

Final report on

Behavior Change Conservation Campaign: Human-Wildlife Coexistence

(January to December, 2021)



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Abstract

Approx. 120 elephants and 87 tigers have shared same habitat in the Bardia National Park and its surroundings (additional 21 tigers in Banke National Park). In recent years, the cases of human casualties from tiger, and cases of crop and property damage from wild elephant are increasing which resulted to retaliatory killing of two tiger and one elephant during the last one year. The case of human casualties was worsening as 27 and 7 local people were killed by tiger and elephant in Bardia complex, recently since 2018 whereas 1272 household lost crops and 246 poor houses were damaged by elephant while searching grains on the same period. To minimize such problem and engaging local communities for elephant conservation, well trained technician and RRT members are mobilized for the monitoring of problematic elephants/tigers and safely chasing wild bull from the agricultural field, respectively. During the period, the team has deployed to monitor the problematic tiger in the stie of nine human deaths and other 11 places, where frequent movements and sightings of tiger in village and highway were reported. The team with the support of National Trust for Nature Conservation (NTNC) and Bardia National Park (BNP), 5 problematic tigers were safely rescued from the fringe areas and profile of 17 tiger developed (still continuing). Similarly, out of 120 elephants from the park, 10 frequently visiting bulls are identified and safely chasing by mobilizing RRT and CBAPU members. With the help of Buffer Zone User Committees (BZUCs) and BNP, 123 conservation education sessions were organized where 5997 people were participated, representing local communities, governmental officers and journalists. The BZUC mobilized their members for the proper running of 42 km electric fence and construction of more than 150 predator proof corral houses. The members of 19 CBAPU subcommittee regularly mobilized its members for the protection of elephant and its habitat. No killing/poaching of elephants and tigers are recorded during the project period and the herds of elephants using corridor are also protected. The human wildlife conflict mitigation strategy is owned and implemented by park authorities with the active involvement of local communities and related stakeholders.



Narrative

1. Activities accomplished during the period

Objective 1: Capacity development for monitoring of problematic elephant and tiger

1.1. Equipment support: The population of elephant and tiger are increasing in Bardia complex, on the other hand human causalities are also increased. To develop the human-wildlife co-existence, the close monitoring of problematic tiger and elephant is urgent. Five sets of GPS, camera, binocular and mobile phone, which are purchased from the IEF support and 10 automated cameras allocated by NTNC, was provided to wildlife technician and RRT groups. Monthly recharge is also provided to those mobile phones for the regular communication.

1.2. Wildlife monitoring training: One and half day training on wildlife monitoring was provided to the NTNC technicians and park game scouts on the tracking of elephant and tiger following the footprints, feces and tracts, setting up camera, use of GPS, identification of individual elephant/tiger and basic knowledge about elephant/tiger social behavior. These technicians are fully mobilized for the monitoring of problematic elephant and tigers in cooperation with RRT members.



Handling of equipment by technicians



Matching of problematic tiger with master profile

1.3. Training for RRT members: A one day training was organized for the 15 members from five RRTs, which were located in the corridor between Bardia National Park, Nepal and Katarniyaghat Wildlife Sanctuary, India. They were trained on record keeping of conflict events,

application for the compensation from government, basic behavior of elephant, safely chasing techniques, better communication and leadership for team mobilization. These trained members have positive role to manage the crowd when local communities were killed by elephant and tiger.

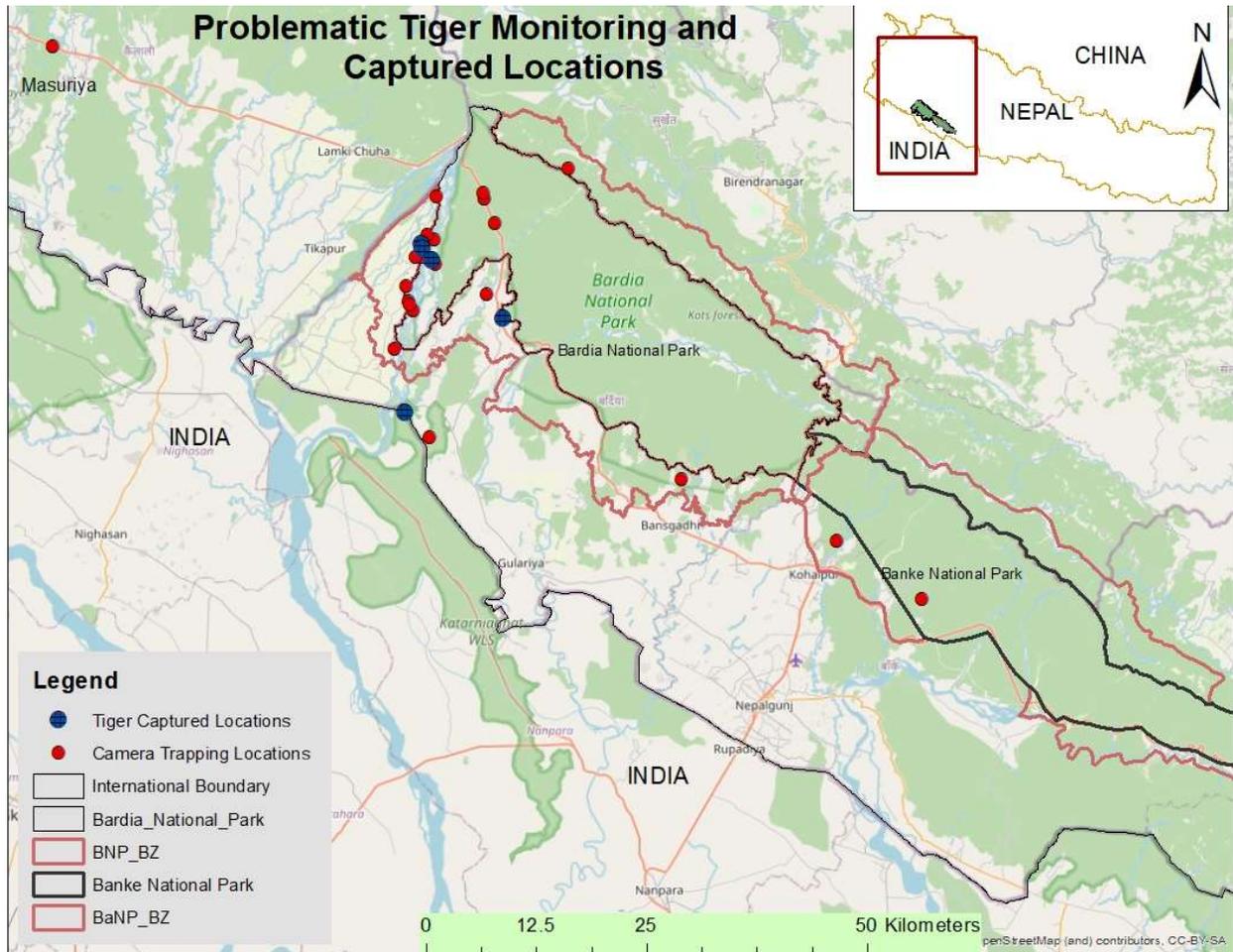


Photos of bulls taken by RRT members while safely chasing from the village and highway

1.4. Deployment of camera traps: When the cases of human casualties and livestock depredation are reported in park office, the technician team are immediately deployed in the conflict site. The team first search animal tracks, footprints and feces. During the period camera traps were deployed in the nine sites where human casualties were reported. Five tigers were found more problematic following our database and body condition of tiger and rescued successfully from the villages. Of 5 tigers, one was transferred to zoo, two kept in holding center (one tiger later escaped from cage and found death), two released in the core part of park (both later again sighted in the village and frequently monitored by team). Additional 5 sites where frequent movement of tiger reported in the highway and villages and 6 sites where livestock were killed by tiger from the village, were frequently monitored by setting automated cameras.

Photographs of seventeen tiger involved in human injury and death, and livestock depredation were captured in the camera traps which were deployed in conflict areas immediately after

incidents of human casualties. Among these, the profile of four individuals matched with the master profile of 2018 tiger survey. Monitoring of conflict causing tigers, immediately after the incident helped park authorities to identify the tigers involved in human death or injury, and adopt immediate actions to take control of the situation and minimize further casualties.



Problematic tiger monitoring and tiger captured locations



BNP_PM01_Bagtapu Bhale (Transferred to central zoo)



BNP_PF05_Rajipur Pothi

BNP_F06_Kalaban Pothi



BNP_PM06_Rajipur Bhale (released in core part of park)



BNP_PM07_Rajipur Rehab Bhale (Kept in Rehabilitation center of BNP headquarter)



BNP_M01_Danda Gaun Bhale (Transferred to rehabilitation center of Rambapur Bardia)



BNP_PUK08_Khata First

BNP_PM09_Khata Male tiger (transferred to BaNP)



BNP_PUK10_Khata Tiger

BNP_UK_Highway tiger



BNP_M24_Bantariya Bhale (trapped in khata)



BNP_M30_Khata Bhale



BNP_PUK11_Khata Tiger



BNP_PM12_Nauranga Bhale



Cubs_Khata 1



Cubs_Khata 2



BNP_PF13_Madhabpur Village Pothi (**transferred to Lamidamar**)

Profile of problematic tiger

Monitoring conflict causing tiger in Kailali

On the 14th February 2021, DFO Kailali informed NTNC-BCP to monitor conflict-causing tiger in Masuriya, Gauringa-5, Kailali. A young woman aged 25 was killed by the tiger near to Mahendra Highway during day time while collecting forage in the community forest. In close coordination with CFCC Kailali, DFO Kailali and Bardiya National Park, technical team of NTNC had deployed camera traps in five different stations of Gauriganga Community Forest area. Our technical team had disseminated awareness on human tiger conflict situations and way of safety measures in response to the conflictual tiger. NTNC-BCP has been coordinating with CFCC, instructing their user groups about the behavior of tiger to aware about the possible human causality by the tiger. On 13th July 2021, two peoples were arrested by the Nepal Police with the skin of same tiger which we had monitored in february 2021.



Matching of tiger stripes

A landscape level elephant population assessment was done and completed in the previous years. Asian wild elephant roaming around the buffer zone and Bardia National Park are documented by capturing the photographs of individual elephant. Based on identification features such as size of tusker, ear notches, tail cut, scratches on body, body size, and sex of the elephants, seven individuals were identified. There is other three individuals which could not distinguish due to poor photos. ID features and their records on conflict involvement have helped to design human

elephant coexistence in Bardia National Park. It can possibly become the reference for other elephants bearing PA of Nepal's Terai.



BNP_EM01: Debre Thutho Makuna



BNP_EM02: Debre Darabhachuwa



BNP_EM03: Dahine Chotedara



BNP_EM04: Linde Bhale



BNP_EM05: Chota Dara



BNP_EM06: Lamadara



BNP_EM07: Dahine Jogikane



Three unidentified tuskers

Profile of problematic bull elephant in Bardia National Park

If the problematic elephant and tiger are reported near the settlement, the information is immediately broadcasted from local FM, public notice by ward offices and alerting message by RRT members for taking safety precautions. Three elephants are frequently visiting in the paddy field, the technician team had wisely chased by partially sedating when other means were not worked.



Frequently visiting three elephants in the paddy field



The team of RRT and veterinarian for the chasing of elephant away from field

1.5. Mobilization of RRT for elephant chasing

CBAPUs are formally organized local youth volunteer networks actively engaged in conservation. CBAPU youths are also engaged in wildlife rescue, wildlife monitoring and joint patrolling with park frontline staffs. In recent years, more than 2400 active youths are affiliated in this campaign, representing 19 subcommittees in BZUCs of Bardia. Basic logistic supports, stationaries,

communication, sport materials were regularly provided to motivate the youths in the anti-poaching program. Three sports events were also organized in Suryaptuwa, Hariharpur and Taranga to interact among different CBAPUs. Likewise, with aim to strengthen the institutional capacity of CBAPU sub-committees, a total of 14 stakeholder workshops and training regarding collection of information were provided to 588 youths (322 M, 216 F).

There are eight Rapid Response Team (RRT) working actively in Bardia along the Khata and Karnali forest corridors that connects Bardia National Park with Katerniyaghat Wildlife Sanctuary of India. The rapid response team consists of members from CBAPU who are mainly responsible for scaring away elephants when entered the settlement. The Park level RRT regularly coordinate respective community level RRT for the chasing of elephant, especially during crop harvesting season. The field office of NTNC and Bardia National Park have regularly provided vehicle for their transportation. A total of 178 high focus torchlight were provided to BNP, and Asaregaudi, Bindra, Geruwa, Patabhar, Surayapatuwa, Thakurdwara, Shivapur and Shreeram Nagar sub-committees to chase the elephant during night. High focus torch light has helped to conduct effective patrol and chase elephant in the night time. In each RRTs, 5-10 trained and equipped local youths work together to reduce any possible damages by wild elephants. The team has chased elephants 52 times from the villages. The detailed is included in Table 1.

Table 1: Activities performed by RRT members

S.N.	Date	Human Elephant conflict and action taken by RRTs
1	2021-01-04	Elephant visited in Karmla and Shivapur area
2	2021-01-15	Elephants visited in Patthabhoji
3	2021-03-21	Remain elephant returned from Khata
4	2021-04-03	Elephant entered in the midnight in Chitkaiya area
5	2021-04-10	Two elephants entered in the village at Janaknagar, Patabhar and one elephant in Tulsipur, Shivapur
6	2021-04-11	Bhunti Bohara, 60 years old, killed by elephant while grazing goat in Bhatara, Geruwa-1, in community forest, cannot hear properly, around 1:30 pm
7	2021-04-13	Elephant (one tusk broken) visited Betahani pahnta
8	2021-04-28	One big tusker sighted in Bardia
9	2021-04-19	One tusker wit (no tusk in the right and small tusk in the left) highway
10	2021-04-26	Elephant herd (track)sighted by Balkrishna
11	2021-05-22	Bull elephant visited in Bhatara area, Pathabar (probably two)

S.N.	Date	Human Elephant conflict and action taken by RRTs
12	2021-05-24	Chanda BK (37 years), Dipa BK (2.5 years) killed by elephant (probably tusk cut), 4 elephants, night time 9:30 pm, stay outside during mensuration, site clearance, electric fence, compensation, elephant deploy (four), plan for chasing after darting, field destroy down side also, time for paddy harvesting (2021-05-25 meeting with local communities)
13	2021-06-07	4 elephants back from the sarkhol, Bhatara (2 ox killed in Khalla gau, 1 ox killed in Patabhar, tiger move in the village of patabhar, camera trap shows tiger in patbhar and Khalla gau, two bull elephants, one elephant (short tusker), one additional elephant chased using xylazine, also reported 7 elephants, this is the time of off-season paddy, electric fence completed, mike completed.
14	2021-06-10	Phirulal and Dr. Return from Sarkhol, Bhatara
15	2021-06-10	More than 50 elephant crosses from Shiva community forest to Hattisar, Bikram, Gobinda, Pithyu saw group elephant, came from India on 2021-06-10
16	2021-06-19	Greuwa-1, Madabhpur, 5 kattha off season rice of Dhanadevi Ban damaged by elephant
17	2021-06-24	Two houses damaged by two elephants in gaddi tole, also lost one katta paddy and seedling two places in patabhar areas, two days ago
18	2021-06-24	Elephant damage grains in Pathhabhoji around NPR1,20,000. NPR12,000 supported by municipality
19	2021-07-06	Geruwa-2, Rajipur, house damage of 76-year-old Jagarnath Yogi, no human casualties, searching for grain.
20	202107-19	Bull elephant visited Kialishi and damage one house with grains
21	2021-07-21	4 Elephant visited Rajipur from last one weeks, some house damage, machine checkup by Pardeshu and Kisan, 3 torch light distributed
22	2021-07-23	Kisan and Pradeshu visited all 13 machines of geruwa site
23	2021-07-23	one tuskless elephant enter in the Dalla village mid night 12:30 am, chased by using 2 torch light and local fire
24	2021-7-7-24	Monitoring, damage seen at hotel side, Hattisar side, Hattisar cross (one elephant damage), Kailashi 3 places, one housed damaged, maize eaten one place, elephant entered one place at Dalla
25	2021-7-7-26	Elephant entry at Jhapa, no huma death
26	2021-7-7-27	House damage at Chitkaiya (Single elephant)
27	2021-08-02	two tusker elephants frequently entering in Kailalishi, 8 torchlights, diesel distributed
28	2021-08-08	Since last 12 days a single elephant (large tusker) visited in Kailashi
29	2021-08-14	Hattisar area, three torch light distributed, three elephants sighted
30	2021-08-17	Elephant at Kusumba, Bankhet and Asaregaudi
31	2021-08-18	Three bull elephants saw by Bikram, probably elephant group also
32	2021-08-20	Three elephants at Asareguadi, one elephant at Dalla
33	2021-08-21	Electric shock by elephant, one house at Rajawara

S.N.	Date	Human Elephant conflict and action taken by RRTs
34	2021-08-22	One house destroyed by elephant (two tusker, one Makuna)
35	2021-08-24	Three elephants visited Sonahaphata, maize harvested season (Asaregudi demanded: Solar, Bindra: watch tower, 20 Halogen light, 5 elephant enter near Kumar hotel, single bull elephant from south, Jhankumar Gola: Gola (1+1), Asaregaudi (1), Patabhar (3), 6 watch tower made by TAL
36	2021-08-25	3 elephants in Asaregaudi and 1 elephant in Bankhet area
37	2021-09-10	1 Elephant (short tusker) damaged paddy
38	2021-09-11	Evening, looks tusker
39	2021-09-13	3 Elephant in paddy field
40	2021-09-16	One Elephant in paddy field
41	2021-09-15	One Elephant damage all proof fence
42	2021-09-10	One elephant in Kailashi (mostly 3 elephant is reported in this area)
43	2021-09-20	One tusker at Dalla
44	2021-09-26	Three elephants in Gola, two elephants in riverside, same elephant in Betahani
45	2021-09-26	One elephant in Betahani
46	2021-09-28	Daytime elephant in Motipur + night time Dalla 2
47	2021-09-29	Daytime in Motipur 1+ night time Betahani 1 + Asaregaudi night time 2
48	2021-10-03	Asareguadi area, 2 elephant, paddy damage
49	2021-10-25	Hattisar area, photo by Anjali
50	2021-10-27	Highway near Kunwabhar one male
51	2021-10-30	two elephants in Kailashi, two in Patabhar and one in Shivapur, Dongpur
52	2021-11-01	Elephant reported in Karmala
53	2021-11-14	Two houses damage by elephant in Madhuban-1, Suryaptuwa
54	2021-12-13	One house damage by elephant at Karmala, Neulapur and continue upto 18 December, team deploy by park for safely chasing
55	2021-12-23	Elephant entered from Motipur and returned back from Bankhet, 4-5 houses damage
56	2021-12-24	Total houses damage 20 houses
57	2021-12-27	2 houses damage by elephant in Sarkhol, Patabhar
58	2021-12-28	Two thatch houses damage in Dalla by elephant
59	2021-12-31	Technical team deploy for the chasing of elephant from Sarkhol, 2 houses destroy at night, blind fire, two dose medicine



Herd of elephant moving from corridor forest



CBAPU members are ready for foot patrolling in Dalla area



Torch light distributed to RRT members of Bindra CBAPU Sub-committee

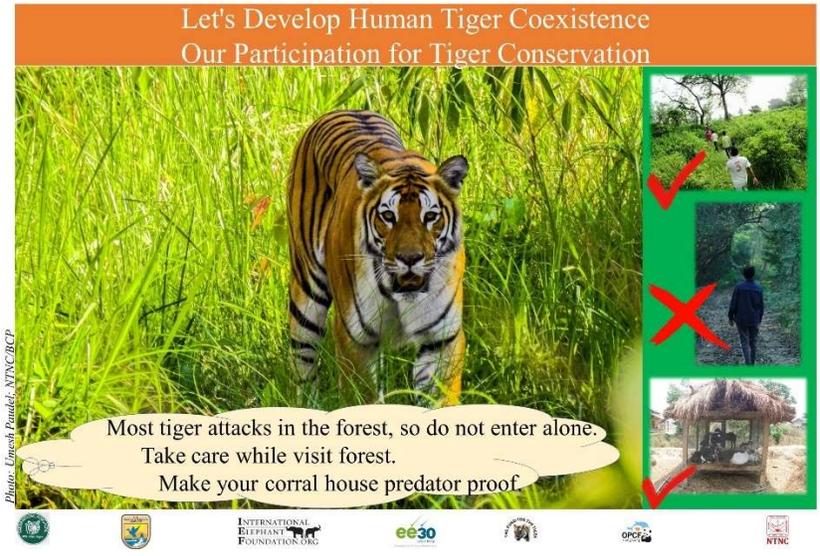
Objective 2: Awareness program on wildlife behavior to local communities for maintaining coexistence

2.1. Development of awareness materials: Posters on how to escape from elephant and living with the tiger were prepared. Each 1000 poster were distributed to village youths, community members and also placed in community places like buffer zone community forest, BZUC building, meeting places, ward office, police office, frequently visiting tea, barber and grocery shops. Similarly, power point slide on tiger/elephant social behavior, why conflict happens, how to escape from tiger and elephant is prepared and distributed to community leaders, park officer and conservationist for the awareness session.



Elephant poster

Same poster translated in English



Tiger poster

Same poster translated in English



2.2. Organize awareness session: Conservation awareness program were organized for district level authorities, security forces, local government bodies, community youth, women, school students and elders. Support was sought from the change agents, park officers and CBAPU leader to facilitate the awareness sessions. The awareness sessions mostly focus on social behavior of elephant/tiger, why animal enter village, how to escape from animal attack. The participants are also aware to adopt predator proof corral house and stall feeding to protect livestock from tiger attack, and adoption of non-palatable crops, timely repair of electric fence, keeping torch light, guarding from machan, avoid alcohol and safely chasing of elephants. During the period 123 awareness session, community discussion and meeting were hold with many stakeholders where priority were given to the places where incidents were happened. These programs will expect to bring positive attitude towards the successful biodiversity conservation and anti-poaching movements in Bardia National Park. In the western buffer zone of Bardia National Park, where three people were killed by the tiger along with frequent livestock depredation, community people need to be kept safe with the possible threats from the tiger. School level education program on

human-tiger coexistence was conducted in 8 school among the 1086 students to aware the behavior of tigers. This program aimed to develop human-tiger coexistence through the school level students. A radio program named "Nikunja Serophero (Park surroundings)" was broadcasted on local FM, Radio Tiger 99.2 with the support of NTNC-BCP to disseminate the importance of biodiversity conservation and ways of human-wildlife conflict mitigation in Bardia National Park. The program was run for 15 minutes on a weekly basis. Most of the users from the buffer zone access the coverage of Radio tiger FM. At the end of program, a quiz was asked to hearer and the one contestant who gave right answer was gifted a conservation message printed t-shirt. Similarly, one Television program on "tiger conservation awareness" was disseminated from Kohalpur NTV about the importance of tiger conservation at the provincial level. The aim of a TV program is to raise awareness among the people residing not only inside the buffer area but also people residing outside the buffer area for effective tiger conservation in the Bardia-Banke complex.

On 8 March, international women day was celebrated by Taranga BZUC by organizing interaction program with female CBAPU members at Taranga village. As women groups are the first users of forest product this program motivates village girls to participate in the biodiversity conservation activities. To identify the issues and challenges in biodiversity conservation of Bardia National Park, a coordination meeting with the local government authorities (3 Rural Municipality and 5 Municipality) and 19 BZUC authorities, was organized by Bardia National Park. A total of 61 authorized people participated in the program with the valuable presence of federal parliament member. The workshop addressed the issues of encroachment, poaching and human-wildlife conflict in the buffer zone of Bardia National Park. The chief warden of Bardia National Park had presented about the issues, challenges, and activities implemented by National Park and program chief of NTNC-BCP had presented opportunities and challenge for conservation and development and its legal issues. Two interaction programs were organized with local journalist to get their support for the wide dissemination of biodiversity conservation, human wildlife conflict minimization and anti-poaching operation in Bardia National Park. A total of 31 journalists were participated in the program. The participant published the wildlife conservation news on their respective news. In close coordination with BNP, an interaction meeting was conducted in Bardia for the proper management of human-wildlife conflict mitigation in BNP-BZ and the corridor area. The meeting proposed for the implementation of preventive and relief measures for the minimization of growing human wildlife conflict in Bardia. It also made a common understanding

among the authorities to rescue or safely chase wildlife especially tiger and elephant from vulnerable areas. The details of conservation education are presented in table 2

Table 2: Details of behavior change awareness session

SN	Date	Activities	Partici pants
1	2021-01-04	Interaction with lemon cultivation farmers (BNP, Ujyalo Nepal, NTNC, CBAPU, BZMC, Cooperatives, single women, Conservation Nepal company and lemon farmers: Planted 10000 lemon by 180 farmers in 480 katta, cultivation training, establishment of conservation Nepal Private Limited for the trading in future, 8 Business plan.	26
2	2021-01-06	Compensation scheme finalization for Suryapatuwa ward: Three major committee, Ward level Santwana committee, three Damage evaluation committee (Park:7, community:3, Ujaylo Nepal:3, NTNC:1, Army:2)	17
3	2021-01-22	Discussion on tiger conservation issues (poaching, Human tiger conflict, highway casualties, problematic tiger monitoring, rescue and rehabilitation); BNP, DFO, CFCC, TAL, ZSL, NTNC, Park, army, CBAPU, BZUC, WESC	25
4	2021-01-24	Stakeholder workshop for human wildlife conflict minimization (BNP, DFO, District administrative office, security forces, municipalities, ward offices, BZUCs, NTNC, ZSL, TAL)	53
5	2021-01-29	Class for army on safety measures from wildlife	30
6	2021-02-01	scholarship distribution for the wildlife victims: 15 girls, 3 above 10 class @ NPR 22000, 12 school girls @ NPR 11500: Total 204000; 10 girls were attended with the parents	32
7	2021-02-02	Wetland day drawing contest (40 students) and river catchment clean (60 persons)	100
8	2021-02-05	Farewell and welcome of commander of army and sharing of HWC experiences	40
9	2021-02-05	WCCB and human wildlife conflict strategy workshop	27
10	2021-02-06	Interaction with cyclers on tourism and wildlife conservation	80
11	2021-02-23	Interaction with CBAPU members for the CBAPU day celebration	30
12	2021-02-25	Class on safety measures for army	25
13	2021-02-25	CBAPU day celebration, preparing meeting, Khalla	32
14	2021-02-26	Awareness on fire control for community forest user group (Thakurdwara, Suryapatuwa, Shivapur, Neulapur, Bagnaha)	70
15	2021-02-26	Goat and bicycle distribution for CBAPU members	16
16	2021-02-27	Highway clean for plastic removal	150
17	2021-02-27	T shirt distribution for CBAPU members, Dalla	220
18	2021-02-28	Meeting at park for CBAPU day celebration	20
19	2021-03-01	Meeting at Khalla for CBAPU day celebration	20
20	2021-03-03	Compensation allocation to the Bhanjupur victim	12
21	2021-03-05	Highway control fire	
22	2021-03-08	International women day celebration in Taranga	55
23	2021-03-13	Interaction with CBAPU members -Thakurdwara	60
24	2021-03-15	Human tiger coexistence and problem tiger monitoring (4 sessions- Khata forest (10), Madhuban municipality (15), Chief District office (5), Across Geruwa region (20)	50

SN	Date	Activities	Participants
25	2021-03-16	Stakeholders meeting for the capturing of tiger	20
26	2021-03-19	Kinwanis Nature Conservation club meeting	18
27	2021-03-29	Preparation for wildlife week	20
28	2021-04-12	Bhatera area HWC discussion after killed Bhunti Bohara (200 crowd, compensation, electric fence maintenance)	50
29	2021-04-14	Wildlife week celebration (talk about the importance of conservation awareness)	60
30	2021-04-14	CBAPU interaction at Gainekanda, Taranga	65
31	2021-04-15	CBAPU interaction at Sukarmala, Taranga	36
32	2021-04-15	Interaction with CBAPU members at Telpani	38
33	2021-04-15	Bird watching (44 species of birds are recorded)	21
34	2021-04-15	Human wildlife conflict minimization strategy (District level)	40
35	2021-04-16	Highway clean for plastic removal	60
36	2021-04-16	Eco club orientation from Thakurdwara (By Basu Bhattarai)	40
37	2021-04-17	Monthly relief for single women (Single women 25, disable 6 (2 F, 4 M))	31
38	2021-04-17	Jungle drive for school students	24
39	2021-04-17	Art competition for wildlife conservation (Thakurdwara)	30
40	2021-04-18	Conservation education with kids by Manju Mahatara	40
41	2021-04-18	Interaction with CBAPU member at Gadapani	38
42	2021-04-19	Friendship sports for wildlife conservation	100
43	2021-04-19	Bardia district coordination meeting for the habitat improvement of wildlife (water channeling and river materials control)	60
44	2021-04-19	Human wildlife coexistence with political and traditional leaders, Pathabhar (my talk on human wildlife conflict minimization)	50
45	2021-04-20	Wildlife awareness and relief distribution, photo exhibition (My talk on behavior change awareness campaign)	50
46	2021-04-14-20	School education on tiger conservation and conflict minimization (8 schools, 320 participants)	320
47	2021-04-23	CBAPU interaction at Asaregaudi (supported by park)	50
48	2021-05-24	Conflict management after killing of two members by elephant Patabhar (200 people, fence maintenance, site clearance, street light, chasing using captive elephant)	150
49	2021-05-26	Manikala CF, Siddagaira, Taranga	22
50	2021-05-25	Betpani BZUG, Gainekanda, Taranga	53
51	2021-05-22	Harrekanda CBPU, Taranga	21
52	2021-05-21	Sukarmala CBAPU, Taranga	31
53	2021-05-19	Guras CBAPU, Taranga	41
54	2021-05-18	Taranga BZUC, Taranga	40
55	2021-05-01	Gainekanda WG, Taranga	31
56	2021-05-14	Bungghat BZUG, Taranga	21
57	2021-06-11	Webinar on tiger conservation with human face in the context of COVID	200
58	2021-07-29	Presented in two sessions (80 participants in Shivapur CBAPU and 80 participants in park) on human wildlife conflict minimization	160

SN	Date	Activities	Partici pants
59	2021-08-12	Interaction with ward, BZUC and CBAPU chairperson on HEC minimization (World elephant day)	15
60	2021-08-20	Insurance for crops and livestock depredation at Dalla	20
61	2021-08-21	Interaction with CBAPU members at Pattharbhoji, 19 females were participated (torchlight, sports materials etc.)	37
62	2021-08-22	HWC awareness by armed security forces	40
63	2021-08-22	Chhotkitaduwa-5, Badkitaduwa-3, Kusumba-4, Durganagar-3, Dalla-4, Patharbhoji-4 torchlight distributed, 2 set and football and volley support in Patharbhoji	25
64	2021-08-23	Interaction with Dalla CBAPU 27 M, 10 F and 8 guest (Human elephant conflict mitigation: night guard from watch tower, repair and maintenance of watch tower, torchlight, fire (diesel), community mike, alternative crops (mentha, chamomile, lemon grass, lemon, turmeric, ginger), predator proof corral house, game proof fence; CBAPU mobilization: income generation, sewing and tailoring, T-shirt, sports, regular patrolling, cycle, exposure tour, monthly meeting, coordination meeting, Good relation with park, leadership training, conservation awareness). School education: Eco club support	45
65	2021-08-25	Participated in orientation workshop made by ZSL for KFW second phase (coordination with chief warden, income generation)	14
66	2021-08-26	Solar light: 7 Betahani, 15 Asaregaudi, 5 Bindra, 15 Gola, 15 Patabahr, Electric fence battery:3, inverter:1 in Gola	57
67	2021-08-30	Sports for conservation in Patabhar	100
68	2021-09-02	Interaction program with Thakurdwarsa region (9 ward chairperson, 5 BZUCs, 5 CBAPUs, Park 4, Army 1, BZMC 2, NTNC 4)	30
69	2021-09-06	Interaction with Kailashi CBAPU	30
70	2021-09-08	Interaction with Hattisar CBAPU	40
71	2021-09-08	Teej song competition at Taranga (2 places)	80
72	2021-09-08	Thirteen international vulture awareness day at Rajapaur	80
73	2021-09-10	Interaction with Thakurbaba CBAU sub-committee	40
74	2021-09-11	Interaction with Betahani CBAPU	35
75	2021-09-11	Interaction with CBAPU network members, Park HQ	40
76	2021-09-12	Motipur	34
77	2021-09-15	Chitkaiya	14
78	2021-09-15	Bankhet	56
79	2021-09-26	Thakurdwara	16
80	2021-09-22	WCCB meeting Bardia	55
81	2021-09-25	Interaction with CBAPU chairperson (park)	30
82	2021-10-02	Shivapur khokalpur	63
83	2021-10-04	CBAPU subcommittee Thakurdwara	31
84	2021-10-23	Interaction with forest minister and team for HWC minimization	50
85	2021-10-23	Compensation mechanism for wildlife victims	15
86	2021-10-27	compensation distribution to 8 persons in Khata	35
87	2021-10-31	Cycle distribution to forest guard	30
88	2021-10-31	Meeting with Hattisar users for Human elephant conflict minimization	16

SN	Date	Activities	Partici pants
89	2011-11-01	Interaction with stakeholders at Dalla on anti-poaching	150
90	2011-11-02	Street Drama by Shivpaur CBAPU	200
91	2021-11-15	Nature guide training participants	42
92	2021-11-24	Interaction on HWC mitigation measures with the stakeholders from Suryaptuwa	27
93	2021-11-25	Interaction on HWC mitigation measures with the stakeholders from Shivapur	32
94	2021-11-26/28	TOT for The CBAPU leaders for the change agent	19
95	2021-11-29	Human elephant co-existence with local students at Kareliya	40
96	2021-11-30/4	Wildlife rescue training for the forest frontline staff	24
97	2021-12-02	Interaction with women group for the minimization of HTC, Dngpur Gola	18
98	2021-12-02	Wildlife rescue for the CBAPU members at Khata	32
99	2021-12-03	Interaction on HWC mitigation measures with the stakeholders from Banke, Gavar (Dhanmaya, Ishowari Bista (Muktinagar), Lila Buda, Wildlife compensation fund in cooperatives 65000	31
100	2021-12-04	Interaction on HWC mitigation measures with the stakeholders from Banke, Ovari (Balapur 700 m fence left, 3600 m completed, Balapur, Samsergusonj, Ovari, Agaiya, Gobarpur, Tapari talim, homestay, education for shephard (ward no 8), most of the people enter forest using cycle and motorbike, street drama, support for ultra-poor at Balapur, Toursim promotion at Manmohan park (watch tower), Most of the households do not have land	34
101	2021-12-04	Highway cleaning program	60
102	2021-12-06	Exposure Park visit for Dangpur women group (talk on human tiger/elephant coexistence)	22
103	2021-12-07	WCCB meeting at Guleriya	15
104	2021-12-08	Cycle distribution program at Neulapur for 13 forest guard (talk on human tiger coexistence)	13
105	2021-12-13	HWC minimization at Kailashi	30
106	2021-12-14	HWC minimization at Bankhet	30
107	2021-12-17	Wildlife rescue training for the participants of Karnali province	30
108	2021-12-18	How to escape from wildlife for CBAPU members of Thakurdwara	36
109	2021-12-19	IOF Pokhara students on wildlife monitoring	40
110	2021-12-20	Women environment subcommittee members women role in conservation	30
111	2021-12-21	Agriculture group of Gobrela, Betahani and Hattisar	25
112	2021-12-22	IOF Pokhara students on wildlife monitoring	32
113	2021-12-22	Kailashi Bardia National Park	120
114	2021-12-22	Chyama Banke National Park	34
115	2021-12-23	Kailalsi Laljhadi Bardia National Park	75
116	2021-12-23	Chayma Baniyabhar Banke National Park	34
117	2021-12-24	Khokarpur Bankhet Bardia National Park	63
118	2021-12-24	Chyama Bikasnagar Banke National Park	32
119	2021-12-24	Wildlife research techniques of Madhuban forestry student	46
120	2021-12-25	Samserguj Balapur Banke National Park	61

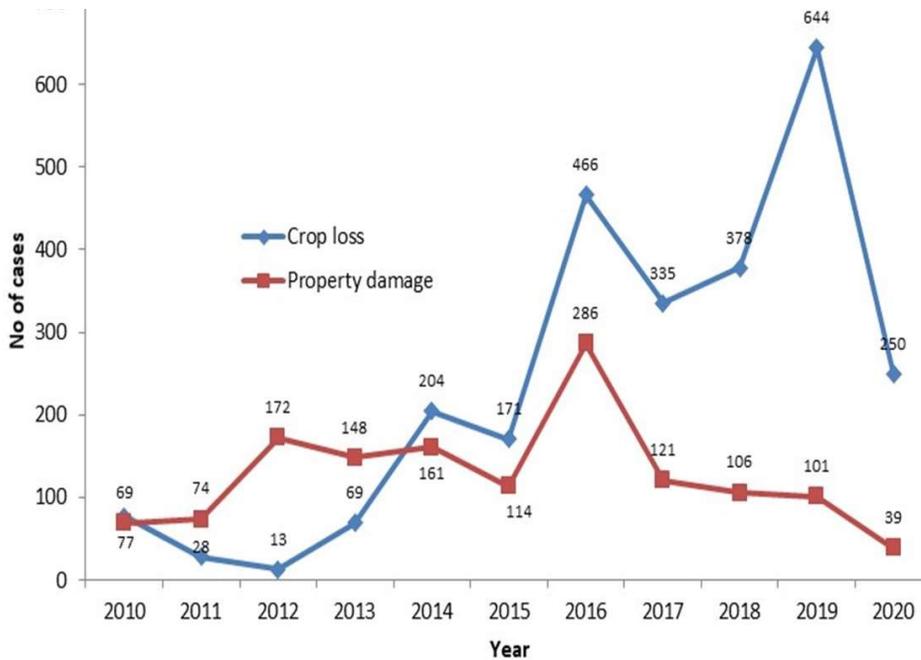
SN	Date	Activities	Partici pants
121	2021-12-25	Nature guide training participants in Gavar (Sukhla, Banke and Ghodaghodi)	24
122	2021-12-26	Samsergunj Govarpur Banke National Park	48
123	2021-12-27	Samsergunj Banek National Park	54
		Total	5997



Community level behavior change awareness session for the development of human wildlife coexistence

2. Conservation outcomes for elephants, other wildlife, habitat and human communities.

- 120 elephants are protected in the Bardia National Park and 46 elephants are safely moving from Bardia National Park, Nepal and Katarniyaghat wildlife sanctuary, India via corridor forest.
- Mechanism developed for the timely monitoring of problematic animals. 10 problem causing bulls are identified, frequently monitored and develop human elephant co-existence despite the frequent visiting bull in the village.
- The recent tiger survey estimated 90 tigers in the park and more than 6 tigers in the corridor forest.
- Most problematic tiger are identified and 5 tiger which were frequently dwelling in the village and repeatedly killing local communities and old with injured were rescued to minimize further human casualties.
- Local level human wildlife conflict minimization strategy is developed with the active participation of CBAPU members, User committee leaders, park officers and district level government authorities.
- Relief programs is allocated on time for the wildlife victim families.
- No death of elephant and tiger in this complex during the project period.
- Minimization of crop and property damage from the elephant



Trends of crop deprecation and property damage by elephant in Bardia

3. Describe how your goals were met and explain any goals that were not met.

This project developed the well-equipped wildlife technician for the timely tracking of problematic elephants and tigers. The RRT members are regularly mobilized for the safely chasing of wild bulls which frequently visit the agricultural land. The RRT members are well equipped with data sheet, GPS, bag packs, torchlight, community mike and communication set. The technician team has monitored the problematic tigers in the 20 places using camera traps and 5 problematic tigers were safely rescued. Local communities are also aware about the movement of problematic tiger and wild bulls. More than 123 awareness sessions were organized where 5997 school students, village youths, community elders, local government and district level authorities and journalist were participated. The project is on track for developing human wildlife co-existence in Bardia National Park.

4. List major findings and accomplishments to date.

- A team of well-equipped trained wildlife technician team is developed for the timely monitoring of problematic animals.

- 15 members of RRT are trained for the database management, safely chasing and elephant behavior for the mobilization of local communities.
- Camera traps were deployed in 20 places for problematic tiger monitoring, 5 tiger rescued, 10 bull elephant are identified.
- 9 RRTs are mobilized for the safely chasing of elephants and aware local community on the safely chasing techniques of wildlife.
- 136 torchlights were distributed for the safely chasing of bull elephant during night time.
- 3 posters on tiger and elephant conservation (each of 1000 copies) were produced and distributed to local communities.
- 123 sessions of conservation awareness were conducted where 5997 members including school students, village youths, women, community elders, local and district level government authorities, journalists.
- CBAPU members of 19 CBAPU subcommittee actively participated in the anti-poaching program.

5. Describe any problems discovered or that occurred during this grant period.

Due to busy schedule of monitoring problematic tiger and bull elephants, and behavior change campaign around the conflict sites, it is being delayed for the submission of interim report.

6. Evaluation

The project has developed human wildlife coexistence in the buffer zone of Bardia National Park and corridor forest. This grant has assisted for the development of a pro-active and sustainable system on problematic elephant/tiger monitoring and RRT mobilization in the buffer zone of Bardia national park. Ten technicians were trained for the problematic animal monitoring. The continuous monitoring of tiger recommended park authorities for the wise management decision, support to develop elephant/tiger conservation strategies and mobilization local communities on the responsible way. Park has already developed and implemented human wildlife conflict minimization strategy with the active participation of concerned stakeholders. Similarly, the capacity of 15 RRT members is enhanced on the mitigation measure techniques. This project also aware 5997 local communities in the collective way to minimize the life of people and sustainable

conservation of elephant and tiger in the Bardia region and also maintain park people relations. The mechanism develop during the project period will be continued by NTNC. The success of project is evaluated by following indicators and source of verification:

Output (immediate project products)

- 10 technicians developed for problematic animal monitoring (Deployed in the field)
- Capacity of 15 RRT members developed (Represented from different villages)
- Camera trap deployed in 20 places to monitor problematic tiger (Camera trap record)
- Bull elephants were safely chased 59 times from the village (CBAPU records)
- 8 RRTs are involved in safely chasing elephant from village. (CBAPU records)
- 5997 people participated in behavior change conservation awareness (Project record)
- 136 torch lights were distributed to RRT members (Project record)

Out comes (results)

- Continue monitoring of problematic animal by trained technician (NTNC record)
- BNP and Buffer User committee has allocated fund for the mobilization of RRT (CBAPU financial statement)
- Support has been made from many conservation partner and donors (USFWS, ZSL, The Fund for the tiger, AWELY)
- Community mobilization for the proper maintenance of 42 km fence and 150 predator proof corral houses are constructed by the farmers (Field observation)
- No poaching/killing of elephant and tiger in the park and buffer zone (Park records).
- More than 60 news on elephant/tiger conservation published in local and national newspaper/media (Media record).

Conclusion

1. Next step of the project

Although, Nepal has significant efforts for conservation of elephant, recent evidence showed that elephants are on massive risk of poaching/retaliatory killing/illegal extraction of forest resources/conflict with local people in buffer zones and corridors. Various efforts (e.g., electric

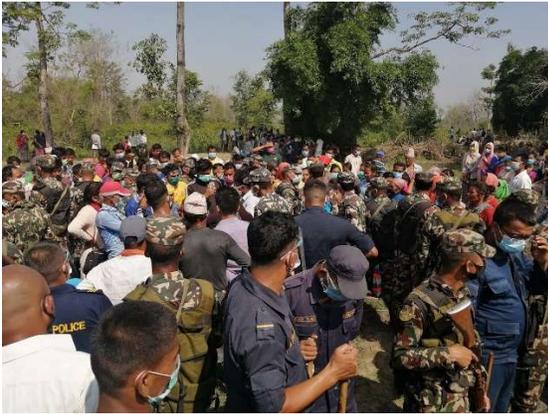
fence, cultivation of unpalatable but high-value crops, radio-collaring of the problematic wild elephants, conservation education, mobilization of rapid response teams, etc.) have been initiated to reduce human-elephant conflict (HEC) and to conserve wild elephant population in BNP with the support of many conservation partners and Donors (WTLCP, TAL, ZSL, USFWS, AWELY etc.). The interventions are still inadequate and need more strategic interventions to maintain human-elephant co-existence. The freely moving solitary bulls which are around 10 in the BNP are causing majority of damage. The COVID-19 pandemic and its impacts on local economy and society has created new challenges. Local community are not caring the electric fence due to low motivation, inactiveness and lack of ownership. People are not aware on elephant conservation and proper way of chasing wild bull from settlements. The damage can be minimized if people change their behavior towards elephants. Our next step is to strengthen and increase the effectiveness of the existing HEC mitigation measures through community motivation, sustainable resources and behavior change elephant conservation campaign. It has been proven that successful protection of elephant population depends on cooperation and support from local communities. The project applied in IEF 2022 grant will mobilize village youths from 9 Rapid Response Teams (RRTs) for the timely monitoring of strayed elephants, safely chasing of those elephants (approx. 10 tusker) from the villages, proper use of prevention measures (34 km fence benefiting 2300 households) by forming 13 electric fence repair and maintenance groups and developing change agents (9 agents) in the village level for changing community behavior (1350 villagers) on elephant conservation. The active engagement of RRTs, Community Based Anti-Poaching Units (CBAPUs), electric fence repair and maintenance groups, Buffer Zone User Committees (BZUCs), Community Forest User Groups, BNP, National Trust for Nature Conservation (NTNC), Local government and national conservation partner will be established for the sustainability of problematic elephant monitoring, safely chasing bulls from village, proper running of fence and massive behavior change elephant conservation campaign. A mechanism will be developed for the regular supply of fence repair materials and maintenance group also timely clean the site and take action for the repair of damaged fence. the survival These interventions secure of elephant (120 population) by developing Human Elephant Co-existence in the buffer zone (507 km²) of Bardia National Park (968 km²). Similarly, it also helps to minimize human tiger conflict and ultimately conserve the growing tiger population in the Bardia National Park. The learning from this project, especially, mobilization of RRTs, monitoring of strayed bulls, proper running of fence,

and massive elephant conservation campaign from the local change agents can be applied in other elephant range protected areas.

2. Interested story

On 24 May 2021, a mother (37 years old, Mrs. Chandra BK) and daughter (2.5 years old, Dipika BK) were killed by bull elephant at night (9:30 pm) while they were sleeping out of the home. The mother was on menstruation cycle. In the rural village, women sleep out of room during the period. The family members were furious with park authorities by blaming no action were taken for preventive measures. They were not ready for the cremation of body without the present of park chief warden in the incident site. On the early morning of next day, the chief warden of Bardia National Park, chief of security force, community leaders and myself were visited the victim's home. They cried and infuriated when we reached the village. Some youths were coming to us for physical attack whereas many women members were verbally attacking. With the help of community elders, local community leaders and members of RRT, we were able to calm down their furious. The family members and neighbors demanded park commitment for the school education support of three young daughters of the late BK, job to the husband, chasing of elephant inhabited in nearby community forest, proper supply of power in the electric fence and financial support for the cremation. The confrontation was concluded after 4 hours negotiation with the fulfillment of above stated demands from our side and community ownership for the proper caring of electric fence and participation in behavior change awareness session from the victim side. Four captive elephants, one truck with 10 security forces, one veterinarian and two wildlife technicians with sedative drugs were immediately deployed on the same day. Additional torch lights were provided to RRT members. They were repeatably engaged for the chasing of three bulls which were mostly lived near by the village and frequently entered in the paddy field. The team was return back after 18 days when the bulls were moved away from the nearby forest. The members of buffer zone community forest user groups and two bulldozers (supported by park and rural municipality) cleaned the bushes for improving visibility. The local rural municipality placed the flash light in the border of village and community forest. With the support of NTNC, Buffer Zone User Committee and local community members, the existing electric fence is repaired and the old energizer is replaced by new one. The husband is deployed for the take care of electric fence with

the provision of USD 70 per month. Now he is looking after all the fence which is located in his village. A local NGO installed alarming system to alert local communities when elephant is entered in the village. A women environment sub-committee and BNP provided an amount of NPR (150 USD) to each child for the support of their educational materials. Bardia National Park has allocated relief amount of NPR 1000000 (10000 USD) and NTNC provided an amount of NPR 50000 (500 USD) to implement income generation program. All those interventions helped to develop positive attitude on elephant conservation.



Crowd after the human death from elephant



Repair of fence



Elephant chasing team



Flash light



Community alerting mike



Handed over of financial support by Chief warden of BNP to victim family's husband

3. Organization associated with the project and their roles

Organization	Roles
National Trust for Nature Conservation (NTNC)	Technical support for the monitoring of problematic elephant and tiger. Its technician is regularly engaged for the monitoring and rescue of problematic animals
Bardia National Park (BNP)	Security of elephant in core of the park. Development and implementation of human wildlife conflict minimization strategy
Community Based Anti-Poaching Units (CBAPUs)	Community awareness, timely informing the movement of animals and poachers to park authorities and conduct patrolling with security forces.
Rapid Response Team (RRTs)	Timely mobilize its members for the safely chasing of elephant
Buffer Zone User Committee (BZUCs)	Mobilize its members for the minimization of human wildlife conflict and to organize behavior change awareness campaign. Mobilize local communities for the timely

	repair and maintenance of fence and adoption of predator proof corral houses.
USFWS/AECF	Capacity enhancement of park frontline staff, human elephant conflict minimization, and assessment of elephant population

Budget

Separately attached

Deliverables

At least six photos (separately attached)

One video clip (separately attached)

Acknowledgements

Paper on "community-based elephant conservation in Submitted to The Journal of the Elephant Manager's Association (JEMA)

A talk on "Human Elephant Conflict mitigation measures: Lesson from Bardia National Park, Nepal" will be presented in the virtual 17th International Elephant Conservation & Research Symposium.

A talk on "Conservation of Recolonized Asian Elephant population in Bardia National Park, Nepal with IEF donors and elephant well-wisher".

Three poster each of 1000 were produced and distributed to community members.

Four TV talk were made in Nepal ([PRIME TALK 2078-7-13 - YouTube](#), [TEA TALK 2078-9-11 With Rabin Kadariya - YouTube](#), [STHANIYA BIKASH 2078-10-6 - YouTube](#))



Interview for national news



Interview for television program

The community engagement program is shared from Facebook page

(<https://www.facebook.com/ntncbcp>)

Many news related to human elephant and human tiger conflict were published in local, national and international news ([Human-elephant conflict around Bardia National Park - Shankar Bhandari - Setopati](#), [Why have tiger attacks spiked in Bardia National Park? | The Third Pole](#), [Nepal's tiger conservation 'too successful'? | Nepali Times](#), [Human-animal interface in Nepal wildlife corridor | Nepali Times](#)).



Participatory tracing of tiger pugmarks from the village