Strengthening One Health Surveillance Coordination in Lao PDR: Findings from a Multi-Sectoral Mapping Study and National Workshop

S Thys[1, 2, 3] (severine.thys@cirad.fr), H L T Thu[1], K Keonam[3], N Adsanychan[3], K Khammavong[4], M Sisavanh[4], W Theppagna[5], M Mispiratceguy[6], V Phouthana[3], F Goutard[1, 7, 8]

[1] *UMR-ASTRE, CIRAD, Montpellier, France*
[2] *CIRAD, Vientiane, Laos*
[3] *National University of Laos, Vientiane, Laos*
[4] *Wildlife Conservation Society, Phnom Penh, Cambodia*
[5] *Department of Livestock and Fisheries, Vientiane, Laos*
[6] *Food and Agricultural Organization of the United Nations, Bangkok, Thailand*
[7] *CIRAD, Hanoi, Vietnam*
[8] *Vietnamese Institute of Veterinary and Animal Science, Hanoi, Vietnam*

Summary
Lao PDR faces significant zoonotic disease risks at the human-animal-wildlife interface, yet surveillance across the human, animal, wildlife, and environmental sectors remains largely fragmented and poorly coordinated. This case story documents three complementary activities carried out in 2025 under the Sustainable Wildlife Management (SWM) Programme: a national One Health (OH) surveillance systems mapping study, an assessment of the wildlife health surveillance network using the OASIS evaluation framework, and a national multi-stakeholder workshop held in Vientiane on 16 June 2025. The workshop brought together 30 participants from three government ministries and eight non-governmental organisations. Through participatory methods including a cross-sectoral SWOT analysis, the process generated shared findings, validated recommendations, and built a degree of inter-sectoral ownership that desk-based studies alone cannot produce. The results point to four priority directions: formalising multi-sectoral coordination structures, developing a national wildlife surveillance strategy, strengthening human resources at decentralised levels, and redesigning community engagement around trust and incentives rather than compliance.

Context
Lao PDR is a landlocked country in Southeast Asia with a very rich biodiversity, and it is widely considered a high-risk area for zoonotic disease emergence. The reasons for this are well known: large and diverse wildlife populations, frequent contact between humans and animals, an active wildlife trade, and borders that are difficult to monitor with several neighbouring countries. Beyond this, the health infrastructure remains limited, veterinary services are understaffed, and the consumption of wildlife is deeply embedded in local culture and livelihoods. All of this creates conditions where a spillover event could happen and go undetected for some time.

Despite this situation, the surveillance systems that exist across the human, animal, wildlife, and environmental sectors have been working largely independently from each other. Although Lao PDR already possesses many of the foundations required for a stronger OH surveillance system: motivated actors, existing collaborations, regional networks, and increasing political recognition of OH approaches, there is very little formalised exchange of data between surveillance systems as well as vertically between national, provincial, district, and community levels. Mechanisms for joint investigation or coordinated response are almost absent and highly dependent on personal relationships rather than institutionalized ones.

The Sustainable Wildlife Management (SWM) Programme (1), funded by the European Union and implemented in several countries in Africa, Latin America and Asia, works to promote the sustainable use of wildlife while protecting biodiversity and reducing health risks at the interface between humans, animals and the environment. In Lao PDR, assessments carried out within the SWM Programme had already shown that surveillance systems needed strengthening, and that better coordination between sectors, along with a One Health (OH) approach, was necessary to improve detection and prevention of zoonotic diseases. To respond to this, three activities were designed and carried out in 2025 by CIRAD and the National University of Laos (NUoL), with the support of FAO and WCS:
(i) a national mapping study of OH surveillance systems, based on desk review and stakeholder interviews;
(ii) an assessment of the wildlife health surveillance network, using the OASIS (Operational Assessment of Surveillance and Investigation Systems) framework; and
(iii) a national workshop, held on 16 June 2025 at LaôTel Hotel in Vientiane, and entitled "Strengthening One Health Surveillance Coordination in Lao PDR."

This case story is mostly focused on the workshop and what came out of it, though the mapping study and the wildlife surveillance assessment provide important context for the findings.

Methods

The workshop was organised together by CIRAD, NUoL, FAO, WCS, and Lao government partners. Thirty participants attended, coming from a range of sectors and institutions. On the government side, 15 officials represented three ministries: the Ministry of Health (MOH), the Ministry of Agriculture and Fisheries (MAF), and the Ministry of Natural Resources and Environment (MoNRE). The other 15 participants came from eight non-governmental organisations: FAO, WCS, the World Health Organization (WHO), the Lao-Oxford-Mahosot Hospital-Wellcome Trust Research Unit (LOMWRU), Institut Pasteur du Laos (IPL), WWF, the Lao Conservation Trust for Wildlife (LCTW), and CIRAD.

The day was organised around participatory methods. In the morning, the three studies were presented in plenary, covering the OH surveillance systems mapping, the wildlife surveillance network assessment (2), and the OASIS evaluation findings (3). After each presentation, participants were invited to discuss, correct or add to what had been shown — not just to listen.

In the afternoon, the group worked through a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis. Four mixed groups of around eight people each rotated through four thematic tables, spending about 15 minutes at each one with a facilitator. The mixing of participants across sectors was intentional, to avoid the exercise becoming a series of separate sectoral conversations. At the last station, all groups were asked the same question: what new mechanism, structure or coordination process could make OH surveillance more integrative and collaborative in Lao PDR (4)? The workshop closed with reflections from three designated observers — a representative from the Department of Livestock and Fisheries (MAF), a senior researcher from CIRAD, and a representative from WCS.

Outcome / Impact

Validation of surveillance system maps

When the mapping study was presented, participants broadly recognised what was shown and confirmed it as accurate, while also bringing corrections and additions — particularly regarding the human health sector, where some information in the original maps needed updating. The discussions made clear that wildlife disease surveillance in Lao PDR is still relatively new, having been started around 2015, and that it sits outside the official government surveillance system. This was not a surprise to most participants, but putting it on paper and discussing it openly was useful. Several participants from the Department of Livestock and Fisheries noted that before expanding the wildlife surveillance network, a proper national strategy would need to be developed first — without that, any expansion would risk being disconnected and unsustainable.

SWOT analysis

The SWOT exercise produced a lot of material, reflecting perspectives from different sectors that do not often sit in the same room (figure 1). On the strengths side, participants pointed to a number of things that already exist and could be built on: partnerships between WCS and provincial agricultural offices, a field epidemiology training programme within the MOH, the presence of motivated individuals in key institutions, and a growing political interest in OH approaches. Regional networks such as SEAOHUN and LAOHUN were also mentioned as existing assets that are underused.

Weaknesses were discussed openly and with some candour. The most recurring issues were unclear reporting pathways between sectors, slow and largely paper-based reporting processes, the absence of a national information system for animal health data — covering both domestic animals and wildlife — and a very limited number of people with wildlife veterinary training. One comment in particular captured the fragility of the system well: the entire wildlife health surveillance network in the country depends heavily on a single expert, and this cannot continue. Poor data sharing between ministries, and the absence of any OH coordination at the local level, were also raised repeatedly.

On the opportunities side, participants pointed to the potential of digital reporting tools including smartphone-based platforms, growing international interest in pandemic preparedness funding, and the possibility of adapting tools already in use in one sector for use in another. The political momentum around OH, both nationally and regionally, was seen as a window that should be used rather than waited on.

Threats discussed included political instability and changes in leadership that can disrupt ongoing programmes, the particular sensitivity of wild meat consumption as an entry point for surveillance — hunters and farmers will not report if they fear punishment — cross-border wildlife trade, and the effects of climate change on ecosystems

and wildlife movement. Social media was also mentioned, notably its role in facilitating illegal wildlife trade through platforms like YouTube and Facebook.

Observer reflections
The three observers offered complementary perspectives that helped to close the day. There was broad agreement that genuine progress has been made in Lao PDR — the level of collaboration between NGOs, research institutes and government is real, and the number of people now talking to each other about OH has grown. But the structural problems have not gone away: bureaucratic reporting delays, insufficient and unstable budgets, and the absence of any formal national coordination mechanism continue to reduce what the system can achieve.

The CIRAD observer raised a point worth keeping in mind: the risks of zoonotic disease transmission do not only happen in forests or protected areas. They also happen at market level, at points of wild meat trade and consumption. Surveillance systems that do not reach these spaces will miss important signals. He also returned to the question of community trust — without it, no reporting system will work as intended, regardless of its technical design.

The WCS observer pointed to the long-standing cooperation between the Faculty of Agriculture and partner organisations, and noted that the experience in community engagement and conservation already accumulated by these institutions is an asset that should be more formally integrated into any future OH surveillance framework. The recommendation was that a main coordinating institution be identified for OH implementation, rather than continuing with arrangements that rely on goodwill and personal relationships.

What participants agreed on
Despite the diversity of people in the room, the four groups came to very similar conclusions when asked about new coordination mechanisms. A formal National One Health Surveillance Committee came up in all four responses. This committee would need a mandate, a budget, representation from all relevant sectors, and links to provincial and district levels. Alongside it, participants envisioned a central OH operational hub — a dedicated space where data from human, animal, wildlife and environmental surveillance could be brought together and acted upon. Training of young people at the community level, short and practical rather than academic, was mentioned as a way to build something that would last beyond the life of any single project.

Relevance for Others
A few things from this experience seem worth sharing for others working in similar contexts.

The combination of desk-based mapping and participatory workshop is more than a methodological preference — it changes what comes out. A mapping study produced on its own, however thorough, remains an external document. When it is presented back to the people it describes, and when those people can push back, add to it, and correct it in real time, the result is something different: a shared reference that participants feel some ownership over. This is not a small thing, particularly in contexts where inter-sectoral trust is still being built.

The SWOT format worked well precisely because it was mixed. Putting a government official from the health ministry in the same group as someone from WCS and a researcher from NUoL, and asking them to fill in the same table together, creates conversations that would not happen otherwise. The rotation also helped — no one institution dominated any one theme.

The question of community engagement came up repeatedly, and not as an abstract principle. In a country where wild meat consumption is common and legally ambiguous, any surveillance system that relies on communities voluntarily reporting observations will fail if those communities do not trust what happens after they report. This is a design problem, not a communication problem. It requires thinking carefully about what communities get in return for their participation, and what guarantees they have about how information will be used.

Finally, this work was stronger for being part of a broader programme. The SWM Programme's work on value chains, wild meat consumption and community livelihoods gave the OH surveillance work a context it would not have had otherwise. Surveillance systems that are designed and implemented in isolation from the economic and social drivers of zoonotic risk will always be working against the grain.

Recommendations
What came out of the workshop, and from the observer reflections, points in a few clear directions.

The most urgent need is a formal multi-sectoral and multi-level coordination structure. A National One Health Surveillance Committee, with real authority, a dedicated budget, and representation from health, agriculture, environment and wildlife sectors, would provide the institutional home that currently does not exist. Without something like this, the progress made through projects and partnerships will remain fragile and difficult to sustain after funding ends.

Wildlife surveillance in particular needs its own policy framework. The current situation — in which wildlife disease surveillance exists but has no formal status within the government system, no standardised protocols, and no agreed referral pathways — is not workable at scale. A national strategy developed through a properly inclusive process, defining priority diseases and species and clarifying who is responsible for what, would be an important step.

Human resource constraints need to be addressed directly. Training needs to reach provincial and district levels, not stay concentrated at the centre. A mapping of existing human resources, as several participants suggested, would give a clearer starting point. And investment in university-level OH education — including practical field training — is one of the few things that will produce durable results over time.

On community engagement, the approach needs to change (5). Expecting communities to report wildlife health observations when the main consequence they can foresee is legal trouble is not a realistic surveillance strategy. Approaches that combine health services, conservation incentives and livelihood alternatives with reporting have a much better chance of generating useful data, and of building the kind of trust that makes the whole system more resilient.

	Helpful	Harmful
Internal	**Strengths:** Existing WCS–provincial partnerships; FETPV field epidemiology programme (MOH); motivated individuals in key institutions; growing political recognition of OH; SEAOHUN and LAOHUN regional networks	**Weaknesses:** Unclear cross-sectoral reporting pathways; paper-based reporting; no national animal/wildlife health information system; single wildlife health expert nationally; no local-level OH coordination
External	**Opportunities:** Digital reporting tools; international pandemic preparedness funding; adaptable tools across sectors; political momentum for OH at national and regional level	**Threats:** Leadership turnover disrupting programme continuity; fear of legal consequences limiting community reporting; cross-border wildlife trade; climate change effects on wildlife movement; social media facilitating illegal trade

Figure 1. SWOT synthesis from the national One Health surveillance coordination workshop, Vientiane, Lao PDR, June 2025. Generated through participatory group rotation across four thematic stations, 30 participants from government and non-governmental sectors.

Keywords: One Health, surveillance, zoonotic diseases, cross-sectoral coordination, wildlife health.

References:

1. SWM Programme (2021). Sustainable Wildlife Management Programme. https://www.swm-programme.info (accessed 5 May 2026)
2. Calba C. et al. (2015). BMC Public Health, 15: 448. https://doi.org/10.1186/s12889-015-1791-5
3. Hendrikx P. et al. (2011). Epidemiol. Infect., 139(10): 1504–1515. https://doi.org/10.1017/S0950268811000161
4. Bordier M. et al. (2022). One Health, 14: 100389. https://doi.org/10.1016/j.onehlt.2022.100389
5. Worsley-Tonks K.E.L. et al. (2026). Lancet Infect. Dis., 26(4): e245–e258. https://doi.org/10.1016/S1473-3099(25)00421-9