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How can we protect wildlife through ecotourism?

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Abstract

Many countries try to use *ecotourism* as a tool for wildlife *conservation*, hoping that the increased income for local people will make them value wildlife more. But this strategy is not always as successful as *conservationists* have hoped. This is why we wanted to test a new model: what if the amount of money local people receive depends on how many and what type of animals tourists will see? We tested this approach for four years in a protected area in Laos in Southeast Asia. Our preliminary results were promising: the illegal hunting of animals declined near the ecotourism site, and wildlife sightings by tourists increased.

Introduction

Conserving wildlife is not an easy task. Many countries have created *national parks* where hunting and development are illegal as a way to protect wild animals and their natural *habitats.* This is usually not enough though, especially in countries that do not have enough *rangers* to *patrol* parks and conduct *law enforcement*. Also, many people may still rely on hunting for food or to sell to make a living.

Another strategy that many countries have adopted is *ecotourism*. Tourists visit natural areas, which generates extra jobs and income for local people. Ecotourism is thought to help conserve wildlife by making local people value *biodiversity*. But researchers have found that it's not that easy. Local people might still go hunting for extra income or enjoyment. Additionally, many local people cannot be employed in the ecotourism industry and do not have an economic incentive to protect wildlife.

We wanted to take a closer look at ecotourism in Laos, a country located in Southeast Asia that is known for its green, forested mountains, rich biodiversity, and friendly people. In Laos, many conservation projects have tried to use ecotourism to reduce illegal wildlife hunting and trade, but with little success, as wildlife populations have continued to decline rapidly.

We came up with a new approach: why not pay local people depending on which and how many animals tourist would see? We created a new ecotourism project based on this idea and monitored the outcome for conservation. Read on to see what we learned.

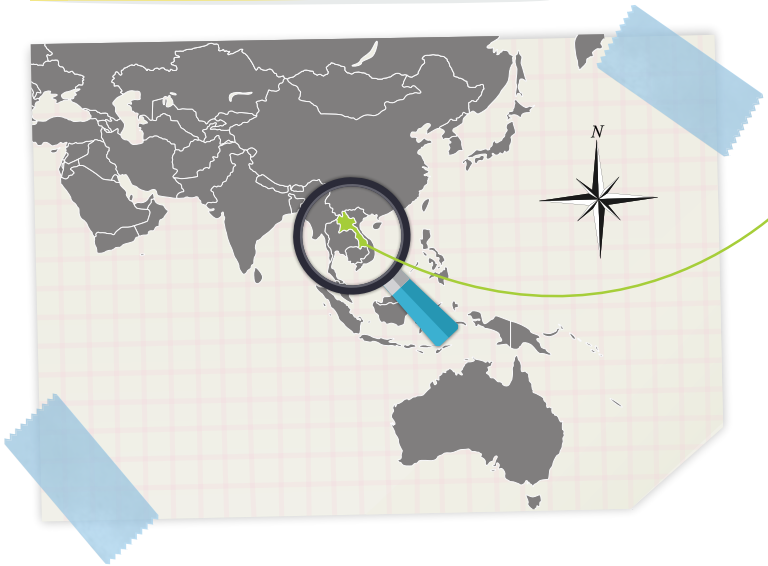
Methods

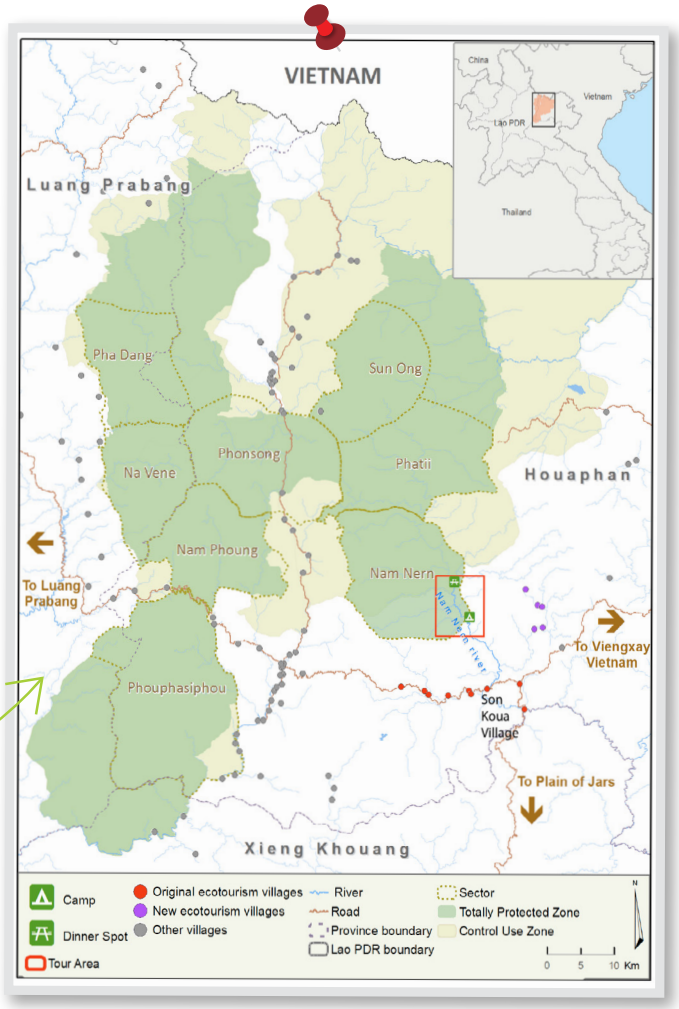
We tried this new approach in Nam Et-Phou Louey, *a national protected area (NPA)* in Laos (Figure 1), which is home to tigers and five other species of wild cats. Unfortunately, the area has a lot of hunting, too, primarily by villagers living near the NPA.

The Nam Nern River that flows through the NPA provides a great opportunity for observing wildlife, including otters, Sambar deer, barking deer, golden cat, civets, slow loris, and pythons. In 2009, we created an *eco-tour* called the "Nam Nern Night

Safari" with the help of the local government and protected area managers. On the Night Safari, local guides take tourists on a boat ride through the jungle at night to show them rare animals by spotlight (Figure 2). We created a fund to share the ecotourism income with people from all nine villages nearby, not just with the tour guides, so that everyone would have a reason to protect wildlife. We asked every family (859 families in total) to sign a contract, which stated how much they would earn for each wildlife sighting by tourists and how much they would lose if they *poached* or sold wildlife illegally.

Figure 1: Map of Nam Et-Phou Louey National Protected Area in Lao PDR





The contract created the following rules:

1. The more and the rarer the animals the tourists saw, the more money each villager and family would receive.
2. If a villager were caught hunting or selling wildlife illegally, the entire village where the hunter came from would receive less money.
3. Villagers working as cooks, guides, boat drivers, handicraft producers and cleaners would lose their job if they or any member of their family violated the hunting and wildlife trade regulations.

Tourists reported animal sightings at the end of each tour. To monitor for contract violations, NPA rangers patrolled the protected area daily and checked for signs of hunting, such as illegal camps and people inside the park.

Figure 2: Local guides taking tourists upriver during the day. At night, the local guides take the tourists back down the river and show them wildlife with headlamps.

Results

- During the first four years of the project (2010-2013), a total of 367 tourists visited the Nam Nern Night Safari.
- Figure 3 shows how the villagers' income from ecotourism increased, while the number of hunting incidents decreased over the four years.
- Hunting in the areas of the park without ecotourism increased, while hunting in the area around the ecotourism site remained constant.
- The average number of rare animals tourists saw during the tour increased by 63% by the fourth year.

Is our ecotourism approach good for the wildlife or the villagers?

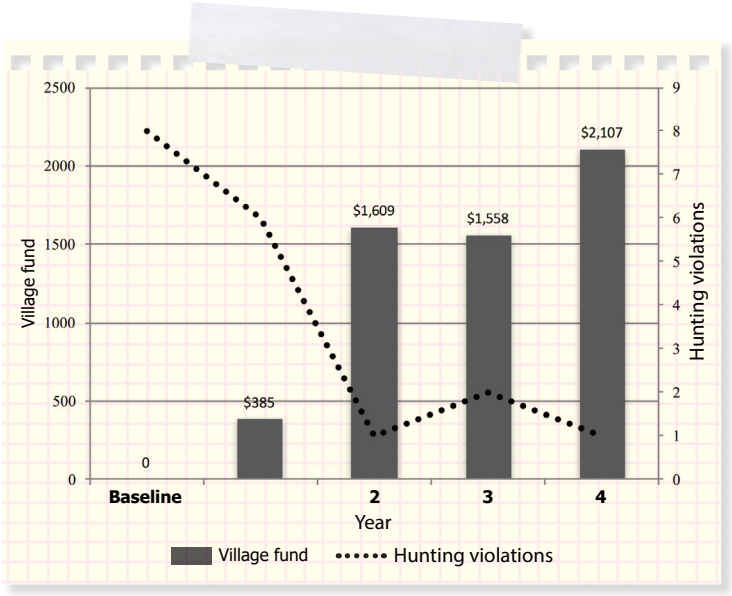


Figure 3: Relationship between villages' income and hunting violations in the ecotourism area

Discussion

During the first four years, our new ecotourism program seemed to show success: illegal hunting in the ecotourism area declined and wildlife sightings increased. But did wildlife *populations* increase? Perhaps not. Animals might have become used to humans in the ecotourism area where they felt safer because of less hunting, a phenomenon called *habituation*. So an increase in sightings might have been a result of habituation rather than an increase in wildlife populations. Nevertheless, hunting pressure did decrease in the ecotourism area of the park, which was the main goal we wanted to achieve. Over time, less hunting should result in greater wildlife populations. In order to prove this, we would need to study the outcome over a longer period.

We also learned some valuable lessons about our model. For example, the amount of income villagers received depended not only on how many animals the tourists saw, but also on how rare these animals were. Unfortunately, the rarest animal – the tiger (Figure 4) – was too rare for tourists to see, and so villagers did not receive any money for protecting them. Tourists did see tiger tracks, however, which made us think it would probably have been a good idea to increase the bonus payment for seeing tiger tracks, in order to increase villagers' income for protecting tigers.

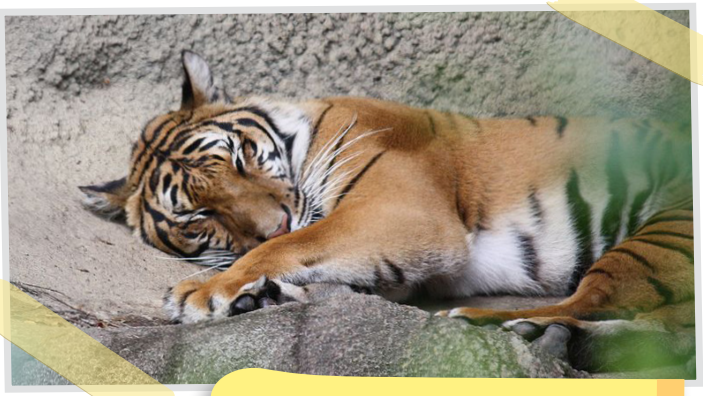


Figure 4: The tiger *(Panthera tigris)* - the rarest animal in the study area. (Photo credit: Ltshears)

Conclusion

The reasons why people hunt and sell wildlife illegally are complex. Ecotourism must be designed in a way that creates the right incentives to change people's behavior. Tourism is not a magic bullet for conservation, as it can only be effective when done in tandem with patrolling and law enforcement. We found that if local people's income from ecotourism increases with greater wildlife sightings by tourists, or decreases with increased illegal hunting or trade, ecotourism can help reduce hunting and protect wildlife.

If you want to help protect wildlife, here are some simple things you can do:

- Never buy products made from endangered or protected species.
- Don't keep illegally traded animals as pets.
- Support conservation of wildlife by being a tourist and supporting local people around national parks, reminding them that you love wildlife.

Glossary of Key Terms

Abundance - the number of individuals of a species (like tigers) in a given area.

Biodiversity - the variety of organisms that live in any given ecosystem. We say that there is high biodiversity when there are lots of different types of plants and animals in an ecosystem.

Conservation - people's effort to protect endangered species.

Conservationist - someone who works to protect and conserve wildlife and nature.

Ecotourism - responsible travel to natural areas that helps conserve the environment and improves the well-being of local people.

Eco-tour - a tour that is done according to the principles of ecotourism. A tour in a natural area that helps conserve the environment and improves the well-being of local people.

Habitat - the natural home or environment of an animal, plant, or other organism.

Law enforcement - the act of causing people to follow the law through warnings, arrests, fines and other punishment.

National park - a place designated for the conservation and protection of biodiversity, as well as tourism, research and education.

National protected area (NPA) - an area which receives protection because of its natural, ecological and cultural values. The designation restricts human activity in order to protect these resources.

Patrol - to travel through an area to look for any illegal activity and catch anyone conducting illegal activity.

Poach - to take or kill an animal or species illegally from a protected area.

Population - the total number of a species in a geographic area.

Ranger - staff member of a national park responsible for patrolling the park for illegal activities, such as hunting.

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Check your understanding

1. What are the basic goals of ecotourism?
2. Why do local people (in Laos in this case) hunt illegally if there are specific regulations and laws not to?
3. The park patrol team caught some villagers hunting illegally even though they had signed the ecotourism contracts. Why do you think that the villagers went hunting after signing the contacts? What are the consequences?
4. How did we monitor wildlife abundance?