

# Strategies to Prevent Spillover (STOP Spillover)

## Impact Brief – Cambodia

### Implementation of Improved Biosafety and Hygiene Practices in Bat Guano Farming Communities in Kang Meas District, Kampong Cham Province

#### Activity 2.2.2.1: Community-level Risk Reduction Interventions

#### INTRODUCTION

In March 2024, STOP Spillover Cambodia completed the final round of community awareness education on zoonotic diseases, and biosafety and hygiene practices. Awareness education activities involved the participation of (i) high-risk people (bat guano producers-BGPs and non-bat guano producers-NGBPs), and (ii) Helping Hands groups (local administrations, Buddhist monks, pagoda committee members, a local health center and vendor) in Kang Meas district. On March 26, the country team conducted one-day household monitoring of biosafety and hygiene practices in 17 BGP and 10 NBGP households followed by community dialogues (CD) and demonstration-based education (DBE) events on March 27-28. The main purpose of these events was to (i) re-assess and increase understanding of zoonotic diseases, (ii) extend technical support to reinforce the adoption of biosafety and hygiene practices, and (iii) identify challenges and barriers to adopting and sustaining improved safety practices among the participants.



Photo 1: BGPs in CD raised hands to confirm their commitment to storing guano in plastic bag.

#### OUTCOMES AND RESULTS

Table 1: Status of PPE use

Practices	Number of Bat Guano Producing Households (%)
Full PPE	10 (59%)
Most PPE	6 (35%)
Some PPE	1 (6%)
Total	17 (100%)

Of the 17 BGP households, 10 (59%) reported using full PPE, 6 (35%) used most PPE and 1 (6%) used some PPE when they harvested bat guano (Table 1). Overall, the number of BGPs practicing PPE increased significantly from previous monitoring periods.

Eight of the 17 BGPs had a dedicated space to store used and cleaned PPE next to the bat roosts. At least 47% of BGPs stored harvested guano in two-layered plastic bags, while the rest (53%) stored it in one-layered plastic bags (Figure 1). Two BGP households kept the guano

bags in isolated rooms outside their houses and 11 stored guano below the roof in the back or by the side of their houses.

Participating households reported practicing biosafety and hygiene when working with bats and in their daily living. Noticeably, 16 (94%) BGPs and 10 (100%) NGBPs regularly cleaned their kitchen and household surfaces with soap. They did this especially in the morning. Fifteen (88%) BGPs and 10 (100%) NGBPs reported covering



Fig. 1: Storing of bat guano in plastic bags

**Table 2: : Biosafety and hygiene practices**

Key Practice	BGPs (%)	NBGPs (%)
1. Surface cleaning	94%	100%
2. Food covering	88%	100%
3. Covering water	94%	100%
4. Disposal of dead bats	80%	Not found
5. Protecting animals	71%	No applicable

their food with baskets and keeping them in cabinets and refrigerators. Sixteen (94%) and 10 (100%), respectively, BGPs and NBGPs, covered their water sources. Five BGPs reported finding dead bats in the past few days, and all but one (80%) of them safely burned or buried these dead bats. BGPs protected their animals; 12 (71%) used specific techniques, including lifting the net off the ground and constructing fences to surround the bat guano farms, thereby preventing animals from roaming under the bat roosts.

Following the monitoring exercise, two-day community dialogues and demonstration-based education sessions were conducted in the same communities. These events reached 73 participants, including 16 bat guano producing households, 37 non-bat guano producing households, 7 Buddhist monks, 5 pagoda committee members, 6 local administrators, local health center personnel and a vendor (55% women). High-risk groups (bat guano producers) said they needed more time to address personal discomfort with wearing some PPE, especially glasses and boots. Participants, especially the bat guano producers, committed to strengthening biosafety and hygiene practices in bat guano farms. A local vendor committed to continuing to sell and deliver essential PPE and hygiene materials as needed. Local administration and health center staff agreed to continue to monitor and provide technical support to each household. Buddhist monks and pagoda committee members planned to extend awareness to people during religious events.



Photo 2: BGP (left) shows the set of PPE used for guano harvesting activities



Photo 3: Local vendor PPE and hygiene materials at her shop



Photo 4: Official from PDA (front) explains the steps to wash hands at a BGP household

## 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)	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)
Activity 2.2.2.2 Coordination and capacity building of sentinel surveillance team		
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)