Strategies to Prevent (STOP) Spillover

Impact Brief

Cambodia

Negotiation and Advocacy in Risk Reduction Interventions in Kampot and Battambang provinces

Activity 2.2.2.3: Community-level risk reduction interventions at cave-associated bat guano harvest sites

INTRODUCTION

A group photo of participants in PKLFPC who implemented the co-designed risk reduction interventions in Kampot province. Photo Credit: STOP Spillover Cambodia

Cave roosting bats in Kampot and Battambang provinces provide an important source of income for community members who harvest bat guano from caves and sell it as organic fertilizer. This Impact Brief outlines community dialogues conducted to identify knowledge gaps and co-design risk reduction interventions. Educational sessions and knowledge exchange visits were launched to bridge these gaps, emphasizing and demonstrating the use of Personal Protection Equipment (PPE) and enhanced hygiene practices. Economic considerations were factored into education provided to ensure community participation. Regular monitoring and feedback mechanisms solidified the project's success, showcasing the pivotal role of community involvement and microeconomic analysis in the advocacy and execution of these interventions. In total, 114 people participated in these exercises in two communities - Phnom Romsay Sak Forest Protected Community (PRSFPC) and Phnom Kuhear Loung Forest Protected Community (PKLFPC).

Microeconomics analysis

To better understand the economics of bat guano harvesting and to ensure that interventions are aligned with local economic realities, the team collected economic information from local guano harvesters. A consultative dialogue on profit distribution from bat guano harvesting at Phnom Romsay Sak Forest Protected Community (PRSFPC) in Battambang revealed a total profit of $6,500 per 1,000 sacks collected over a 45-day period. This profit is divided amongst three groups:

- The Community Committee receives a 25% dividend.
- Guano harvesters (10 members) collectively receive a 30% dividend, translating to an estimated monthly income of $149 per harvester.
- Cave guards (8 members) receive a 45% dividend.

This profit-sharing model highlights potential income opportunities for community members involved in guano harvesting and cave guarding activities.

In Phnom Kuhear Loung Forest Protected Community (PKLFPC) in Kampot Province, a guano harvester earns around $2/day or $86 for a 45-day period . Unlike in Battambang, PKLFPC's harvesters collect guano every day (vs. every 45 days). Each guano harvester pays $1.25/sack to carriers. Trader-cum-transporters buy guano directly from harvesters at $3/sack and spend $0.25/sack on a cable service to transport sacks to an aggregation site. They also

pay $0.75/sack to the Provincial Department of Environment (PDOE) as an environmental protection fee, $0.25/sack for transportation, $0.50/sack for fertilizer ingredients, and $0.25/sack for packaging materials. Despite potential risks during mixing, net revenue reaches $8/sack.

Awareness education

The Knowledge, Attitudes, and Practices (KAP) survey identified gaps in understanding of zoonotic diseases and biosafety measures within targeted populations. To bridge these gaps, educational sessions were organized focusing on explaining zoonotic spillover risk pathways and preventive measures such as PPE, and handwashing techniques. These educational sessions were reinforced with hands-on demonstrations. Training sessions, which included pictorial scenarios and infographics, led to significant improvements in participants' knowledge. Test scores increased from 59% (pre-test) to 70% (post-test).

Seven infographics on zoonotic diseases and hygiene practices, explained and guided by the Technical Officials of Cambodia CDC. Photo Credit: STOP Spillover Cambodia

Achievements and results

The introduction of risk reduction interventions was initially met with skepticism due to the cost of buying PPE and accessing soap and water for hand washing. However, following a series of negotiations underpinned by the microeconomic analysis above, these challenges were overcome. In PRSFPC, community leaders allocated a portion of guano harvesting profits for PPE purchase. This decision was influenced by discussions around guano harvesting profits. In Kampot, the intervention received support from the PDOE, inspired by the existing revenue-sharing model. Educational programs played a crucial role in increasing community understanding of zoonotic diseases. Following the educational campaigns, 40 bat guano harvesters began implementing key interventions. They started using PPE consistently and established handwashing stations at guano harvesting sites. These efforts underscore the importance of tailored interventions, continuous dialogue, education, and sharing of best practices in promoting a culture of safety and disease prevention.

STOP Spillover Cambodia support to Cambodia's GHSA and JEE scores

Year 4 Activities	GHSA priorities	JEE score (2016)
Activity 1.2.6.1 Bat guano farm study (continued from Y3) Activity 2.2.2.2 Coordination and capacity building of sentinel surveillance team	Category 1: Preventing the emergence or release of pathogens with potential for international concern: Zoonotic diseases (1.2) and biosafety (1.4)	Indicator P.5.1 Surveillance of zoonotic diseases (JEE Score 2 for P4.1 surveillance systems in place for priority zoonotic diseases; and JEE Score 2 for P6.2 biosafety training and practices)
Activities 2.2.2.1 and 2.2.2.3: Community level risk reduction interventions	3.5 Risk Communications	Risk Communication and Community Engagement (RCCE), Indicator R5.2: Risk Communication and R5.3 Community Engagement (JEE score 3 for R5.4 Communication engagement with affected communities)

This brief is made possible by the generous support of the American people through the United States Agency for International Development (USAID). The contents are the responsibility of STOP Spillover implementing partners and do not necessarily reflect the views of USAID or the United States Government.