEC in which a total of 1107 people participated (Table 2). Among the total participants 56% were male and rest were female. The village level HECx trainings were carried out by using the trained local resource persons (LRPs). The one-day long training was of about 4 hours long. In the training various training methods and tools (eg games, posters presentations, slide shows, short video clips presentations) were used. The classes and video documentaries on elephant behaviour, habitat requirements, ecological importance, nature and extent of HEC, methods to respond elephants and what should be done when the elephants do visit in the villages are discussed/practiced using various training methods and tools. After the training the participant's knowledge on wild elephant's behaviour together with method of saving life when encountered with elephants is expected to be increased. Such village level awareness camps and trainings are very effective to minimize human casualties. Similarly, a short street dram on HECx was organized in the western Nepal using the citizen scientists and local students.

We also tested prior knowledge of participants on the elephant's behaviour, elephant conservation and HECx. We collected data from 774 participants out of 1107 who participated on our HECx trainings. We found that about 55% participants did not have knowledge about elephants and their behaviour, before the training, 30% had basic knowledge and 15% had good knowledge on the HECx. We also evaluated the participants after the training and found that 60% of the participants had good knowledge on elephant's behaviour and HECx; 30% good and 10% still has no knowledge on HECx. Overall, the village level HECx trainings were found very instrumental to increase the tolerance level of communities towards wild elephants and to change the behaviour of people so that life of the people can be saved.



Table 2. Details of village level HECx trainings conducted during the period.

SN	Date	Location	Participants		Total
			M	F	
1	15-Jan-20	Thori, Suwarnpur	15	13	28
2	18-Jan-20	Amlekhganj, Bara	30	5	35
3	02-Feb-20	Aadhabhar Bara,	19	15	34
4	05-Feb-20	Manhari, Makwanpur	10	13	23
5	13-Feb-20	Manhari, Makwanpur	23	10	33
6	19-Feb-20	Jitpur simra, Bara	15	19	34
7	24-Feb-20	Parsagahi Napa	19	5	24
8	15-Mar-20	Thori4, Nirmalbasti	25	8	33
9	19-Mar-20	Barah, Sunsari	24	14	38
10	20-Mar-20	Prakashpur 10, sunsari	30	15	45
11	17-Aug-20	Baghphanta, Kanchanpur	12	15	27
12	18-Aug-20	Jhilmila, Kanchanpur	13	14	27
13	19-Aug-20	Imaliya, Kanchanpur	17	15	32
14	12-Sep-20	Kothiyaghath, Bardia	18	13	31
15	13-Sep-20	Dalla, Bardia	17	15	32
16	14-Sep-20	Kailasi, Bardia	13	18	31
17	15-Sep-20	Nbanjariya, Bardia	11	14	25
18	16-Sep-20	Manau, Bardia	13	18	31
19	17-Sep-20	Patabhar, Bardia	15	17	32
20	18-Sep-20	Shivpur, Bardia	16	14	30
21	19-Sep-20	Amlekhgunj Parsa	15	16	31
22	20-Sep-20	Subarnapur, Parsa	11	14	25
23	20-Sep-20	Nirmalbasti, Parsa	16	15	31
24	21-Sep-20	Bhikathori, Parsa	23	12	35
25	22-Sep-20	Ayodyapuri, Madi	16	18	34
26	23-Sep-20	Kalyanpur, Madi	17	13	30
27	24-Sep-20	Jagatpur, Chitwan	18	14	32
28	25-Sep-20	Maghauri, Chitwan	15	13	28
29	08-Oct-20	Pipra, Saptari	16	14	30
30	09-Oct-20	Bhardha, Saptari	18	15	33
31	10-Oct-20	Madhuban, Susari	13	15	28
32	11-Oct-20	Prakashpur, Sunsari	23	12	35
33	12-Oct-20	Bahundangi, Jhapa	18	13	31
34	13-Oct-20	Bahundangi, Jhapa	19	17	36
35	14-Oct-20	Jalthal, Jhapa	25	18	43
<b>Total participants</b>			<b>618</b>	<b>489</b>	<b>1107</b>



Figure 5. Street drama being performed by local youths on HECx



Figure 6. Community level HECx training participants in Bardia, Patabhar





Figure 6. Community level HECx training participants, Kanchanpur



Figure 7. HECx training participants at Chitwan

**Activity 2.3. Develop field booklets on HECx and distribute to the villagers.**

We prepared a booklet on elephant conservation on local language and printed 3,000 copies. The booklet is distributed in HEC prone areas to sensitize elephant affected communities on elephant conservation and saving their own life from elephants. All the booklets have been distributed in HEC prone areas and during the village level trainings and HEC survey. The PDF version of the booklet is attached with the report for reference.



Figure 8. Wild elephants in the East west highway at Parsa, Nepal

1. Describe the conservation outcomes for elephants, other wildlife, habitat and human communities, and list major findings and accomplishments to date.
  - HEC survey across Nepal conducted. A peer reviewed paper is planned to be published out of this work which will contribute Nepal to develop HEC mitigation strategies and plans.
  - 3,000 copies of elephant conservation booklet produced and distributed to the local communities which will help to minimize HEC and help promote HECx.
  - 40 HECx trainers produced and are working in the field to sensitize people on HECx
  - A total of 35 community trainings on HECx carried out and trained 1107 people on HECx.
2. Approximately how many humans/communities are/were impacted by your project? Approximately how many elephants are/were impacted by your project?
  - HEC survey with 490 households
  - HECx trainings to 1107 framers carried out from HEC prone areas
  - 3,000 copies of elephant booklet reached to 3,000 households at HEC prone areas
  - 40 HECx Tutors at community level produced and are functional
3. Describe any problems discovered or that occurred during this grant period.



- The global pandemic of COVID 19 has impacted to conducted field level HECx trainings and travel restrictions

4. Was your project successful? State short and long-term goals that you are using to evaluate your accomplishments.

Yes, our project is very successful. Local people were fond of working with this project and they are willing to continue. They have asked to continue the conservation awareness program and also want to be a part of this kind of activities as a volunteer. They have suggested that women and youth should be focused for conservation awareness activities because women were encountered with elephant during fodder and fuel wood collection inside the forest where youths were encountered during chasing elephants. So, they suggested to focus on it. They have also requested to continue this kind of conservation awareness program among the school kids.

5. Based on this Project, what is the “next step” for this project and does it have implications for future conservation actions?

The project “Strengthening Human Elephant Conflict (HECx) in Nepal is very successful project because this project has provided the latest, HEC situation and the major conflict hotspots have been mapped. Our assessment revealed that very low level of community awareness on HECx. Therefore, the behavioral changing training to the HEC affected communities are immensely important to increase the community’s tolerance towards wild elephants. Next step of this project would be to strengthen the achievements and reaching to the larger number of people to strengthen community stewardships on elephant conservation.

6. **Provide at least one human interest story.** This story should enable the reader to identify with the people, a problem, day-to-day situations, achievements or a funny or strange occurrence during the course of the project. Examples: a story about when the bull elephant put his tusk through the window of the research vehicle or the lion with a snare on his leg and the many weeks it took to find the animal and remove the snare or a specific family who benefitted due to the project. If available, please include a photo of the incident described.

- There are 12 bull elephants in Koshi Tappu Wildlife Reserve (KTWR). Usually, they are in a group of single herds and sometimes in a separated small herd of 6-8. 3-4 loners (Single bull) elephants were wandering nearby villages which had damage a to the human lives and property. These four elephants had killed 26 people around KTWR and also damages lot of houses and crops. Among these four, one elephant story was very interesting and I have written here below.
- People name that elephant as a “Makhana”. The Makhana is a dominant bull in KTWR and leaded the sub adult male group and he has contributed a lot in breeding of captive elephants. There are three babies born in KTWR captivity.

- Makhana continuously visited to the local villages for raiding crops and property, he has also killed over a dozen people alone. Once, when he visited to human settlement, he was chased, hit severely with by arrows particularly by one person. Next day, he visited to the same place and continue crop raiding in Saptari district, the land owner came nearer and nearer he again chased and attacked the elephant with fire ball and arrows. But this time, Makhana attacked him and played like a football for half an hour. Hundreds of people came there after that incident, they cried loudly, Makhana didn't stop playing. Finally, people came with tractor and chased the elephant that day. Local people collected the corpse, did the postmortem and buried in the nearby area with rituals. Makhana again came the next night, dugout the corpse and tore all the body parts in to small pieces and then went back.
- This incident happened because of the negative behavior of the people (attacking the elephant). So, Makhana killed that man very badly due to his negative behavior to the elephant. Currently, the Makhana is radio-collared with satellite collars and monitored in a real time basis. When he approaches to the human settlement our park staff inform to the local people and immediately our rapid response team goes and push the elephants towards forest areas. The Makana is not aggressive these days and looks friendly.

7. List all organizations associated with this project and their roles in the project.

Sn.	List of organization associated with this project	Role of those institution in executing the project	Remarks
1	Ujyalo Nepal	Preparing booklet (Educating material)	
2.	NTNC	Facilitating for TOT and monitoring the project	
3.	Parsa NP,	Facilitating for TOT and monitoring the project	
4.	Chitwan NP, Bardiya NP,	Monitoring the project	
5	Department of National Parks and Wildlife conservation	Provided permission and also monitored the project	

8. Include an itemized financial report of IEF funds spent as a separate page of the report.

- The financial report is attached separately.

9. Submit at least five high resolution digital images (500 dpi or over) representative of the Project as separate individual files for each 6 month and final report. Do not send the same photos for multiple reports. If possible, please include at least one photo with an elephant in the frame that demonstrates your project activities.

- Photos are attached with the mail.

10. Submit at least one video clip least 2 minutes in length for each 6 month and final report. Do not send the same video for multiple reports. The video can cover anything you think IEF and/or the general public might find interesting as long as it relates to the project funded by IEF and includes the following:

- Introduce yourself and the title of your project
- State the purpose of the project
- Please very briefly acknowledge the International Elephant Foundation.
- Must have either audio or subtitles
- If the audio is not in English or if it is difficult to understand or hear, provide a written transcript in English.
- Do not add music to your video.
- Please try to include footage of elephants when possible

Please remember that the general public and donors are fascinated by the work you do and your knowledge of and experience with elephants. They want to learn about the projects that help elephants and see how their donation is being used. You can explain the goals, objectives and significant outcomes of your project, or take us through a day in the life of a patrol or your interactions with community members, or tell us why your project has greater implications for elephant conservation. Use your imagination to tell us your very special conservation story.

11. Do you intend to publish and/or present your findings at a conference or symposia? Please provide us information about the journal/conference/symposia and a timeframe.

- Yes, it will be published on peer reviewed journal. I am working on the manuscript. Acknowledgements will be given to IEF.

12. Has your project received any media coverage? If so, provide copies of the articles, videos, etc complete with web links if the coverage was online.

Yes our project has received the media coverage and help to not kill the rougue makhana of Koshi Tappu Wildlife Reserve, where local government has decided to kill but we raise the issue and it is now safe. Please see the link below.

<https://kathmandupost.com/climate-environment/2020/12/17/to-kill-or-not-to-kill-authorities-and-wildlife-conservationists-debate-fate-of-elephant-that-recently-killed-a-man-in-sunsari?fbclid=IwAR1SB9r-WmQ6tCISBnPsSrLHqS-5HG7DwF9jKSpB4AsavB-OXfKqwNrrLU>

Other related,



हात्ती विभिन्न समूहमा हिंडुछन् । भालेपोथी सँगै पनि हिंडुछन् । त्यस्तो बेलामा भाले गार्डको रूपमा पछिपछि हुन्छ भने पोथी अधिअधि । पोथी आकारमा ठूलो पनि हुन्छ । बच्चाहरू भाले-पोथीकै बीचमा लुकेर हिडेका हुन्छन् । लोनर (सिङ्गल) हिंड्ने हात्ती पनि हुन्छन् । पर्सामा 'लोनर' हात्ती पनि छन् ।

खोजेका छन् । मिहिन तरिकाले अध्ययन गरेर वार्षिक रूपमा हुने क्षतिको विवरण निकाल्ने प्रयासमा छुँ, उनी भन्छन्, 'त्यसैले मानव-वन्यजन्तु द्वन्द्वको अवस्था थाहा हुन सक्छ ।'

पछिल्ला वर्षमा वन्यजन्तुको आक्रमणबाट ज्यान गुमाउनेको संख्या बढ्दै गएको छ । त्यसैले सरकारले भर्खरै वन्यजन्तुको आक्रमणबाट ज्यान गुमाउने व्यक्तिका परिवारलाई राहतस्वरूप १० लाख रुपैयाँ दिने नीतिगत व्यवस्था गरेको छ । यसै, घाइते हुने र बाली र घर गोठ क्षति भएका परिवारलाई पनि क्षतिपूर्तिको व्यवस्था गरिएको छ ।

अशोकको अध्ययनको अर्को विषय हो- हात्तीको वासस्थान (ह्याबिट्याट) कतिको सुरक्षित छ ? जनसंख्या विस्तारसँगै भएको वन विनाशले हात्तीको परम्परागत बाटो विछल्न मात्र भएको छैन, हात्ती हिंड्ने बाटोमा ठूला सरचना बनेका कारण पनि अवरोध बढ्दो छ । हात्तीले आफ्नो बाटो सोचेर निर्धक्क आउजाउ गरेको हुन्छ, अशोक सुनाउँछन्, तर, मान्छेले त्यसैलाई डिस्टर्ब गरेको सम्भव छ । पूर्वदेखि पश्चिमसम्म हात्तीको वासस्थानका बारे अध्ययन गर्ने अशोकको योजना छ । हात्ती पाइने सबै क्षेत्र कनेक्टेड छैन, उनी भन्छन्, 'सर्लाहीको बाग्मतीदेखि भद्रापासम्म सम्पर्क (मार्ग) गराउन सके हात्तीको वासस्थान सुरक्षित हुनेछ ।'

सर्लाहीको बाग्मतीदेखि कञ्चनपुरसम्म सञ्चालित तराई भू-परिक्षा कार्यक्रम (ताला) ले हात्ती, बाघ, गैडाजस्ता ठूला वन्यजन्तु (मेधा स्पिजिज) को आउजाउ र संख्या विस्तारमा सहयोगी भूमिका खेलेको सरक्षणकर्मीको बुझाइ छ । तर, बाग्मतीदेखि भद्रापासम्म फोँलएको वासस्थान खलबलिपुकाको कनेक्टिभिटी गाह्रो छ, अशोक भन्छन्, हात्ती प्रजाति तितरबितर भएकै छन् ।

-अबदुल्लाह मिर्चा

भापादेखि कञ्चनपुरसम्म हो । यसबीचमा तराईका १८ र चुरेका ३ गरी २१ जिल्ला पर्छन् ।

भापामा भारतको पश्चिम बंगालदेखि हात्तीको बचान आउँछ र बेलामैले विलुप्त मच्चाउँछ । स्थायी रूपमा भापामा जम्मा १० देखि १२ वटा रैथाने हात्ती छन् । त्यहीँका केही हात्ती सुनसरी/सप्तरीको कोसीटप्पु वन्यजन्तु आरक्षसम्म आउँछन् । कोसीमे पनि ९ देखि १० रैथाने हात्ती छन् । पूर्वी क्षेत्रका ती हात्ती कमला खोला कट्टेदेखि भन्ने विरवास थियो । तर, पूर्वी क्षेत्रका हात्ती अहिले सिन्धुली हुँदै बर्दियास, सर्लाहीसम्म आएर विलुप्त मच्चाउने गरेको अशोक सुनाउँछन् । पीएचडी शोधमा हात्तीको जेनेटिकल्ली एक टाउँबाट अर्को टाउँसम्म कनेक्टेड छ कि छैन भनेर अध्ययन गर्न खोजेको छुँ उनी

भन्छन् । योवाहेक नेपालका चारवटा ब्लकमा जंगली हात्ती यति नै हुनु भनेर यकिन नभएकाले अशोकले जेनेटिक एनेलाइसिस गरेर संख्या पत्ता लगाउन खोजेका हुन् ।

अशोकका अनुसार हात्ती विभिन्न समूहमा हिंडुछन् । भालेपोथी सँगै पनि हिंडुछन् । त्यस्तो बेलामा भाले गार्डको रूपमा पछिपछि हुन्छ भने पोथी अधिअधि । पोथी आकारमा ठूलो पनि हुन्छ । बच्चाहरू भाले पोथीकै बीचमा लुकेर हिडेका हुन्छन् । लोनर (सिङ्गल) हिंड्ने हात्ती पनि हुन्छन् । पर्सामा 'लोनर' हात्ती पनि छन् । अध्ययनको अर्को विषय हो- हात्तीको परम्परागत वासस्थान रहेको चारवटा ब्लकका हात्तीको माइग्रेसन हुन्छ कि हुँदैन ? चारवटा ब्लकका हात्ती एकअर्कामा

कनेक्टेड छन् कि छैनन् भनेर पनि हेरिरेहेको छुँ उनी भन्छन् । भापा, कोसीटप्पु आसपास, सर्लाही, पर्साले निकुञ्जको आसपास, पितवनको माडी उपत्यकासहित मध्यवर्ती क्षेत्र, बाघ, बर्दिया निकुञ्जको मध्यवर्ती क्षेत्र, शुक्लाफाँटा निकुञ्जको मध्यवर्ती क्षेत्र हात्तीबाट मुख्य प्रभावित क्षेत्र हुन् ।

ती क्षेत्रमा बर्सेनि हात्तीले मान्छेको ज्यान लिन्छ । वालीनाली विनाश गर्छ र घर लहसनहस पार्छ । बर्सेनि हात्तीले गर्ने मानवीय क्षति कति हो यकिन हुन सकेको छैन । निकुञ्ज र आरक्षक्षेत्र तथा मध्यवर्ती क्षेत्रमा भएको क्षतिको विवरण राष्ट्रिय निकुञ्ज विभागमा उपलब्ध भए पनि पूर्ण छैन । त्यही भारत अशोकले बर्सेनि हुने क्षतिको अवस्थाबारे पनि पीएचडी अध्ययनमा समेटेन



# हात्तीको पछिपछि

अध्ययनअनुसार नेपालमा जंगली हात्तीको संख्या बढीमा १४५ छ । तर, यो यकिन होइन, अनुमानित संख्या मात्रै हो । पछिल्ला वर्षमा बढेको हात्ती वितण्डा हेर्दा यो संख्या निकै बढेको अनुमान गरिएको छ ।

## मा

पादेखि कञ्चनपुरसम्म जंगली हात्ती कति होलान् ? अनि भापाका हात्ती सर्लाही हुँदै पर्सासम्म आउजाउ गर्छन्/गर्दैनन् ? पर्साका हात्ती कोसी र भापासम्म माइप्रेट गर्छन्/गर्दैनन् ? हात्तीले गर्ने मानवीय क्षतिको आँकडा कस्तो छ ?

युवा संरक्षणकर्मी अशोककुमार राम एक वर्षयता यी प्रश्नको उत्तरको खोजीमा तराईका जंगलमा भौतारिरहेका छन् । खोजीमा उनी घरी कोसी पुग्छन्, त घरी भापाका हात्ती प्रभावित क्षेत्र । कहिले बारा, पर्सा, सर्लाहीका जंगल घुम्छन् त कहिले चितवन, बर्दिया, शुक्लाफाँटाका लालभाडी र मोहना । यो अध्ययन अबको तीन वर्ष चलिरहनेछ ।

हात्तीमै विद्यावारिधि गरेका नरेन्द्रमानबाबु प्रधानको सन् २००७ को अध्ययनअनुसार नेपालमा जंगली हात्तीको

संख्या १०७ देखि १४५ छ । तर, पछिल्ला वर्षमा बढेको मानव-हात्ती द्वन्द्व र हात्तीको वितण्डा हेर्दा संख्या बढेको अनुमान संरक्षणकर्मीको छ । 'हो, वास्तविक हात्तीको संख्या बढेको छ कि छैन भनेर मेल जेनेटिक (वशाणुगत) अध्ययन गर्न खोजेको हुँ' पर्सा निकुञ्जमा सहायक बाईन रहेका अशोक भन्छन्, 'एक वर्षयता मेरो अध्ययन जारी छ ।'

नेपालमा पूर्वदेखि पश्चिमसम्म हात्तीको चारवटा 'सब पपुलेसन' छ भन्ने बुझाइ छ । ती हुन्- पूर्वमा भापादेखि कोसीसम्म, सर्लाहीदेखि चितवन/पर्सासम्म, दाङ, बाँके र बर्दियासम्म र कञ्चनपुरको शुक्लाफाँटा लालभाडी र मोहनासम्म । वाइल्डलाइफ इन्स्टिच्युट अफ इन्डिया, देहरादुनबाट 'इलेफेन्ट इकोलोजी' मा पीएचडी (विद्यावारिधि) गर्दै गरेका अशोकको अध्ययन क्षेत्र



Elephant conservation focused news in national media highlighting the PI's work.

13. Please list all websites, blogs, social media accounts, etc associated with the project, its investigators, and organizations (this includes Facebook, Twitter, Instagram, etc)

I have been connected with face book and research gate which I have listed here below.

<https://www.facebook.com/ashok.ram.946>

[https://www.researchgate.net/profile/Ashok\\_Ram4](https://www.researchgate.net/profile/Ashok_Ram4)