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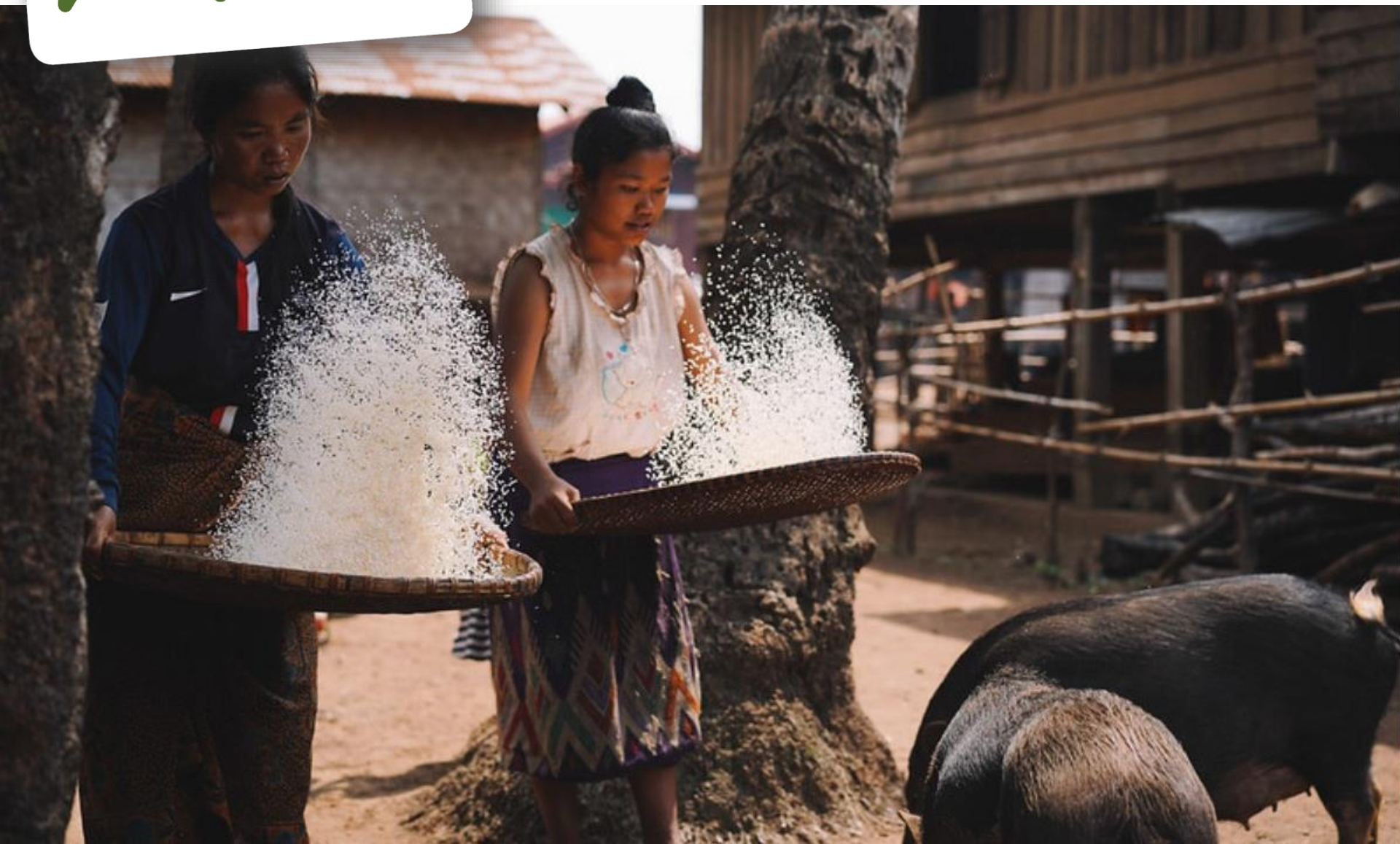
ASF Coordination Virtual Meeting

Field observations & actions in Lao PDR



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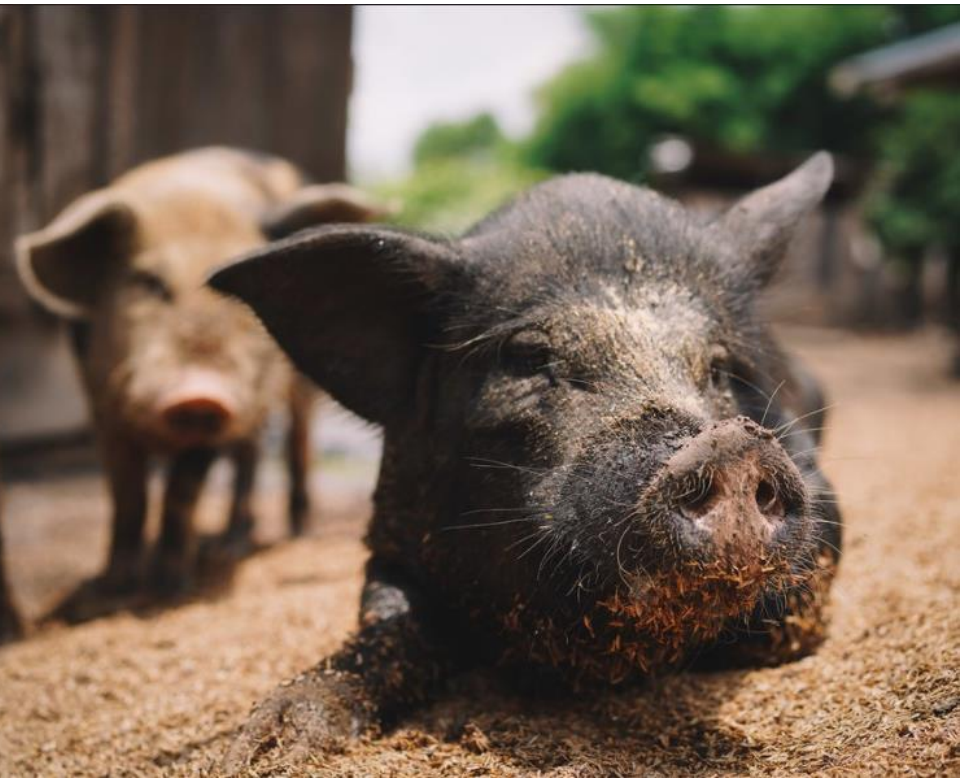
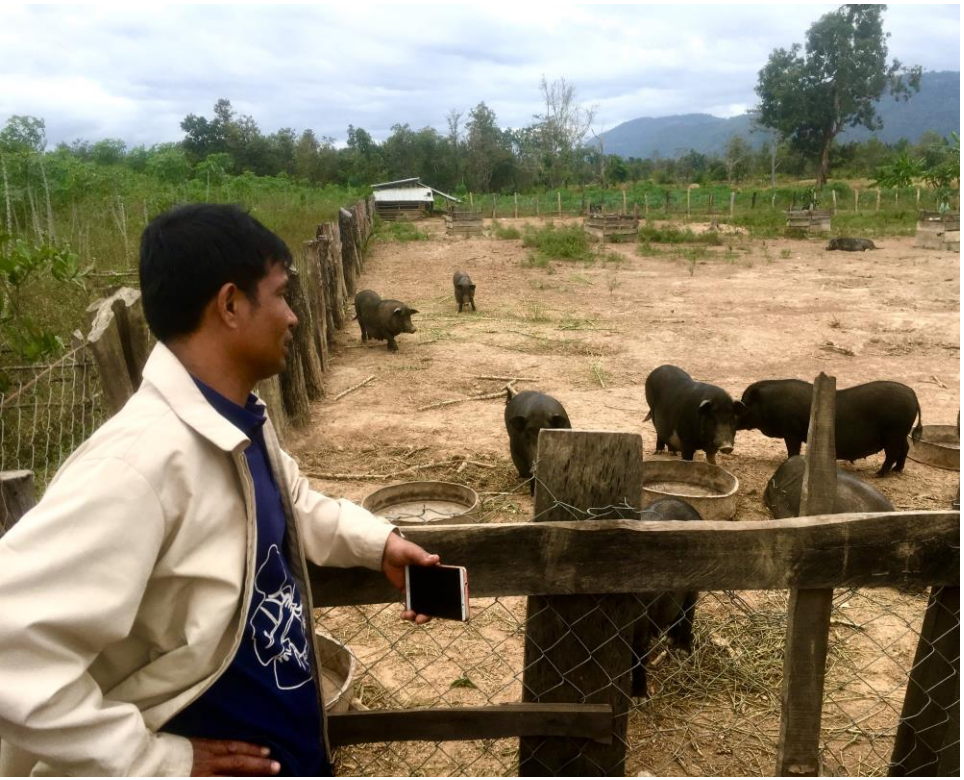
Quick outlook of activities since June 2020

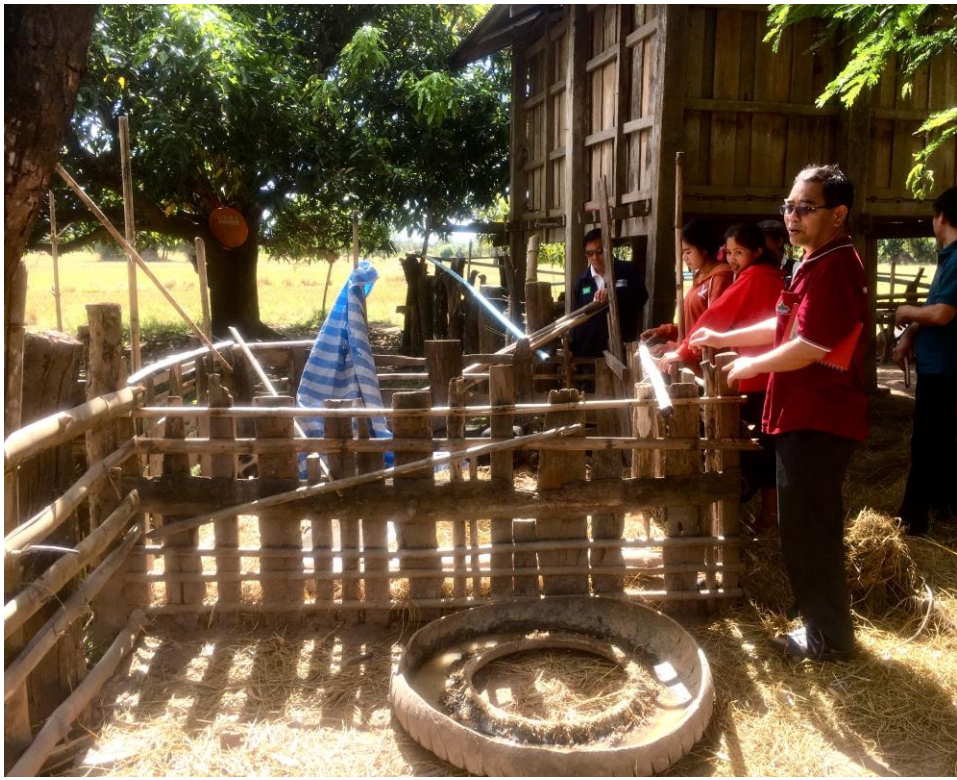


AVSF actions in Lao PDR
Main actions since the last OIE ASF-CVM (1/1)

- Since the last ASF Coordination Virtual Meeting in June 2020 (see our last presentation), the following actions were conducted by AVSF to address African Swine Fever in Lao PDR:
  - **Project development and prospects:**
    - Finalization of a proposal for a regional technical assistance project on swine biosecurity in Southeast Asia (FEXTE) covering Lao PDR, Cambodia, Vietnam and the Philippines, in partnership with CIRAD and France Vétérinaire International (FVI). *Under scrutiny by the donor*;
    - Fundraising, data collection and project formulation of a first pilot action in ToomLarn district, to be implemented starting 2021 (*see slides 11-14*);
    - Prospects with technical partners (CIRAD, WCS) on complementary actions on domestic/wildlife management of swine populations. *Ongoing*;
  - **Technical partnerships:**
    - Official signing of a cooperation agreement between OIE and VSF International, including on "the prevention, control and/or eradication of diseases" (including "ASF"). Similar agreement under negotiation with FAO and integration of VSFI within the EMC-AH "Incident Coordination Group";
    - Training of AVSF field staffs and partners (DAFO staffs, NUOL) by Colorado State University (CSU) on ASF virus characterization, disease management, disease investigation & biosecurity (USDA funded);
    - Ongoing discussions with MAF-DLF on a cooperation agreement with AVSF Laos.
  - **Public advocacy:**
    - *See slide 15.*

Field data collection & analysis





Field data collection & analysis
Results from data collected in Southern Laos (1/4)

In August 2020, a data collection was conducted by AVSF team in 36 villages of all 3 provinces (Savannakhet, Saravan and Attapeu) and 12 districts of AHAN project, with a total of 216 households (HHs) interviewed :

- Supposedly, more than half of the respondents were affected by ASF:
  - In the last 18 months, 118 HHs (54.63%) experienced pig deaths. Although we cannot with be sure of the reason of those pig deaths, **the high average fatality rate (7 out of 9, or about 80%) points out to ASF**;
  - Pig fatalities were concentrated in 6 out of the 12 districts covered, especially in the provinces of Saravan (ToomLarn, TaOy and Saravan districts) and Savannakhet (Phine, Thaphangthong and Xonaburi), while Attapeu province was largely spared despite its borders with both Vietnam and Cambodia.
  - The great majority of respondents (76.39%) did not receive any general information on ASF; **inversely, Covid-19 communication campaigns proved to be very effective, even in remote areas**, according to other data collected in AHAN project area… (see AVSF presentation at GASL in October 2020).
- The immediate to long-term impact on pig production and rural HHs' livelihood is very worrying :
  - Drastic decline in swine population among the 118 HHs supposedly affected by ASF, from 7 to 1 pig per HH on average. **Most of the 118 HHs reported the loss of their sows (0 out of 2 on average), putting at threat restocking capacities**, especially for local breeds that are raised by 91.12% of HHs and are not only the most preferred meat but also the most resilient and cost-competitive pig breeds in Lao PDR ;
  - **Pigs are raised by every HH, and are by far the main source of income of rural HHs**: besides pig production, only 39.35% of HHs have another income generating activity (mostly crops for 32.41% and other livestock – mostly poultry – for 31.02%). Pigs are mostly raised for quick cash (62.21%), but also for self-consumption to a large extent (61.29%). *On average, rural HHs need to sell 30 piglets per year to cover their HH daily cash needs (e.g. about 750 USD) according to villagers met in ToomLarn district in November.*

Field data collection & analysis
Results from data collected in Southern Laos (2/4)

- **Pig production plays a central role in rural HHs' livelihoods**: the "quick cash" pig sales are mainly used for education & health (53.46%), farm investments (42.4%) and complementary food (41.94%), and marginally for celebrations (9.29%) or other uses (4.15%), while a significant part (61.29%) is self-consumed.
- **Pigs also play a central role as livestock security ("mobile bank") in case of crisis**: although relatively limited, the impacts of Covid-19 crisis, combined with ASF outbreaks, could have a severe and lasting impact on the long run on affected rural HHs and on restocking schemes (see AVSF presentation at GASL);

De facto, sustainable livestock alternatives to pigs are not obvious in the area between poultry (low profitability, high mortality), cattle (high investment, limited pasture land) or goat (good profitability but lesser market demand).

➢ Despite its socio-economic importance, pig production remains largely traditional and precarious:

- Free roaming of pigs remains widespread (63.94%), except during the rice season for some pig raisers (35,94%) – although most villages (62.04%) have local regulations banning pig scavenging at that period;
- Even among the HHs (32,26%) using full-time penning schemes (FTPS), penning systems are mostly limited to wood fences (63.59%) and basic biosecurity practices remain very low, let it be quarantine for newly bought animals (30.88%), separation between piglets, sow and boars (23.5%), alien people accessing to the pen (48.85%), other animals accessing to the pen (51.61%), absence of drainage system (44.7%). Swill feeding is largely used (61.29%), but some of them (42.13%) cook it before feeding their pigs;

Yet, most HHs (72.46%) using FTPS did not experience pig deaths in the last 18 months. Even if we extract the HHs of Attapeu province who did not experience any death in the last 18 months (*77.77% of them use FTPS, although it cannot mechanically explain the absence of ASF outbreaks*), this figure is still high (56.09%), meaning that **HHs using FTPS may have less than 50% chances of being affected in outbreak zone (ASF or others), even with low biosecurity practices**. But hose figures shall be taken with precautions and investigated further.

Field data collection & analysis

Results from data collected in Southern Laos (3/4)

- Unsurprisingly, animal husbandry techniques (and thus yields) are very low: pig production is largely oriented towards the sale of piglets (87.56%) versus fattened pigs (50.69%) and breeding stock (28.57%), **regardless the raising techniques** (free roaming, part-time penning or full-time penning);
- Likewise, animal health practices are very low: the great majority of HHs (76.85%) do not use vaccines, a few (15.27%) raise their own boar and natural reproduction is widespread, resulting in high fatalities including at birth (2-3 out of 8-9 per litter). Only 32.41% of HHs are visited by DAFO staff at best every 6 month (10.19%), and even less by VVWs (13.43%, at best every 6 month) although they exist in half the villages surveyed.
- This discrepancy between rudimentary pig raising systems and the socio-economic importance of pig production situation can be explained by 3 main factors/constraints:
  - **A limited family workforce**, concentrated on work-intensive and low-yield rain-fed rice production over 8 to 10 months a year. In this context, free roaming remains the most cost and time-competitive option.

Thus, animal feeding is one of the mains constraints to the transition towards penning schemes, although the great majority of HHs are willing to invest in biosecurity systems (92.59%) and restocking (96.3%), while a significant but lesser share of them would accept to spend more time for their pigs (67.59%);

  - **A lack of technical knowledge (and access to quality animal health services)**, on animal health, animal husbandry and biosecurity techniques, but also on financial literacy and business planning;
  - **A lack of market information knowledge**: the great majority (79.63%) of HHs sell live pigs to middle-men (who set the prices) at farm gate, and the remaining stock to neighbors (42.59%), while direct sales at local markets is done by very few HHs (1.85%); the decision to sell largely depends on their cash needs at the moment instead of commercial purposes. Subsequently, the great majority of HHs (90.74%) do not slaughter their pigs themselves.

Field data collection & analysis
Results from data collected in Southern Laos (4/4)

- Potential hypothesis on main ASF pathways in the area:
  - The role of wild boars is assumed to be limited in the area: only 22,39% of HHs acknowledge the presence of wild boars around the village, and even less (9.72%) declare hunting wild boars;
  - The role of contacts between free roaming domestic pigs is certainly high, especially due to domestic boars travelling on relatively long distances for mating, as well as the proximity to roads, *although those factors may be limited by a lesser human and animal population density (and farm workers) compared to other countries*;
  - **It can be however assumed that the main vector of ASF transmission in Lao PDR can be attributed to the movement of pigs by middle-men (collectors, and often butchers and/or slaughterhouse operators), who play a central role in livestock value chains.**

As a result, ASF prevention and response strategy should adopt a global approach to biosecurity, not only focusing on farmers' pig raising techniques but also on value chain intermediaries, and especially **middle-men** and ultimately **slaughterhouses**, through both passive (information, training, economic and legal incentives, local traceability schemes, etc.) and active (controls, penalties, etc.) measures.

- Key opportunities:
  - Relatively simple pig value chain structure compared to other neighbour countries;
  - ASF is not only impacting farmers, but also collectors whose activity was dramatically reduced in some areas, creating a potential space for collaboration;
  - Promoting biosecurity would improve pig husbandry techniques (animal feeding, crop-livestock integration, reproduction, fattening, animal disease prevention and reduction of the use of antibiotics – AMR –, etc.), and **could eventually generate more value-added for both farmers and middle-men**.

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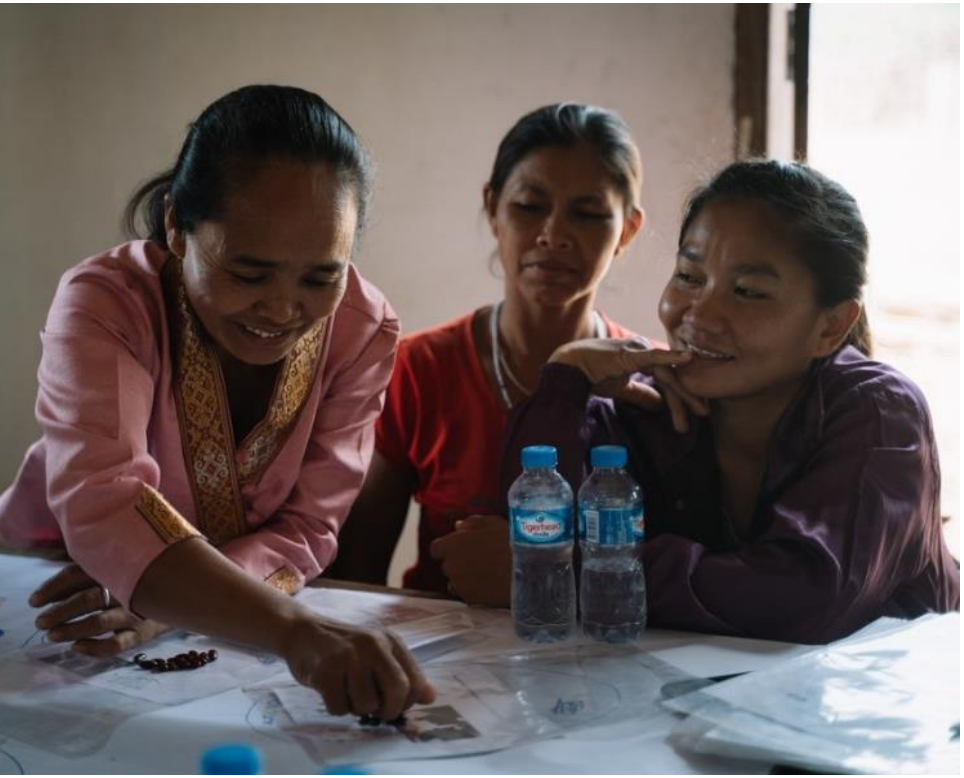
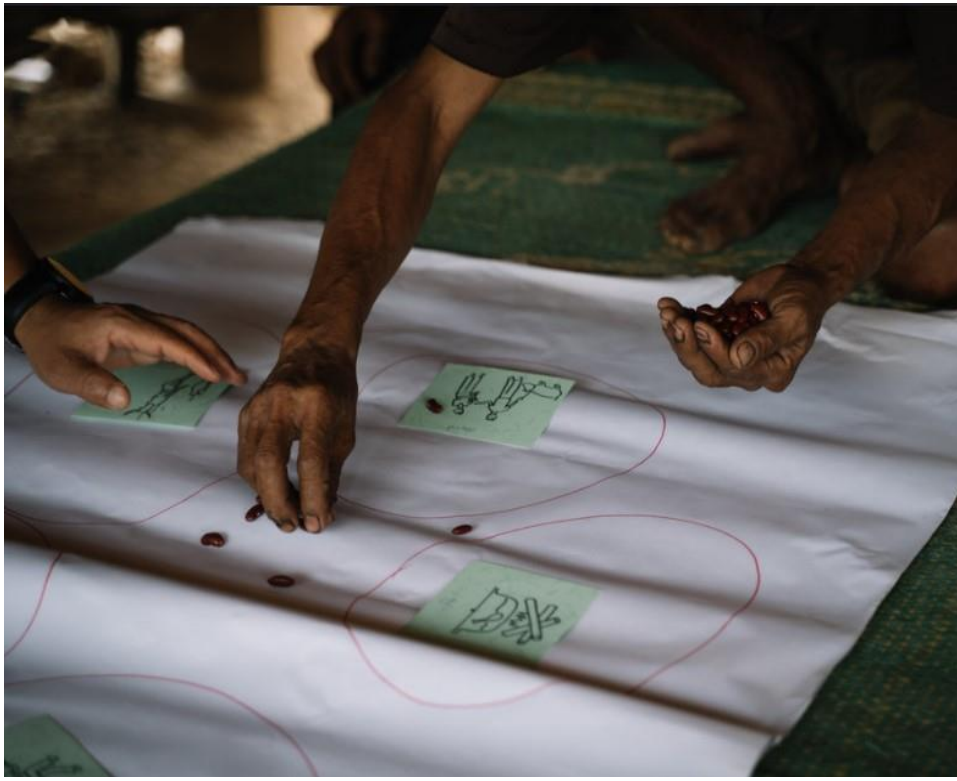
Technical orientations for field actions





Technical orientations
ASF pilot project in ToomLarn district (1/4)

- Since 2019, AVSF has been actively working on addressing ASF in Lao PDR in the field, despite a tremendous lack of funds in this sector:
  - In March 2020, a fundraising campaign and advocacy video was launched in France to finance a pilot project on ASF in AHAN project area, aiming at (i) providing specific trainings on biosecurity to VVWs and DAFO staff, (ii) developing biosecurity models at farm/village levels, (iii) establishing quality and bio-secured local value-chains for pork through simple traceability schemes and PPPs and (iv) protect local pig breeds;
  - In October 2020, consultations were conducted with MAF-DLF: Saravane province, and especially ToomLarn district, was mentioned as a priority area of intervention, due to the importance of pig raising, the high prevalence and incidence of ASF, and the fact that this province (and ToomLarn district more specifically) was the first and most affected by the virus since June 2019;
  - In November 2020, a field mission was organized in ToomLarn district with the support of MAF-DLF to confirm the data collected in August 2020 (*see last chapter*) and define the outlines of a first pilot project, in concertation with target beneficiaries and local authorities.
- Main preliminary conclusions:
  - Focus group discussions (with farmers, value chain intermediaries and local authorities) and field observations largely corroborated the data collected in August 2020 (*see last chapter*);
  - An “ASF outbreak contingency plan” was strictly implemented by local authorities in the 12 affected villages of ToomLarn district: (i) creation of a local ASF task force (including AVSF field staffs), (ii) inspection, sampling and lab testing, (iii) zoning and systematic culling within the red circle zones (12 villages out of 37), (iv) ban and control of movement of pigs, (v) training of DAFO staff, (vi) public communication;

Technical orientations
ASF pilot project in ToomLarn district (2/4)

- In January-February 2020, restocking was allowed again in red zones but farmers did not adopt biosecurity practices in the meantime: there is a great challenge to provide technical support to pig raisers in this regard to prevent or mitigate the impacts of potential new outbreaks (risk of over-indebtedness, already recorded for some pig raisers groups, and of destocking of other livestock including cattle);
- However, all pig raisers would not be able (or willing) to adopt those biosecurity practices: a proportional (dual) and participatory approach should be implemented, focusing on "model pig raisers". In this regard, solutions should also be found to prevent model pig raisers in red zones from systematic culling (farm by farm approach like in Vietnam?) and create appropriate incentives (local certification scheme?);
- ToomLarn district and Saravan province were significantly affected by the ASF outbreaks, which totally disorganized the pig value chains: the demand largely exceed the offer (despite higher prices and consumer fears about ASF), especially for domestic breeds, and collectors (from ToomLarn and Saravan), struggle to find suppliers from other districts/provinces. This geographic extension of collectors' operations could increase the risks of ASF inter-provincial transmission in case of new outbreaks;
- On the other hand, this market gap could also create commercial opportunities between local collectors and local model pig raisers: during the mission, a model smallholder pig farm was identified and could serve as a demonstration plot for trainings as well as a beneficiary of a first pig contracting scheme; besides, the group of collectors of Saravan (also operating the 2 slaughterhouses and meat market of Saravan city) showed great interest in collaborating with pig raisers supported by the project in ToomLarn district ;

The key will be to collectively identify solutions ensuring a good balance between key incentives (economic, social, legal, etc.) for pig raisers and middle-men, and necessary but proportional coercive measures (local regulations at village and district levels).

Technical orientations
ASF pilot project in ToomLarn district (3/4)

- Preliminary project methodology and key ideas (underwork):
  - Scope: 12 priority villages (from the 12 red zone circles)
  - **Participatory epidemiological assessments:**
    - Experimentation of "Village Participatory Biosecurity Assessment Plans": identification and understanding of main pathways, categorization of risks, identification of appropriate local solutions;
    - Investigation of a "District Biosecurity Value Chain Plan", through focus group discussions (and collective information/training) between pig raisers, middle-men and local authorities as an extension the Village Plans and as a way to promote market linkages and multi-stakeholder coordination.
  - **Farmer-to-farmer practical trainings:**
    - Additional training of AHAN-trained VVWs (ongoing) on pig biosecurity and ASF, on animal health monitoring (traceability, AMR) and on and business planning;
    - Support to the creation of a "demonstration pig farm" in ToomLarn district;
    - Technical training of pre-identified "model pig raisers", on biosecurity systems, on associated improved husbandry practices (feed production, reproduction, fattening, AMR, etc.) and on business planning;
    - Creation of voluntary "pig raisers groups", around "model pig raisers", for selected interested farmers;
    - Farmer-to-farmer cross-visits within the district/province to visit other farms and market intermediaries;
  - **Restocking of local pig breeds:**
    - Livestock bank (boars, sows) around "model pig raisers" and "pig raisers groups";
    - Collective microfinance schemes (around AHAN-supported Village Funds or "pig raisers groups");
    - Implementation of biosecurity schemes: use of sentinel pigs, quarantine, monitoring, etc.;

Technical orientations
ASF pilot project in ToomLarn district (4/4)

- **Restarting of local pig value chains within the district/province:**
  - Market linkage with collectors and slaughterhouses (pilot and fair contracting schemes);
  - Investigation of local certification (and traceability) schemes.for model pig raisers;
  - Concertation with local authorities on administrative aspects and potentials incentives.
- **Technical dialogue with local authorities:**
  - Early detection and notification systems?
  - Local regulations at village level (with and without outbreaks)?
  - Social incentives (certification for “model pig raisers” or “model villages”)?
  - Differentiated zoning/culling strategies in case of outbreaks?
- **Public awareness campaigns at village and district levels:**
  - Development of communication tools on ASF and swine biosecurity adapted to different audiences, including towards customers (fears of human contamination);
  - Communication on lessons’ learned and innovations from the project .

➢ This final scope of activities will however depend on the final volume of funds collected.

- **Research-action (CIRAD-NUOL)** – *project proposal for additional funding under preparation*
  - Analysis of Knowledge, Attitudes and Practices (KAP) encouraging or restricting behavioral changes towards the adoption of biosecurity practices and good animal husbandry practices (GAHP) for pigs;
  - Co-identification of incentives to encourage behavioral changes, using participatory modelling methodologies (ComMod).

Selected bibliography
Technical guidelines & position papers

The following documents were quoted in this PPT presentation:

- *From Crisis to Action: Lessons' learned from COVID-19 for building a better future through sustainable livestock* (GASF MSP Online Meeting "Rest of Asia", September 2020) – link.
- *African Swine Fever: context, approach and update on activities* (OIE "ASF Coordination Virtual Meeting" #1, June 2020) – link.

Additional useful resources:

- *Community-Based Animal Health Workers (CAHWs): Guardians for quality, localized animal health services in the global South* (VSF International: Policy Brief, September 2018) – link.
- *Quality animal health arrangements: lessons from the AVSF experience* (AVSF, 2011) – link.

Thanks for your attention !

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