

# Snow Leopard Conservation Grants Program

## FINAL REPORTS FOR 2009 PROJECTS

**DUE: 31 JANUARY 2010**

Please submit your final report by the due date above. We would appreciate it if you could follow the suggested format below. You should refer to your original proposal for items such as objectives, methods, etc. unless those were substantially altered during the course of the work. If so, please explain why.

### **1. Executive Summary:**

A community based livestock insurance program was initiated in Kanchenjunga Conservation Area in 2005 by WWF Nepal in collaboration with locals so as to reduce retaliatory killing and conflicts and create communal effort for Snow leopard conservation. But the root level monitoring and evaluation on the effectiveness of the program was lacking. So, some questions regarding the acceptance and viability of the scheme were unanswered. To what extent insurance program was acceptable and effective? Had the compensation received from the insurance program helped herders to recover their loss? Did the insurance program have minimized the retaliatory killing of snow leopard? Did all herders involve in the scheme or was there any relation between acceptance of insurance program and livestock size as well as economic and social status of the herders? My study was intended to answer all the above mentioned questions and discern the achievement of the scheme on conflict mitigation and collaborative conservation of Snow leopard.

Retrieving information from 41 herders out of 69 involved in the insurance scheme (snow leopard conservation sub-committee), results are not encouraging. Conflict exists on land tenure as pasture/grazing tax are collected by the indigenous Limbus but they are not in the committee and conservation circle. The committee is forced to pay compensation for wild dog predation. Well-off herders insure only half of their herds because of the fear of exposing wealth (cattle) outside.

The insurance program has endowment fund of NPR 1.2 million. The premium (NPR 55/cattle/Yr) and compensation (NPR 2,500/cattle killed) for each size and breed of the cattle enforces "one size fits all" modality whereas cost of different cattle breed ranges from NPR 4,000 – 25,000. The committee and the Management Council have become two ends of one system. Obviously, there is rank and file situation. The scheme is dogged with limitations because projects, position and money matters to all. If not corrected on time, the scheme will be never appreciated.

### **2. Objectives:**

The broad objective of the project was to study livestock depredation intensity by snow leopards and examine the effectiveness of community- based livestock insurance program. The specific aims of research were:

1. To study the incidence and intensity of livestock depredation by snow leopard in KCA.
2. To explore effectiveness of livestock insurance program to minimize retaliatory killing of snow leopard.
3. To explore and upgrade acceptance of insurance program by herders.

As per the plan, the project was a root level monitoring and evaluation on the effectiveness of livestock insurance program, which was intended to address the questions regarding the acceptance and viability of the scheme.

Detail and precise information regarding the insurance program and snow leopard conservation were lacking. In that scenario the research result was expected to contribute to the knowledge regarding achievement of the scheme on conflict mitigation and collaborative conservation of Snow leopard and on the other way was expected to discern the conservation status of snow leopard under running of the insurance program. The study was expected to be a base or reference for the extension of this program to all over the Nepal's Himalayas of prime snow leopard's habitat where human-snow leopard conflict is a major challenge for conservation.

### 3. Methods:

The following methods were used for the data collection.

#### 1. Secondary data collection

Various research papers and project reports were reviewed and consultations were made with local NGOs, especially Himali Conservation Forum, Snow Leopard Conservation Sub-Committee, Kanchenjunga Conservation Area Management Council, WWF Nepal and its field staff in KCA, and other concerned group, committee and organization for the cross check, comparison and verification of the data collected in the field.

#### 2. Primary Data Collection:

A field visit was made from 8 April to 23 May, 2009 for the data collection as follows.

##### i. Participatory Rural Appraisal (PRA):

A PRA was carried out in each Village Development Committee (VDC) where livestock insurance program has been implemented. PRA activity has facilitated the identification of snow leopard habitation areas, herder's movement areas and areas having higher depredation rate. Besides, herders' attitudes and perceptions on snow leopard conservation and livestock insurance program were scanned.

##### ii. Key Informants Interview:

A total of 12 Key informants' interview were made with the members of Kangchenjunga Conservation Area Management Council, Snow Leopard Conservation Sub-Committee and representative from different Non Governmental Organizations (NGOs), Community Based Organizations (CBOs), Woman Groups and other concerned knowledgeable persons.

##### iii. Questionnaire Survey:

Out of the total 69 herders who have been rearing yak and yak breeds in all the three VDCs and make the seasonal altitudinal movement for grazing their cattle, 41 herders were sampled and interviewed.

No of herders and sample size in each VDC were as follows.

<i>VDCs</i>	<i>Total Herders</i>	<i>Sample size</i>
Lelep	19	12
Olangchung Gola	30	15
Yamphudin	20	14
<b>Total</b>	<b>69</b>	<b>41</b>

#### Field Observation:

During my field visit, no predation incidence had taken place and so none of the sites could be visited for the examination and validation of the predation incidence. However one case of livestock injury due to snow leopard's attack was documented from Gybla of Lelep VDC.

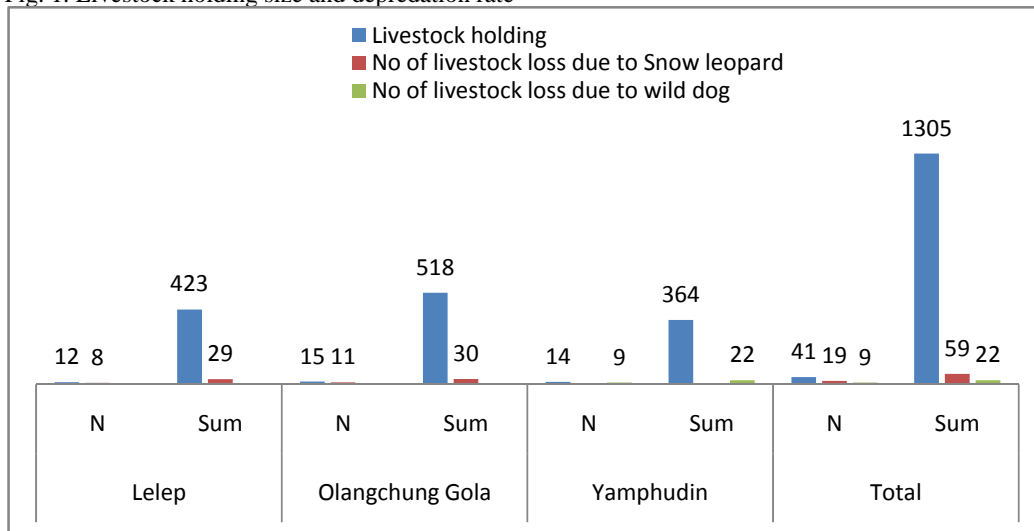
### 4. Results:

In Kangchenjunga Conservation Area, livestock rearing has been a traditional occupation of mainly the Sherpa, and then Gurung and Rai communities for the sustenance and income generation. After the establishment of the conservation area, their occupation has been concerned for proper management, and controlling deforestation, poaching and retaliatory killings of wild animals. In the past, even after the establishment of conservation area, there has been record of retaliatory killings of snow leopard and wild dog by the herders. Frustration due to livestock loss, lack of compensation, inability to recover the loss and the lack of awareness has made many herders kill snow leopard and wild dog by putting poison over the carrion of the depredated livestock. No herder accepts his involvement in the retaliatory killing, even in the past, and blame to others but not by citing the name. However many herder know the method of killing predators, and has realization that due to those activities, Lelep and Olangchung Gola VDCs have lost the wild dog, as there has not been any sighting since more than 5 years. Currently, more than 80% of the herders are facing the problem due to wild animal. As an effort to minimize human-wildlife conflict and promote conservation of snow leopard in Kangchenjunga Conservation Area, livestock insurance program

has been in operation since December, 2005. With an endowment fund of NRs 1,200,000 (about US\$ 16,900), supported by National Centre of Competence in Research (NCCR North-South) through the Department of Geography, University of Zurich, Switzerland in collaboration with WWF-NP, the Livestock Insurance Program was initiated (Gurung, 2006). To take part in this scheme, herders should have paid NRs 55 per yak and yak breed each year. If any herder's livestock loss was verified to be caused by snow leopard, then the project would provide NRs 2500 and the verification was made by Snow Leopard Conservation Sub-Committee (SLCSC). The program was running on three VDCs, Lelep, Olangchung Gola and Yamphudin out of the 4 VDCs in Kanchenjunga Conservation Area. The Yamphudin committee was compelled to compensate the depredation of wild dog too from the same endowment fund under the community pressure. Besides managing the insurance program, the SLCSC had been monitoring and doing regular assessment and survey of snow leopard and its prey species.

Education level among the herders in Kanchenjunga Conservation Area was poor. More than 30% of the herders were illiterate and less than 10% had the lower secondary education. As there had not been any cheese factories to sell the milk directly, herders had to make income by making 'chhurpi', a hard cheese like product and ghee. In spite of the good income, this occupation has been less prioritized by the new generation and there have been a trend of shifting occupation. Only about 2% of the herders have the age less than 25 years. There was significant variation in livestock holding size among the herders. Only 5% of the herders had the livestock holding size of more than 80, whereas about 50% had the livestock size of 20-40 and about 25% had that of less than 20. The average livestock holding size of the herders was about 31. After the starting of insurance program, about 47% of the herders have faced the livestock depredation due to snow leopard, whereas about 22% of the herders have faced that due to wild dog (Fig 1). About 50% of the herders stated that the higher rate of depredation occurs in night, whereas more than 25% of the herders did not know the time of higher rate of depredation.

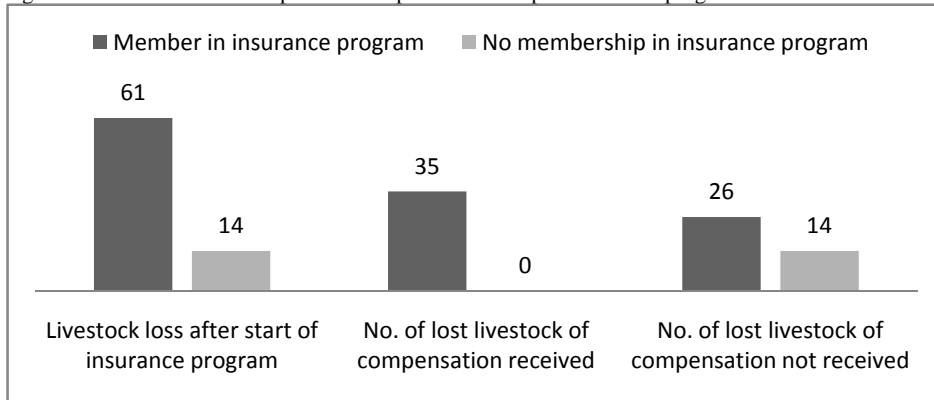
Fig. 1. Livestock holding size and depredation rate



*N*: Number of herders, *Sum*: Number of livestock

About 80% of the herders had the insurance of their livestock, however only few herders had taken insurance of all. After the commencement of the program, the total livestock loss of the sample herders was 75, of which more than 80% had the insurance. But only less than 60% of the lost livestock having insurance were compensated. More than 75% of the lost livestock were killed by snow leopard in Lelep and Olangchung Gola whereas the remaining was killed by wild dog in Yamphudin VDC. About 55% of the lost livestock due to the snow leopard had been given the compensation (Fig. 2.)

Fig. 2. Livestock loss and compensation as per membership of insurance program



The acceptance and rejection of the insurance program had been determined mainly by the location of the herders, approach to the committee and the kinship with the snow leopard conservation sub-committee members than the attraction to and the effectiveness of the insurance program. About 50% of the herders had taken the insurance program beneficial for the compensation of the depredated livestock, whereas 20% of the herders had taken insurance program beneficial for taking loan at low interest rate. Some 15% of the herders had not the positive thoughts towards the program and they did not see any benefits. More than 90% of the herders responded that Rs. 2500 compensation for each breed and size of the livestock is not suitable and sufficient, whereas the remaining herders did not have any response on this issue.

About 45% of the herders had the perception that the compensation amount should have been at least 50% of the cost of lost livestock, whereas more than 25% had the thought to be equal to the cost. About 15% did not specify the compensation amount but they responded that the amount should have been different for different breed and cattle size.

Many of the herders who had not taken the insurance of their livestock were unsatisfied to the insurance program for the poor and ineffective committee, their negligence on the verification process and low amount of compensation. As suggested by the herders and key informants, the following were some of the weakness and negative aspects of the program. 1. All the herders had not been involved, and there was no any effective network for verification, conservation and awareness, 2. Committee members were more non-herders than the herders and were not the representative from all the location and there was lack of harmonious relation among the committee members and the herders, 3. Compensation was not sufficient and there was no variation in premium and compensation as per the size and breed of the animal, 4. The committee members did not verify the depredation cases on time, so the complaining and getting compensation was tedious, and 4. Insurance committee had done nothing for the improvement of the pasturelands and to minimize the depredation rate.

Though less than 5% of the herders had the negative attitude towards the conservation of snow leopard, only about 55% were well aware about its conservation. As reported by the respondents, the following were the major benefits of conserving the snow leopard. 1. Promotion of the tourism business and improvement in community livelihood, 2. Implementation of many conservation and development activities by different INGOs, NGOs and government bodies, and 3. Biodiversity conservation and proud of having snow leopard.

### 5. Discussion:

Livestock rearing is one of the main livelihood strategies in the upland communities of the KCA. So the livestock losses have a significant economic impact on the community. Worst scenario of livestock depredation causes unsustainable living condition or withdraw from yak pastoralism to the households with medium or small-sized herds (<40 cattle) due to their inability to repurchase the cattle. My study has found that more than 70% of the herders had the livestock holding size of less than 40 heads. So, even a single livestock loss causes significant impact on the pastoralist's livelihood. Compensation and insurance program, if well managed in favor of communities, is the best practice for snow leopard conservation as community included conservation practices have been in the progress of success.

As an attempt to soothe the herders' frustration, minimize the retaliatory killings of snow leopard and insure its conservation, insurance program was initiated in KCA. However still after the passing of more than 4 years, the program has many circumstances, obstacles and weakness that all are hindering against objective of success achievement. The program has not been appreciably accepted by all the herders. The premium (NPR 55/cattle/Yr) and compensation (NPR 2,500/cattle killed) for each size and breed of the cattle enforces "one size fits all" modality whereas cost of different cattle breed ranges from NPR 4,000 – 25,000. With the compensation received from the insurance program, the medium herd-sized farmers rarely become able to recover their loss by re-buying new cattle. This condition leads to decrease in number of cattle each year, and ultimately make the pastoralist withdraw from this occupation. The Kangchenjunga area was declared as the Conservation Area on March 1998, but large part of the land is still owned by the local indigenous Limbus, who continues to exercise their traditional rights and privileges. Kangchenjunga Conservation Area Project is being unable to address this land tenure issue. The pastoralist communities are still compelled to pay the pasture/grazing tax to the Limbus called as '29-Subbas', who are not under the conservation and management circle. Last year, they collected NRs. 78000, but none was invested on any conservation activities or social and community's benefits.

Kangchenjunga Conservation Area Management Council and Snow Leopard Conservation Sub-committee had become two ends of one system. There was a cold war for the superiority, and the sharing and update in database and progress among two committees was almost zero. Management council attempts to monitor the activities of the snow leopard conservation sub-committee but the sub-committee don't want to be under management council, as the endowment fund was directly handed over to sub-committees without planning a proper monitoring and systematic governance. One has the money; other has the power, then who counts whom? Herders of some of the excluded location are not satisfied with the sub-committees and the insurance program as they lack the homogenous representation of the herders from all the location. In Lelep VDC, all the members are from Ghunsa, whereas herders are in Gyabla and Khambachen too, at a distance of 5-6 hrs walk to each from Ghunsa, where committees are dominated by the non-herders. In Olangchung Gola VDC, snow leopard conservation sub-committee office is in Olangchung Gola but members are from both Olangchung Gola and Yangma. Yangma is at a distance of about one and half days and hence committee-members are facing inconvenience as many of the equipment and materials useable for the verification process are in Olangchung Gola. So the herders and the committee members are demanding separate committee and proportional distribution of resources as per the number of herders and livestock size in Gola and Yangma.

In Yamphudin VDC, there is the issue of livestock depredation due to wild dog more than the snow leopard. So the insurance committee is forced to pay the compensation for wild dog depredation. Still the Yamphudin committee is less able to convince and aware the pastoralist and herders to take part in the insurance program. There are many herders who are still unknown about the insurance program, and many of the individuals have the perception that the fund has been allocated to instantly distribute among the herders as compensation against livestock depredation in future. Many herders, whose livestock size is relatively greater, and are more susceptible to snow leopard depredation are still less interested to and are less benefited from the insurance program due to two reasons, i. large distance from the depredation site to the committee's office, and ii. Lack of immediate response by the committee members for the verification of depredation. Herders when in the remote pastures sustain with limited resource persons for guarding and take caring of the livestock. If livestock are depredated, 2-3 days should be walked for informing to the committee, and committee members are not sure to meet on arrival to the insurance office. During this period of time either depredated livestock would be lost being unverifiable or another might be lost due to lack of man power to care after. So herders when in the highest altitude and prime snow leopard habitat, suffer more from the unsystematic insurance process. So due to the lack of the network of information sharing and immediate response of committee members, many herders whose livestock are in large number feel tedious for reporting depredation and claim of compensation. These situations always hinders on raising positive attitude on the herders towards snow leopard conservation.

In all three VDCs, where insurance program is in operation, the snow leopard conservation sub-committee has done nothing on pastureland management and other depredation minimization approaches, just collect premium, and pay compensation if verification approved. The rate of retaliatory killing of snow leopard has been decreased after the initiation of the insurance program but more was due to the fear of KCAP and penalties than due to the awareness and effectiveness and benefits from the insurance program. Due to the lack of well guarding practice and predator proof corals, livestock were let free on pasturelands even in the night time, when depredation was higher. A combination of lax guarding practices, favorable cover and

habitat conditions, and high snow leopard density are primarily responsible for the high depredation rates in Nepalese Himalaya (Jackson et. al., 1996). Well-off herders insure only half of their herds because of the fear of exposing wealth (cattle) outside. The trend was privileged during the period of Maoist insurgency and was still on the same scenario. Even the herders who are in the vital post of the insurance committee had taken the insurance of their half of the cattle only. The insurance process was very unsystematic as there was not the system of marking the cattle having insurance. Due to this, the insurance committees were not free from the potential fake claim of compensation.

There was no significant relationship among the livestock holding size and acceptance of insurance program. But the social and economic status had played vital role on taking membership on insurance program. Livestock holding size determines the economic status of the herders. The economic and social status determines their approach to conservation and development committees. In some Sherpa family there is a belief that their ancient god protects their livestock from the predators. So they did not feel the importance of insuring their livestock, and the committee was unable to make aware them to involve in the program. Due to the higher work input, tedious job and degraded quality of the pasturelands and less availability of the grass, the young generation of the pastoralist communities were not interested to the traditional livestock herding occupation. So the numbers of herds have been decreasing on each year. Major occupation shifts are to business and foreign employment. The qualities of the pasturelands have been decreasing day by day due to the lack of water resources, and encroachment of the alien species. Those pasturelands with good status are also being degraded as large numbers of livestock become intensify on the same pastureland and days spent per pastureland have been decreasing with the decrease in quality. This may cause threat to the forest areas, as herders seek alternate areas to feed their livestock. The pasturelands on which depredation rate was higher are Khambachen Kharka, Surkya Phokte Kharka, Siddi Kharka, Syabuk Kharka etc. In Syabuk Kharka, herders had made a coral where they put livestock calves of 1-4 years in the night and set free in the day time. This practice had minimized the rate of depredation in this area.

For the effectiveness of the insurance program, there should be the provision of predator proof corals during the night time and herders should be monitored for their guarding practice during the grazing and day time. Besides, use of guard dogs as an informant of snow leopard presence and potential of attack and taking assistance of guarding livestock is the best practice to minimize the depredation. Only few herders have reared guard dogs in their shed, and many of them are show dog rather than the guard dogs due to the lack of training to them. So there was the need of assessment of all the pasturelands, management of water availability and grass, so that the herders would not have need to go to the snow leopard habitation areas, and construction of predator proof corals in the pasturelands of prime snow leopard habitation areas. Awareness levels among the herders were less and their attitudes towards snow leopard were still negative as taken as a predator only. They were less aware about the importance of snow leopard conservation. Awareness and informal education should be given to the herders regarding snow leopard conservation and reporting of snow leopard presence and depredation activity. So that the other herders would be alert and also the conservation committee would be supported for planning conservation, management and compensation program. By educating and giving awareness to herders, the insurance program should be completely handed over to them for the management and implementation. Network should be well established for the effective verification and immediate compensation of the lost livestock. Whenever the herders do not realize their ownership over the capital fund and insurance program, the success in this program would never be achieved.

The insurance program itself should be systematic and under the standard rules and regulations. In other areas of Nepal, where livestock insurance program are appreciably successful are running under the principle of cooperative. Under this system valuation of each livestock are made annually and are checked for the health condition before taking the insurance. Farmers have to pay 3 to 4% of the valuation cost as the premium. Under the death of livestock farmers receive 80% of the valuation cost as compensation. Each livestock are tagged with unique identification number, and the verification process is well effective and transparent. However, the insurance program in Kangchenjunga is running without such standards of cooperative and insurance principle. There was system of one premium and one compensation for each breed and size of animals, which was not farmers friendly and was being less able to compensate the farmer's loss and livelihood threats. On the other hand the program was not secure from potential false claiming of uninsured lost livestock. Also, there was no effective mechanism to increase the money on the capital fund, and its long term ability to pay the compensation was not secure with the fixed amount of

endowment fund. Therefore the program has the uncertain future. If not corrected timely, the program will not be long term appreciable and will not be able to mitigate the human-snow leopard conflict by being community friendly and community honored.

**6. Photographs:**



**Calves of Chauri resting during the mid day at ward no. 8, of Lelep VDC. Photo by Ramesh Paudyal**



**A yak calf injured by the attack of snow leopard at Lelep VDC ward no 8, Gyabla. Photo by Ramesh Paudyal**



**Abandoned shed. Photo by Ramesh Paudyal**





Pasturelands of good quality of grass and water availability. Photo by Ishwor Raj Bartaula