



Prakriti

NEWSLETTER OF THE NATIONAL TRUST FOR NATURE CONSERVATION

JULY TO DECEMBER 2015

NTNC CHAIRPERSON NOMINATED



Right Honorable Prime Minister Mr. K. P. Sharma Oli in the capacity of the Patron of National Trust for Nature Conservation (NTNC), as per the provision of article

5 (ka) of NTNC Act 1982, nominated Honorable Minister for Forest and Soil Conservation, Mr. Agni Prasad Sapkota, as the Chairperson of the Governing Board of the Trust on Wednesday, November 4, 2015.

Following the nomination, Honorable Chairperson Sapkota visited NTNC and was briefed about the Trust's activities on Monday, November 16. The Member Secretary of the Trust Mr. Govinda Gajurel presented the Trust's major activities in the field of nature conservation and development in Nepal. On the occasion, the Chairperson directed the officials for better coordination among all stakeholders to conserve nature and rebuild natural beauties that were damaged by the devastating April 25 earthquake.

NTNC TO ASSESS THE FAUNAL DIVERSITY IN CHURE RANGE OF NEPAL

The NTNC and the President Chure Terai Madhesh Conservation Development Board (PCTMCDB) signed an agreement to carry out the study on Faunal Biodiversity Assessment in Chure Range of Nepal on Monday, November 16, 2015.

Mr. Govinda Gajurel, the Member Secretary of NTNC and Dr. Annapurna Nanda Das, the Member Secretary of the Board signed the agreement in the presence of Honorable Minister for Forests and Soil Conservation and the Chairperson of the Trust Mr. Agni Prasad Sapkota.

The main aim of the two years' project is to assess the status of biodiversity, pertaining threats and help devise conservation sensitive policies and interventions in the Chure (Siwalik) range of Nepal. The study will focus on distribution and abundance of faunal species including mammals, birds, herpetofauna, fishes and insects to establish a baseline database for the Chure range. Similarly, the study will also reveal the threats and challenges of species conservation in the Chure range.

ANAPURNA REGION: SAFE FOR TREKKING

Annapurna Conservation Area (ACA), one of the most popular trekking destinations in Nepal is safe for trekking as indicated by the "Damage Assessment of Annapurna Region" conducted by the structural and geotechnical experts from Miyamoto International, USA. The assessment was conducted from June 25 to July 2 with the support from SAMARTH-NMDP, a market development program supported by UKAID, and on behalf of the Government of Nepal through the Ministry of Culture, Tourism and Civil Aviation.

The objective of the rapid reconnaissance of the region was to develop a baseline understanding of the extent of earthquake-related damage, provide advice on the overall trekking safety of the region's routes and recommend repairs or risk mitigation measures. The report is instrumental in developing commercial readiness strategies for Nepal's tourism recovery too.

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CENTRAL ZOO CELEBRATES 20TH ANNIVERSARY UNDER NTNC MANAGEMENT

The Central Zoo celebrated its 20th anniversary under the management of the NTNC with various programs at its premises at Jawalakhel, Lalitpur on December 29, 2015.

Inaugurating the program, the Chief Guest, Honorable Minister for Forest and Soil Conservation (MoFSC) and the Chairperson of NTNC Mr. Agni Prasad Sapkota emphasized on proper management of natural resources and wild animals as the country has high potential for nature based tourism to improve the livelihood of the local communities. He also expressed his commitment to transfer the big mammals to zoological garden to be established at Suryabinayak, Bhaktapur as the land area of the current location at Jawalakhel is too small.

Similarly, the Secretary of the MoFSC Mr. Uday Chandra Thakur shared the progress for the establishment of the zoological garden at Suryabinayak. He said that the welfare of the wild animals in the exhibit is very important. The Director General of the Department of National Parks and Wildlife Conservation (DNPWC) Mr. Fanindra Raj Kharel, appreciated the zoo's efforts and its contribution in creating awareness through conservation education programs.

Mr. Govinda Gajurel, Member Secretary of the Trust, in his welcome remarks gave emphasis on the need to expand of the area of current zoo as the Government of Nepal has already decided to establish a zoological garden in Suryabinayak, Bhaktapur. Ms. Sarita Jnawali, Manager of the NTNC-Central Zoo, in her vote of thanks, shared about the issues and challenges faced in Nepal.

On the occasion, the Chief Guest felicitated the former Directors of the Central Zoo, Dr. Mukti Narayan Shrestha, Dr. Shreevatswa Man Malla, Mr. Bal Krishna Khanal and Mr. R. K. Shrestha recognizing their contribution in the improvement of the Zoo. The Chief Guest also distributed medals, prizes and certificates to winners of inter-school Friends of Zoo (FoZ) football tournament, organized as a part of zoo anniversary that was participated by 21 schools. Little Angels' School, Hattiban; Grace Academy, Nakkhu; Himalayan International Ideal School, Dhobighat acquired first, second and third positions respectively.

The Chief Guest also inaugurated the painting exhibition by fifty senior artists of Nepal based on nature and earthquake. The painting exhibition for Zoo visitors lasted for two more days. Mr. Ramesh Dhoj Shrestha, *Pragya* of the Nepal Academy of Fine Arts briefed about the paintings to the Chief Guest.



NTNC TRUSTEE CHAUDHARY AWARDED

Prof. Dr. Ram Prasad Chaudhary, member of the Governing Board of Trustees of NTNC has been awarded the National Conservation Award from MoFSC of the Government of Nepal.

Amid a function of National Conservation Day of 2072 organized on September 24, Prof. Dr. Chaudhary was awarded with a certificate of honor for his exemplary contribution in the field of conservation in the country. The award carries a purse of one lakh 51 thousand rupees. Prof. Dr. Chaudhary is working with Central Department of Botany at Tribhuvan University.



NTNC GOVERNING BOARD MEETING HELD

The 51st meeting of Governing Board of Trustees of the NTNC convened on November 30 under the chairmanship of the Chairperson of NTNC and Honorable Minister for Forests and Soil Conservation Mr. Agni Prasad Sapkota.

The meeting passed the income and expenditure of fiscal year 2071/072 and approved the proposed program and budget for the fiscal year of 2072/73. The meeting also approved to process the procedure of Human Wildlife Conflict Management Fund and the Climate Integrated Conservation Management Plan of Manaslu Conservation Area (2015 to 2018). Similarly, meeting also directed to formulate 3 years infrastructure development plan of the Central Zoo and develop the infrastructure as per approved plan as the Zoo is being managed by the Trust since 20 years. During the meeting, members were briefed about the progress and ongoing activities of the Trust.

ANNAPURNA CONSERVATION AREA PROJECT (ACAP)

NATURAL RESOURCE CONSERVATION PROGRAM

Nursery operation is one of the primary activities of the project to fulfill seedling demand for plantation and hence the project nursery at Lwang and private nursery at Rivan and Dandagaon were supported for seedling production. During the period, 6,443 seedlings (501 from project nursery and 5,942 from private nurseries) of different species were distributed for plantation. Nursery efforts in Bhujung continue to maintain good prospect. Seeds of different fodder, fuel wood and tree species like *Badahar*, *Raykhani*, *Pakhuri*, *Ujis* and *Sisau* have been sown in the nursery beds. Besides that, six private nurseries in Bhujung sector produced and distributed 5,939 seedlings of different species for private, block and community plantation.

Conservation Area Management Committees (CAMCs) are responsible to implement and monitor the program and project including conservation activities in their respective command areas. In order to strengthen local level CBOs, stationeries and remuneration of CAMC secretaries and forest guards have been deposited to their respective bank accounts as a continuation of previous years. In Lwang sector, the Himalayan black bear had caused severe injury on three local people of Machapuchhre and Rivan VDCs. All the victims were treated at Pokhara and were also provided immediate relief. The CAMC Chame was reformed after the expiry its tenure on October 12, 2015. Ms. Anita Lama was elected as its chairperson and Aashish Gurung as the secretary. The Conservation Area Management Operational Plan is the authentic guideline to CAMC as per the Conservation Area Management Regulation 2053 and Directives 2056. After the expiry of the plan, new operational management plan are prepared in collaboration with the CAMCs and is in the process of approval.

In order to keep financial transactions transparent and updated, the project



has been supporting CAMCs and other community based organizations (CBOs) to audit their books of account at the end of fiscal year. Six CAMCs, a day care center, a saving and credit group and five micro hydro committees have been audited in Ghandruk sector. Similarly, out of eight CAMCs seven have completed their auditing in Bhujung sector. UCO Lwang organized a CAMC auditing and networking workshop in participation of CAMC representatives and during the workshop discussed about the ongoing projects in their respective areas. A monitoring and evaluation joint sub-committee (MEJSC) was also formed comprising 15 members for project monitoring and to solicit ideas for the ACA management in future. UCO Ghandruk patrolled forests at Tadapani, Banthanti, Ishuru and Dobato areas in coordination with CAMC, FMsC and TMsC in the second week of August 2015. Various species of wildlife were seen during patrolling. Similarly, police officials were also deployed to patrol the area on the first week of September.

Three units of forest fire control and climate change awareness camps were conducted among the communities facing potential risks of forest fire. With the aim to control and manage the biodiversity and habitat of the rich flora and fauna in the region, the root

causes of forest fire were discussed in the workshop held at Ghanapokhara, Khudi and Taghring. Similarly, control measures for preventing forest fire were also discussed. The outcome of the workshop by the local people was taken very encouragingly. A day long budget presentation workshop was organized in Yangjakot in participation of chairpersons and secretaries of CAMCs on second week of December. The meeting's focus was on informing and holding discussions around the approved budget for the fiscal year 2072/073. Similarly, a planning and program review workshop was also conducted in Bhujung on the December 24, 2015.

With support from USAID funded Hariyo Ban Program, three climate change awareness camps were conducted at Singdi, Simpani and Bhujung in Bhujung sector. Teachers and students took part in the awareness classes. A similar awareness camp was conducted for mother groups in Ghalegaon village with participation of 35 local women including representatives from CAMC and youth clubs. A devastating flood in Lumle VDC on the night of July 29 washed out 12 households whereby a total of 29 people (13 female, 5 male, 11 children) died and 3 others were injured. UCO Ghandruk provided cash support to all of the HHs for funeral, reconstruction of houses as well as their treatment.

PROJECT UPDATE

CONSERVATION EDUCATION AND EXTENSION PROGRAM

Conservation education and extension program at the school level is one of the priority activities carried out by the project with the aim to prepare informed future leaders to take over the conservation and development. All the schools teaching conservation education were supported for teacher's salary, stationary and printed books of Prakritiko Sandesh part 1, 2 and 3 for grade 6, 7 and 8.

Like every year, December 10 was marked as 'Conservation Day' and celebrated with the theme as "conservation for sustainable development." The main objective was to disseminate the messages of significance of conservation to the grassroots. Local people, CE schools, CAMCs, mother groups, local youth clubs, and students actively participated in the program. Different UCOs successfully performed different activities like conservation songs and local traditional dance competition among CE schools in Ghandruk, Shikha and Ghara VDCs; interaction between stakeholders in Dangsing VDC; agricultural products' exhibition, quiz contest, folk song competition at Bhachowk in Lwang sector. Similarly, Sikles organized their celebrations in Yangjakot with various programs. CAMCs in Bhujung sector celebrated the day with conservation oriented entertainment programs.

World Tourism Day is celebrated every year on the September 27. The slogan for this year was "One Billion Tourists, One Billion Opportunities" focusing on



the idea that, every time one travels for whatever reason, we become an integral part of a global movement and that has the power to drive inclusive development and safeguard natural and cultural heritage. It was celebrated at the Birethanti check-post in Ghandruk, and in the check post and information center in Pothana by UCO Lwang by welcoming visitors with *tika*, *Khatta*, and token gifts of the Lord Buddha. In Bhujung sector, Chief District Officer of Lamjung district Mr. Shrawan Kumar Timilsina and representatives of district government, and non-governmental offices, journalists and other social workers and key persons marked the day jointly honoring a tourist couple from Germany. In Manang sector, it was celebrated in two locations – in Dharapani and in Manang check-post. During this occasion, the first five trekkers to pass the check-post were honored by

offering them with free dinner and two liters of safe drinking water.

Festival celebration is seen as vital to maintain and promote cultural tourism. To promote the area – through foreign as well domestic tourism – UCOs have supported *Lalupathe* Youth Club Khoramukh, *Janajagaran Samadyukh Bikas Kendra*, Ghachok and *Negho Baraha* women's Group, Dhampus for the celebration of Teej Mela 2072 through their respective CAMCs. Cash support was also extended to YOUNEC Ghachowk to celebrate the first Ghachowk Utsav-2072.

TOURISM MANAGEMENT PROGRAM

The British Ambassador to Nepal His Excellency Richard Morris visited Annapurna region on August 15 and December 11, 2015. His stay at Dhampus village provided impetus in disseminating information and assurance that the Annapurna region is safe after the April 25 earthquake in Nepal.

UCO, Ghandruk has been operating two check posts and information centers in Birethanti and Sikha. Both the check posts are operating smoothly with the required infrastructure. During this period, in total of 12,588 foreign visitors entered and 12,592 exited from the Birethanti whereas 2,731 entered and 189 exited in Sikha. Similarly, the project is in process to establish another check post, an agreement was made between Chhomrong TMsC, Dhaulashree





Secondary School and UCO Ghandruk of NTNC-ACAP while the construction and maintenance work in the facility is still in-progress. With the objective of providing tourism information, monitoring ACA entry-exit and harvesting of forest products, a check post was set up at Dudhpokhari Chowk in Pokhara.

Following the April 25 earthquake and due to the ongoing unrest in the Terai region, along with India's border blockade, foreign visitors arrival numbers have been painfully low. The check post and information centre at Ghalegaun is operating well. Domestic tourists in to Ghalegaon village are mostly on the rise because of its renowned status as a SAARC model village.

A two-day first aid and high Himalaya rescue training was organized at Chhomrong of Ghandruk VDC, Kaski from December 21-22, 2015. During the event, basic training on topics such as first aid, high mountain sickness, rescue operation preparedness, strategies and implementation was imparted. Similarly, Gamow bag introduction, using method, oxygen for altitude sickness, how to use oxygen cylinder and how to transport patients safely were also discussed during the workshop that was participated by 27 local people.

GENDER EMPOWERMENT PROGRAM

Operating for the past 23 years since 1992, the Ghandruk Day Care center is among the highly successful programs of

the project. Day Care Center Management Sub-committee manages the center and currently 23 kids are there with extensive care. The entire members in that sub-committee are women. In Lwang village, *Maishyoku Kholo* Day Care Centre has 17 kids in the Lwang day care centre. Two such centers in Sikles, and Yangjakot are also running well. In Bhujung village, a day care centre with 25 children (13 males and 12 females) directly benefit from this service. The auditing program of the saving and credit groups of Bhujung sector was organized by the project at Ghalegaon check post and information centre. Registered auditor Mr. Anand Ghimire from Besishahar was appointed for auditing. According to the prevailing cooperative rule and regulation, saving and credit groups must be audited annually. Out of 19, 17 saving and credit groups were audited.

AGRICULTURE AND LIVESTOCK DEVELOPMENT PROGRAM

One day knowledge sharing conservation farmer's workshop and vegetable seed distribution program to share experience and interaction with conservation farmers was organized at Rivan in Lwang sector. The workshop was aimed to share and integrate ideas; experience for practicing better problem resolution approaches and that directly benefitted 17 farmers. In Sikles sector, 52.875 kg and/or 116 packets of vegetable seeds have been distributed to the 19 conservation farmers during this period. One tea nursery in Togi of Saimrang VDC was also supported

with tree cuttings (1,400) and Chitra (7) from UCO Sikles. The demonstration plot of the project nursery in Bhujung is operating well. Seasonal vegetable seeds have been sown in the germination bed where vegetables like cauli flower, cabbage, and radish are already good for demonstration. Seedlings are also planted in the demonstration plot. Locals often visit these plots.

A total of 401 *ropani* land area is covered by tea gardens in Bhujung VDC alone. To avail proper sizes – especially during the winter season – the tea plants have to be technically pruned. As a result of this, the production of tea buds tends to flourish. Thus, the technical team of UCO Bhujung has facilitated the locals in implementing such pruning methods. In addition to this, the small scale tea processing plant that was installed in Bhujung VDC last year will begin processing in the near future.

One livestock health clinic operates in each VDC within ACA by livestock health workers (LHWs). The assistance of livestock health workers in providing basic treatment to domestic animals have played a vital role in improving and increasing animal husbandry in this area. Every six months monetary incentive is provided to the LHWs through the CAMCs. Eight LHWs operate in UCO Bhujung area alone. Some vet medicines like iodine, abbandazone, etc. were purchased and distributed to the eight vet clinics. The LHWs provide these medicines free of cost to the marginalized and poor farmers.

HEALTH SERVICE SUPPORT PROGRAM

A total of 1,188 patients were provided general health care services in Lo-Manthang. Here, along with the conservation work, ACAP also provides for health services through its community health initiatives. In spite the challenges faced by health staff during winters, their services and commitment continue to be outstanding. In order to mitigate the health hazards caused by smoke, high altitude and others, mobile health camps are conducted in different villages of the sector. During this period, a total of 122 locals have benefitted from these camps.

MANASLU CONSERVATION AREA PROJECT (MCAP)

NATURAL RESOURCE CONSERVATION PROGRAM

MCA rich cultural heritage equally matches with its biological richness. Buddhism is the predominant religion of the area and the houses have Buddhism prayer flags erected on a wooden pole which needs to be replace every year. Thus, to reduce cutting down of the pole size tree to use as stand for their cultural flags, MCAP has been supporting iron poles to households within MCA since Year II of Hariyo Ban Program. These iron poles are permanent in nature and thus need no replacement annually which eventually helps in forest conservation. This year, the iron poles for flag stand was given continuity and 72 iron poles that were purchased before earthquake were distributed to the HHs of Lho (58) and Bihi (14) village development committees (VDCs). Through this initiative, all of the HHs of Chhekampar, Samagaun, Lho and Bihi VDCs now have the iron pole for their flags.

There is high demand of timber for reconstruction of public and private houses and other infrastructures after the damage by April 25 earthquake. Thus, to provide the timber as a relief to public infrastructures, CAMCs planned to utilize fallen, dead and dying trees of the forest area through equitable distribution. CAMCs, FMsCs, TMsCs and anti-poaching units have vital in securing sustainable conservation and equitable distribution of forest resources. For the coordination of these committees, a three days coordination meeting cum workshop was organized among all the representatives of all seven VDCs, organized at Philim of Sirdibas VDC during first week of October 2015. Through this workshop, a common understanding was made by identifying potential locations for timbers collection in each VDCs. CAMC will take a lead to extract timber from those identified locations.

CAMCs are responsible to issue permit and collect revenue for harvesting of

forest resources such as timber and NTFPs. MCAP supported to audit their books of account for financial transparency. During the period, an independent auditor has audited all of the seven CAMCs. During the auditing, chairman and secretaries were also briefed on techniques of book keeping.

ALTERNATIVE ENERGY PROMOTION PROGRAM

With the aim to reduce pressure on forest, MCAP has been promoting Alternative Energy Promotion Center-AEPC's three-pot holder metal improved cooking stove (MICS) in the region since the year II of Hariyo Ban Program. MICSs are proved to consume less fuel and also provide space heating which is very advantageous in the Himalayan region. During the period, 145 MICSs were purchased and are in the process of transportation and distribution to the HHs of Sirdibas (40), Bihi (45), Prok (15) and Chumchet (45) VDCs.

LIVELIHOOD SUPPORT AND FOOD SECURITY

The access to Manaslu and Tsum valley was blocked due to the landslide triggered by earthquake and thereafter the monsoon rain. Thus, debris clearance on

the trail and pavements works is ongoing in coordination with District Development Committee (DDC) Gorkha and CAMCs. Meanwhile, to open the trail blockage in Yarubagar, three wooden bridges were placed on Buddhi Gandaki river. DDC Gorkha and World Food Program (WFP) also extended the support for the wooden bridge construction by providing 40 and 10 gabion boxes respectively. The wooden bridges were constructed with the financial support from Hariyo Ban Program mobilizing the local community. This has eased the access for trekkers visiting MCA, and also made possible for local people to transport materials by mules which was blocked since monsoon, for about five months.

AGRICULTURE AND LIVESTOCK DEVELOPMENT PROGRAM

In MCA, there is a favorable climate and geography for plantation of *Swertia chirayita* and other NTFPs like cardamom and tea. To increase income level of local people by promoting block plantations, the project planned to support local farmers in block plantation as a showcase model sites to encourage local people to initiate such green enterprise. Five local farmers were supported 4,010





seedlings of Chiraito in two plantation sites. Later 22,995 seedlings of Chiraito were supported to 13 farmers in Sirdibas VDC. Among these seedling 22,195 seedlings were purchased and supported to farmers from nursery of Sano Philim and Aanga through Hariyo Ban Program where as 800 seedlings were supported from project nursery at Philim.

CONSERVATION EDUCATION AND EXTENSION PROGRAM

CAMCs are responsible local institutions to conserve and manage natural resources of their VDCs. To conserve the snow leopard within MCA, CAMCs has formed Snow Leopard Conservation Committee (SLCC) at local level in different settlements, under CAMCs. There were seven SLCCs already formed in Chhekampar with the aim to conserve snow leopard and minimize human-snow leopard conflict. During this period, additional two SLCCs were formed at Sama and Samdo in Samagaun VDC. CAMC consultation/interaction meetings and orientation training were also organized during the period to the newly formed SLCC to make them aware on importance and significance of snow leopard conservation. The activity was financially supported from United States Fish and Wildlife Services (USFWS).

Conservation education plays a vital role to motivate and sensitize local people towards conservation of natural resources and wildlife. With the aim to disseminate conservation message among local school students and local communities, MCA conducted 17 units of snow leopard

conservation camp during this period. Altogether 421 (F=193, M=228) school students and local communities. During the camps, participants were facilitated on the ecological importance of natural resources, occurrence and distribution of snow leopard, threats and legal status of the snow leopard.

Retaliatory killing of snow leopards is likely in high Himalayas due to human snow leopard conflicts, thus, to minimize the conflicts, series of meeting and a workshop have been organized to develop community based relief mechanism in Samagaun and Chhekampar VDCs. As a part of this relief mechanism, livestock insurance policy is planned to be set-up at the community level with support from USFWS. SLCCs have planned to register the livestock of each HHs of their respective VDCs first and farmers have to deposit certain amount of money in the

relief fund for insurance. The affected HHs will be provided 20 to 30 percent of the valuation of livestock depredated by snow leopard from the relief fund.

Two days workshop has been organized on local level at Philim of Sirdibas VDC in participation of representatives from CAMCs, snow leopard conservation committees and local communities. During the workshop predators ranking, causes of animal loss and potential interventions which could minimize the conflict, seasonal calendar of depredation were discussed and assessed. Besides that, community based relief policy was also reviewed.

EARTHQUAKE RELIEF SUPPORT

Hariyo Ban Program provided quick relief support after the earthquake, shelter materials viz. tarpaulins (490) and blankets (1,500) were distributed to the affected HHs at seven VDCs within MCA. Blankets were distributed to each HHs of Bihi, Lho, Samagaun, Chumchet Sirdibas and Chhekampar VDCs including Gumba of Frakpa, Sirdibas. With the motive to initiate the reconstruction of private properties and improve access, 18 set of trail improvement tools and 30 sets of shelter improvement tools were provided to CAMCs of respective VDCs.



GAURISHANKAR CONSERVATION AREA PROJECT (GCAP)

NATURAL RESOURCE CONSERVATION PROGRAM

In collaboration with Multi Stakeholder Forestry Programme (MSFP), GCAP implemented "Piloting Climate Smart Conservation Approach in Gaurishankar VDC" project with special focus at Simigaun and Tashinam settlements. The aim of this project was to pilot and develop a 'climate smart approach to conservation' based on the traditional knowledge of the community. During the period, two coordination meetings were held at Manthali, Ramechhap discussing the ways to tackle the illegal wildlife trade, natural resource conservation activities and create a coordination network among government agencies, GCAP, line agencies and other stakeholders. The meeting, organized on November 2, 2015 in the chairmanship of Mr. Dinesh Ram Pant, Local Development Officer and the Chief Guest was Mr. Shesh Narayan Paudel, the Chief District Officer of Dolakha. The meeting advised GCAP to work in collaboration with District Forest Office and Community Forest Users' Group in the field of seedling production and plantation and the meeting also identified some landslide prone area for plantation of bamboo. Similarly, another coordination meeting that was chaired by Chief District Officer Paudel discussed on illegal trade of wildlife and body parts and also made some strategies to combat it.

In order to secure local's guardianship in conservation activities, GCAP supported in formation of 21 CAMCs within GCA and support have been provided regularly for office operation and in formulation of their operational plans. Along with the regular assistance, GCAP provided emergency relief support to all the CAMCs to support earthquake victims of April 25 earthquake. GCA is highly vulnerable with view of climate-induced disasters. Fragile geophysical structure, variable climatic conditions, weak economic condition, low literacy rate, resource constraint and limited public awareness are the factors that affect in coping with the natural disasters. To address those issues, a disaster mitigation subcommittee was



formed comprising nine members in Gaurishankar VDC under the CAMC. Similarly, a post-disaster relief fund of four lakh rupees was established within CAMC to provide emergency support for post-disaster management that directly benefits the local people of Gaurishankar VDC. Operation plans of CAMCs were reviewed in consultation with CAMCs CFUGs, line agencies and concerned stakeholders to incorporate climate change impacts and mitigation measures.

The degradation of lands can create possibilities of landslides, floods and other natural disasters mainly caused by deforestation, overgrazing, over use of forest resources, steep slope farming and so on. With the aim to mitigate such issues, plantation was done in 10 ha area of Tashinam and other degraded lands. In total 890 seedlings of *Bambusa* sp. (Bamboo), 3,400 of *Thysanolaena maxima* (Broom Grass-Amlisho), 500 of *Morusalba* (Mulberry-Kimbu) and 210 of *Choerospondi asaxillaris* (Lapsi) were supported for plantation. To improve the knowledge and awareness level of local community, informative posters were distributed. Informative poster on climate change and wildlife crimes were printed and distributed to community people to increase their level of understanding over the issues. To conserve and utilize traditional knowledge that has

been adopted over generations were documented properly. To disseminate the success stories of 'piloting climate smart conservation approach', a documentary was produced highlighting the interventions and changes brought during the project.

LIVELIHOOD IMPROVEMENT PROGRAM

To improve the living quality of local community, GCAP has been supporting them for betterment of their livelihood activities such as, farmer support program, sanitary model toilet support program, electrification and micro hydro promotion, school support program, river embankment, soil erosion control and drinking water support. In order to reduce consumption of forest resources used in shed house, 11 HHs were supported a bundle of CGI sheet to each in Gaurishankar VDC. Support was provided to Simigaon settlement for the maintenance or drinking water scheme. The support includes water tank, pipes, cement etc. that resulted better sanitation and improved hygiene in the community. Farming is one of the primary options of livelihood in GCA where people largely depend on traditional farming practices. With the aim to increase the economic status through cash crops, GCAP supported 450 plants of Kiwi to 72 HHs in Gaurishankar VDC.



TOURISM DEVELOPMENT PROGRAM

GCAP aims to support local communities through multiple benefits of eco-tourism. GCAP in collaboration with local communities supported eco-tourism activities such as, trails and trekking routes, sanitation, home stay promotion and establishment of trekkers check-post cum service centres. Trails and trekking routes are the basic requirements for eco-tourism and thus, support was provided to upgrade trail at Simigaon using locally available materials that directly benefitted 250 HHs of Simigaon and the visitors.

To keep the environment clean and maintain sanitation three incinerators were constructed along the prime trekking routes in Gaurishankar VDC. Similarly, support were provided to local community for improvement and maintenance of religiously and culturally important infrastructure and monuments. Support includes 2 Khumbu, 21 bowels and materials of religious importance.

CAPACITY BUILDING PROGRAM

In order to build the capacity of community people and empower them, GCAP conducted hospitality and house keeping training with the aim to improve skills for home stay management. In total 47 participants took part in the training. Similarly waste management training was provided to 33 local people of the Gaurishankar VDC.

Considering the immense impact of climate change and natural calamities on daily life and livelihood, climate change sensitization workshop cum trainings were conducted with the objective of imparting knowledge and information on climate change and climate induced issues and to strengthen adaptive capacity to cope with adverse impacts of the same. Three units of trainings were organized to project staff and 99 community people from Tashinam and Simigaon.

Sustainable forest management is paramount to conservation and proper utilization of forest resources. The efficient and effective management requires knowledge, skills, technologies

and good practices of local community. To help increase skills and raise capacity of local community, GCAP provided one day forest management training with the objective of providing information and knowledge in areas of scientific sustainable forest management, forest and its importance, characteristic features, sensitivity, relevant law and directives and technical skill along with practical exercises to manage forest. Thirty people participated in the training and enhanced their knowledge.

RESEARCH AND MONITORING PROGRAM

Realizing poaching and illegal activities pose threat in biodiversity conservation, GCAP supported local communities for their active involvement in curbing illegal activities. In order to capacitate local community for advocacy, mobilization and informants networks, six youths were selected and mobilized for a period of four months with the main objective of disseminating conservation messages with special focus on illegal activities. Similarly, information sharing and interaction program was organized among CAMC members and local community on November 21, 2015 at Singati and another similar joint networking meeting was organized on December 2, 2015 in participation of representatives from 13 CAMCs of Dolakha.



CENTRAL ZOO

LARGEST DEER SPECIES HOUSED IN ZOO

The female Sambar deer (*Rusa unicolor*), the largest deer species found in Nepal, rescued by the District Forest Office, Kathmandu on August 22 is housed at Central Zoo. Its distribution is from Parsa in the east to Shuklaphanta in far west of Nepal including Chitwan and Bardia. The Sambar deer are crepuscular (i.e. active at morning and dusk) and nocturnal in habit, they are easily spotted at the fringe area of the forest where they feed on young grass shoots.

Male sambar is among the largest of south and Southeast Asia's deer, with a head-body length of up to two meters and weighing up to 260 kg. The fur is brown to grey-brown, the tail dark and the underside of the tail and rump area whitish. The antlers of the male usually have three tines (points). Herds are small with up to four individuals, and a single fawn is born after a gestation period of eight months. They are threatened species mainly due to habitat encroachment and illegal hunting.

CONSERVATION EDUCATION PROGRAM

The most popular and highly appreciated conservation education program,



animal feeding has been opened for FoZ members from July to December 2015. During the period, 2,000 FoZ member students from 26 different schools took part in the program. FoZ members together with keepers prepare food for the captive animals according to the dietary chart and feed the animals, which is effective to provide them first hand experience and to widen their knowledge on the ecology of the animals. In order to impart knowledge on wildlife and conservation to FoZ member students, Central Zoo organized a visit to Natural

History Museum on September 4, 2015. Altogether 60 students of 28 different schools visited the museum that provided them an opportunity to learn about the evolution of species, its history and diversity of flora and fauna of Nepal.

The FoZ club meeting was organized at Zoo on August 14, 2015 attended by the 54 FoZ club chairpersons of 25 schools. They highlighted activities conducted by FoZ clubs in their respective schools throughout the year. The eco-club activities of different schools were also shared at the meeting that gave them an opportunity to know how to coordinate and participate in joint programs. The FoZ of D.A.V Sushil Kedia Vishwa Bharati, Lalitpur was awarded with the best eco club award, 2015.

Global Tiger Day was marked on July 29, 2015 with face painting, coloring, talk program, documentary show for visitors and FoZ members that was participated by 250 individuals. The aim of the program was to raise awareness among the FoZ members and visitors about the Royal Bengal Tiger, its ecology, behavior threats and conservation and management issues. International Vulture Day was observed on September 6, 2015 with a talk program. Held at the vulture





enclosure, talk program was delivered on two species of the vultures (*Himalayan Griffon* and *Gyps bengalensis*) with focus on its conservation and threats, various other aspects. Over 500 FoZ members and zoo visitors attended the program. Similarly, World Rhino Day was marked on September 22, 2015 with various activities like coloring, drawing and talk program. About 300 visitors and FoZ members participated in the program.

The Central Zoo provided free FoZ membership to 250 students from five different public schools namely Shree Chandee Adarsha Secondary School, Patan, Shree Shramik Bal Bigyan Lower Secondary School, Pulchowk, Shree Nandi Ratri High School, Naxal, Shree Pragati Shikshya Sadan School, Kupondole and Shree Shanti Higher Secondary School, Lalitpur. The main objective of the free FoZ membership is to encourage and provide access to public school students in conservation education. Essay and drawing competitions were organized for FoZ members in two categories for 5-7 grades and 8-10 grades on the topic of "Sambar Deer and Its Conservation." The preliminary round was held in the respective schools where 1,500 FOZ members took part in the competition. The final round was held in the Zoo

on November 30, 2015. Night guided tour for FoZ members was conducted on December and January. During the period, 857 students and teachers from 15 different schools participated in the program that provided them an opportunity to learn about the behavior of nocturnal animals in captivity.

CAPACITY ENHANCEMENT

Ms. Sarita Jnawali, Project Manager of the Central Zoo attended the 70th World Association of Zoos and Aquarium (WAZA), the largest conservation organization globally for zoo and aquarium community, conference held in Al Ain, UAE from October 11-15, 2015. The theme of the conference was "Zoo and aquarium making a difference in conservation and animal welfare". The conference helped the zoo to strengthen its networking with the world zoo community and exchange ideas for better management of the zoo.

Ms. Rachana Shah, Acting Curator of the Central Zoo attended the two weeks training on Monitoring of Greenhouse Gas Fluxes from Natural and Agro ecosystem held from December 15-31, 2015 in Chengdu, China. The Chengdu Institute of Biology; the Chinese Academy of Sciences organized the training in collaboration

with International Centre for Integrated Mountain Development (ICIMOD), the objective of the training was to build the capacities of the neighboring countries in the field of climate change monitoring.

ANIMAL MANAGEMENT

The two species Yellow headed turtle (*Indotestudo elongata*) and three striped palm flying squirrel (*Funambulus palmarum*) were rescued by the local community and handed to the Central Zoo. After the health checkup by the vet these animal are now in Zoo for exhibits.

The devastating April 25 earthquake had minimal impact to zoo animals and its infrastructure however, the shed of the Juddha SJB's mother's statue got damaged and it broke the barrier of Himalayan goral (*Naemorhedus goral*) enclosure. In addition, the animal kitchen, east-south corner wall and one of the old enclosures in section two were also damaged. The damaged enclosures were repaired. The height of the net fencing of ostrich enclosure was increased so that the bird cannot jump out of the enclosure.

The anti-rabies vaccine was given to all the zoo keepers and vet staff as a precaution against any redundant disease last year. The booster dose was again provided to all the staff who took the vaccine last year.

VISIT

The expatriate from US embassy visited the Zoo on August 9 and August 30 in two groups. The visitors were given a brief presentation on the history of Zoo and its programs. The guided tour along with the elephant feeding and bear feeding was also provided to them. Similarly, Social culture group from UK visited the Zoo on September 11.

Professor David Field, Zoological Director of Zoological Society of London (ZSL) visited the Zoo. The discussion meeting was held with the senior officials of NTNC together with the Zoo team. NTNC and ZSL signed an MOU and has been working together since a decade and the visit was aimed on strengthening relationship and further collaboration in ex-situ conservation.

BIODIVERSITY CONSERVATION CENTER (BCC)

WILDLIFE RESEARCH AND MONITORING PROGRAM

NTNC-BCC is conducting various type of long-term wildlife monitoring in and around Chitwan National Park (CNP) and Parsa Wildlife Reserve (PWR). Rhino monitoring, tiger and prey base monitoring, bird monitoring, vegetation study, human wildlife conflict study etc. are on-going research and monitoring in collaboration with national and international universities, NGOs, government line agencies and local communities. ID based rhino monitoring in low density rhino areas of Chitwan was started in 2009 with dual objectives of reducing the threats of poaching by increased surveillance and gathering scientific information about rhinos. In collaboration with Nepal Army, a new android based application was developed and field testing was completed.

Human-tiger conflict in CNP and its surrounding areas is becoming severe in recent years. Thus, NTNC-BCC is implementing a project from the support



of USFWS to deal with conflict through the establishment of a rapid response team and an up to date conflict database. Human resource has been arranged to record HWC incident systematically along with GPS location in a standard data form. Similarly, an analysis of HWC incidents from previous years from Chitwan is ongoing. Spatial mapping of the conflict incidents show that the settlements

adjoined the park have higher conflict incidents. Similarly, BCC and Kalabajar BZUC with support of CNP continued a community based tiger monitoring to prevent human killings. Camera traps are placed around Sauraha area to monitor a problem tiger sighted nearby and a mechanism is also developed to inform BCC and CNP about their movement.



BCC has been collaborating with CNP and buffer zone communities to establish a comprehensive HWC database in Chitwan. All the historic records were collected from CNP and some BZUCs. Technical and financial support was provided to CNP to publish a book on HWC and relief details. Similarly, BCC is supporting the Government of Nepal in management of problem animals in nearby districts. During this period, two problem tigers were taken into control and rescued from buffer zone of CNP. Similarly, BCC is also in taking care of two rescued leopard cubs in collaboration with CNP. The cubs named Tika and Ram were rescued from Siraha in May 2015. Both male cubs were grown at BCC premises in isolation except the caretakers and veterinary staff. This is a pilot project on leopard re-wilding. The

cubs are growing well and developing natural skills. They were recently moved from BCC to Hardakhola, eastern sector of CNP to expose them in the wild environment and train to adapt in the natural habitat.

Pangolins are one of the most threatened species globally primarily due to poaching and illegal trade. At present pangolins are the most traded (illegally) species globally. In order to acquire the information on the species, with financial support from Hariyo Ban Program, status survey and pangolin conservation program was initiated in Makawanpur and Gorkha districts. In Makawanpur, a reconnaissance survey of Pangolin was carried out by mobilizing student of Institute of Forestry and four CFs were selected to conduct details camera trap based survey. Similarly, other four CFs were selected in Mirkot, Gorkha for survey and conservation work.

NATURAL RESOURCES CONSERVATION PROGRAM

Plantation and restoration of the degraded forests is one of the priority programs to meet the need of local people and to reduce the pressure on CNP. As a part of this, 16 plant species are produced at BCC nursery that includes timber, fodder, fruit trees, ornamental and medicinal plants, bamboos, etc. In total 12,040 seedlings were distributed to the local communities for plantation. Bhimauli community forest in the north-eastern part of Barandabhar Corridor Forest is a good wildlife habitat but animal density is very low especially due to water scarcity. To address the problem, community dug a pond at Gunde Mandre Chaur. BCC under financial support from USFWS has restored water holes for all seasons. New water recharge system has been constructed with solar PV set for year round water supply. This water hole provides water source for critical species like rhino, tiger and its prey species. As an effect, two tigers, a male and a female were also camera trapped in recent camera trap survey.



Human-wildlife conflict is one of the major concerns for wildlife conservation. Crop raiding, livestock depredation, human casualties have been observed frequently from different parts nearby the protected areas and forests. Few cases of retaliatory killings of wildlife have been observed. BCC is working very closely with communities and CNP on prevention, control of problem animals and immediate relief through different mitigation measures and awareness programs. As a part of this, BCC supported all the BZUCs around CNP to conduct an interaction program on measures and methods to prevent and minimize incidences of HWC. In total, over 20 such events were conducted in active participation of local community. Similarly, different measures such as trench and fencing, electric fence, alternative cropping etc. are also introduced to mitigate HWC. Electric fence has been considered very effective for large mammals like rhinos and elephants in reducing HWC if maintained properly. This year 10.032 km fencing installation was started in the relocated community of PWR, Ramauli Pratapur that will benefit 500 HHs directly. Elephant is the most problematic species in the relocated area and installation is ongoing. Poaching of wild animals is a serious threat to wildlife conservation. Therefore, NTNC-BCC has been providing support for anti-poaching activities.

BCC extended CBAPU support program outside of the buffer zone. CPABUs were formed under community forests in both east and west sides of BCF with financial support from USFWS in collaboration with district forest office.

BCC has been promoting and supporting regularly for the installation of biogas plants as it has been proven as one of the best alternative energy source for rural Nepal. Following the success of declaring Kumroj as first model biogas VDC in Nepal, support to other communities are also extended. During this period, 101 plants were constructed within Budhirapti and Nirmal BZUCs of PWR, and Sikhrauli BZUC of CNP.

Understanding governance status is crucial for effective management of conservation projects at community level, from the support of USAID - Hariyo Ban Program, NTNC initiated to conduct PGA in 68 BZUCs in the Terai region from Parsa to Shuklaphanta. A part from this, BCC conducted the PGA of 22 BZUC in CNP and 14 BZUC in PWR.

CONSERVATION EDUCATION PROGRAM

NTNC-BCC conducts different conservation education programs. One of the major and long term program is conservation education program in schools through green force clubs and environmental teacher's forum (ETF).

PROJECT UPDATE

Started in 2002 from 55 public schools from CNP's buffer zone and peripheral areas, green force clubs now have network in 65 schools. Environment subject teacher of the each school is patron of the green force club and member of environmental teacher's forum. These green force clubs from the support of ETF conduct different conservation education and awareness programs among students. From the Beeshazaar and Associated Lakes Conservation and Community Empowerment Project, 13 school teachers of different schools of the catchment area of the Beeshazar and associates lakes were oriented on the status, threat and conservation issues of wetlands in Nepal. Similarly, speech program was conducted on Himalaya Dandapani higher secondary school with the participation of students from seven schools. Wetland conservation slogan were developed and broadcasted from local FM and video jingles were broadcasted from the Crystal Television, Chitwan based local television channel.

Wildlife display and information centre at BCC was established in 2004 as an education centre providing information about wildlife in Nepal's Terai through demonstration of whole or body parts. The centre has more than 400 specimens of preserved animals, skeleton, skin, bones and faecal matters of more than 80 species on display. A live sized leopard skin was stuffed and put on display. Regular updating of specimen tags and information boards is on-going.

SPECIES CONSERVATION AND BREEDING

There are three on-going captive breeding programs in Chitwan i.e. Vulture Conservation and Breeding Centre (VCBC), Gharial Breeding Centre (GBC) and Elephant Breeding Centre (EBC). NTNC-BCC has been managing VCBC since 2007 in collaboration with CNP and Bird Conservation Nepal (BCN) with the support of Royal Society for Protection of Birds (RSPB) and Zoological Society of London (ZSL). NTNC-BCC has been collecting the donations from the entry

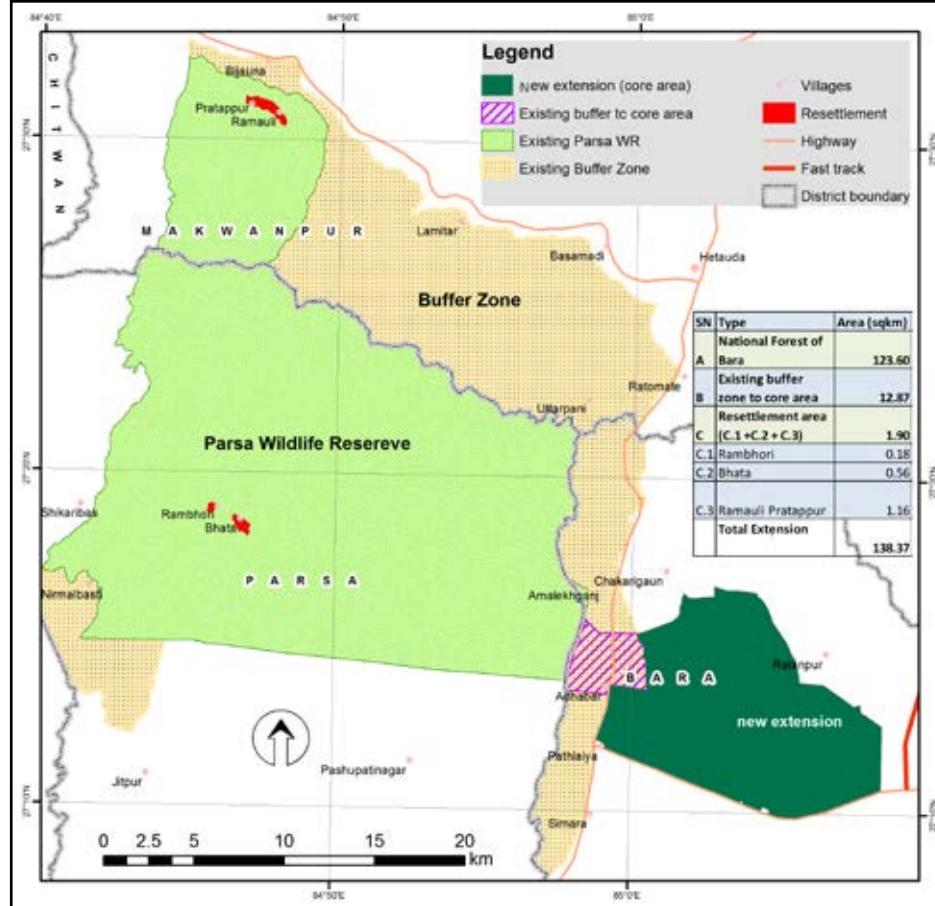
of tourists in EBC and GBC and utilizing the funds for the centres' management in close collaboration with CNP. In VCBC, there are 58 vultures including one chick, one juvenile and 56 adult. During this season, several eggs were laid and one chick was successfully hatched. This is the second chick hatched at VCBC. During this period, molecular sexing of all vultures of VCBC was done in collaboration with Agriculture and Forestry University, Chitwan. Out of 57 vultures (except newly hatched), 32 were female and 25 were male.

PARSA CONSERVATION PROGRAM

Parsha Conservation Program (PCP) was established in May 2010 as a satellite office of BCC to conduct biodiversity research and monitoring in and around Parsha Wildlife Reserve and support local communities for livelihood and mainstreaming them in conservation. Recently, the Government of Nepal has

extended 138.3 sq km area of PWR. The eastern extension especially the Bara forest has huge pressure from surrounding settlements. Thus, PCP extended support for guard post construction from the financial support of ZSL Nepal. Similarly, biodiversity assessment of birds, mammals is on-going. Camera trap survey has been planned to assess the tiger's status in the area. Preparation of checklist of birds is on-going. Over 325 bird species has already been recorded.

To strengthen security in Parsha SMART (Spatial Monitoring and Reporting Tool) has been implemented since last year through funding support of ZSL/Panthera. SMART is an effective tool for strategic and effective patrolling in protected areas. NTNC-PCP conducted earlier version of SMART (known as MIST) in Parsha for more than a year since 2012. All nine guard posts in Parsha are now collecting data on SMART protocol.



BARDIA CONSERVATION PROGRAM (BCP)

WILDLIFE RESEARCH AND MONITORING PROGRAM

ID based rhino monitoring is a program initiated in 2008. Since 2012, the monitoring is continuing with financial support from USAID funded Hariyo Ban Program. At present, 33 ID profiles are prepared in Bardia National Park and among them 29 are in regular observation. Two rhinos of ID 24 (named as Shibu Pothi) and ID 15 (Bagar Pothi) were fitted satellite radio collar on November 2014 and March 2015 respectively and are under constant monitoring. Following the initiative, DNPWC, BNP, NTNC and WWF jointly has planned to radio collar additional two rhinos for scientific monitoring.

NTNC in collaboration with DNPWC and the financial support of Hariyo Ban Program initiated blackbuck translocation to Hirapur Phanata in Shuklaphanata Wildlife Reserve (SWR). Among the 28 animals translocated in 2012, there are more than 35 animals in the fenced habitat maintained at the Hirapurphanta and in the second phase, altogether 14 blackbucks (female-10 and male-4) were reintroduced from the Blackbuck Conservation Area, Khairapur, Bardia.

To enhance the research capability, BCP supported university students to undertake studies as a part of their academic fulfillment. This year, BCP supported Chet Bahadur Oli to carry out study on "Diet analysis of four horned Antelope (*Tetracerus quadricornis*) in Banke National Park (BaNP). Similarly, logistic and technical support was provided to Subodh Upadhyay and Paras Acharya for their studies on "Comparative ecology and genetics of sympatric wild cats in relation to human-wildlife conflict in Bardia National Park, Nepal" and "Ecology and Conservation of Indian Smooth-coated Otter (*Lutrogale perspicillata*) in Karnali River System of Bardia National Park" respectively as a part of their PhD study.



A patrol team for wildlife monitoring from Kothiyaghata to Lalmati comprising members of community based anti-poaching units (CBAPUs), representatives from BNP, BCP and members of users' committees of Patabhar, Gola, Pashupatinagar, Suryapatuwa and Thakurdwara was formed and organized patrol on the first week of January 2016. Some poachers were arrested involved in illegal fishing and traps setting in the rivers of buffer zone.

Observing the few cases of natural death and poaching of tigers in past one year, special focus was given to Babai valley in BNP for the monitoring of threatened wildlife jointly with BNP. For the monitoring purpose, grids of two km into two km were setup and a format was developed. Altogether six technicians were deployed with equipment after providing training at BCP. The data sheet forms are collected on the monthly basis.

CONSERVATION EDUCATION AND EXTENSION PROGRAM

A workshop on biodiversity conservation and wildlife poaching control was organized for media personnel on December 20-21, 2015 at BCP office. The workshop, participated by 42 journalists,

was aimed to create the awareness on the significance of biodiversity conservation and anti-poaching, and role of media to highlight conservation issues.

NATURAL RESOURCE CONSERVATION PROGRAM

BCP is operating two forest nurseries at Thakurdwara-5 and Pashupatinagar-5. Every year these nurseries produce over 43,000 seedlings of different multipurpose tree species which are distributed to the community and private forests. The main seedlings are *Sagun*, *Sisoo*, *Khair*, *Bakaino*, *Amla* etc.

The Orahi river was causing the problems of bank cutting and water logging in hundreds of hectare of agricultural land. It mainly impacted several areas of buffer zone namely Kaligaudi and Bhadeli of Shivapur VDC, Bhudkaiya and Sukhad of Thakurdwara, and Perahni and Sujanpur of Neulapur VDC. To minimize the impact, support was provided for river embankment through plantation, river trimming, bioengineering, and flood water control by using gabion box that is under progress. The activity was supported with financial support from Hariyo Ban Program.



In order to strengthen the BZUCs and UGs, participatory governance assessment training was organized on November 4-6, 2015 with the objective of assessing governance at the local level which would help to diagnose and identify problems, monitoring and evaluating policies and programs, and helping communities to engage in discussions, inclusiveness, goals, and priorities. Altogether 19 participants comprising representatives from buffer zone of BNP, SWR and representatives from FECOFUN, Dang took part in the training. Similarly, the participatory governance assessment (PGA) is initiated in BCP and till date 28 BZUC (BNP-19 and BaNP -9) is completed. The PGA helps to ensure and enhance the good governance and participation along with resource management, transparency and accountability of the equity based dividend distribution process. Further, one day stakeholder workshops were organized at Chinchu, Lekhparajul, Taranga, and Haripur BZUCs that focused on review of progress of the last year and planning of next fiscal year.

With the aim to involve CBAPU members in conservation by enhancing their income generation, different activities were conducted to build their capacity. In collaboration with Rapti Technical School, Dang, this year, BCP provided a three months training of community livestock assistant and brick layer mason to 16 youths. Similarly, in collaboration with USFWS and RUFFORD, the solar maintenance training was imparted to 13 youths from Chinchu, Lekhparajul, Hariharpur, and Taranga UCs.

The CBAPU planning workshop was organized on December 22, 2015 participated by 39 participants from CBAPU coordination subcommittees. The participants shared experiences, issues and formulated programs and activities for the coming fiscal year. Further, plan and activities to be assigned to the CBAPUs were also discussed and finalized. With the partial support of BCP through STF, a building of CBAPU information centre was constructed with a meeting hall, an office room and a veranda.

HUMAN WILDLIFE CONFLICT MINIMIZATION PROGRAM

To minimize the human wildlife conflict in buffer zone, BCP conducted various programs such as sensitization workshops, different festival celebrations etc. A sensitization workshop was organized on November 30, 2015 focusing human elephant conflict, participated by 33 participants. The workshop mainly focused on challenges, issues, and mitigation measures of the conflict. Similarly, support were provided for maintenance of electric fence that includes a solar panel of 140 watt and a charge controller at Thaurdwar-9

and Shivapur-1 respectively. Likewise, elephant festival was organized on the occasion of Bijaya Dashami with participation of six CBPAUs. The elephant football competition, men and women swimming competition, and cultural program were the main highlights of the festival.

Further, BCP has been promoting alternative crops like Chamomile and Mentha with an aim to minimize human wildlife conflict as it is unpalatable. This year, Suryapatuwa BZUC was supported with 50 percent partial support fund to purchase the chamomile and mentha seeds. One thousand of mentha suckers and 10 kg chamomile seeds were distributed. Similarly, the community based demonstration plot of lemon grass is established at the degraded forest land of Kailashi Community Forest to examine the growth performance in the local environment. BCP supported 8,000 slips of lemon grass and that can be harvested up to four consecutive years. One hectare of lemon grass produces 20 kg oil in single harvesting and it can be harvested thrice a year. The market value is between NPR 1,100 to 1,200 per kg.

ALTERNATIVE ENERGY PROMOTION PROGRAM

Majority of the local community people depends up on the forest resources for fuel wood. Biogas directly helps to reduce the pressure on the forest resources and to improve the health of the women working in the kitchen. Since 1995, the BCP has supported to install over 1,500 biogas plants in the buffer zone. Studies revealed biogas helps to reduce firewood consumption by 45 to 55 percent. This year, BCP supported 133 biogas plants which are under construction.



SHUKLAPHANTA CONSERVATION PROGRAM (SCP)

WILDLIFE RESEARCH AND MONITORING PROGRAM

One of major focus of NTNC-SCP is wildlife research and monitoring in SWR. Different short and long term research activities are ongoing in collaboration with SWR, national and international universities, NGOs, government line agencies and local communities. A long term ecological study (2013 - 2016) on swamp deer (*Rucervus duvaucelii*) was initiated in collaboration with DNPWC under the partial grant support of Hariyo Ban Program with the aim to study the population dynamics, spacing behaviour, seasonal habitat use and nutritional ecology of the species. As a part of the study, 12 individuals (8 female and 3 male) were collared in June 2015. Among the collared animals, a female died in October and one lost contact short after the collaring. The remaining 10 animals are under the constant supervision of SCP. Preliminary results revealed average 95 percent MCP home range of swamp deer as 5.61 sq km based on VHF radio tracking locations. Home range of male is slightly higher than female. Most of the swamp deer were found to be dispersed



into the Sal forest during the monsoon season. Based on the data, scientific papers will be produced by Mr. Hemant Kumar Yadav, Conservation Officer of the NTNC for his PhD at University of Messy, New Zealand.

Historically, blackbuck (*Antelope cervicapra*) was widely distributed across

Nepal's Terai with scattered populations in Kanchanpur, Bardia and in the old floodplain areas of Rapti river in Banke but by early 1970s they disappeared from most of its range and believed to be regionally extinct. In 1975, blackbuck conservation was initiated immediately after the nine individuals were reported at Khairapur, Bardia. Population of blackbucks increased gradually and reached up to 300 in 2014. Realizing the risk of single population, under the leadership of DNPWC and financial support of Hariyo Ban Program, NTNC initiated blackbuck translocation to Hirapur Phanta of SWR in 2012 by reintroducing 28 animals. Additional 14 wild blackbucks from Blackbuck Conservation Area (BCA), Khairapur were reintroduced to Hirapur Phanta in July 2015. All these stock animals are kept in predator proof fenced area at Hirapur Phanta. At present, there are 39 blackbucks in Hirapur Phanta. In order to provide sufficient habitat for the reintroduced blackbucks in SWR, the



existing 17 ha was expanded by another 20 ha in northern side. Regular health check-up and diet supplement during the crunch period is a regular management activity being carried out in the released site. For scientific management of the reintroduced animals in a organized way, a site specific conservation for blackbuck in SWR has been finalized and is under process of printing.

ID based rhino monitoring has been conducted in all rhino bearing areas with dual objectives of reducing the threats of poaching by increased surveillance and gather scientific information about rhinos. As a part of this, ID based monitoring has been continued in SWR. A booklet with profiles of rhinos in Barida and Shuklaphanta has been published.

Grazing of livestock has been identified as one of the major threats to biodiversity of SWR. However, information on exact extent of the grazing pressure was unknown. Thus, NTNC-SCP conducted a survey in September 2015. According to the data generated, nearly 17,000 livestock including 14,027 cows, 1,341 buffalo, 1,461 goats and 169 others (pigs, sheep etc.) entered everyday for grazing. Similarly, scientific understanding of the grazing impacts will greatly help to devise mitigation measures. Thus, a study on "Effects of livestock grazing on vegetation and wild ungulate in Shuklaphanta Wildlife Reserve" is ongoing. For the study, research grant has been provided to a graduate student Ms. Pratiksha Paneru from Institute of Forestry.

NATURAL RESOURCES CONSERVATION PROGRAM

NTNC-SCP gives due focus on restoration of the degraded forests especially in buffer zone through plantation, fencing and restoration. SCP has operated a nursery to produce and distribute seedlings of fodder, timber trees and grass seeds. This year the nursery produced and distributed



1,778 fodder seedlings to 90 HHs in buffer zone area to promote fodder plantations on private land. Fodder plantation not only reduces the fodder collection from SWR it also promotes stall-feeding to livestock. Community based anti-poaching units (CBAPU) plays a crucial role on controlling poaching and other illegal activities inside forest areas at local level. Thus, with the aim to activate them in conservation, from the grant of USFWS, SCP supported for formation of 24 units of CBAPUs and three CBAPU sub-committees under Shuklaphanta, Bageshwari, Sagarmathaand Himalaya BZUCs with the involvement of 125 local youths. These units are active in their respective areas to control illegal activities and increase conservation awareness among communities.

SUSTAINABLE LIVELIHOOD PROGRAM

With the aim to reduce dependency on forest resources, SCP has been supporting local communities for alternative options of income generation for their livelihood. As a part of this, support of a goat and a predator proof corral was provided to 20 HHs of Chandani Dodhara municipality. Skilled labour cost and market materials were supported whereas locals arranged unskilled labour and locally

available materials themselves. Poor and disadvantaged groups as well as families who lost their livestock from carnivore were selected for support on recommendation of the respective UCs.

Alternative energy plays crucial role to reduce forest dependency. SCP thus promotes biogas, improved cooking stoves (ICS) and other alternative energy programs to meet energy need of local people. Biogas has multiple benefits for subsistence agriculture based rural communities as well as reduces pressure over forests for fuel wood. This year, SCP supported over 200 biogas plants in buffer zone area of SWR. Most of these plants are under construction.

Large number of unproductive livestock holding in buffer zone area is primary reason for exerting heavy grazing pressure in SWR. Promotion of improved variety of livestock can significantly reduce the livestock holding as well as grazing pressure. Thus, from Awely Green Cap Program, artificial insemination support was provided in buffer zone in collaboration of District Livestock Service Office, Kanchanpur. Last year, artificial insemination was done for 84 cows. Similarly, to promote stall feeding, summer grass seeds were distributed to 359 HHs in buffer zone having 1,394



livestock. Through the financial support of ZSL Nepal, SCP is also conducting a project to reduce grazing pressure in buffer zone by upgrading two veterinary centers at Pipladi and Badeipur of buffer zone.

Sewing and tailoring is an effective alternative income option especially for women which can be initiated from their own home with a small investment. From Awely Green Cap, three sewing and tailoring shops involving 20 women has been established in buffer zone of SWR. To strengthen their capacity, sewing machine, interlock machine, iron press, chair etc. were supported to these shops. Two units of two week long training on sewing machine repair and maintenance was also conducted. Basket making from locally available materials is tradition of ethnic Rana Tharu communities. Thus with the aim to promote it commercially, advanced basket making training was conducted to 30 women of Deurali and Ganga UGs under Bageshwari BZUC.

CONSERVATION EDUCATION AND EXTENSION PROGRAM

Education and awareness plays crucial role to bring positive changes in communities towards conservation. SCP conducted a range of conservation education activities

SCP conducted awareness program to 359 users of nine UCs. Presentations and video documentary was shown during the sessions.

On the occasion of Global Tiger Day on July 29, SCP organized a tiger conservation rally in Mahendranagar from support of Awely Green Cap that was participated by 328 local people including representatives from SWR, BZUGs, BZMC, social workers and media. The rally took a round of Mahendranagar and ended in an assembly where the speakers highlighted the importance of tiger conservation and need of joint effort together by government line agencies, community based organizations, non-government organization, local communities and stakeholders.

Innovative approaches are required to make conservation education effective. Conservation street drama is one of such tool to bring strong motivation of local community towards biodiversity conservation. SCP thus, supported for formation of a conservation drama group involving 15 youths. Materials and equipment support such as sound system, dress and stationeries was provided to the group this year.





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