

Report on the International Elephant Foundation Funded “Improving Livelihoods for Farmers Affected by Human Elephant Conflict” Project

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Cambodian Elephant Conservation Group in Kampong Speu, Koh Kong, and Mondulhiri Provinces.

Region/Country:

Kampong Speu Province (Treng Trayeung District), Koh Kong Province (Sre Ambil District), and Mondol Kiri Province (Pichyada Districts), Cambodia

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1. Background

Cambodia is still recovering from the disastrous genocidal regime of Khmer Rouge from 1975 to 1979. Most local people's houses had been destroyed and most of them had lost all their belongings and lacked equipment, tools and capital for resettlement and reconstruction. Almost the entire infrastructure such as roads, health and education services were destroyed. People have lived in real peace since 1993, when the refugees returned home and Cambodia rose up from a country facing starvation to begin the process of development.

Cambodia needs partners, both local and international, to develop the country. Reducing poverty is one of priority policy issues of Royal Government of Cambodia because poverty of people will affect on many facets of a developing nation. Therefore, the Cambodian Elephant Conservation Group (CECG) combines three institutions, Department of Nature Conservation and Protection (DNCP), Forestry Administration (FA) and Fauna and Flora International (FFI). CECG is focusing part of its mission on livelihood improvement of local farmer affected by human elephant conflict, in order to prevent killing of elephants and destruction of habitat.

2. Details of Activities

As described in the proposal, the overall objective is improving livelihoods for farmers affected by human elephant conflict of poor village communities. Listed below is a recap of the overall objective and purposes of the project.

Overall Objective: Improving Livelihoods for Farmers Affected by Human Elephant Conflict

Scope of Work:

1. Increase production of chilli for use in HEC mitigation
2. Research locally applicable methods for deterring elephants, including historic techniques
3. Assist farmers to organize themselves into collectives for guarding crops
4. Develop alternative crop choices in HEC affected areas to stabilize local livelihoods

We are making good progress towards the achievement of the project purposes and the overall objective of "Improving Livelihoods for Farmers Affected by Human Elephant Conflict". We have conducted many activities towards assisting local farmers with HEC. However, it is too early at this stage to confirm the scale and sustainability of our achievements in the field.

Activity 1: Increase production of chilli for use in HEC mitigation

CECG has conducted two meetings at national level to discuss a chilli strategy. As a result of the meetings, Joe Heffernan took responsibility for bringing Mexican hot chilli seeds to Cambodia to help the farmers protect their fields from the elephant. He has not been successful so far, due to supply problems. We have been using seeds harvested from our first crop of chilli to reseed the plantations, to varying success. Mr. Sok Kheng Novin and Ms. Mao Dawne took responsibility for growing chilli with farmers and find the market for selling, respectively. Two locations (village 3, Trang Troyeng commune, Kampong Speu province and Busra commune, Monduliri province) are growing chilli. We explained to farmers that it would take around 3 months from planting chilli until harvesting. In contrast, farmers growing sugar cane wait for six months before they can sell their produce.

Farmers in Trang Troyeng commune are selling Cambodian chilli at the market and Mexican chilli was selling in the FCC restaurant and Dan Meats Butchers shop, both in Phnom Penh.

The other two farms at Trang Troyeng commune, the farm of Ngor Saroeung planted 4000 chilli plants and Ta Eang's farm planted 6000 chilli plants. 2500 chilli plants are remaining in farm stalks for next plantation. The two farmers collected about 1000kg and sell for 1000 Khmer Riel (=\$0.24c) to 1500 Khmer Riel (=\$0.36c). Farmers in Busra commune collected about 50kg of fresh chilli (their first collection) and sold them in the provincial capital, Senmonorom. Cambodia chilli is selling at 1500 Khmer Riel (=\$0.36c) to 2500 Khmer Riel (=\$0.60c) and Mexican chilli is selling at the price \$1.20 to \$2.00. We provided all money back to the farmers. Nowadays, the farmers are drying chilli because it can keep for long term and fetches a higher price than the fresh chilli.

Mexican chilli is nearly out of seed. When the 1st generation was growing well, the farmers took the seed growing the 2nd generation. It is not growing as well as the 1st generation. However we are still finding out the best way for success next time. The import of Mexican chilli seeds to Cambodia were delayed, so we decided to grow Cambodia chilli. The rest of the chilli has been kept by the farmers for deterring elephants. Any ideas on sourcing hot chilli seeds in large quantities would be appreciated.

Chilli Plant in Field



A farmer drying chilli



Activity 2: Research locally applicable methods for deterring elephants, including historic techniques

We have trained the farmers in improved methods of deterring elephants very successfully. Farmers are applying their knowledge about improved protection methods to their fields and disseminating these methods to their friends and neighbours in the village. The first printed Khmer language "toolbox" is the result of CECG research for three years. All methods and human elephant conflict policies have been documented as a book for all stakeholders especially for the farmers affected by HEC. This has helped farmers and government officers understand and apply these methods. Most farmers, including those in remote areas, have also received the book. Some mitigations methods CECG specialists have learned from other countries, including Kenya, Vietnam and Zimbabwe and these have been applied when the elephants destroy or damage crops.

Chilli rope: we are doing this first in the Southwest and then Eastern Cambodia. We use a combination of materials: strong chilli, grease, motor oil, cotton string, and mask to cover face. They take the strong chilli put into the mortar for pounding and milling. After that, put grease and motor oil together into the can then take the string and keep for one night. The farmer then ties a rope between fence posts with a space of 2m, in the areas that elephant likes to come and eat the crops. When the elephant comes and touches the chilli rope, it makes their skin affected with an irritating heat for a long time.

Preparing "Chilli Dung"



Elephant (cow or buffalo) dung, oil bean, and the strong of chilli: They mix the excrement and chillies together with a little bit of water, break it into smaller pieces and take it to dry. The farmer takes it to the border of their farm and burn it. When elephants come into the field and choke on the smoke, they will be afraid to damage the farmer's crop. We advised the farmer to make it carefully. Before they light the materials, they should find out the direction of the wind. If they do not do this properly it could burn the forest and houses.

Cambodian traditional methods are also being applied everyday through our work. Historic techniques for frightening the elephant include: burning around the edge of the field, making noise through banging cans, and putting scarecrows up to confuse the elephants.

Bamboo Method



In Busra Commune, the farmers use the following historical methods: take the bamboo, vine or nylon wire, long-handled knife, axe, and create an ingenious noise making device. Beside this method, the farmer also uses other techniques. Farmers put zinc on the tree to make a loud sound with a bamboo rod, and tie up a hammock across the road in a similar manner to a scarecrow. We also create a system for informing the farmer that an elephant is coming by using a cow bell connected to a wire, (these materials are always stolen though). Some farmer used to burn campfire or firewood but they are using this action less because it could burn the forest and the house, and farmers also use flash lights to dazzle the elephants.

Activity 3: Assist farmers to organize themselves into collectives for guarding crops

In Kampong Speu and Koh Kong province, we are creating many guarding groups, increasing from 3 groups to 9 groups in the past year (See attachment below). The farmers have a good understanding of the CECG program and that our teams are offering to work closely with them. We offer T-shirts and the farmers feel that they are a part of the CECG team. They are cooperating with CECG very closely and have good communication. We've got support from the farmer for sharing their time for guarding crops as below:

1. Village No. 6 (Phich Nil District) Treng Trayeung, Kampong Speu Province: have 12 groups with 1 chief and 25 members

2. Preykong Village, Prah Angkeo Village, Dong Peng Commune:

- Taov Lake: Have 3 groups with 1 chief and 12 members
- Kraingsla Lake: Have 7 groups with 1 chief and 30 members
- Chamkear Lake: Have 6 groups with 1 chief and 33 members
- Trapaing Lake: Have 11 groups with 1 chief and 53 members
- Trapaing Chhouk Leu Lake: Have 9 groups with 1 chief and 50 members

3. Chy Kor Leu Village, Chy Kor Leu Commune, Sre Ambil District, Koh Kong Province: have 12 groups with 1 chief and 66 members

In Mondul Kiri province, the CECG field team have tried to create a guarding group but it is not successful, because the farmers are planting their crops very separately, and they are not linking their work. We will need to work more with local communities here and guide them in creating a strategy to effective guarding.

Activity 4: Develop alternative crop choices in HEC affected areas to stabilize local livelihoods

The elephant is a clever animal and always knows when the rice plants tillers and the harvesting period of rice and sugarcane comes. Usually elephants come to damage rice from the middle of August till the end of April, so the elephant comes to eat and damage the farmer's crop. These problems make the farmers are angry with the elephant, and have led, in the past, to killing elephants.

We suggested the farmers' change their crops from those that elephants like to eat to plantations of alternative crops that elephant dislike such as: kinds of chillis, taro, tobacco, cashew nut, and beans. Most of the farmers in Kampong Speu and Koh Kong province are changing their attitude and planting these crops that we mentioned. They can sell these, making a profit, to local markets and tourists in Phnom Penh for a suitable price. In Mondul Kiri province, the farmers still plant much rice in the short period but in the long season plant these alternative crops. They sell to the local market and to tourists when they come to visit Province.

A Dam in Kampong Speu



We built a traditional dam instead of wells in Kampong Speu. The farmer can take the water to the crops quickly and it is more sustainable. Recently during the rainy season, a part of the traditional dam and some plantations were destroyed by flooding. Water is still very high, but it should be repairable once the waters have subsided. The wells at Kampong Speu were damaged by floods, and CECG will repairing it after this season.

4. Comment on Timeline of Planned Activities

In Cambodia, we have a lot of natural disasters (now is the raining season) and some of the experiments in some plantations CECG and farmers have set up have been damaged. Also, some mitigation methods will be tested during high HEC season from November till February, so the the results will be demonstrated in the next report. We will also ask for further support for this period. Other objectives of building up the capacity to improve farmer crop yields to improve tolerance to HEC will be continued as planned.