

## **Protecting the Tibetan brown bear through the reduction of human-bear conflict in the Chang Tang region of the Tibet Autonomous Region, People's Republic of China.**

### **1. Overview**

The Tibetan brown bear is perhaps the least known and least studied of the world's subspecies of brown bear. Residing at elevations of 4,000–5,300 m on the desolate grasslands of northern Tibet's Chang Tang region, Tibetan brown bears have subsisted almost exclusively by hunting the ubiquitous black-lipped pika as well as feeding on fish, grasses and other vegetation. However, over the past few decades, the population of these bears has declined drastically, and thus Tibetan brown bear has become one of the endangered species in Tibet.



With the creation of the Chang Tang National Nature Reserve in 2001, and the accompanying firearms confiscation program and ban on hunting, the threat of hunting was essentially removed, and the population of Tibetan brown bear has increased. With the growth of the brown bear population, the conflict between local herders and the Tibetan brown bear has also increased tremendously. In the spring of 2006, the WWF China-Lhasa Field Office conducted a survey to evaluate the extent of conflict between humans, bears, and other large mammals in the Chang Tang region, the area of the Chang Tang with the largest human population. Results revealed that brown bears inflict more economic losses to herders than any other species. Losses inflicted by brown bears are diverse, including livestock kills; direct damage to corrals, homes, and home furnishings; loss of human food supplies; and occasionally direct physical injury or even death of household members. Meanwhile, clandestine retaliatory killing of brown bears by livestock herders protecting their homes, property, and livestock rivals commercial poaching as the largest threat to the continued existence of brown bears in Tibet. With an alarming 60% of respondents to the survey in Shenzha and Nyima counties having experienced conflict with brown bears since 1990; that frequency had increased nearly 5-fold between 1990 and 2006. In 2008, the households in three villages in Nyima County were attacked by brown bears at least three times a year, which even caused severe injuries of two local herders. A herder in Amdo County was also killed by a brown bear.



Since brown bears are the single largest source of human-wildlife conflict in the Chan Tang region, it is imperative that strategies to mitigate, reduce, and eliminate human-brown bear conflict issues in the Chang Tang region be developed immediately.

With IUCN's sponsoring, WWF Lhasa Field Office initiated and designed a testing project for resolving the issue of human-brown bear conflict in the region of Chang Tang. In 2008, despite an unstable political and social situation in Tibet negatively impacting on the implementation the project, with WWF Lhasa Program Office staffs' effort, general project activities have been successfully completed as planned.

Progress and achievements have been made for of the following areas:

- 1) Identification of key places with high incidence of human-brown bear conflict through further investigating some of the target areas in Chang Tang.
- 2) Improvement of local conservation workers' conservation knowledge and conflict prevention skills.
- 3) Implementation of human-brown bear conflict mitigation measures at selected local community pilot sites.
- 4) Publicity of Chang Tang conservation project through producing and publishing a report and news articles.

## 2.Objectives

**Objective** This activity relates to three objectives: 1) To standardize data collection on bear-human conflict; 2) To reduce the conflict and its impact on both local herders and the Tibetan brown bear through educating local herders and rangers; 3) To reduce retaliatory killing of the Tibetan brown bear.

### **Activity 1. Conduct training for local residents and conservation workers**

Two training workshops were organized in cooperation with local county level forestry bureaus of Amdo and Shendza counties. The field survey showed that Shendza and Amdo are the two counties of the highest occurrences of human-brown bear conflict, which not only resulted in a great deal of economic loss to local herders, but also caused severe retaliatory killing of the endangered wildlife by herders. In order to prevent such tragedies, two sessions of training workshops were held to improve local rangers and herders' conservation knowledge and conflict prevention skills. A total of 75 participants, including 35 in Shendza and 40 in Amdo, were trained in:

- 1) data collection methods on the local brown bear population and its habitat, brown bears' presence in the village and attacks, and basic information of afflicted individual household and their economic loss etc;
- 2) prevention skills in reducing human-wildlife conflict and safeguarding personal safety when encountering brown bears; and
- 3) general wildlife conservation knowledge.

Meanwhile, discussion sessions were also undertaken on the root causes of the conflict as well as solutions to reduce or resolve the conflict. In terms of potentially achievable solutions, most of the local participants felt that fencing off houses and pens to keep brown bears away, and storing valuable items in high quality steel container would be of help.

The training workshops were warmly welcomed by both local herders and conservation workers. Local county level officials hoped that such training could be carried out in other communities of Chang Tang region.

**Objective.** To reduce the conflict and its impact on both local herders and the Tibetan brown bear through various methods including building fences, improving houses and corrals. Based on the tremendous need for reducing human-brown bear conflict in local communities, the following measures were taken.

**Activity 2: Bear-proof food storage container distribution**

In order to prevent brown bear's damage to furnishings, foodstuffs and valuable ornaments of local herders, 120 high quality bear proof steel containers in three different sizes have been designed, processed and distributed to 40 households in selected communities of Amdo and Nyima counties.





**Activity 3: Building bear-proof fences around local herders' houses and corrals**

Twenty local houses and corrals were measured and fenced off in two selected sites in Amdo and Shendza counties, which has substantially prevented damages to local herders' houses and corrals caused by brown bear as well as snow leopard.





**Objective** To reduce the conflict and its impact on both local herders and the Tibetan brown bear through various methods.





#### **Activity 4: Establish compensation fund for local herders**

This activity was readjusted due to the compensation policy of the government. Since last year, the government has launched a new policy to compensate local herders in the reserve areas for their economic losses from conflict with wildlife. As soon as the policy came out, WWF Lhasa Programme Office, together with local partners, had a discussion on the necessity of establishing a compensation fund. As a result, local partners would rather have WWF Lhasa Office spend funds to address conflict issues through the other possible measures which local community participants suggested. Therefore, WWF Lhasa Programme Office readjusted the plan and focused on two key activities known as conflict prevention and data collection training, and the provision of fences and foodstuff containers to local households.

**Objective** To reduce the conflict and its impact on both local herders and the Tibetan brown bear through various methods.

#### **Activity 5: Dog evaluation**

This activity is also readjusted.. Raising dogs is a tradition of local nomads, and almost every household has dogs. However, as local herders reflected, dogs are good at repelling other small predators, such as, wolf, lynx and fox, but this does not really work for encounters with larger predators like the brown bear and snow leopard. Local conservation workers and community herders would rather have more safeguarding training and fences constructed around their houses and corrals.

### 3. Outcomes

Prevention training and the two above mentioned conflict reduction methods were warmly welcomed by local herders and government officials. With the success of the project, some of the efficient measures will be replicated in some other high incidence communities for preventing the conflict between local herders and brown bears.

Activity	Output	Outcome
1. Conflict reduction and personal safety training	Total of 70 local participants from Shendza and Amdo counties were trained in wildlife conservation knowledge, conflict prevention skills and data collection methods.	1) Standardized data collection on human-brown bear conflict; 2) Improved local herders and rangers' wildlife conservation knowledge; 3) Promoted human-wildlife conflict prevention skills among the herders and rangers;
2. Bear proof food storage container distribution	120 high quality foodstuff containers were designed, processed and distributed to 40 households in two communities of Nyima and Amdo counties.	1) Reduced herders' economic losses resulting from frequent human-bear conflict; 2) Reduced retaliatory killing of bears by herders.
3. Building testing fences around herders' houses and corrals	Houses and corrals of 20 households in two villages of Shendza and Amdo counties were fenced off for conflict reduction.	Reduced herders' economic losses resulting from frequent human-bear conflict; 2) Reduced retaliatory killing of bears by herders
4. Establish compensation fund	Establish a human-brown bear conflict compensation scheme for the project community	Readjusted due to the fact that a region-wide compensation policy has launched by government since 2008.
5. Dog evaluation	Experiment with training of Tibetan mastiffs to repel bears	Readjusted duo to dog's fear to brown bear and herders' preference to fences and containers.
6. Compile findings and results of all project activities in research and policy reports	A news report on findings and progress of the project is developed and publicised.	" <i>Human-brown Bear Conflict Reduction in the Chang Tang Region of Tibet</i> " is published on 2008 No.3 of <i>International Bear News</i> , a quarterly newsletter of IUCN and IBA

#### 4.Unexpected results

- 1) The unstable political situation in Tibet caused delays to the project’s implementation;
- 2) Two activities were readjusted due to the fact that 1) the government has formulated and launched a region-wide compensation project in TAR, 2) Dogs are not able to repel brown bears, and 3) local herders showed a greater interest in fencing off their houses and corrals, and having food storage containers.

#### 5.Conclusions

WWF staff had a series of discussions with TAR forestry bureaus and the TFB was convinced by the project design of mitigating bear-human conflict. Therefore, we are expecting a good outcome for introducing this new approach to the local government as a mitigation technique. In particular, both local governments and herders showed great interest in human-brown bear conflict prevention training, fencing houses and corrals, and providing storage containers to local herders. Both the local government and herders suggested focusing on these two activities instead of dog evaluation and compensation fund establishment.

1. Dog evaluation	Experiment with training of Tibetan mastiffs to repel bears	Readjusted due to dog's fear to brown bear and herders' preference to fences and containers.
2. Establish compensation fund	Establish a human-brown bear conflict compensation scheme for the project community	Readjusted due to the fact that a region-wide compensation policy has launched by government since 2008.
3. Design and implement bear proof improvements for doors, windows and roofs		Readjusted due to the fact that fencing off herder's houses make greater sense than just improving doors, windows and roofs.