



Strengthening ASF Prevention and Control at the Domestic–Wildlife Interface: The Lao PDR Experience

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Project overview

- **Project:** Enhance capacities on ASF prevention and control at the domestic–wildlife interface through an integrated approach.
- **Lot 1:** Study to understand wild pig distribution, interactions with domestic pigs, and spillover risk at domestic-wildlife interface – implemented by WCS and provincial/district Agriculture and Forestry Offices
- **Lot 2:** Training wildlife rangers and village veterinary workers on ASF biosecurity and surveillance on farms, wildlife and at the domestic-wildlife interface – implemented by Wildlife Conservation Society



**FINAL
REPORT**
2022–2024





Lot 1 Study – Implemented by WCS, DLF, PAFO/DAFO



Study to understand wild pig distribution, interactions with domestic pigs, and spillover risk at domestic-wildlife interface

FOUR CORE ACTIVITIES

01

FIELD ASSESSMENT



Assessed villages and the domestic-wildlife interface to identify risks and priority sites.



02

FOCUS GROUP DISCUSSION



Engaged communities and stakeholders to understand perceptions, practices and information needs.



03

CAMERA TRAP PLACEMENT



Monitored wild pig presence and movement at the domestic-wildlife interface (dry and rainy seasons).



04

RESTITUTION WORKSHOP



Shared findings with communities and partners to promote awareness and guide actions together.





Study area and target villages

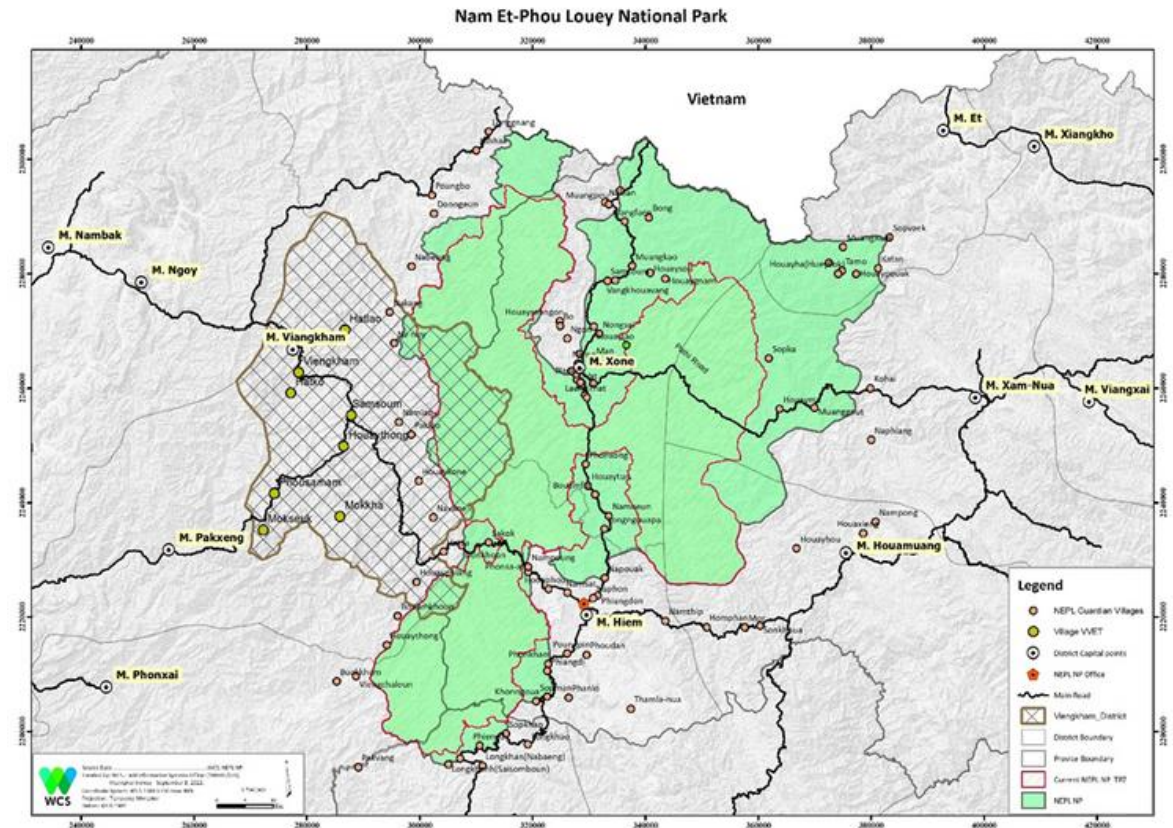
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Viengkham District, Luang Prabang Province.

Initial field assessment covered 6 villages: Viengkham, Navaen, Paklao, NaNoy, Samsoum and Houaythong.

Five target villages adjacent to Nam Et–Phou Louey National Park (NEPL NP) were used for FGDs.

Navaen, Paklao and Nanoy were selected for camera trapping based on accessibility, habitat proximity, reported wild boar observations and history of ASF mortality.



Map of project intervention area



Lot 1 Study – Field Assessment

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- Wild pigs were reported in all visited villages except Viengkham; observations were especially frequent in Navaen, Paklao and Nanoy.
- Wild boar were mostly observed around Sanams and nearby cassava/corn fields, particularly during the rainy season.
- Four villages reported current or previous domestic/wild hybrid piglets.
- Navaen was the only village reporting a dead wild pig during the assessment period; it was found close to domestic pigs.

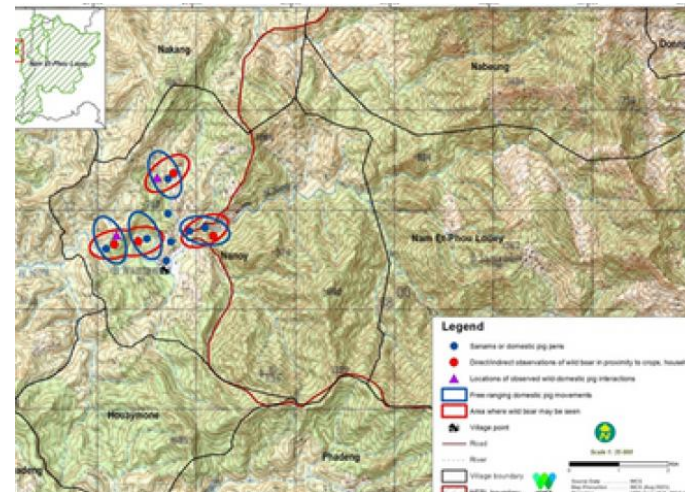




Lot 1 Study – Focus Group Discussion

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- FGDs were conducted in five villages adjacent to NEPL NP.
- Information was gathered from a cumulative 410 households that had raised pigs.
- Objective: characterize domestic pig–wild boar interactions and identify locations for camera trap deployment.
- FGDs identified multiple pathways and practices that could facilitate ASF spillover/spillback.





Lot 1 Study – Key risk factors at the interface

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- **Spatial:** Sanams located within/immediately adjacent to the national park and crop areas.
- **Temporal:** August–November associated with crop production/harvest and more frequent interactions.
- **Husbandry:** Free-ranging pigs, weak barriers, and feeding pigs with crops from fields damaged by wild boar.
- **Knowledge & response:** limited ASF knowledge, unsafe carcass disposal, underreporting and limited investigation/response.
- **Trade/consumption:** slaughtering and local sale/trade of pigs during mortality events; wild boar commonly hunted and consumed.





Lot 1 Study – Camera Trap Placement (Round 1)



Dry season: November 2023–January 2024.

- Six camera traps were placed across Navaen, Paklao and Nanoy, operating for approximately 60 days.
- Paklao showed the greatest number of images capturing domestic pigs and wild boar in the same locations.
- Nanoy also showed repeated use of the same areas by domestic pigs and wild boar.
- Results supported FGD findings that the two populations range in the same areas.





Lot 1 Study – Restitution Workshop



Conducted in Navaen, Paklao and Nanoy to share FGD and Round 1 camera-trap findings.

- Reviewed ASF, surveillance, clinical signs, transmission routes, prevention and reporting of sick/dead wild boar.
- Participation: Navaen 72; Paklao 72; Nanoy 35.
- Communities showed particular interest in camera-trap images and related findings.
- NEPL and district staff were identified as important local stakeholders for continued wildlife disease surveillance and communication.





Lot 1 Study – Camera Trap Placement (Round 2)



Rainy season: March–June 2024.

- Same three villages and approximately **60-day duration**, using similar methods to Round 1.
- Locations were slightly adjusted where forest fires or annual land clearing posed risks.
- **One camera** in Navaen was **destroyed**; one in Paklao fell but continued to capture images for a period.
- **Only Navaen captured domestic pigs** and wild boar in the same camera-trap area during Round 2.





Lot 1 Study – What did the two seasons show?



- Domestic pigs ranged near camera-trap locations, with detections peaking around mid-day.
- Wild boar were detected more sporadically across day and night.
- Domestic pigs and wild boar entered the same areas, sometimes on different days/times.
- Villages showing shared use of areas differed between seasons, potentially influenced by predators, human activity, land clearing, forest fires and crop cycles.
- Overall, seasonal variation did not eliminate the potential for interface contact.





Lot 1 Study – Overall findings

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- FGDs and camera trapping provide complementary evidence of domestic pig–wild boar spatial overlap.
- The interface is influenced by location of **sanams**, crop production, free-ranging husbandry and seasonal wildlife activity.
- Observed overlap creates potential opportunities for ASF transmission and other pathogen sharing.
- Risk reduction should focus on high-risk practices, behaviours, perceptions and responses at community level.

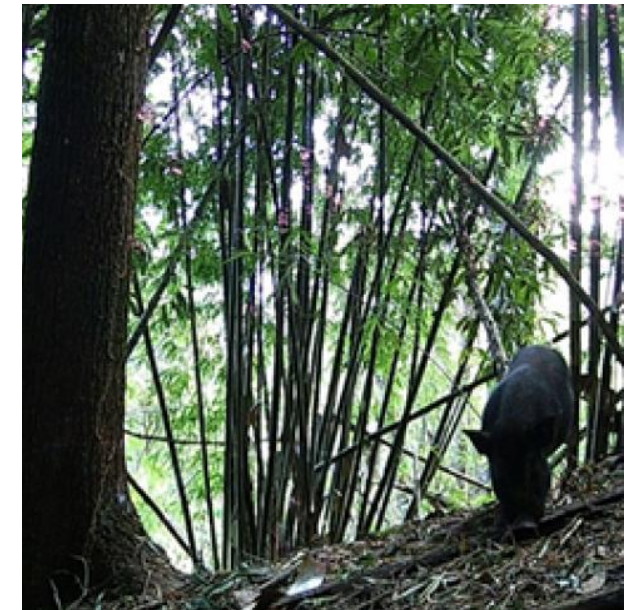


Lot 1 Study – Implications for ASF control



- Prioritize risk-reduction measures at domestic–wildlife interface hotspots.
- Strengthen community awareness, reporting and surveillance for sick/dead domestic pigs and wild boar.
- Promote safer husbandry and carcass-disposal practices.
- Engage NEPL, district/provincial authorities and communities as sustained surveillance partners.
- Use integrated approaches that also reduce risks from other pathogens affecting animal health, public health and livelihoods.

https://rr-asia.woah.org/app/uploads/2026/08/Final-Report_Lot1_WCS.pdf





Lot 2 – Implemented by AVSF and PAFO/DAFO

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Training wildlife rangers and village veterinary workers on ASF biosecurity and surveillance on farms, wildlife and at the domestic-wildlife interface





Objectives

- Enhance knowledge and skills of Village Veterinary Workers (VVWs), DAFO officials and forest rangers on ASF surveillance and biosecurity.
- Strengthen networking for joint ASF surveillance at the domestic–wildlife interface through a One Health approach.

Implementation period: August 2022 – November 2023.





	Kind of material	Target group
Training modules		
1	One health	Rangers, VVWs and VPHs
2	Introduction to pathogens	Rangers, VVWs and VPHs
3	Biosecurity	Rangers, VVWs and VPHs
4	Personal Protective equipment's	Rangers, VVWs and VPHs
5	Communication skills	Rangers, VVWs and VPHs
6	Biological sampling for diagnosis	VVWs
7	Common pig diseases (part 1 and 2)	VVWs
8	Management of sick animals	VVWs
9	Carcass disposal management	VVWs

- Materials developed in English and Lao and shared for feedback and validation.
- Training materials were shared to DLF, PAFO, DAFO and WOAHA for the feedback



Lot 2 – Who was trained

Four-day training of trainers in Vientiane trained 2 AVSF staff and 4 DAFO officers.

- 22 VVWs from 11 target villages.
- 11 Village Public Health Volunteers (VPHs).
- 10 Rangers, 6 DAFO participants and 2 WCS staff were included in the overall training.
- Overall participant table: 51 trainees across VVWs, VPHs, rangers, DAFO and WCS staff.





Lot 2 – Training Structure

- VVW-specific training: 21–23 September 2023; 22 VVWs.
- Joint modules were delivered during September–October 2023.
- Participants were split into two groups to support participation and self-learning.
- Each training was facilitated by 1 AVSF staff member and 2 DAFO officers.
- Pre- and post-training assessments measured knowledge gains.



Lot 2: Joint Training – Knowledge gains

- 94% of participants increased their overall score.
- Average score increased from 60% pre-training to 73% post-training.
- Pre-training range: 20–80%; post-training range: 50–100%.
- Overall improvement: 13 percentage points.
- Notable gains were seen in pathogens, PPE and communication-related questions



- All VVW participants increased their overall score.
- Average score increased from 55% pre-training to 75% post-training.
- Pre-training range: 20–70%; post-training range: 50–95%.
- Overall improvement: 20 percentage points.
- Some questions had lower post-test scores, reflecting local practice and interpretation of questions.





Lot 2: What worked well?

- Three-day duration was considered adequate and balanced theory with practice.
- Local trainers using the local language improved comfort, participation and discussion.
- Group work and practical exercises supported problem-solving.
- Visual and animated PowerPoint materials improved comprehension.
- Locally available materials made PPE practice more realistic and sustainable.





Lot 2: One Health networking model

- VVWs provide the village-level animal health link.
- Forest rangers support wildlife surveillance and reporting.
- Village Public Health Volunteers connect animal-health surveillance with the human-health perspective.
- DAFO provides district-level technical and coordination support.
- Together, these actors form the basis for integrated surveillance at the domestic–wildlife interface.





Lot 2: Challenges and areas for improvement

- One Health and biosecurity concepts were challenging for some participants.
- Detection and reporting of livestock and wildlife mortality/morbidity should be emphasized more.
- Trainees requested communication tools such as posters and further coaching.
- Additional facilitator support during group work would be beneficial.
- Female participation should be encouraged further.
- Evaluation questions should be pre-tested to avoid ambiguity.



Lot 2: Recommendations for sustainability

- Continue coaching and mentoring of trained personnel.
- Strengthen early detection and reporting of livestock and wildlife mortality/morbidity.
- Develop locally appropriate community awareness materials.
- Maintain collaboration among VVWs, rangers, public health volunteers and DAFOs.
- Build on existing projects and local structures to address needs identified by trainees.

https://rr-asia.woah.org/app/uploads/2026/08/Final_Report_Lot2_AVSF.pdf



Thank you



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