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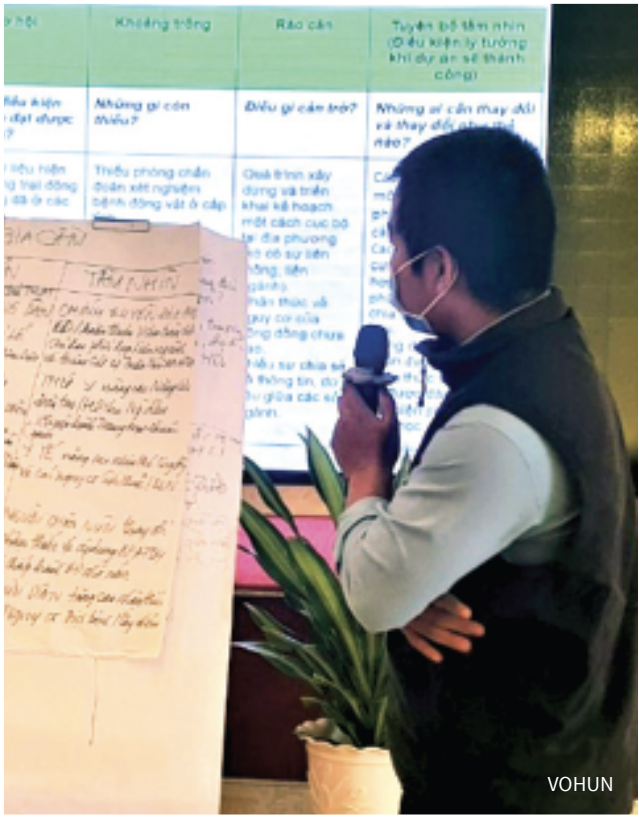
VIET NAM PARTICIPATORY PLANNING USING OUTCOME MAPPING:

Summary Report



September 2022

STOP Spillover

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STOP SPILLOVER

Strategies to Prevent Spillover (STOP Spillover) enhances global understanding of the complex causes of the spread of a selected group of zoonotic viruses from animals to humans. The project builds government and stakeholder capacity in priority Asian and African countries to identify, assess, and monitor risks associated with these viruses and develop and introduce proven and novel risk reduction measures.

Through Outcome Mapping (OM), a structured participatory tool that uses a bottom-up collaborative process, spillover ecosystem stakeholders (both traditional and non-traditional) will be empowered to identify and reduce zoonotic spillover risks at the human-animal-environment interface and develop an outcome-oriented project action plan. This report outlines the details of the OM workshop activities in Viet Nam.

Acronyms

CCG	community collaborator group
CDC	Centers for Disease Control and Prevention
DARD	Department of Agriculture and Rural Development
DHC	District Health Centre
DOH	Department of Health
HUPH	Hanoi University of Public Health
ISSP	Intervention/Study Selection Process
KAP	Knowledge, attitude, and practice
MARD	Ministry of Agriculture and Rural Development
MOH	Ministry of Health
OM	Outcome Mapping
PPC	Provincial People's Committee
SEAOHUN	Southeast Asia One Health University Network
STOP Spillover	Strategies to Prevent Spillover
USAID	United States Agency for International Development
VOHUN	Viet Nam One Health University Network
WWF	World Wide Fund for Nature

Key Terms

Critical (boundary) partner: In OM, boundary partners are stakeholders or social actors with whom a project will work or whom the project will support or influence to achieve the project's vision. (STOP Spillover uses the label critical partners as a more readily understood alternative.) These may be individual organizations, groups, or institutions (e.g., local cultural or religious leaders, government agents, partner organizations, business entities, or other societal actors). It is through them that the project expects to influence change in the wider society toward the agreed-upon OM vision.

High-risk interface: A socio-economic, environmental, and biological area in which the transmission of infectious agents across species (human, livestock, and/or wildlife) is known to occur. This may include bat guano collection sites, wet markets, wildlife farms and restaurants, and tourist areas. Human behaviors in these zones are driven by livelihood and economic needs, cultural traditions, and norms that cause contact and thus transmission risk. Each STOP Spillover intervention focuses on a specific high-risk interface relevant to a targeted zoonotic disease.

High-risk interface node: A particular interactive space in an interface where there is potential for transmission of infectious agents across species (human, livestock, and/or wildlife).

Intervention: Action taken by the project or other organizations to help critical partners achieve their outcome targets (also referred to as outcome challenges).

Outcome target: An outcome target (the challenge) is a statement of change that describes how the behaviors, relationships, activities, or actions of each critical partner will change if the project achieves its vision. Outcome targets capture partner behavior as anticipated in the vision.

Spillover: For the purposes of this project, spillover is defined as an event in which an emerging zoonotic virus is transferred from one animal host species (livestock or wildlife) to another or to humans.

Vision: Conveys the large-scale development-related changes that a project hopes to encourage in a given context. It is one or several statements and paragraphs that describe the economic, political, social, environmental, and relevant broad behavioral changes in selected critical partners.

Introduction

In Viet Nam, more than 182 species of wildlife are farmed for food, medicinal purposes, and other products. The value of the illegal wildlife farming trade in Viet Nam has been estimated at more than $43 million (in U.S. dollars) per year,[1] with most trade focused on food, tourism, and traditional medicine. Many of Viet Nam's wildlife products are exported to China. Wildlife farming is well-developed in the region; however, both legal and illegal farming, hunting, marketing, and associated food retailing and services have evolved rapidly ahead of effective regulation. Recent studies have indicated that coronaviruses are prevalent in field rats destined for human consumption (34%), and coronavirus prevalence significantly increased along the supply chain from field rats sold by traders (20.7%) to those sold in large markets (32.0%) to field rats sold and served in restaurants (55.6%).

On September 30, 2020, the United States Agency for International Development (USAID) awarded the STOP Spillover project to a Tufts University-led consortium. The five-year project supports Viet Nam in strengthening its capacity to reduce the risk of viral spillover from animal hosts to humans. Specifically, STOP Spillover will collaboratively design, implement, and assess risk reduction interventions by empowering local stakeholders to better understand and act to reduce key risks. STOP Spillover's scope is limited to the following priority viruses: Ebola; Marburg; Lassa, Nipah; animal-origin coronaviruses (including SARS-CoV, SARS-CoV-2, and MERS-CoV); and animal-origin zoonotic influenza viruses (such as highly pathogenic H5N1 avian influenza).

A core component of STOP Spillover is a participatory planning process based on OM (Outcome Mapping). OM focuses on changes in targeted actors and in the spillover ecosystem as project outcomes to be influenced by STOP Spillover. Through participatory workshops, stakeholders identify and prioritize high-risk interfaces, describe current opportunities and knowledge gaps in zoonotic spillover risk pathways, and identify potential and relevant activities to reduce related risks.

Outcome Mapping Process

Between 7 and 10 December 2021, a hybrid in-person/ virtual OM workshop was conducted in Dong Nai province, bringing together stakeholders from national, provincial and local levels. The first three days of the workshop targeted stakeholders from the national and provincial levels. The final day of the four-day workshop targeted community-level stakeholders involved in the wildlife trade in Dong Nai. The objectives of the interface workshop were to introduce STOP Spillover to the government and other stakeholders; prioritize the top-ranked zoonosis spillover high-risk interfaces and related viral pathogens in Viet Nam; identify the project's critical partners; map gaps, barriers, and opportunities for spillover control; and discuss potential risk-reduction interventions and research opportunities. Participants also developed a vision statement, outcome targets, and progress markers for monitoring progress towards the desired outcomes. After these workshops, STOP Spillover prioritized interventions to implement through an intervention/study selection process (ISSP). Figure 1 illustrates the sequence of activities.

Figure 1: Sequence of OM Activities

1 Pham, T. T., Trần, Y. L., Nguyễn Thị, K. N., Tăng Thị, K. H., & Đặng, H. P. (2021, July). The economic value of the wildlife trade in Viet Nam. CIFOR infobriefs, 336, 1–6. https://www.cifor.org/publications/pdf_files/infobrief/8098-infobrief.pdf. Some sources estimate it closer to $1 billion per year. Southerland, D. (2020, June 9). Can Viet Nam stop its trade in endangered wild animals? Radio Free Asia. https://www.rfa.org/english/commentaries/Viet Nam-wildlife-06092020160820.html.

WHY DONG NAI

In Viet Nam, Dong Nai province was selected as the initial implementation province. Dong Nai province hosts more than 800 wildlife farms; some species are sourced from the wild and either legally or illegally enter the value chain through wildlife farms. There is also a significant value chain and international market in the Southern Mekong region for multiple species of wild field rats, which are major rice crop pests as well as known zoonotic viral pathogen reservoir hosts.[2] Wildlife and related products move along value chains that have many potential flashpoints where high exposure risk can result in spillover. Dong Nai has a relatively large forest area. The total forest area is approximately 200,000 hectares (ha.) with natural forest area accounting for 123,6000 ha. Dong Nai province has a relatively large number of wild fauna species (an estimated 1,729 species) in the Dong Nai Forest zone, which is adjacent to four districts in which most captive wild animals are raised. However, the number of legal wildlife farms has decreased in recent years:

- **2014–2019:** 1,100 legal wildlife farms with 39–71 species (34 exotic)
- **2020:** 839 legal wildlife farms with 68 species and 425,374 individuals
- **2021:** 814 legal wildlife farms with 67 species and 390,308 individuals

WORKSHOP PARTICIPANTS

In total, 80 people attended the provincial-level workshop (35 males and four females in person and about 28 males and 13 females virtually). In addition, 30 people (21 males and nine females) attended the in-person community-level engagement on December 10, 2021.

The first three days of the workshop targeted stakeholders from the national and provincial levels. Eighty participants at this first phase of the workshop included representatives from: General Department of Preventive Medicine, MOH; MARD; Dong Nai DOH; Dong Nai DARD; Dong Nai Department of Natural Resources and Environment (DONRE); Dong Nai Department of Industry and Trade (DOIT); Division of Environmental Police, Ministry of Public Security (MPS); Dong Nai Department of Information and Communication; Dong Nai CDC; Women's Union; Dong Nai PPC; and officials from four of Dong Nai's districts). The final day of the four-day workshop targeted community-level stakeholders involved in the wildlife trade in Dong Nai. Thirty participants at this event included representatives from various sectors, including: wildlife and domestic animal farm owners; wildlife farm workers; restaurant owners; consumers of farmed wildlife; community leaders; Women's Union; Youth Union; community veterinarians; and community health workers). In addition, there was representation from STOP Spillover at the global (Tufts University), regional (SEAOHUN) and national (VOHUN) level, as well as representation from USAID Washington and the Viet Nam Mission across the four-day event.

Workshop Activities and Outputs

Interface Identification and Prioritization

A list of potential interfaces was first developed. At the end of separate group breakout discussions, all participants agreed to prioritize the wildlife-human interface for the STOP Spillover program.

In Dong Nai, wildlife farms are mainly distributed in the following districts: Dinh Quan (335 farms); Vinh Cuu (231 farms); Tan Phu (53 farms); Xuan Loc (53 farms); and Thong Nhat (46 farms). The wildlife species farmed include snakes, crocodiles (freshwater), bats (in the wild, mainly in Cat Tien national park's caves), Asian palm civets (*Paradoxurus hermaphroditus*; other names: common palm civet, toddy cat, and musang), Viet Nam mouse-deer (*Tragulus versicolor*), also known as the silver-backed chevrotain, bamboo rats, wild boars, peafowls, pheasants, spotted deer and samba deer (*Rusa unicolor*), edible-nest swiftlets (*Aerodramus fuciphagus*), and primates. Various people are involved in related value chains: farmers, traders, transporters, gather-points, restaurants, and wildlife ports of entry. There is no official regulation on biosafety and the production of the animals. Farm owners do not pay attention to diseases because they do not have adequate knowledge about this, and they are not trained on biosafety. They capture and keep the animals as a tradition and by experience, without concern for disease control and prevention.

2 Van Cuong, N., Carrique-Mas, J., Vo Be, H., et al. (2015, January 28). Rodents and risk in the Mekong Delta of Viet Nam: Seroprevalence of selected zoonotic viruses in rodents and humans. Vector-Borne and Zoonotic Diseases, 15(1), 65–72. https://doi.org/10.1089/vbz.2014.1603

KEY INTERFACE OPPORTUNITIES, BARRIERS AND GAPS

OPPORTUNITIES

Government agencies have been established and well organized. These include the CDC, Animal Husbandry and Veterinary Department, District Animal Health Station, District Forest Ranger, DHC, etc. There is multisectoral coordination between the health and agriculture sectors (CDC, animal husbandry, and veterinary), with a shared briefing session every three months or as required. Circular no. 16/2013/TTLT-BYT-BNN&PTNT has been issued, presenting guidelines for coordination to prevent zoonotic diseases.

The health and veterinary personnel have technical knowledge of disease surveillance and prevention and are trained regularly with updates on new information. An infectious disease monitoring software was developed according to circular no. 54/2017/TT-BYT of the MOH and managed by CDC. The Forest Protection Department has developed wildlife data management software.

BARRIERS

The CDC laboratory lacks legal basis and permission from competent authorities for testing and publication of results for some specific zoonotic diseases. There are no guidelines for coordination between the Forest Protection Department, veterinary services, and public health. There are no detailed biosafety instructions for handling infected or dead wild captive animals. Most people destroy and dispose of affected animals on their own. Environmental management regulations for captive animal production are unclear. The official regulation on reporting of infected or dead wild animals has not been enacted yet.

Farm owners only inform District Forest Ranger when dead animals have already been handled. Most animal deaths would be destroyed or buried without any explanation. Farm owners have not paid attention to animal diseases because they lack knowledge on biosafety and wildlife diseases. Communities are not interested in centralized slaughter facilities for reasons including high set-up cost and distance from farm.

GAPS

Government agencies do not have adequate human resource capacity to guide biosafety in wildlife production, including how to raise the animals and prevent infections.

Most wildlife farms are spontaneous, small-scale productions without any long-term development strategy. The locations are not suitable for their production (confined rather than open and free), and the rearing structures (e.g., barns) are rudimentary. Farm owners and workers are reluctant to contact or interact with relevant technical agencies for advice. They lack investment to develop and meet any biosafety requirements.

Actors within the wildlife value chain (the farm owners, workers, traders, transporters, slaughters, consumers, and other community members) have limited knowledge on the potential zoonotic disease risks. From a gender perspective, men are more exposed to the risks due to their relatively more frequent contact with animals (e.g., hunting, caring, slaughtering, and transporting). They are also more likely to suffer from physical injuries from wild animal attacks. Local governments show little interest in wildlife slaughterhouses.

VISION

The participants used the opportunities, gaps and barriers to develop changes that they hope see if the project was successful. In OM this is referred to as a vision statement:

"The Provincial People's Committee (PPC) establishes a multisectoral technical coordination group that leads the coordination and supervision of wildlife farming among the stakeholders: farmers, forest rangers, veterinary, and health services, and environment managers. A multisectoral technical coordination group monitors, supervising and guides wildlife farming in the entire province. Farmers are aware of good practices on hygiene and biosafety. They implement reasonable captive animal models related to farm location, area used, facilities provided, and treatment of captive animal waste. Central and local governments develop policies and guidelines on centralized wildlife slaughter. Consumers are aware of safe and legal wildlife products. Slaughterers have improved knowledge, attitude, and practices (KAP) on biosafety in wild animal slaughter. The local government strengthens the control system on slaughterhouses. Local authorities increase awareness of zoonosis and assign tasks to local CSOs to implement risk reduction activities. Veterinary and health staff have improved knowledge and skills in zoonotic disease identification and management; and work in a coordinated mechanism guided by local governments."

IDENTIFICATION OF CRITICAL PARTNERS

The following actors were identified as critical partners, with whom STOP Spillover will work or influence to support transformation towards the ultimate goal of zoonotic risk management in the wildlife-human interface. The program will work with or influence these partners to support transformation towards the ultimate goal of zoonotic risk management in the wildlife-human interface:

1. DARD
2. DOH
3. Farm owners and workers
4. Community-level actors (including local authorities, civil society organizations, village health workers, and the village head)

CRITICAL PARTNERS' OUTCOME TARGETS

The workshop participants agreed on a set of outcome targets for the partners. These include implementation guide for zoonosis prevention issued by the PPC through DARD coordination amongst the agricultural, health, natural resources and environment, and provincial police sectors. One other target outcome was for all wildlife farming value chain actors (health workers, veterinary staff, forest rangers, and environmental resource officers) to have the required professional capacity in biosecurity and training skills. The program will also work to ensure all actors engaged in wildlife farming and trade apply gained knowledge for biosafety in their value chain functions, with support from local agencies and community level actors.

The detailed outcome targets for the partners are presented in Table 1.

Table 1: Critical partners' outcome targets (desired short-, medium-, and long-term outcomes of all proposed activities over the life of the project)

ACTORS	DARD, DOH	ACTORS ALONG THE WILDLIFE VALUE CHAIN	COMMUNITY LEVEL ACTORS
Short-term changes	The DARD and DOH convene other functional departments to review existing shortcomings and discuss a joint proposal for the PPC's approval to establish a (sub) coordinating committee and an implementation guideline for coordinated action by the different sectors. They submit a proposal on developing the implementation guideline for approval of the PPC.	Wildlife farming value chain actors participate in awareness-raising events on wildlife farming, related regulations, and zoonotic disease risk management interventions.	Community level actors participate in or lead community outreach activities on wildlife farming and risk management. They conduct demo plots on zoonosis spillover prevention and control, veterinary hygiene, and biosafety in wildlife farms.
Medium-term changes	Local government actors form a guideline development team and submit the guideline for approval of the PPC. They use feedback to revise and finalize the guideline.	Wildlife farming actors deepen their knowledge and capacity in wildlife farming and risk management via capacity-building and/or on-farm demo-plots.	Community level actors participate in regular review sessions on biosafe wildlife farming. They establish a network to support (deeper and wider) community outreach (and adoption).
Long-term changes	The guideline is integrated into the district and provincial regulations on coordinated action and joint resources among multi-sectoral partners. They proactively organize periodic reviews for further improvements of the guideline.	Wildlife farming actors apply and comply with procedures and regulations on biosafety and food safety practices along the wildlife value chain. They take up alternative livelihoods that have lower spillover risks.	Provide feedback and propose innovations on how community outreach and training materials can be revised or improved for adoption and implementation.

PROPOSED RISK REDUCTION INTERVENTIONS

To support those partner outcomes, the partners suggested several interventions listed in Table 2.

Table 2: Interventions proposed by OM participants

#	Interventions Proposed by OM Participants
1	Support facilities for testing and gene isolation of emerging and reemerging viruses (or transfer samples to the Regional Animal Health Office No. 6, the Pasteur Institute, or overseas labs)
2	Conduct risk assessment of biosafety in wildlife farms
3	Support integrating data management software in health, animal health, and forest protection for zoonotic disease identification and monitoring.
4	Conduct baseline, mid-term, and final assessments on KAP on veterinary hygiene, biosafety in wildlife farms of the technical team and community collaborator group (CCG) members, farm owners, workers, and community members.
5	Conduct regular sample tests on humans and animals to identify diseases for prevention and timely treatment.
6	Build capacity for veterinary staff, forest rangers, or health staff members who implement biosafety in wildlife value chains.
7	Build capacity of the local technical coordination team (one-health related stakeholders) on zoonosis prevention and control, veterinary hygiene and biosafety in wildlife farming, community outreach, and monitoring and reporting skills for the network.
8	Support developing an official channel, forum, or application to connect local government agencies, sponsors, and targeted communities to share information, knowledge, and demand for services and information on zoonosis prevention and control as well as veterinary hygiene and biosafety in wildlife farming.
9	Support CCGs (community collaborator group) with means of communication, implementing community outreach activities and regular CCG network meetings/workshops/events on zoonosis prevention and control and Veterinary hygiene and biosafety in wildlife farming.
10	Design communication (awareness-raising) materials and organize communication activities on risks of zoonotic diseases, regulations on wildlife breeding, biosafety, and food safety.
11	Establish demo-plots (one demo-plot per commune) on improved wildlife farming and slaughtering practices for study visits.
12	Support the PPC to issue a guideline for a coordination mechanism among the local functional departments (i.e., agricultural, health, natural resources and environment, and provincial police).
13	Support developing detailed guidelines for implementation of biosafety along some selected wildlife supply chains.
14	Support establishing a zoonotic disease control steering committee (core team) with the participation of relevant stakeholders and a local technical coordination team from provincial to community levels, local CCG networks, and farmer groups/cooperatives; improve operation and experience sharing mechanisms.
15	Coordinate, collaborate, and communicate (mainstream) with other programs on food safety and traceability (e.g., national program on traceability done in HCM and being implemented in Dong Nai).
16	Conduct research on alternative livelihoods.
17	Support conducting semi-annual and annual reviews to draw lessons learned and finalize and improve the coordination mechanism and implementation guidelines.

Intervention/Study Selection Process

From that initial list two key research studies and three interventions were selected using a prioritization process and the following criteria:

1. Alignment with local needs and priorities and STOP Spillover's objectives
2. Level of the impact of interventions on risk reduction
3. Feasibility: cost, duration of interventions, and resources (human and financial)
4. Willingness, interest, and commitment of local beneficiaries and partners
5. Potential sustainability (e.g., established policies and institutions, enabling environment and networks, resources/funding, motivation, and capacity)

Based on the results of the OM planning workshops in Dong Nai, the STOP Spillover country team and key local stakeholders prioritized the following interventions. The intervention groups support one another in contributing to the expected outcomes in Dong Nai province.

Viet Nam Activities

Activity 1: Conduct an initial rapid, qualitative joint risk assessment along the high-risk wildlife farm value chain in Dong Nai. This will include several tasks:

- Develop key risk framing questions based on existing data and identify key zoonotic spillover risk reduction pathways;
- Utilize risk assessment outputs (risk management) to inform improved biosafety training and social behavior change (SBC) interventions; and
- Disseminate risk assessment findings at the local (stakeholder, wildlife farm interface), provincial and national levels, and share with and through relevant stakeholders.

Activity 2: Complete a rapid assessment of prior biosafety training programs conducted at the wildlife farming stakeholder level to improve the design and adoption of appropriate and feasible biosafety recommendations using barrier analysis tools and ethnographic decision trees. This will include prioritized risk factors from the initial qualitative risk assessment described above, but design work will begin simultaneously.

Activity 3: Use the results of the initial rapid assessment and biosafety training and practice review/barrier analysis (Activity 2) to identify three locally feasible biosafety improvements for wildlife farming value chain actors to test using trials of improved practices on demonstration / model farms. Design and implement SBC interventions based on lessons learned from barrier analysis and stakeholder input.

Activity 4: Establish a coordination mechanism at the provincial level, refining sub-steering committees and developing implementation guidelines for coordinated action. There are several sub-tasks:

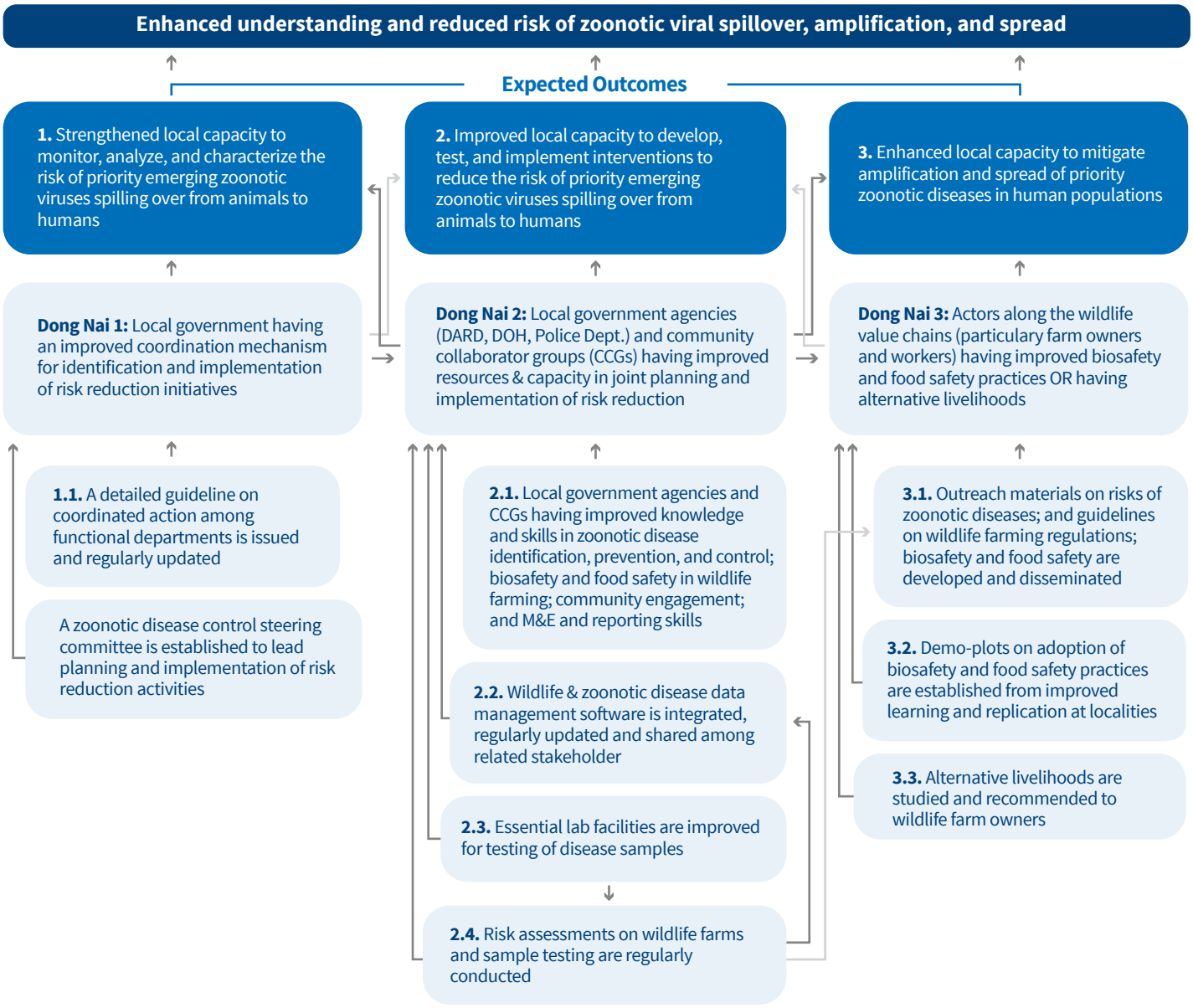
- Develop implementation guidelines to facilitate cross-sectoral One Health collaboration at the wildlife farm interface level in Dong Nai.
- Use these guidelines to mobilize the establishment of a provincial level OH steering committee to improve coordination and reduce zoonotic disease spillover, amplification and spread at the interface level.
- Develop evaluation criteria and standard operating procedures to measure the effectiveness and performance of the provincial steering committee to reduce the risk of the spillover, amplification and spread of zoonotic diseases.

Activity 5: Consolidate zoonotic disease monitoring data on wildlife farms with human health data, and improve reporting procedures to facilitate data sharing and planning among sub-committee members, to improve the design and implementation of spillover risk reduction interventions. There are several sub-tasks:

- Assess current zoonotic spillover data collection and sharing systems, including current data management systems and data use (see the One Health Information Assessment Tool - OHIAT).
- Using the results of the initial data and information technology assessment, identify simple ways to improve data sharing and use with existing systems, and identify any data gaps requiring data collection adaptations.
- Using findings from steps 1 and 2, develop a simple zoonotic disease incident reporting guideline (tool, process) for local partners to improve One Health coordination and data-based decision making at the interface level.

The STOP Spillover country team and key local stakeholder developed a Dong Nai–specific results framework for the human-wildlife farming interface (Figure 2). This framework identifies desired outcomes and anticipated results from proposed project activities and interventions. It also describes how the activities and approaches are interconnected to achieve the goal and objectives of STOP Spillover (translated into targeted outcomes).

Figure 2: Results framework for STOP Spillover in Don Nai at the wildlife-human interface



CONCLUSION

The four-day interface OM workshop in Dong Nai province was successfully organized and received positive outcomes and feedback from participants. Workshop participants included provincial, district, and community-level non-governmental organization stakeholders as well as the global STOP Spillover team. The wildlife farms–human interaction was identified as a priority high-risk interface. Four groups of critical partners were identified: the DARD, the DOH, farm owners and workers, and community level actors. Risk reduction interventions were proposed to reduce the spillover of emerging zoonotic viruses at the interfaces while reducing amplification and spread. These included those related to strengthening policies, guidelines, data software support, communication, and capacity-building for the critical partners.

ANNEX 1: PARTICIPANTS

OM Planning Meeting and OM Engagement | Dong Nai, December 7–9, 2021

	NAME	ORGANIZATION/TITLE
	In person participants	
1	Le Minh Hoan	DOH Dong Nai
2	Le Minh Han	DARD, Dong Nai
3	Nguyen Van Hung	Dong Nai PPC
4	Tran Lam Sinh	DARD, Dong Nai
5	Vu Thi Hong Lua	Sub-Department of Rural Development and Agriculture and Forestry Product Quality Control
6	Nguyen Van Dung	Sub-Department of Forest Protection, Dong Nai province
7	Hoang Xuan Lam	DOH, Dong Nai
8	Nguyen Tuan Anh	DOH, Dong Nai
9	Bui Van Manh	Sub-Department of Animal Husbandry and Veterinary Medicine, DARD, Dong Nai province
10	Hoang Dien Chau	DOH, Sub-Department of food Safety
11	Le Dinh Thong	Sub-Department of Animal Husbandry and Veterinary Medicine, DARD, Dong Nai province
12	Nguyen Huu Tai	DOH, Dong Nai
13	Phan Van Phuc	CDC, Dong Nai; DOH
14	Nguyen Thi Vieng	CDC, Dong Nai; DOH
15	Nguyen Thanh Binh	Sub-Department of Forest Protection, Dong Nai province
16	Nguyen Duc Hien	Sub-Department of Animal Husbandry and Veterinary Medicine, DARD, Dong Nai Province
17	Hanh Dung	Dong Nai Publication
18	Nguyen Hai Giang	District Division of Forest Protection
19	Nguyen Dinh Viet	DOH, Sub-Department of Food Safety
20	Dao Thanh Ha	Department of Natural Resources and Environment
21	Le Anh Duy	DOH, Dong Nai
22	Tran Huu Hoan	CDC, Dong Nai; DOH
23	Do Anh Loi	Division of Environmental Police, Department of Public Security
24	Nguyen Thuc Cuong	Department of Industry and Trade
25	Tran Anh Khoa	Department of Information and Communication
26	Dao Minh Chau	Women's groups or associations
27	Vu Van Do	District Division of Forest Protection, Dinh Quan
28	Nguyen Van Vy	DHC, Thong Nhat
29	Vo Hong Dong	DHC, Tan Phu
30	Truong Ky Nhon	District Departments of Agriculture, Vinh Cuu
31	Nguyen Van Vu	DHC, Vinh Cuu
32	Truong Phu Loc	District Departments of Agriculture, Tan Phu
33	Tran Quy Thien	DHC, Dinh Quan
34	Nguyen Viet Tuan	DHC, Dinh Quan
35	Pham Van Xuan	DHC, Tan Phu
36	Le Hoai Trang	District Division of Forest Protection, Thong Nhat
37	Nguyen Tri Thong	District Departments of Agriculture, Vinh Cuu
38	Nguyen Van Thanh	DHC, Tan Phu
39	Nguyen Thi Chuyen	DHC, Dinh Quan
40	Nguyen Thi Ngoc Ha	STOP Spillover Viet Nam

	NAME	ORGANIZATION/TITLE
	In person participants	
41	Nguyen Thi Le Quyen	STOP Spillover Viet Nam
42	Ha Minh Tuan	STOP Spillover Viet Nam
43	Tran Kim Ngan	STOP Spillover Viet Nam
44	Nguyen Thi Thu Trang	STOP Spillover Viet Nam
45	Pham Thanh Ha	STOP Spillover Viet Nam
46	Nguyen Thi Huong Ly	VOHUN
47	Pham Duc Phuc	VOHUN

ANNEX 2: PARTICIPANTS

OM Community Engagement | Dong Nai, December 10, 2021

	NAME	POSITION	
1	Nguyen Thi Binh	Youth group	Village 1, Nam Cat Tien, Tan Phu, Dong Nai
2	Dang Thi Nen	Community health station	Village 5, Nam Cat Tien, Tan Phu, Dong Nai
3	Pham Thi Thich	Wildlife farmer	Village 3, Nam Cat Tien, Tan Phu, Dong Nai
4	Duong Thi Linh	Domestic animal farmer	Tan Cang, Phuoc Tan, Dong Nai
5	Nguyen Van Hoang	Wildlife farmer	Phu Ly, Vinh Cuu, Dong Nai
6	Vo Duong Toi	Breeder	Vinh Cuu, Dong Nai
7	Ta Duy Thai	Poultry restaurant owner	Poultry Restaurant in Dinh Quan, Dong Nai
8	Ngo Huu Trung	Domestic animal farmer	Vinh Cuu, Dong Nai
9	Ngo Thi Anh	Wildlife worker	Xuan Tan, Long Khanh, Dong Nai
10	Pham Van Ngu	Community veterinary station	Village 2, Xuan Loc, Dong Nai
11	Nguyen Truong Thien Minh	Domestic animal farmer	Xuan Loc, Dong Nai
12	Phan Dinh Tung	Slaughterer	Vinh Cuu, Dong Nai
13	Nguyen Tien Chuong	Head of village	Hieu Liem, Vinh Cuu, Dong Nai
14	Le Thi Nga	Carrier	Long Khanh, Dong Nai
15	Phan Thi Thanh Tam	Women's union	Long Khanh, Dong Nai
16	Dang Thanh Binh	Community health station	Village 3, Hieu Liem, Vinh Cuu, Dong Nai
17	Vu Dinh Luu	Carrier	Village 3, Hieu Liem, Vinh Cuu, Dong Nai
18	Truong The Hai	Chef of wildlife restaurant	Phuoc Tan, Bien Hoa, Dong Nai
19	Phan Quoc Thieu	Farmers' union member	Village 2, Nam Cat Tien, Tan Phu, Dong Nai
20	Nguyen Duc Anh	Domestic animal farmer	Village 4, Nam Cat Tien, Tan Phu, Dong Nai
21	Pham Tien Dung	Farmer	Village 5, Nam Cat Tien, Tan Phu, Dong Nai
22	Duong Thien Tin	Trader	Village 2, Nam Cat Tien, Tan Phu, Dong Nai
23	Le Thi Thu Huyen	Carrier	Village 4, Nam Cat Tien, Tan Phu, Dong Nai
24	Nguyen Thi Nam	Women's union	Village 2, Nam Cat Tien, Tan Phu, Dong Nai
25	Nguyen Van Ha	Farmer	Village 2, Nam Cat Tien, Tan Phu, Dong Nai
26	Pham Van Bo	Wildlife farmer	Village 3, Vinh Tan, Vinh Cuu, Dong Nai
27	Nguyen Trong Nhan	Wildlife farmer	Giang Dien, Trang Bom, Dong Nai
28	Pham Ngoc Binh	Wildlife worker	Bac Son, Trang Bom, Dong Nai
29	Nguyen Van Truyen	Community veterinary station	Hieu Liem, Vinh Cuu, Dong Nai
30	Le Hoai Trang	Domestic animal farmer	Trang Bom, Dong Nai

	NAME	ORGANIZATION/TITLE	
31	Nguyen Thi Ngoc Ha	Country team lead	STOP Spillover Viet Nam
32	Nguyen Thi Le Quyen	SMM officer	STOP Spillover Viet Nam
33	Ha Minh Tuan	FWA officer	STOP Spillover Viet Nam
34	Tran Kim Ngan	WLE officer	STOP Spillover Viet Nam
35	Nguyen Thi Thu Trang	RAC officer	STOP Spillover Viet Nam
36	Pham Thanh Ha	Administrative and financial officer	STOP Spillover Viet Nam
37	Nguyen Thi Huong Ly	Administrative officer	VOHUN
38	Pham Duc Phuc	VOHUN coordinator	VOHUN

ANNEX 3: PARTICIPANTS

OM Planning Meeting and OM Engagement | Dong Nai, December 7–10, 2021

	NAME	ORGANIZATION/TITLE
	Virtual participants	
1	Nguyen Duy Dieu	National Agricultural Extension Center, MARD
2	Nguyen Thi Huong	GMDP, MOH
3	Chu Van Tuat	National Center for Veterinary Hygiene Inspection No1
4	Bui Khac Hung	Department of Livestock, MARD
5	Chu Ba Huy	General Department of Forest Protection, MARD
6	Pham Quang Thai	NIHE
7	Bui Tran Anh Dao	VNUA
8	Le Quang Thong	HCM Agriculture and Forest University
9	Diafuka Saila-Ngita	Tufts University
10	Nguyen Phuong Dong	MOH
11	Sear Borin	Cambodia One Health University Network, Prek Leap National Institute of Agriculture
12	La Ngoc Quang	HUPH
13	Michael O'Leary	USAID
14	Dao Ha Trung	TE-FOOD
15	Meredith Grady	Tufts University - USAID STOP Spillover
16	Luong Chan Quang	HCM PASTEUR
17	Man Ha Anh Nguyen	Vietnam Food Administration
18	Alisa pereira	USAID
19	Jen Peterson	Tetra Tech
20	Katherine (Katie) Prager	UCLA, STOPS Consortium Member
21	Nguyen Duc Vinh	Research, consulting and training center for local development - STG
22	Lê Thanh Hải	Vietnam One Health University Network (VOHUN)
23	Nguyen Thu Hien	VOHUN
24	Nguyen Hong Phi	VOHUN
25	Pham Thi Minh Phuong	VOHUN
26	Bui Thuy Nga	TRAFFIC
27	Bui Dang Phong	WWF
28	Michelle Owen	WWF
29	Nguyen Nga	WCS

	NAME	ORGANIZATION/TITLE
	Virtual participants	
30	Nguyen Thi Thinh	ILRI
31	Esther Kihoro	Right Track Africa
32	Julius Nyangaga	Right Track Africa
33	Mariner, Jeffrey C	Tutfs
34	Rabindra	RL, SEAOHUN
35	Kochevar, Deborah T	STOP SPillover Director

Tufts University

Africa One Health University Network

Southeast Asia One Health University Network

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Right Track Africa

JSI Research & Training Institute, Inc.

Tetra Tech

University of Washington

University of Glasgow

University of California, Los Angeles

Broad Institute

University of Nebraska Medical Center

Humanitarian OpenStreetMap Team

Internews

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