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A Report on National Radio Awareness Programme for Bat Conservation in Nepal



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A report submitted to **Rufford Small Grants Foundation, UK** under the project “**Detailed monitoring survey of bats and their conservation through radio awareness programme and outreach programme to school children in Kathmandu**”

Cover Photo: Radio Jockey **Rajesh Pandey** interviewing to **Yuvraj Bhusal**, Secretary, Ministry of forest and Soil Conservation, Singha Durbar, Kathmandu. **Photo by: Sagar Dahal.**



Photo: Dikpal Krishna Karmacharya, General Member and Volunteer at SMCRF attaching the Radio Programme announcement in Khodpe, Baitadi District; a remote area at Far Western Development Region of Nepal where Radio Kantipur can be tuned at 101.8 Mhz. **Photo by: Dikpal K. Karmacharya.**

All Photos by Suchita Shrestha and Sanjan Thapa

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Introduction

Small Mammals Conservation and Research Foundation (SMCRF) is dedicated for the research and conservation of small mammals within its priority areas and other potential sites throughout Nepal. Small Mammals like bats, red panda, pangolin, hispid hare, otter, etc. comprise more than 60% of total mammalian species in Nepal; yet, it is still among the least concerned taxa. Having focused on this least concerned taxon; SMCRF has so far worked on the monitoring of and conducted researches on bats on different parts of Nepal and on the red panda and pangolin too. Education and community outreach programs through school children is another activity, SMCRF is taking up, including the formation of Bat Club in the schools and conducting various awareness lectures. Radio program is one of the awareness activities, SMCRF had listed in its tasks to achieve the goal of reaching out to a large mass of common people and raising awareness regarding small mammals.

The words and the data on reports seems appealing to few groups of people but the information may be overloaded to general public or sometimes even to the policymakers therefore the radio is considered as an effective means for conveying the message to the target group. Dating back, bat conservation radio awareness program, in Nepal started shortly after the peace accord of Maoist insurgency by November 2006. This first attempt of such radio program, however, was limited to local and regional FM station; Rupendehi FM and Radio Annapurna respectively. In this regard, the radio programme “Mammalian World” is the first nation-wide broadcasted bat conservation radio awareness programme in Nepal. This is the key section of the project “Detailed monitoring survey of bats and their conservation through radio awareness programme and outreach programme to school children in Kathmandu” supported by Rufford Small Grants Foundation, UK. The programme was aired through Radio Kantipur station (96.1 MHz) throughout Nepal far beyond the project area (Kathmandu Valley) reaching out to more than twenty million listeners.

Objectives

The former and the most important aim of the radio programme is to transmit the gained knowledge from the literatures and fields up to the various target groups like general public, students, policy makers, researchers, etc. Some of the objectives of the program can be outlined as-

1. To familiarize the target groups with the facts and the importance of few important small Mammals highlighting o bats,
2. To interact with the expert associated with the small mammals’ issues focusing on bats,
3. To highlight the gap between the present condition of the research and the policies regarding small mammals focusing on bats,
4. To emphasize in the conservation of small mammals focusing on bats,
5. To bring a change in the people’s attitude towards the small mammals focusing on bats.

Programme in brief:

The aim of this programme was to change people's negative attitude to bats and make aware of the facts on bats and their importance in ecological role and public health issues and to induce them for the long-term local level conservation of bats on their own.

Target group

Wider group of people were targeted including general public, students, researchers, policymakers, etc.

Methodology***Contract***

A contract for the 13 episodes of the programme entitled "Mammalian World" was signed between Radio Kantipur (www.radiokantipur.com) and SMCRF on 12th January 2010. The package included 13 episodes of each 30 minutes broadcasting every Friday 7:30-8:00 hour from 22nd January 2010 to 16th April 2010.

Advertisement

The advertisement pamphlets of the radio programme posted on the various schools, colleges, VDC offices, and promo of the program was broadcasted from the Radio Kantipur before (in other programme of the station) and during the program period.

Expert interaction

Experts working on research and conservation of small mammals (Bat, Red Panda, Pangolin, otter, hispid hare) as well as experts from other conservation partners and stakeholders (Himalayan Nature, National Trust for Nature Conservation, Department of National Parks and Wildlife Conservation, Bardia National Park, Ministry of Forest and Soil Conservation) were interviewed.

Report

Eight reports on different small mammals were broadcasted during the programme episodes. The report section included: Three full reports on Bats, two short reports on Red Panda, each short report on Pangolin, Otter and Hispid Hare.

News

Few national and international news regarding research and conservation activities on small mammals as well as some activities by SMCRF were also delivered.

Quiz

A question was asked in each episode, related with the reports on aired on the same episode. The questions that were asked were as easy as possible to cover most of the people from any field. This part of the program was included as an indicator of the popularity of the program and to know its feed back as well for the program effectiveness. A week time was allocated for sending the answers to programme "Mammalian World" through Post to P.O. Box 13153, Sundahra, Kathmandu, Nepal and also through email to mammalianworld@yahoo.com. The winner was selected through lucky draw from the quiz

participants. His/her name was announced in the next episode and was prized a vest printed with bats image at back. The prize was managed by SMCRF.

General Format of the radio program

- Starting with One liner
- Introduction of SMCRF and RSG
- A short report on the specific small mammal
- An interaction with an expert
- Quiz
- Ending with the one liner

One liner

I am in favour of animal rights and human rights, that is, the way of a whole human being – Abraham Lincoln.

The greatness of a nation and its moral progress can be judged by the way its animals are treated.- Mahatma Gandhi.

Episode 1 January 22, 2010

**Guests: Ms. Suchita Shrestha, Secretary, SMCRF
Mr. Sanjan Thapa, Mmember, SMCRF**

The first episode was a warm-up session for the listeners for getting prepared for the upcoming programs. In addition, it was designed so as to introduce SMCRF, its objectives and the objectives of the radio program too.

The opening of the programme was done by the RJ, Rajesh Pandey highlighting what the whole package of the “Mammalian World” consists of and the dimensions it was going to cover. The first episode did not follow the general format of the program and included the brief introduction of SMCRF, its objectives, objectives and the importance of the radio program. Executive member, Sanjan Thapa and Executive Secretary, Suchita Shrestha were present as a guest interviewee. Sanjan emphasized the importance of small mammals as it covers more than 60 percent of the total mammals population and told that while most of the organization, both government and non-government, are giving the whole attention to charismatic large mammals, SMCRF has been focusing on the least concerned taxa, small mammals.

Suchita opened the curtain of how the journey of the SMCRF begun with the number of eight fresh Masters’ graduate from different faculties like Zoology, Environmental Science and Botany and also stressed on the activities of SMCRF like research of small mammals, conducting awareness programs, trainings and seminars. Moreover, they highlighted the reason behind



the radio program. According to them, the findings of the research reports are accessible to few groups of people only like organizations, students, and other stakeholders but local people are unaware of their

Ms. Suchita Shrestha (Right) and Mr. Rajesh Pandey (RJ) in the Radio Kantipur's studio

surroundings. In order to, share the knowledge in a simple and efficient way, radio was used as a means. On asking how general people of Nepal who are still below the poverty line and can't fulfill the basics of life, will be able to understand the issues of small mammal conservation, Sanjan answered that we are living in an ecosystem where every organism has its ecological role and small mammals which is also a part of the same ecosystem have key role in the peoples' day-to-day life. For instance, bats consume more than 2000 mosquitoes and pests consequently controlling the life-taking diseases and various diseases of crops. He added the importance of bats as they have a key role in pollination and seed dispersal and even their guano is used as organic fertilizer as well as for the production of washing powder whereas other small mammals are used for the lab test of medicine effectiveness. Suchita added that the small mammals which are burrowers also help people indirectly by playing a major role in maintaining the fertility of the soil.

After the commercial break, Sanjan mentioned that more than 5,000 species of mammals are found till date of which more than sixty percent are small mammals. While in context of Nepal, Suchita emphasized that the total figure of mammals is 207 of which 162 of them are small mammals. Sanjan threw the light upon the condition of small mammals. According to the NPWC Act 1973, four species of small mammals viz., Indian Pangolin, Red Panda, spotted Linsang and Hispid Hare are listed in a protected species and Otter, Mongoose, Civet and one species of bat i.e. Indian Flying Fox *Pteropus* are listed in CITES. He also highlighted that there has been no concrete conservation steps from the policy makers. He clarified that the small mammals are going to face the negative consequences of global warming too and there is a need of proper study. To highlight the urgency of the conservation of small mammals, Suchita mentioned that some small mammals like pigmy hog and hispid hare are said to be extinct and endangered respectively in case of Nepal. The program also delivered the message that the small mammals are not getting the priority for conservation in front of large mammals. However, there are some non-government organizations like National Trust for Nature Conservation (NTNC), WWF-Nepal, Himalayan Nature and Red Panda Network etc. that will be interested in working together for their conservation. The programme appealed the concerned authority to promote conservation of small mammals by prioritizing the research on them and also through awareness among the local people.

Episode 2 29th January Guest: Mrs. Geeta Shrestha, Chair, Nepal Action Trust for Utility of Resource Education (NATURE)

The episode started with the SMCRF news and the current activities of different member of the organization. It then followed by the recorded report presented by Suchita Shrestha regarding the general information about Bats which described their divisions, their position in mammalian world, their distribution in the world, and their special characters of producing ultrasonic sound.

Geeta Shrestha, Chair of Nepal Action Trust for Utility of Resource Education (NATURE) was invited as guest interviewee for this episode. She talked about the conservation awareness program organized by NATURE regarding bat conservation and their importance among school children. She also described her experience of getting involved into the bat conservation program in Nepal.

She gave general overview about the conception of people regarding the bats. There are lots of misbelieve on bats which needed to be cleared among the mass. She also discussed about the list of challenges for bat conservation which included decrease in number due to lack of new research, urbanization, excessive use of fertilizers and due to predators.

She concluded that awareness to the mass is only a long-term way of conserving these valuable animals in the ecosystem. She addressed the need of implementation of bat conservation actions outside valleys (Kathmandu and Pokhara).

Episode 3 5th February

Guest: Ms. Suchita Shrestha

This episode comprised of the discussion in the form of conversation revealing the features and interesting facts about the bat. The facts like echolocation, ability of bats to fly and its inability of perching straightly like birds were discussed. Besides these, the programme was interrupted by some amazing information. For example;

- Tiger moth can echolocate, and they use it get rid of bats attack.
- Bats are not blind, in fact, big fruit-eating bats can see things clearly and insect eating bats have tiny eyes with low vision and therefore they use echolocation method.
- Bats that feed on the pollen grains and nectar have long tongue.
- Hibernation and migration are the essential phases of bats life cycle.
- They have gained the skill of throwing their excreta in an upside-down position without letting them to touch their own body.
- Female bat can produce milk equivalent to 16 percent of the body weight per day.

In addition, some of the negative notions of bats prevailing in the society were tried to clear out through the programme. Some of the examples of these were:

- Rabies is supposed to be communicated through bats. Only an insignificant number of people are infected of the rabies through bats. Almost 99 percent of them are due to dog bite.
- Bats are presumed to be dangerous to human as they are thought to suck the human blood. But the fact is that the three species of vampire bat found in South and Central America suck the blood of cattle.
- Bats are assumed to be dirty and stinky. In the contrary, they clean themselves timely.
- Bats are considered to be the part of which and ghost and they bring bad luck if seen in house.
It is only the impression instilled by the novels that used the bats as a character like Dracula and Vampires.
- Bats destroy the fruits from the orchards. In fact, a research has revealed that only 7 percent of one hectare of field are used by the bats which is negligible.

- The meat of bats are used to cure the diseases like asthma, arthritis, tuberculosis which is totally untrue and only the coincidence.

The episode was ended by discussing some advantages of bats to an ecosystem like seed dispersal, pollination, regrowth of the forest and so on.

Episode 4 12th February

**Guest: Mr. Hari Prasad Sharma, Assistant Professor,
Central Department of Zoology, Tribhuvan University**

The episode started with the SMCRF news and the current activities of different member of the organization. It then followed by the recorded report presented by Suchita Shrestha regarding Red Panda. She gave the morphological structure, adaptive behavior, distribution, habit and habitat, feeding behavior, position in animal taxa, its ecological importance and threat to this beautiful animal. This report was prepared with the help of Kamal Kandel and Arjun Thapa.

Hari Prasad Sharma, a young lecturer of Central Department of Zoology, Tribhuvan University was invited for the interview. He is involved in the conservation of Red Panda from quite a long time. He shared his research experience from mid-western, western and central regions of the country around Rara National Park, Dhorpatan Hunting Reserve and Langtang National Park. He discussed the existing laws regarding the conservation of this animal. He also described the hurdles he went through preparing the action plan of Red Panda with other concerned bodies.

He gave the overview of problems regarding the conservation of Red Panda in the Himalayan topography. Harsh climatic condition, difficult geographical structure, lack of technical manpower, insufficient funds, local trade of the fur near Tibetan area, its shy and cryptic nature along with its routine defecating behavior were the major threats for the conservation of this animal.

According to him local awareness programs, ecotourism, conservation of its habitat and regular monitoring of population are essential for its conservation.

Episode 5 19th February

**Guest: Mr. Kamal Kandel, Researcher
Red Panda Network Nepal**

The episode started with the SMCRF news and the current activities of different member of the organization. It then followed by the recorded report presented by Suchita Shrestha regarding the status of Red Panda in Nepal.

Kamal Kandel from Red Panda Network was called for the interview. He shared his experience of his research study of Red Panda from Ilam district in Eastern Nepal. He discussed about the potential of Eco Tourism on the periphery of Red Panda conservation by the participation of People additionally with some information similar on that from previous episode.

Episode 6 26th February

**Guest: Mr. Juddha Bahadur Gurung, Member Secretary
National Trust for Nature Conservation (NTNC)**

The episode started with the SMCRF news and the current activities of different member of the organization. It then followed by the recorded report presented by Suchita Shrestha regarding the general information about Pangolin. It included its habit, habitat, behavior, life cycles, reproduction, age, number of offspring etc. The report was prepared by Tulshi Laxmi Suwal, Pangolin researcher and conservationist at SMCRF.

Juddha Gurung, member secretary of National Trust of Nature Conservation was invited for the interview to discuss about his research on Pangolin. He discussed about the challenges faced by him during his research. He also shared the findings of his study.

He insisted the people's participation and awareness program for the long term conservation of the two species of Pangolin.

Episode 7 5th March

**Guest: Mr. Paras Mani Acharya, Associate Professor
Patan Multiple Campus, Tribhuvan University**

The episode started with the SMCRF news and the current activities of different member of the organization. The program then followed by the recorded report presented by Suchita Shrestha about Otter. She gave the overview of habit, habitat, morphological description, life cycle, behavior and breeding cycle, position in food chain, importance and threat to this animal. She also described the types of Otter found in Nepal and its distribution in different river bodies within Nepal known till now. The report was prepared by Paras Mani Acharya.

Paras Mani Acharya, assistance professor of zoology in Patan Multiple campus, Lalitpur district was invited for an interview for this episode. He has been involved in the research of Otter at Narayani River, Chitwan last year. He shared his experience of the research and explained the importance of otter in healthy river habitat.

He shared the result of his study and found out the illegal hunting, decrease of fish due to uncontrolled fishing in the Narayani River and effluents of industrial pollution as the major threat to this indicator animal. He focused on awareness program and strong monitoring for the conservation of this animal.

Episode 8 12th March

**Guest: Mr. Promod Tandan
Environmental Graduates Himalaya**

The episode started with the SMCRF news and the current activities of different member of the organization. It then followed by the record play of the report presented by Suchita Shrestha regarding the general information about Hispid Hare which described their divisions, their position in mammalian world and their distribution in the world. The report was prepared by Promod Tandan.

Pramod Tandon, a freelancer was called for the interview to share his overall research experience of Hispid Hare in Bardia National Park of Western Nepal. Hispid hare is one of the rarest animals of South Asia having numbers no more than 140. He described distribution of Hispid hare. He also gave the food behavior of this animal.

The study sites of the research were Bardia National Park in the Western Tarai of Nepal; 4 districts: Surkhet, Kailali, Bardia & Banke.

Hispid hare is the habitat specialist



Mr. Sagar Dahal (Right), Mr. Promod Tandan (Middle) and Mr. Rajesh Pandey (RJ) in the Radio Kantipur's studio during the Programme

species has low adaptability to the changing environment which is the key threat to this animal. He also described the threats of wildfire to these animals.

He recommended the more such studies on Hispid Hare and proper guideline for carrying out the fire in Park. According to him community awareness and sufficient equipment for the staffs were also recommended.

Episode 9 19th March

Guest: Mr. Sagar Dahal, Treasurer, SMCRF

The episode started with the SMCRF news and the current activities of different member of the organization. Sagar Dahal, Treasurer of SMCRF was called for an interview for this episode.

This program talked about the behavior of Bats in 12 months; their nature and ecology on different months. The program gave the overview of different activities of Bats in a year around starting from January to December. It included their hibernating stage, mating behavior, roosting colony formation, torpor stage, weaning stage on different time schedule. The program also discussed about the life span and mortality causes of Bats.

On other half the program concentrated on the discussion about the history of Bat studies in Nepal and the ethnochiropterology. The program gave the overview of local name of Bats in different

ethnic languages like Tamang, Sherpa, Newari, Rai, Limbu, Maitheli, Tharu etc. communities of Nepal.

Episode 10 26th March

**Guest: Mr. Yuvaraj Bhushal, Secretary,
Ministry of Forest and Soil Conservation**

The episode started with the SMCRF news and the current activities of different member of the organization.

Yuvraj Bhushal, the secretary of Ministry of Forestry and Soil Conservation was invited for the interview for this episode. He talked about the policies and plans of Government regarding the conservation of Biodiversity and Small Mammal. He discussed about the extension policy of Conservation Area from 23% to 27%. He also focused about the loopholes of policies, lack of manpower and technical experts working on the conservation of small mammals in Nepal. He also accepted the limitations of government for working only on the big mammals.

So far only the action plan of Red Panda has been made for the conservation strategies and only five species has been noted as small mammal by the government.

He gave the overview of tasks done by the government sector like building trans boundary corridors with National Parks, awareness campaigns run by the government, data collection though it had lots of missing links for the conservation of biodiversity. He also described the provision of punishment in the law for the illegal hunting and poaching of animals that extends from 1 year to 10 years of imprisonment and Rs. 40,000 to 75,000 of penalty or both.

Lastly, he concluded the program with commitment to help the individual researcher for conservation of small mammals.

Episode 11 2nd April

**Guest: Mr. Tika Ram Adhikari,
Chief Conservation Officer, Bardia National Park**

This episode includes the interaction with the Tika Ram Adhikari, Chief Conservation Officer of Bardia National Park and Suchita Shrestha on behalf of SMCRF to share some activities of the organization. The notification of one-day seminar on small mammals' issues was aired and people were encouraged to inform SMCRF about the small mammals they could have in their surroundings.

Chief Conservation Officer listed the name of protected animals in Bardia National Park including 10 species of mammals, 6 species of birds and 4 species of reptiles. Tiger, Wild Elephant, one-horned Rhinoceros, hispid hare etc. were some of the examples of mammals. Talking about the condition of small mammals he shared that there is lack of information on hispid hare and pigmy hog both in Bardia and Chitwan National Parks. He also shared about his study on rodents by capture and recapture method in the year 1999 that reported ten species of them during the one year of study period. His study revealed that the 60 percent of small mammals were decreased after the grass cutting because the anthropogenic activities like grass cutting in large quantity disturbed them making the habitat unsuitable for them and as they are cover-dependent species, they were more prone to their predator. The findings of his study also revealed that after forest fire, population of rodents declined by 15 percent more and

after rainfall the population of rodents increased slowly as grass sprout started germinating. Thus, he concluded that to maintain the population of small carnivores and birds of prey, small mammals should be conserved. Chief Conservation Officer enlightened some of the challenges in the conservation of small mammals like uncontrolled forest fire, illegal hunting and poaching, distribution of grasses to local community every year, flooding, etc. However, he said that small mammals have high reproductive capacity and they manage to maintain their population till now in the national parks. Putting his view on how conservation could be done, he mentioned about the core area management, habitat improvement and management, awareness campaign to local people, promoting ecotourism in the bufferzone and uplifting the livelihood of the people mainly having low economic level who have more tendencies to violate the rules and regulations of National Parks. He also emphasized that other national organizations like National Trust for Nature Conservation (NTNC), Terai Arc Landscape (TAL) from WWF Nepal were working in the cooperation with the National park for conservation through the community forest development, generating alternative options of income and conservation through participatory approach through several groups, committee and buffer zone community forest users' group.

Suchita listed some of the activities done by SMCRF. One of them was the establishment of the bat house in the Central Zoo situated in Kathmandu city. The design of the bat house was established as recommended by the Bat Conservation International which is one of its first kinds in the country. Throwing the light upon the activities of SMCRF, she added that the researches of bat have been done in the Eastern of Nepal and in the Syangja district as well. Moreover, one-day training on bat handling technique was carried out for the interested students of graduate level in 28th July, 2009.

Episode 12 9th April

**Guest: Dr. Hem Sagar Baral, Chief Technical Adviser
Himalayan Nature**

The episode started with Notice: On 11th July 2009, a flex board having the information of the importance of bats was kept in Nagarjun Peace Cave in order to aware visitors and local people. SMCRF has also completed the first phase of research on bats in eastern districts viz, Sunsari, Jhapa and Morang and on 25th April, 2009, baseline survey of bats in Kailash cave of Syangja district of western Nepal. This episode includes the interaction with Dr. Hem Sagar Baral from one of the leading conservation related NGO, Himalayan Nature and the co-author of the recently published book entitled “Wild Mammals of Nepal.” According to him, till now there is only special focus to the charismatic and large mammals and though, more than sixty percent of mammals have been covered by small mammals, it has been a neglected realm for the scientific research and conservation as well. He added that the level in the small mammals could be the reason why programs on small mammals. He did not fully use umbrella species under which small mammals are large mammals. In the contrary, he put his view that several species of small mammals have



**Dr. Hem Sagar Baral (Right) and Mr. Rajesh Pandey (RJ
the Radio Kantipur's studio during the Programme**

unique habitat requirement and behavior so special conservation programs focusing on small mammals should be initiated. He also added that policies are well-written but not implemented well and mostly the research studies in the country are donor-driven rather than interest-driven so the studies of small mammals are not basically prioritized. In that light, he highly praised the initiation of SMCRF. He emphasized that it is the duty of organizations like SMCRF to give the right information and database based on scientific researches regarding small mammals and in turn government should come up with the policies and programs and should update our studies learning from other part of the world.

After short commercial break, he shared some of the analysis made and the experience gained during writing the book entitled Mammals of Nepal that the scientific study and research should be done and conservation steps should be taken. Apart from these, he accepted that though government was partially unenthusiastic in the conservation of small mammals, the local communities were aware enough for their conservation where the programs like Terai Arc Landscape (TAL) and Sacred Himalaya Landscape (SHL) were instigated. However, he also admitted that local people were still in view that small mammals like rodents destroy the crop in their field and pointed out that there should be awareness program in coming year from both government and non-government organizations. He informed about the ongoing project of updating the National Red List of Mammals initiated by the government body, Department of National Park and Wildlife Conservation (DNPWC) in the cooperation with leading non-government conservation organizations like WWF Nepal, NTNC and ZSL. According to him, project team is preparing the National List of total number of species of mammals of Nepal and the list of critically endangered, endangered, sensitive species among them. In the course of sharing some of the outputs of the project, he pointed out that the number of species of small mammals has been upgraded from 207 to 210. Though, approximately fifty percent of total small mammals have not been studied yet and are kept in the list of data deficient while some species are kept in critically endangered list. The prepared list would be helpful guidance for the further conservation works on mammals, according to him. He unveiled the objectives of the organization, Himalayan Nature, he was associated with and finally he thanked SMCRF for the commendable works.

**Episode 13 16th April Guest: Mr. Gopal Parsad Upadhaya, Director General
Department of National Park and Wildlife Conservation (DNPWC)**

This episode includes the telephone interview with the Director General (DG) of Department of National Parks and Wildlife Conservation (DNPWC) that summarises the status and condition of small mammals mainly in National parks and reserves of Nepal, researches undergone till date and the priority of small mammals in the wildlife week 2010. Agreeing upon the fact that the small mammals are less studied area, he put his view that department is willing to encourage the young researchers to conduct their researches on small mammals so that the data generated could be helpful for the management and conservation of the small mammals. He also drew the attention that some researches are ongoing in the from Terai and Himalaya areas. Responding to the query, why small mammals are least concerned in comparison to large mammals, he answered that small mammals have their own ecological role as a prey species so they are important as large mammals for ecological services and maintenance and Nepalese young researchers are working on them and department has set fund for such researches. Without research, it is difficult to have a clear view of the actual status of the concerned small mammals, so research is in the priority of department, according to Director General. He also mentioned that it is equally important to increase awareness among the community and hand over the authority and ownership to conserve the natural resources including small mammals as well. He threw the light upon

the importance of landscape conservation approach, corridor and connectivity approach, community awareness through media and education, participatory conservation approach and revenue sharing mechanism among community for the effective conservation and simultaneously supporting their livelihood. The instances of such conservation approach that incorporate the community like Conservation Area and Bufferzone concept are the model for all over the world. He said that wildlife week should be seen in totality i.e. the week is for entire wildlife from small insects to mega faunas and that includes small mammals as well. Regarding the awareness level in the community, he mentioned that the DNPWC has been always launching different awareness campaign as per different protected areas targeting the community depending upon the small mammals.

After 3 minutes commercial break, the Director General threw the light upon some recent steps in favour of small mammals like some researches being done like that of rodents in Bardia National Park and conducting a National workshop on updating the Red List Data of Mammals of Nepal. Apart from this, department encourages students from university to conduct research and also bears an authority to give permission to researchers for conducting researches inside national park or other national forest. Regarding formulating policies concerned with small mammals, Director General came up with the broad view of conserving every plant and animals including small mammals which are the key elements of the ecosystem like rodents, civet, pika are the prey species and are the diet of carnivores. So he convinced that the department would definitely follow the findings and recommendations of the scientific researches. He stated that the main hindrance in conservation are illegal hunting and poaching and in case of small mammals use of large amount of insecticides in field mostly affecting rodent species is the obstacle. He also highlighted on the importance of awareness campaign, law amendment, national conservation authority and crime bureau formation and flourishing of eco-tourism sector and its policies in local, regional and national level. Moreover, he appealed for the cooperation from citizen, students, researchers and officials to conserve the green heritage for future. He concluded by sharing his vision of prosperous Nepal through utilizing the natural resources sustainably.

Notice: about the research study of bats on Nawalparasi district of Central Nepal and about the one-day Seminar on “Small Mammals Issues” on May 15th, 2010 was also announced at the beginning of the episode.

Quiz questions/Answers and Winners:

Six winners in the quiz were presented a gift SMCRF vest printed with bat (Flying Fox *Pteropus giganteus*) image. Quiz correct answers were not received in another four episodes while no answer was received during two episodes.

Q.1. What is the name of the process by which bat detect the objects on their path radiating the ultrasound?

Ans: Echolocation

Winner: Ms. Aditi Shrestha, Dharan



**Ms. Anita Shrestha, Executive Member,
SMCRF presenting the prize to Ms.
Aditi Shrestha**

Q. 2. How many stripes are there in the tail of Red Panda?

Ans: Twelve

Winner: Mr. Tek Bdr. Gharti Magar, Baidam, Pokhara

Q.3. How many offsprings are born by female Red Panda in a year?

Ans: One offspring per year

Winner: Mr. Krishna Paudel, Taplejung

Q.4. How many types of pangolins are found in Nepal?

Ans: 2 types; Indian and Chinese

Winner: Ms. Shanta Pandit, Central Department of Environmental Sciences, Tribhuvan University, Kirtipur, Kathmandu.

Q. 5. What is the major food of otter?

Ans: Fish

Winner: Mr. Bishow Raj Tamang, Sindhuli (Now at Central Department of Zoology, Tribhuvan University, Kirtipur, Kathmandu.

Q. 6. Hispid Hare is supposed to be in two of National Parks of Nepal. Name them.

Ans: Shuklaphanta National Park and Bardia National Park

Winner: Kaustav Raj Neupane, Morang (now at Tri-Chandra College, Ghantaghar, Kathmandu.

Feed Backs:

During our visit to Chepang community at Kakda V.D.C of Makwanpur district, we found they have come to know about importance of bats hearing the radio programme. Many (about 63) suggestive and encouraging feed backs were received during the programme. Feed backs and quiz participation were received from Taplejung district (Eastern Nepal), Chitwan district (Central Nepal) and Pokhara, Kaski district (Western Nepal) beside Kathmandu Valley.



Mr. Kastuv Raj Neupane
wearing the prize