Strategies to Prevent (STOP) Spillover

Activity Brief

Vietnam

Testing and Validating Techniques to Improve the Adoption of Biosafety Practices at the Wildlife Farming Interface

Activity 2.2.2.1: Identify at least three different biosafety improvements for value chain actors to test and validate, using trials of improved practices on demonstration farms and social behavior change approaches to disseminate results.

INTRODUCTION

In Vietnam the wildlife human interface was prioritized as the interface of focus for the STOP Spillover project. One of the key strategies for preventing the spread of zoonotic diseases from wildlife is to improve biosecurity and waste management practices in captive wildlife facilities. This brief provides information on the Trials of improved practices (TIPs) activities implemented in Vietnam to improve biosafety practices at farm level. TIPs are a participatory formative research method that can be used to test and refine potential interventions on a small scale, prior to broader implementation. TIPs enlist members of the target population to pilot test the practices and recommend modifications.

TIP-1: Enhance PPE use to reduce exposure to wildlife saliva, blood, urine, feces, respiratory droplets and aerosols.

TIP-2: A comprehensive approach to improving waste management, handling, and processing on wildlife farms (priority given to civet and bamboo rat farms).

TIP-3: Improved biosafety and biosecurity through health care, disease control and disease surveillance for farmed animals

Expected Outcomes

Techniques to improve the adoption of biosafety practices are tested and validated at the wildlife farming interface level in Dong Nai.

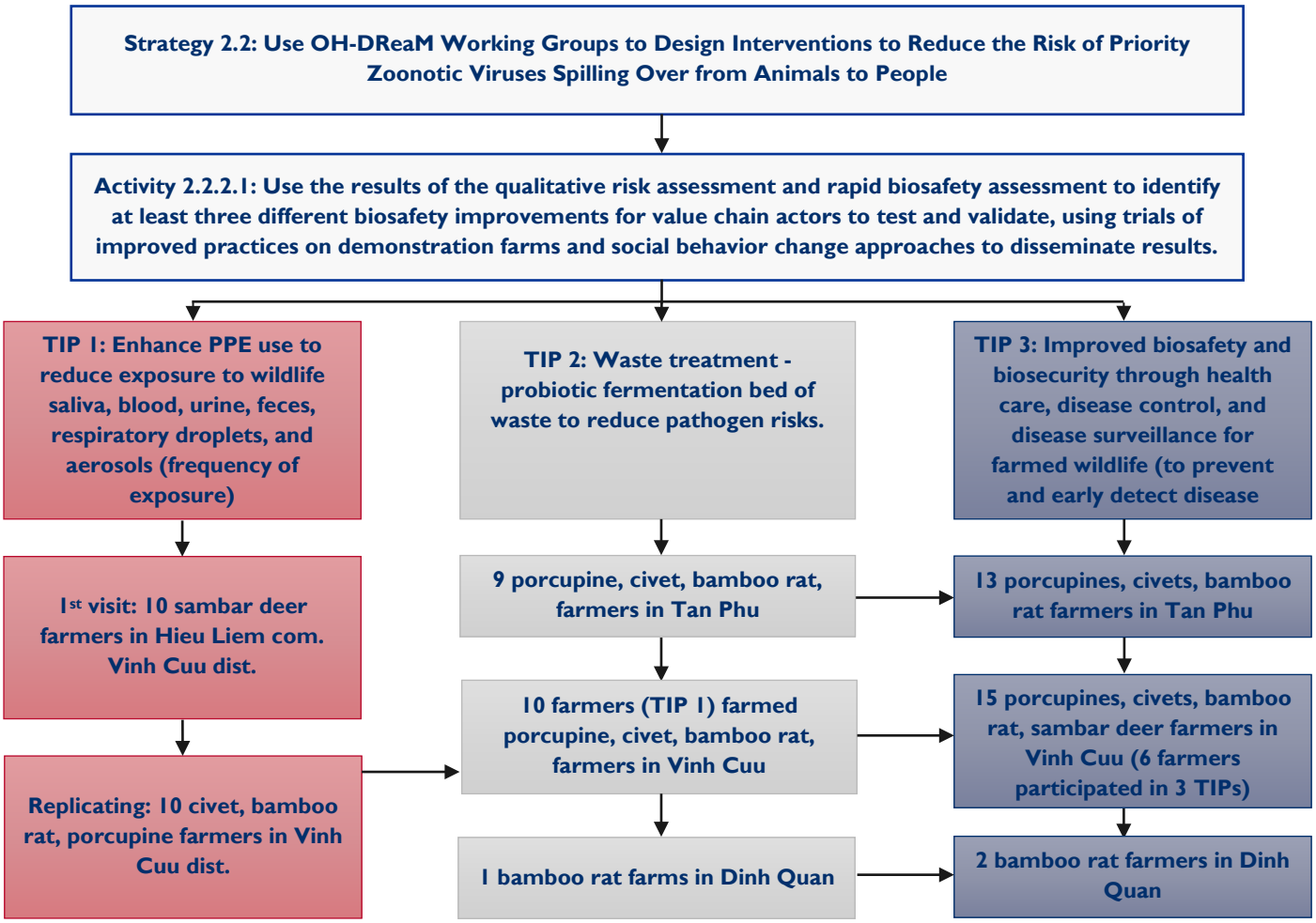
TIP Integration

In practice, the three TIPs have a close inter-relation with each other with the objective of promoting sound wildlife husbandry practices. Waste treatment is an activity that necessitates use of proper PPE and farmers are now more aware of the need to prevent direct exposure to the risk of pathogens. In addition, we promote health monitoring in farmed wildlife to detect early changes in animals when abnormal signs are detected. Participants were instructed on how to track down the causes from internal sources (food, water, and barn cleaning) and external sources (people, tools and intermediate objects carrying pathogens from outside to the farm).

The good practice of applying three TIPs simultaneously on a wildlife farm is the basis for proposing the development of a set of biosafety criteria and progressing towards granting a biosafety certificate to wildlife farming households in the coming time.

Integrated TIPs implementation

The TIP implementation in three districts focused on four captive farming Wildlife species of civet, porcupine, bamboo rat and sambar deer. It is summarized in the flowchart below:



Achievements

Farmers participated in TIPs by district and gender

The table below shows the number of wildlife farms with gender separation participating in the TIPs implementation in 3 districts of Tan Phu, Dinh Quan and Vinh Cuu of Dong Nai province.

	Items	TIP 1 (Vinh Cuu)		TIP 2 (3 districts)		TIP 3 (3 districts)	
		♀	♂	♀	♂	♀	♂
1	Number of farmers joined for pilot	5	5	4	10	6	22
2	Number of farmers replicated	2	8	0	6	1	4
3	Number of farmers dropped	*0*		*1*	*3*	*0*	*0*
5	**Total actors/ farmers**	**7**	**13**	**4**	**16**	**7**	**26**
	Total households/ farms	**20**		**20**		**30**	

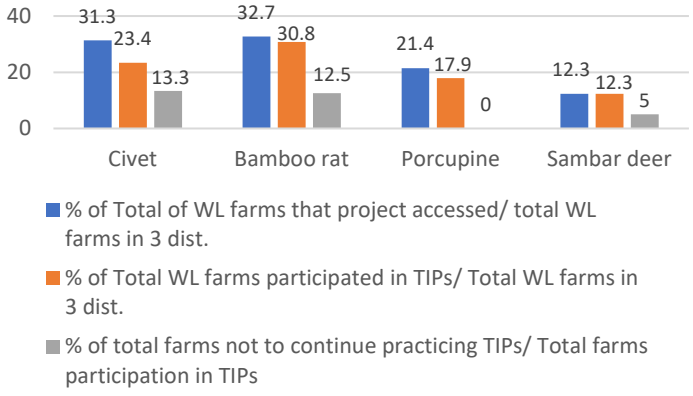
♀ = Female ♂ = Male

The total number of wildlife farms that participated in TIP 1 (including pilot and replication stages) was 20 households (20 actors) of which 6 of the 20 actors joined TIP 2, 11of the 20 actors joined TIP 3.

The number of wildlife farms participating in TIP 2 (including pilot and replication stages) was 20 households (20 actors, 4 female and 16 male).

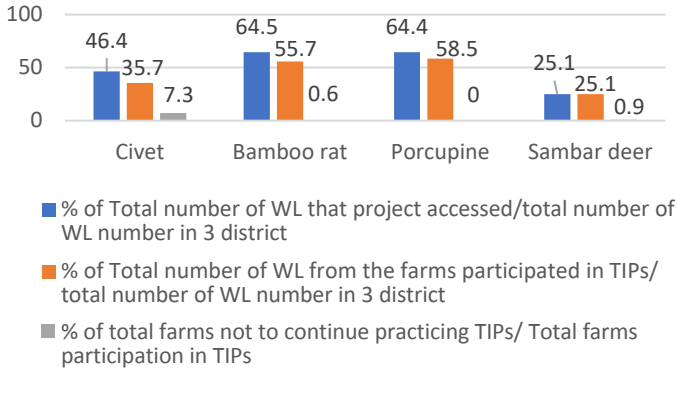
The number of wildlife farms participating in TIP 3 (including pilot and replication stages) was 30 households/ farms (33 actors, of which 7 female and 26 male), of which 6 households joined all three TIPs and 20 households joined in TIP 2.

Percent of WL farms/households participating in TIPs in 3 target districts



Total captive wildlife farms in 3 districts: Civet: 64, Bamboo rat: 52; Porcupine: 28; Sambar deer: 162

Percent of four wild animal species raised by households participating in TIPs



Total captive wildlife by species raised in 3 districts: Civet: 1231; Bamboo rat: 2831; Porcupine: 1353; Sambar deer: 843

Reflection of impacts from TIPs implementation shared by farmers and One Health workers:

It is too early to measure the impact of the TIPs implementation in 3 target districts of Dong Nai province, however, some initial thoughts from TIPs implementing farmers and One Health workers frankly shared as below:

Uncle Truyen, Hieu Liem commune One Health worker, and chief of sambar deer cooperative, shared that:

"After participating in the practice of biosafety measures introduced by the project (3 TIPs), wildlife farming households are now well aware of the prevention of the risk of disease transmission from wild animals to humans and vice versa. Households have self-invested in deer antler

cutting equipment to reduce the risk that hiring people to cut antler will carry pathogens from one farm to another farms"

Uncle Tam, from a household raising 23 civets in Phu Hop B Village, Phu Binh commune, Tan Phu district, Dong Nai province said:

"Since applying waste treatment (feces and urine) to civets with fermented probiotic Balasa No1 bedding, the bad odor from the civet's urine and feces has almost gone away. Moreover, I do not need to spray water to wash the floor of the barn every day, so the floor is always dry, reducing electricity and water cost. This treatment method is easy to apply, I had no difficulties from making padding for waste treatment".

Mr. Cuong is a civet farmer in Phu Binh commune that suffered very heavy economic losses from the distemper diarrhea epidemic that occurred in his civet farm in March 2023 that killed 65 out of 75 civet animals. Currently, there are only 10 civets left after going through the epidemic. He said:
"If I had met the project staff earlier, my civet would not have died, my family wouldn't have suffered heavy damage during the recent epidemic. Meeting the project staff, talking with the district veterinary experts, made me more confident".

Top left: Farmers donning their dedicated clothing/boots for wildlife husbandry; Top right: demonstration of preparing bedding for probiotic composting of wildlife farming waste; Botton: wildlife farmers describing and discussing the most common health issues in farmed wildlife.

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