

Improving Pig Biosecurity and African Swine Fever (ASF) Control in Four ASEAN Countries: Vietnam, Laos, Cambodia and the Philippines

STDF/PG/798

END OF PROJECT REPORT



11 Sept 2025

PROJECT INFORMATION

STDF/PG/798	
Title	
Improving pig biosecurity and African Swine Fever (ASF) control in 4 ASEAN countries: Vietnam, Laos, Cambodia, Philippines	
Implementing agency	
Ecole Nationale des Services Vétérinaires - France Vétérinaire International (ENSV-FVI)	
Partners	
IFIP, French Institute of Pig Chain	
Start date	
01/02/2022	
End date	
31/01/2025, extended to 31/03/2025	
Beneficiary/ies	
Vietnam, Laos, Cambodia, Philippines	
Budget	
Project Total Value:	\$ 1 009 379 (+ € 806 372 from French Ministry of Europe and Foreign Affairs)
STDF contribution:	\$ 900 179
Other contribution:	In-kind contribution: \$ 99 680 Co-financing: \$ 9 520

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LIST OF ABBREVIATIONS

AH: animal health

AVSF: Agronomists and Veterinarians Without Borders

BAI: Bureau of Animal Industry (Philippines)

BIG: Biosecurity in pIG production

CAHWS: Community Animal Health Workers

CGAAER: Conseil Général de l'Alimentation, de l'Agriculture et des espaces ruraux (French High Council for Food, Agriculture, and Rural Areas)

CIRAD: French Agricultural Research Centre for International Development

COPIL: comité de pilotage / steering committee

DAH: Department of Animal Health (Vietnam)

DLF: Department of Livestock and Fisheries (Laos)

ENSV-FVI: National School of Veterinary Services – France Veterinary International

FAO: Food and Agriculture Organization

FSPI: Solidarity Fund for Innovative Projects, Civil Societies, Francophonie and Human Development (France)

GDAHP: General Directorate of Animal Health and Production (Cambodia)

IFIP: French Institute for Pig and Pork Industry

MASA: Ministry of Agriculture and Food Sovereignty (France)

MEAE: Ministry for Europe and Foreign Affairs (France)

NLU: Nong Lam University in Vietnam

NUOL: National University of Laos

VNUA: Vietnam National University of Agriculture (Hanoi)

STDF: Standards and Trade Development Facility

WOAH: World Organisation for Animal Health

The 4 institutions in bold are the departments of the Ministries of Agriculture in charge in each country of the Veterinary Services at central level, at the time of the project

1. EXECUTIVE SUMMARY

The BIG program ("Biosecurity in Pig Production"), implemented between 2022 and 2025 in Vietnam, Laos, Cambodia, and the Philippines, aimed to strengthen biosecurity in the pig sector and improve control of African Swine Fever (ASF).

This disease, which appeared in Asia in 2018, decimated millions of pigs and disrupted both national and regional markets. In response to this health and economic crisis, France, through ENSV-FVI and its partners, coordinated a regional initiative financed by two complementary donors: the STDF (Standards and Trade Development Facility), with a budget of USD 900,179, and the French Ministry of Europe and Foreign Affairs (FSPI), with EUR 806,372.

The lead implementing agency was the National School of Veterinary Services – France Veterinary International (ENSV-FVI), supported by the French Institute for Pig and Pork Industry (IFIP), the French Agricultural Research Centre for International Development (CIRAD), and Agronomists and Veterinarians Without Borders (AVSF).

The budgetary structure reflected complementarity: the STDF mainly financed training activities, while the FSPI supported field studies, farmer surveys, and community awareness campaigns. STDF-funded expenditures reached 94.5% of the allocated envelope.

The project targeted five main categories of beneficiaries: (i) pig farmers (from large commercial farms to family-level subsistence units), (ii) national and local Veterinary Services, (iii) community animal health workers (CAHWs), (iv) professional organizations (farmer representatives, cooperatives, veterinary associations), and (v) universities and veterinary training centers. This diversity ensured a broad and sustainable dissemination of the project's achievements.

Training activities reached several actors in each of the countries. Face-to-face sessions were organized for official veterinarians in each country: two in Vietnam (covering all 60 provinces), as well as in the Philippines, Laos, and Cambodia. Satisfaction rates were very high (93–96%), with female participation ranging from 10% in Laos to 47% in the Philippines. To ensure sustainability, these trainings of trainers were complemented by distance learning programs (like e-CERISE).

For the farming sector, the project designed and disseminated biosecurity training modules, which were made available as e-learning tools on an open-access platform. By August 2025, this platform had already attracted 507 unique users. Expert missions helped identify needs and produce contextualized training materials (photos, videos, animations). Specific training sessions were also delivered to community animal health workers. These training courses, combined with workshops and awareness-raising campaigns, ultimately reached over 1,400 attendants (of whom over 1,000 from the private sector, 150 public Veterinary Services officers, 57 village workers, and the remaining are partners of cooperation).

Concrete outcomes included improved dissemination of biosecurity best practices, stronger coordination between national and local veterinary authorities, and increased involvement of universities in continuous training. While regional ASF health indicators (incidence and trade flows) show some improvements but do not reflect the specific contribution of the project, the BIG program laid the foundations for a more sustainable response to the disease.

The project's impact is also evident in several unexpected results. Strategic partnerships were developed with FAO, WOAHA, and the academic and research community. These collaborations helped align the project with international recommendations, for example regarding "disease-free zones" or the integration of social sciences into biosecurity measures. In addition, budget reallocations made it possible to fund extra training sessions, further strengthening local ownership.

Beyond the numbers, the project fostered a regional dynamic by exchanging practices, stimulating cooperation among ASEAN countries, and raising awareness in rural communities. In the medium term, its impact lies in the appropriation of the tools developed, the consolidation of skills, and the lasting integration of biosecurity into veterinary governance and farming practices.

Local partners (AVSF and CIRAD), who played an active role throughout the project, are well positioned to continue supporting Veterinary Services, including both the official authorities and the CAHWs, by applying and adapting the tools already produced. Universities and private actors are also encouraged to maintain and expand the inclusion of these biosecurity modules in their training programs.

Additional areas for development include continued support to the four countries in designing or updating their national ASF contingency plans, particularly through risk mapping, simulation exercises, and the establishment of emergency funding mechanisms. Strengthening these elements would help ensure that field teams have ready-to-activate SOPs for outbreak investigation, stamping out, compensation, and movement control, while also promoting regional convergence of contingency protocols for cross-border ASF threats.

In recent years, countries in the region have increasingly shifted away from sourcing livestock products from neighbouring states, turning instead to more distant suppliers. To help mitigate this trend, reciprocal trust among neighbouring countries must be reinforced, especially through bilateral guarantees on health certification for trade, harmonized cross-border control procedures, and the development of regional disease surveillance platforms and data-sharing agreements.

2. OVERVIEW

2.1 Project background

ASF Context and Regional Impact

ASF is a highly contagious and deadly viral disease affecting domestic pigs and wild boars, with mortality rates reaching up to 100%. Since its emergence in Asia in 2018, the virus had devastated pig populations across the region, causing unprecedented losses:

- **Vietnam** lost around **6 million pigs in 2019**, leading to a 20% decline in pork production and a surge in imports.
- **Laos** experienced outbreaks in **all 18 provinces in 2019**, prompting a sevenfold increase in pork imports.
- **Cambodia** recorded a **20% decrease** in overall pig production between 2018 and 2019, with small-scale farmers hardest hit.
- **The Philippines** lost **over 3 million pigs** by 2020, resulting in a 16% production decline and a national pork price crisis.

ASF's persistence destabilized pork markets, increased reliance on imports, and strained regional trade dynamics. Countries like Thailand—relatively unaffected by ASF—became primary exporters, while neighboring states struggled with supply deficits. Given that pork is the preferred protein source in the region and critical to rural livelihoods, ASF represented both an economic and food security challenge.

Regional Cooperation and Trade Integration

Given ASF's transboundary nature, the project emphasized a **regional approach** in line with ASEAN's objectives for deeper economic integration and enhanced SPS capacity. Southeast Asia's interconnected pig value chains required coordinated responses among neighboring countries to prevent disease spread, maintain food security, and stabilize pork markets.

Furthermore, the initiative aligned with **national and regional development strategies**:

- **Vietnam** sought to modernize its livestock sector under its **National ASF Control Plan (2020–2025)** and promoted disease-free production zones.
- **Cambodia** aimed to strengthen SPS controls to reduce reliance on imports and build local production capacity.

- **Laos** focused on improving laboratory quality, surveillance systems, and private-sector engagement.
- **The Philippines** prioritized biosecurity and ASF control as part of its agricultural modernization and export development agenda.

The project also supported the **“One Health” framework**, recognizing the interdependence of animal, human, and environmental health, especially in the post-COVID-19 context.

Partnerships and Stakeholder Engagement

The initiative leveraged a **public-private partnership (PPP)** model to integrate actors across the pig value chain. Two lead organizations coordinated implementation:

- **ENSV-FVI**: WOAHA Collaborating Centre specialized in training of official vets.
- **IFIP**: French technical institute with extensive expertise in pig industry innovation and biosecurity.

Collaborations with national veterinary authorities, laboratories, and international partners — including CIRAD, AVSF, FAO and WOAHA— were planned to ensure technical coherence and sustainable outcomes. By involving ministries of agriculture, the project aimed to harmonize policy frameworks and operational practices.

Expected Outcomes and Broader Impact

By improving biosecurity and farmer training, the project aimed to reduce ASF transmission and mitigate production losses, strengthen SPS compliance and facilitate safer regional and international trade.

2.2 Program objectives

The BIG program overall aimed to enhance the prevention and control of African swine fever (ASF) in South-East Asia, with a particular focus on strengthening biosecurity measures on farms.

More specifically,

- The co-funded **FSPI project** aimed to disseminate best practices towards improving farm biosecurity, based on field studies that identify areas requiring improvement. These studies, led by Cirad and AVSF, were intended to guide subsequent actions to be implemented through national authorities and public services, as well as rural stakeholders (producers, professional organizations, and village communities). These actions include feedback sessions in working groups, workshops, and training programs.

- The **STDF Project** aimed to secure trade in pork and pork products in the context of the spread of ASF in 4 ASEAN countries by training official veterinarians (SPS measures), farmers and pig operators (means of competitiveness and biosecurity) and laboratory staffs (diagnoses of ASF and other transboundary animal diseases) in order to facilitate trade which is a vector of economic growth for these countries and a guarantee of food security of the population that relies mainly on pork in their diet and as a means of subsistence.

The two projects complemented each other under the BIG program banner, sharing the same main immediate objective: to improve the implementation of biosecurity measures for the prevention and control of ASF. Their activities were interconnected and reinforced each other; in particular, the outputs from the FSPI project (study results) were used to design the training courses within the STDF program.

2.3 Program beneficiaries

- The program targeted five main types of beneficiaries (similar for the 2 projects):

- Pig farmers: This includes both commercial farmers and owners of smaller, subsistence family farms.
- Veterinary Services: These services from the four beneficiary countries were engaged at both the central level, through the designated national contact points and Chief Veterinary Officers (CVOs), as well as at the local level, through agents working in provinces or districts.
- Community Animal Health Workers (CAHWs): As veterinary para-professionals, CAHWs play a crucial role in rural areas, where public and private veterinary services may be limited. They provide first aid, conduct epidemiological surveillance (early warning), communicate with villagers, and monitor biosecurity measures. The project focused on enhancing their technical training and worked with national authorities to explore ways to institutionalize and solidify their role in supporting, rather than competing with, existing veterinary services.
- Professional Representatives: This group includes veterinary associations, cooperatives, drug sellers, and others who provide advisory services to livestock farmers.
- Universities and Training Centres: Primarily veterinary institutions, these were key for disseminating training tools developed during the project, ensuring their adoption and continuation beyond the project's duration.

2.4 Program Specificities

The BIG Program promoted an innovative approach through the following key elements:

- Adoption of an integrated approach: The program combines exploratory missions, field studies, collaborative workshops, and training sessions to enhance the capacities of stakeholders.
- Emphasis on social and human sciences (SHS): In addition to the technical approach, the program highlights the importance of social and human sciences to address behavioural and community dynamics, ensuring a holistic solution.
- Public-private partnership: The program fosters collaboration between the public, private, and academic sectors. This PPP approach was favoured throughout the project, both at the French implementing partners level and in the beneficiary countries.

3. PROJECT IMPLEMENTATION

3.1 Program design

The BIG Program combined two **distinct projects**, each supported by a different donor:

- The **FSPI Project No. 2022-87**, titled "Reinforcing Biosecurity Measures in the Pork Sector in Cambodia, Laos, the Philippines, and Vietnam to Combat the Spread of African Swine Fever (ASF)," was funded by the *Fonds de solidarité pour les projets innovants, les sociétés civiles, la francophonie et le développement humain* (FSPI) under the Ministry for Europe and Foreign Affairs (MEAE). The FSPI contributed **€806,372** to the BIG Program, primarily supporting field surveys, and covered the period from April 25, 2022, to November 30, 2024, including a six-month extension.
- **The STDF Project (PG/798)**, titled "Improving Pig Biosecurity and African Swine Fever (ASF) Control in Four ASEAN Countries: Vietnam, Laos, Cambodia, and the Philippines," was financed by the Standards and Trade Development Facility (STDF). The STDF contributed **\$900,178** to the BIG Program, primarily financing training-oriented activities. This funding spanned from January 2022 to January 2025.

3.2 Program implementing partners

The BIG program was carried out for STDF-funded components with the active participation of the following organisms:

- **ENSV-FVI**: France Vétérinaire International (FVI) is a cooperation body in the field of veterinary public health for the French Ministry of Agriculture (MASA), but ENSV is also the national school for initial and continuous training of official veterinarians, and a WOAH collaborating centre.

- **IFIP** (Institut Français du Porc): Dedicated to research and development in the pig farming sector, with a focus on improving animal health, welfare, and the efficiency of pork production systems.

The FSPI project co-funded activities involved other French partners:

- **CIRAD** (Centre de coopération internationale en recherche agronomique pour le développement) research institute: specialized in agricultural research and development, particularly in the tropical and subtropical regions, focusing on improving agricultural systems and food security.
- **AVSF** (Agronomes et Vétérinaires Sans Frontières), NGO: aims to improve the livelihoods of rural communities, with a focus on sustainable agriculture, veterinary services, and food security in developing countries.

3.3 Program Governance

FVI, responsible for coordinating international veterinary projects and ensuring the effective implementation of strategies to improve animal health and food security worldwide, oversaw the leadership and supervision of the BIG program, in alignment with the MASA strategy for Europe and International.

FVI appointed Mr. Loïc Evain as the BIG Program Leader. Mr. Evain is the Inspector General of Veterinary Public Health at the High Council for Food, Agriculture, and Rural Areas (CGAAER), and a former Chief Veterinary Officer and WOAHA Delegate of France at the French Ministry of Agriculture, Food Sovereignty, and Forestry (MASAF). He worked closely with Mr. Cyril Pietruszewski, FVI Chargé de Projet, who was in charge of the BIG program.

Additionally, the two French Agricultural Advisors (CAAs), based at the French Embassies in Hanoi (covering Vietnam, Laos, and Cambodia) and Singapore (covering the Philippines), respectively, played a key role in facilitating communication between project stakeholders and the relevant authorities in the beneficiary countries.

From the beneficiary countries, national program coordinators were appointed to support the implementation of various program activities, in accordance with the decisions of their Chief Veterinary Officers (CVOs).

Regarding the **program management**, a joint Steering Committee (COPIL) for both projects under the BIG program was established, to jointly and mutually oversee the implementation of the two operational frameworks. The COPIL provided a platform for coordination, decision-making, and ensuring alignment across both projects. The COPIL met:

- At the kick-off meeting in June 2022 in France (presentations and meeting minutes are available).
- During a face-to-face COPIL meeting in Hanoi in April 2024, which involved representatives from all four beneficiary countries (meeting minutes are available).

Additional **Steering Committee meetings** were held under both projects, including:

- Bilateral videoconference meetings with the Chief Veterinary Officers (CVOs) and technical coordinators, notably in January and February 2023, when operational action plans were presented.
- A dedicated Steering Committee for the French component, which met monthly. For instance, the 25th COPIL for the French part was held in September 2025. This committee included the four main partners of the project team (ENSV-FVI, CIRAD, AVSF, and IFIP) as well as the project leader. Donors were invited to these meetings, but their attendance was not always consistent.

4. ACHIEVEMENT OF RESULTS

The detailed values of the indicators based on the project's logical framework are provided in Annex 1.

4.1 Project goal and outcome level results

4.1.1 Project goal

The project's main goal in the logframe was "Securing trade in pork and pork products in the context of the spread of ASF in 4 ASEAN countries".

The achievement of this goal can be reflected, as defined in the initial logframe, by two indicators:

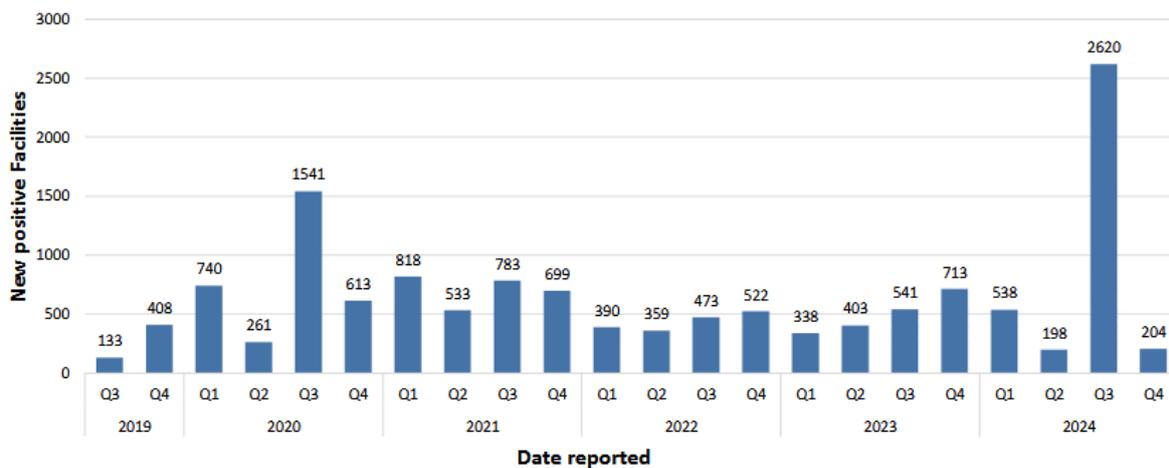
- a. Disease notifications
- b. Trade workflow

a) From the point of view of animal health indicators, the elements available are the notifications of disease cases by each country to WHOA, which feed the WAHIS database. These can be supplemented by data and reports put online by the countries themselves.

Laos and Cambodia stopped notifying to WOA in 2020 and 2019 respectively, as the situation had not yet been brought under control, and case notification has not resumed since.

As for the Philippines, the sanitary situation continues to fluctuate (see incidence rate below).

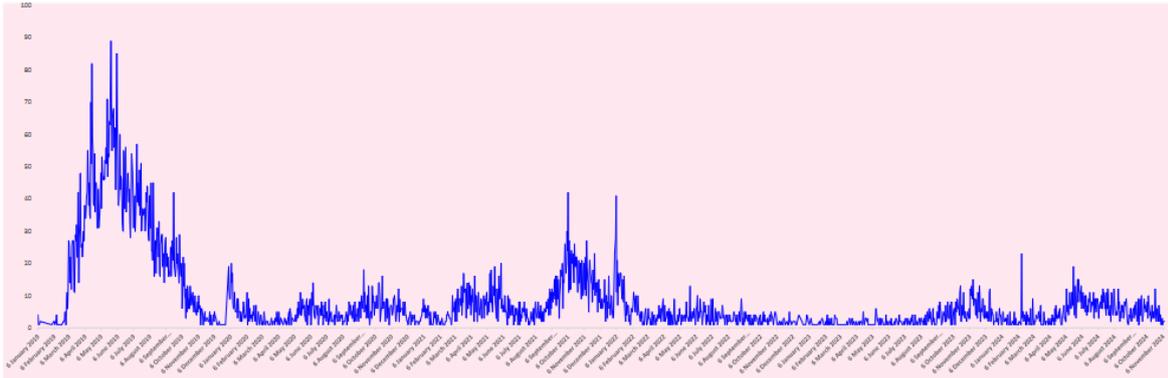
Quarterly Sum of ASF Cases reported from New Facilities (August 2019 - November 2024)



Evolution of ASF incidence in the Philippines. Source: WOA, rr-Asia (https://rr-asia.woah.org/app/uploads/2024/12/Philippines_poster.pdf)

In Vietnam, a gradual reduction in outbreaks had begun between 2021 and 2023, but there has been a recent increase in 2024, also due to new ASF virus genotype resistant to current used vaccines¹.

¹ This scientific article explains the evolution of the resistance to ASF vaccines in Vietnam: <https://www.mdpi.com/2076-393X/12/10/1114>



Most outbreaks were caused by ASFV type II

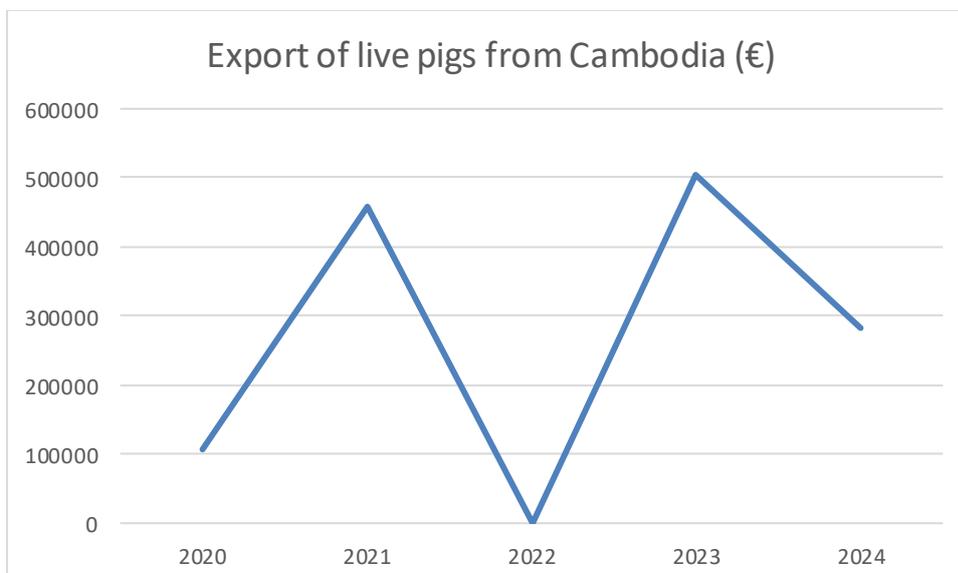
- First detection of ASF on 01 Feb 2019
- In 2019: > 8,500 infected communes in 63/63 provinces; 6 mil pigs culled
- In 2020: 1,596 outbreaks in 50 provinces; 86,462 pigs culled
- In 2021: 3,029 outbreaks in 59 provinces, 279,910 pigs culled
- In 2022: 1,229 outbreaks in 53 provinces, ~ 59,000 pigs culled.
- In 2023: 714 outbreaks in 45 provinces with 34,551 pigs culled
- In 2024: As of 10 November, 1,486 outbreaks in 48 provinces, 83,058 pigs culled

Source: WOA, rr-Asia (https://rr-asia.woah.org/app/uploads/2024/12/Vietnam_poster.pdf)

From a quantitative point of view, therefore, we cannot claim that the project has had a short-term positive impact on disease control, contrary to the (ambitious) initial goal.

b) Regarding trade workflow, based on the Trade Data Monitor application²,

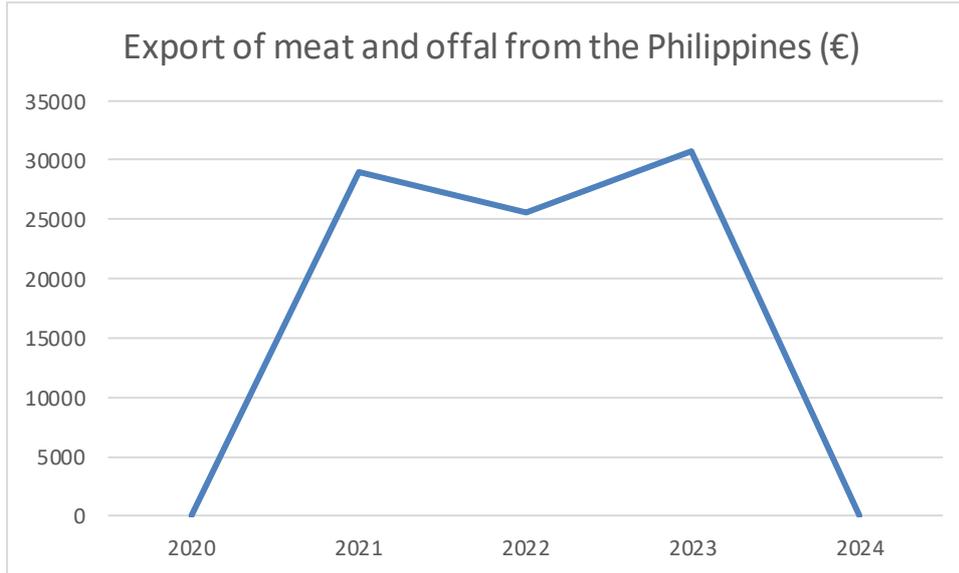
For Cambodia, on the pig sector, only exports of live animals are officially registered:



The Philippines exports a limited amount of meat in the pig sector:

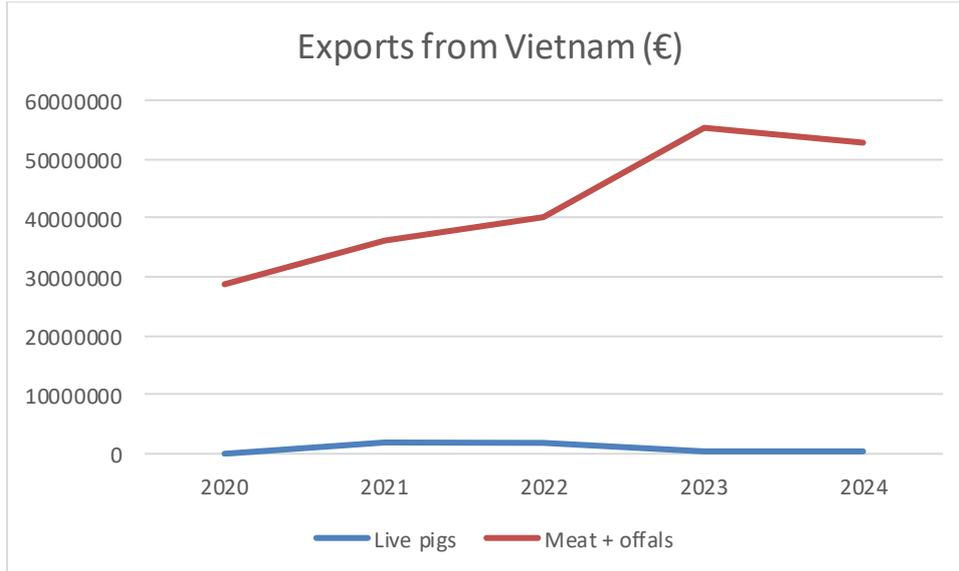
² <https://tradedatamonitor.com/>

Trade Data Monitor publishes monthly trade statistics from over 115 countries, that represents 99% of global trade.



The illustration of the project's goal in terms of trade flow indicators is not relevant if we look at export data for the Philippines, Laos (no official data) and Cambodia, which export too little pig products to be representative.

Vietnam's export levels, which are more significant (in particular meat products) have experienced a certain increase over the years 200-2024.



Globally, it's not easy to highlight the project's specific contribution through trade indicators. Indeed, the project's impact should be looked at from 2025 onwards, as most of the raising-awareness activities were implemented in 2024 (trainings, campaigns). However, the ASF crisis has in some cases considerably altered the landscape of trade flows in the ASEAN region.

For instance, in 2020, 90% of imported meat and offal in Cambodia was coming from Thailand. This dramatically changed since 2021 (only 6% imported meat from Thailand), despite stable bilateral political cooperation. In 2024, the 3 main suppliers of meat for Cambodia were the USA (25%), China (23%), and Brazil (22%), which is not in favour of a regional trade.

The same situation is seen in Vietnam's supply of live pigs: while it came almost exclusively from Thailand in 2020, it later shifted to being sourced mainly from European countries. This is not the case for the import of meat and offal by Vietnam, mostly and consistently from Russia and Brazil. Likewise, the Philippines, which sources meat rather than live pigs, has maintained a supply pattern that is still dominated by the Americas and Spain.

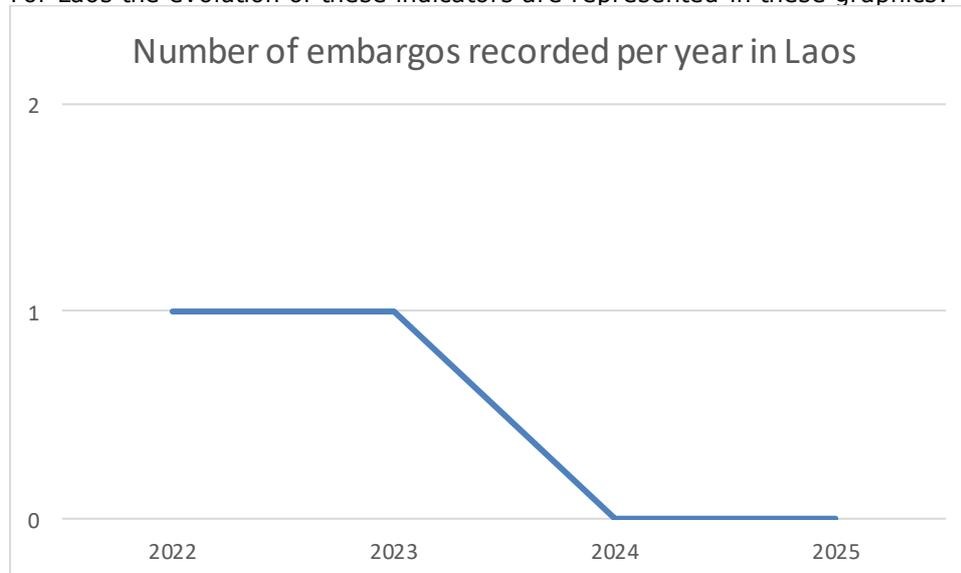
4.1.2 Project outcomes

The first and main outcome was to "Improve implementation of biosecurity measures to control ASF across much of the value chain".

For this outcome, 5 indicators were initially defined: evolution in the number of contingency plans implemented; number of embargos of pork; illegal trade flows diverted; number of zoning implemented; and the number of WAHIS notifications).

Regarding ASF disease notifications, the dates are the ones indicated in the § 4.1.1 supra. Data for the other indicators were transmitted by Laos³ and Cambodia⁴. For Cambodia they give only information for the recent period (2024-2025), which doesn't allow to compare trends⁵.

For Laos the evolution of these indicators are represented in these graphics:

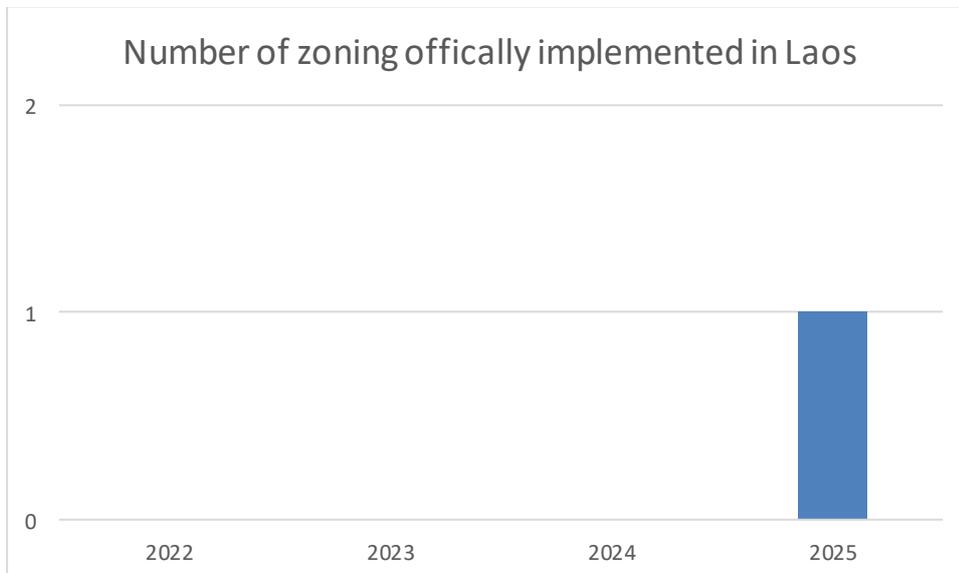
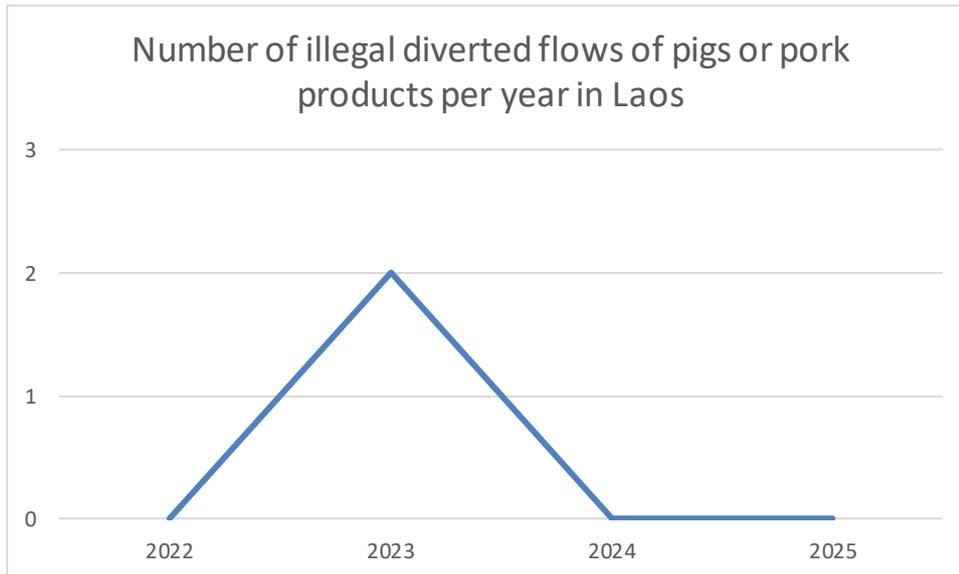


This first graph shows a positive trend, based on the published information found for Laos.

³ Source : published articles (thanks to AVSF representation in Laos)

⁴ Thanks to the BIG program focal point at GDAH

⁵ In Cambodia, there has been 2 embargo periods over 2024 on frozen pork products, and 20 recorded cases involving illegal animal products (but in total with poultry, porck, and Beef)



These 2 last graphs give figures that are too low to be representative. Official figures claiming no reported case between 2020 and 2024 raises questions. This could, however, be a sign that existing cases are beginning to be taken into account.

In general, for the indicators of this outcome, the sources of information are disparate, probably not exhaustive and/or the figures are too low to allow any tangible trends to be identified.

This may also indicate that the indicators chosen to target this outcome were not sufficiently representative of the project's specific impact. For this reason, the rest of the report focuses on the outputs of the project through the training and partnership activities implemented.

The second outcome was to develop or review National policies and strategies for better control of ASF in accordance with WOH standards.

The result of this outcome is reflected by the implementation of 2 national policies:

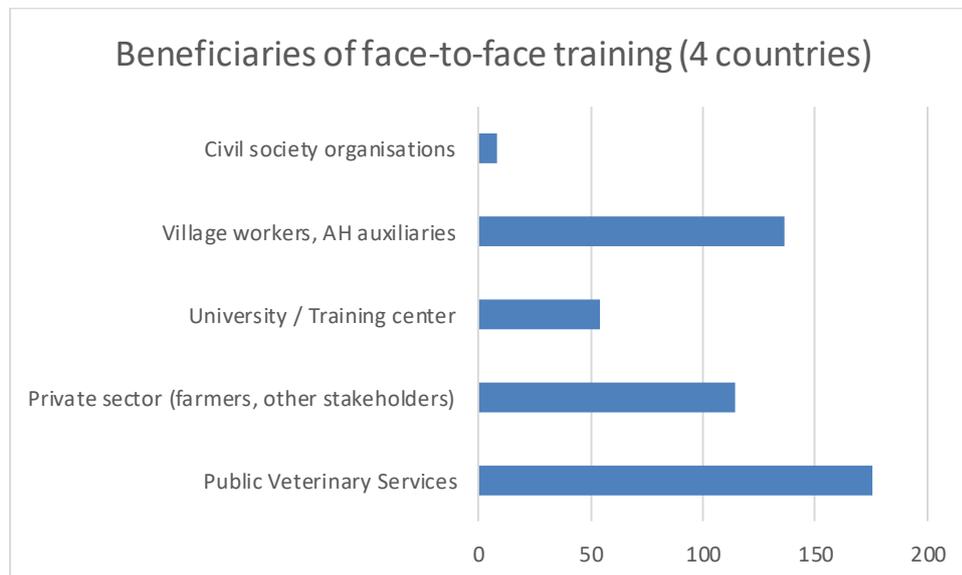
- The Circular 24 on Animal free-diseases certification in Vietnam, for which the project helped to identify application difficulties and ways of improvement (in particular via a survey of commercial

breeders co-funded implemented by Cirad on FSPI funds). The results of these surveys were used to train trainers during the training sessions in Vietnam (cf § 4.2.2).

- The organization of working groups with representatives of the Laotian Ministry of Agriculture and AVSF which led to the deployment of the national strategy for the prevention and control of ASF in Laos: after a discussion phase in May 2024, involving 15 participants from the authorities (DLF), a first version of the plan was prepared. A second phase in June 2024 extended consultations to the provinces (26 participants in total at this second session). The strategic plan for the prevention and control of ASF in Laos was finalized and officially approved by the Head of the Department of Livestock and Fisheries (DLF).

Nevertheless, the positive effects of the project may not yet be measurable, as the main training and awareness-raising activities were implemented in 2024, and their impact is geographically and organizationally partial:

- the trainings of trainers for STDF activities involved 175 representatives from the public sector (regional offices and national directorate in charge of animal health control) from every province of each of the 4 countries, as well as 35 representatives of the private sector (companies, farmers). On average, 32% of participants were female. Their dissemination is ongoing (cf § 4.2, §9 and annex IV).
- The training of trainers in village communities involved in the prevention of animal diseases through 136 village workers and animal health auxiliaries (both STDF and FSPI activities)
- In the field, awareness-raising campaigns and farmer cross-visits involved 928 farmers and 26 village workers. They remained limited to some provinces of Laos and Cambodia (11 villages in Viengkag district in Laos for the campaign, the following communes for cross visits in Cambodia: Ponley, Thluk Yul, Reussey, Chour, Khang, Tboug, Soay, Kampoul, Serey).

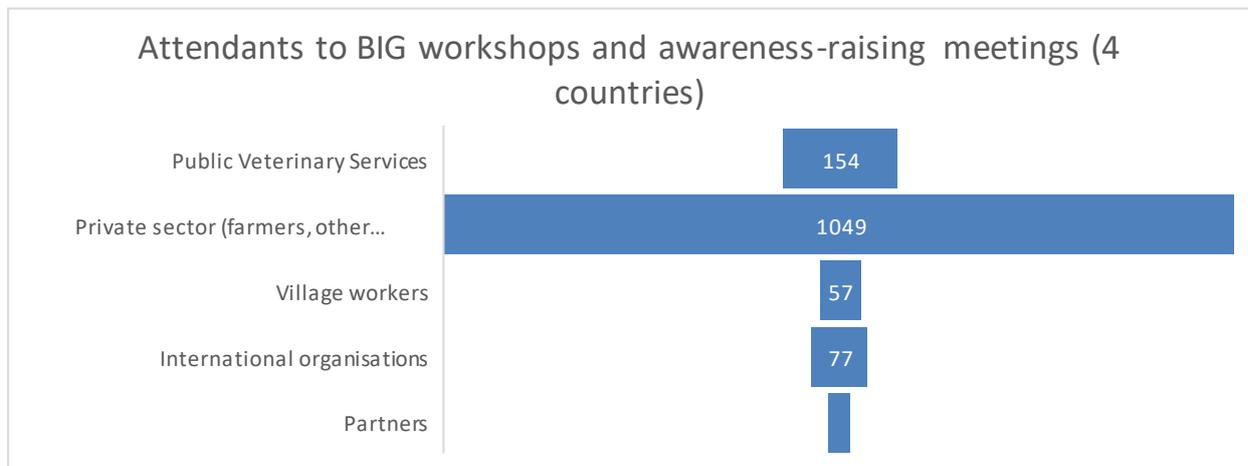


Very wide-scale dissemination would be required to achieve structural effects, combined with significant investment (particularly in terms of human resources in the public sector and financial compensation for culling losses for breeders, in particular in Laos and Cambodia).

However, thanks to its participative approach, and through regular links between the public and private sectors, the BIG program has achieved results that should help beneficiary countries to equip themselves with effective tools to combat the disease. These include :

- the very positive response to the training of trainers (§4.2.2), attended by 175 participants representing 100% of the administrative regions of the 4 countries, and their easy availability on internet (§ 9.2)
- working in partnership with universities, including those in Vietnam (NLU and VNUA) and Laos (NUOL), enabling training courses to be included in university curricula in certain cases (e.g. Laos: § 9.1)

- the updating and validation of the National Strategic Plan for the Prevention and Control of ASF, adapted to the Laos Department of Livestock and Fisheries (DLF), with the support of AVSF (FSPI activity)
- in Vietnam, the SWOT evaluation of the national action plan, highlighting the strengths, weaknesses, opportunities and threats associated with the implementation of national biosecurity measures (FSPI activity)
- assistance with the implementation of circular n°24/2022 by the Vietnamese authorities, on animal disease-free zones (FSPI activity).



4.2 Output 1: Develop the skills of official veterinarians in SPS and trade in a context of ASF prevalence

4.2.1 Activity 1.1: Adaptation of French training content on SPS and trade for the 4 partner target audiences

✓ Through exploratory field missions:

Before developing pedagogical engineering, IFIP and ENSV-FVI carried out exploratory missions on site in order to analyse the needs and the context in each country. These exploratory missions were initially planned by the IFIP team (activity 2.1). The ENSV-FVI was also involved, even though this was not initially planned, so that both partners of the project could understand the context and meet the partners before initiating the work on training tools, as well for public sector.

Between June and September 2022, a field mission of one week was conducted in each of the beneficiary country (Cambodia, Lao PDR, Vietnam, and the Philippines) to address ASF control and biosecurity measures in pig farming.

In Cambodia, the Cambodia Livestock Raisers Association (CLRA) expressed interest in tailored distance learning modules for farmers, with a focus on smartphone access and short, free content. The mission emphasized the need for targeted biosecurity measures and improved veterinary training, especially for small farmers. Challenges included a lack of veterinary supplies and limited internet access.

In Lao PDR, the District of Livestock and Fisheries (DLF) highlighted the need for better ASF control, simplified biosecurity procedures, and improved surveillance. The mission identified challenges like illegal pig product movement and limited laboratory capacity. A focus on training village veterinary workers and raising public awareness was recommended.

In Vietnam, the mission focused on training local veterinarians in biosecurity and ASF detection. The National Agriculture Extension Center (NAEC) proposed developing a model farm to promote biosecurity practices, while emphasizing the challenges of reaching smallholders and the importance of simple, effective training methods.

In the Philippines, the Bureau of Animal Industry (BAI) stressed the need to increase affordable pork production and improve biosecurity. The mission recommended strengthening ASF management strategies and implementing more hands-on biosecurity training for farmers. Key challenges included rising feed costs and unorganized small farms.

Across all missions, the focus was on improving training, biosecurity measures, and coordination to enhance pig farming resilience in the region.

To address these recommendations, workstreams were identified:

- Adapt training contents on biosecurity measures to small farmers, use effective training methods
- To do so, organize workshop with local experts to share the best practices to be recommended, based on the findings of AVSF and Cirad studies and surveys that would identify gaps in biosecurity implementation
- Organize raising-awareness actions at villages level, and trainings that would be accessible to both commercial farmers and smallholders.

✓ **Through the promotion of the results of AVSF and Cirad studies**

FSPI co-financed studies and in-field surveys in the 4 countries. These studies consisted in identifying the gaps in the farming practice or the obstacles to the implementation of some biosecurity measures to prevent ASF. The results of these studies provided recommendations for the authorities to whom the reports are addressed. But they also gave inputs to develop training contents (listed in Annex III):

- ➔ Inclusion of a specific section on these results in the face-to-face training programs (trainings of April and October 2024: see activity 1.2). For instance, one section of the training in Vietnam focused on the misperceptions of ASF pathways of transmission and another one treated the implementation of the regulation of the country (Circular 24), which has been the subject of a specific study by CIRAD.
- ➔ Edition of videos summarizing AVSF and Cirad studies, published on BIG YouTube channel⁶:
 - 2 videos describing how ASF arose in Vietnam and the government efforts to control the disease
 - One video summarizing the pig chain mapping analysis (identification of potential risk pathways) in Vietnam
 - One video exploring the identified challenges to better enhance fight against ASF in Vietnam (areas for improvement)
 - Two videos summarizing AVSF studies on Community Animal Health Workers (CAHWs), in Laos and Cambodia
 - One joint video for AVSF surveys on Knowledge – Attitudes and Practices of African Swine Fever and biosecurity measures in Laos and Cambodia.

These videos are also available in several languages on the BIG website page: https://www.big-program.com/studies_and_surveys (by choosing country flag).

⁶ <https://www.youtube.com/@BIGprogram-videos>

✓ **Through practice-sharing workshops (FSPI co-funded):**

In June 2023, a workshop was held in Manila to discuss the strategy and tools used in biosecurity in the Philippines. Nine participants from the Bureau of Animal Industry (BAI), three private veterinarians from the veterinary college of swine practitioners, and three district veterinarians participated. “Co-construction” workshops, which aim at sharing experiences from both side (French experts and beneficiary country) in order to share best practices to be implemented in the country using audit grids were conducted, focusing on existing mandatory and recommended control points. The workshop was well-received, but the BAI appeared hesitant to revise the existing regulatory texts and preferred an interpretation of the current grid.

A second similar workshop was held in Hanoi in October 2023, in the presence of the Vietnamese Chief Veterinary Officer (CVO), gathering representatives from the public and private sector from 3 countries (Laos, Cambodia, and Vietnam).

The work conducted during these workshops provided an opportunity to exchange views on the levels of knowledge and regulations in force in the 4 countries, and served as a basis for the training of trainers of public and private veterinarians organized in 2024 (§4.2.2), with a list of items to evaluate and a common set of obligations. At the end of these workshops, the beneficiaries had suggested not separating training for the public sector from that for private players (a mixed audience would be all the more conducive to exchanges).

	Workshop Manila June 2023 (IFIP/ENSV-FVI)	Workshop Hanoi October 2023 (IFIP/ENSV-FVI)
Public Veterinary Services	12	17
Private sector (farmers, veterinarians)	3	3
International organisations		3
Partners		2
Total	15	25
<i>ratio F/M</i>	<i>60%</i>	<i>16%</i>

4.2.2 Activity 1.2: Dissemination of training modules for the implementation and enforcement of SPS in trade (face-to-face trainings of trainers)



Vietnam

The BIG program approved Vietnam DAH's (Department of Animal Health) request to train representatives of all of the 63 Vietnamese districts on biosecurity in relation with recent Circular number 24 (on free-disease certification, including the approval of farmer's biosecurity plan).

A mission, co-funded by French FSPI (Fund for Innovation), took place in January 2024, about the implementation of a training unit in Vietnamese universities, allowed to share views on the training curriculum for veterinarians, and also helped in the preparation of the organization April training sessions as described below.

Training courses for trainers were deployed in Vietnam in April 2024. A first session was organised in partnership with the Department of Animal Health (DAH) of the Ministry of Agriculture, and the University of the South (Nong Lam University) in Ho-Chi-Minh (11-12 April) and a second in Hanoi with the Vietnam National University of Agriculture (VNUA). These 2 sessions brought together

- 67 participants from the Veterinary Services (DAH, RAHO and sub-DLPAH : 3 in HCM and 29 in Hanoi) who would be able to disseminate and deploy biosecurity audit and control tools in pig farming.
- 28 participants from the Universities (8 in HCM, 20 in Hanoi), which would allow a possible dissemination of training contents in the framework of initial and continuous trainings (see also §B/co-funded activities – training unit implementation).

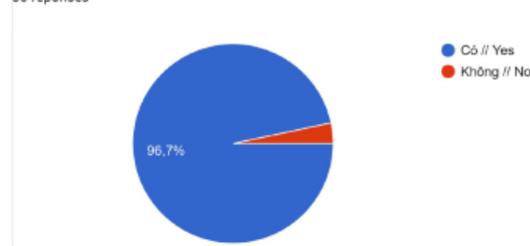
Three trainers (from IFIP, CIRAD Asia and ENSV-FVI) ran the courses, with contributions from two Vietnamese lecturers from the host universities, who are specialists in ASF.

The outputs of Cirad studies in terms of identified gaps and possible ways of improvement (summarised into videos, see activity 1.1) were presented by Cirad and ENSV-FVI trainers. These training courses involved the participants by using participatory teaching tools (such as quizzes).

In terms of possible dissemination, the participants expressed their willingness to disseminate the training to their colleagues (respectively for 96 % of the Hanoi session and 100 % of the HCM session participants).

Bạn có nghĩ rằng bạn sẽ phổ biến khóa đào tạo này ở cấp độ của mình (cho đồng nghiệp của bạn hoặc cho các bên liên quan mà bạn đại diện hoặc giám sát) không? // Do you think you will disseminate this knowledge to your colleagues or relevant parties you supervise?

30 réponses



Bạn có nghĩ rằng bạn sẽ phổ biến khóa đào tạo này ở cấp độ của mình (cho đồng nghiệp của bạn hoặc cho các bên liên quan mà bạn đại diện hoặc giám sát) không?

36 réponses



In the assessment form, many comments express a very positive opinion of the training and the wish to continue this type of training.



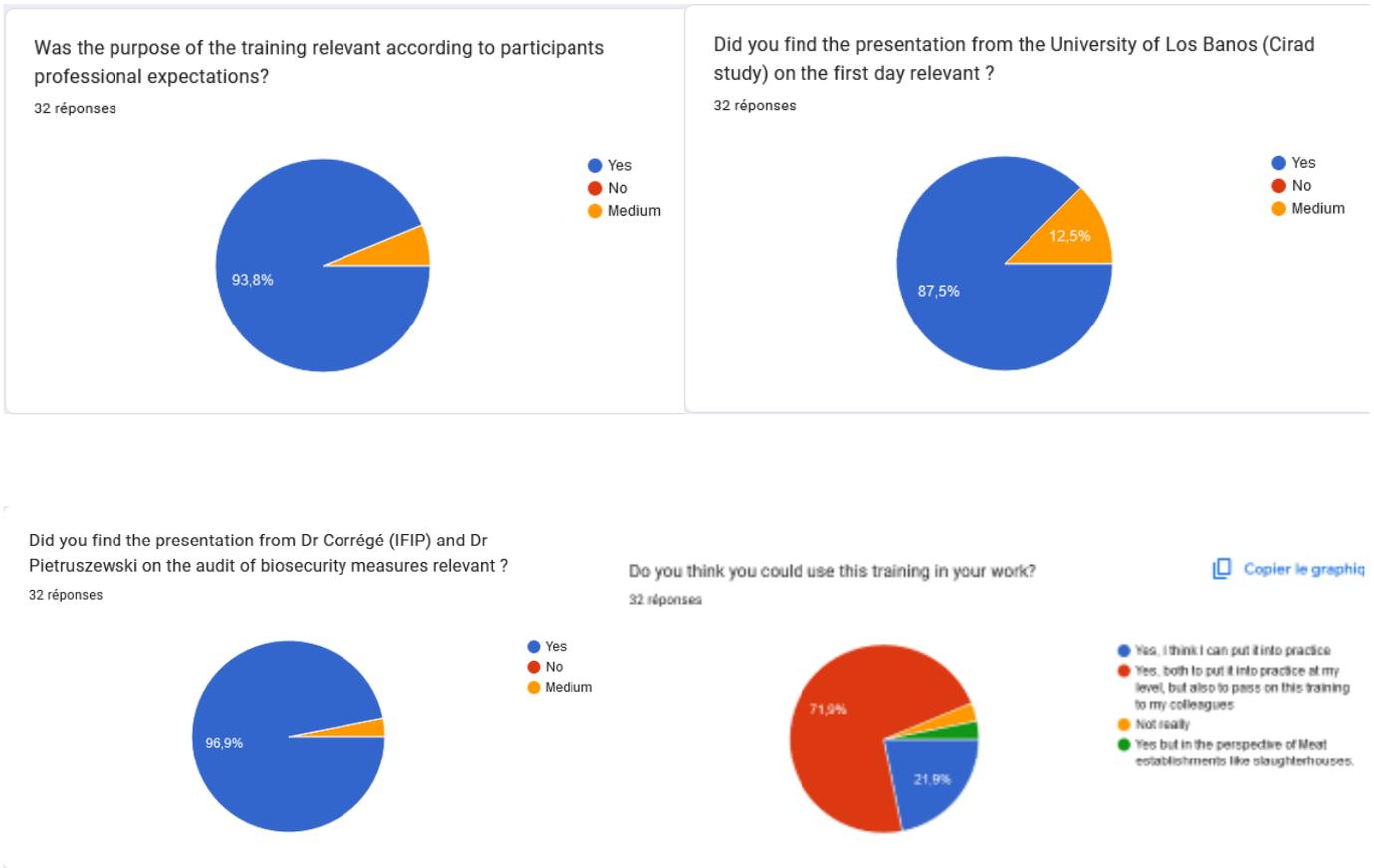
Philippines

The training was held on the 17-18 October 2024, with the logistical support of the ITCPH (International Training Center for Pig Husbandry), a training institute involved in most trainings on the pig chain for farmers.

32 participants attended this session of whom 26 involved in several services of the public sector (all 13 regions of the Philippines were represented).

	Philippines (IFIP/ENSV) ToT 17-18 Oct. 24
Public Veterinary Services	26
Private sector (farmers, other stakeholders)	2
University / Training center	4
Village workers, AH auxiliaries	
Civil society organisations	
Total	32
<i>ratio F/M</i>	<i>47%</i>

Here is an extract of the training assessment by the participants:



On this last graph, we see that most participants (93%) felt able to disseminate the training afterwards. The most common post-training comment was their will to have more insights on smallholder farms.



Laos

The training was organized on 21-22 October 2024, with the logistical support of AVSF (translation, preparation, invitations).

Of the 45 participants to the trainings, all 18 provinces of Laos were represented for the public sector (by the local authorities: District and Provincial Agriculture and Forestry Offices, who mentioned the interest of bringing them together), as well as the national level (DLF). Some representatives of the private sector participated (vendors, companies).

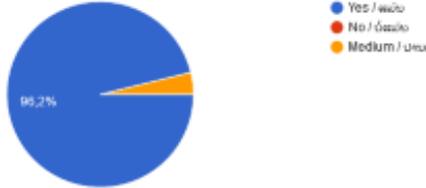
The training was deemed to be very useful (100% thought they would use it in their work), although a smaller proportion of participants thought they could redeploy it (27%) when compared to the Philippines.

The comments also included a desire for further training.

Did you find the main course from Dr Corrégé (IFIP) and Dr Rossel on the audit of biosecurity measures relevant ?

ທ່ານຄິດວ່າ ຜູ້ກຈຸດສູງກ ຈາກທ່ານ Dr Corrégé (IFIP) ແລະ Dr Rossel ກ່ຽວກັບການກວດສອບມາດຕະການຄວາມປອດໄພທາງຊີວະພາບ ແມ່ນກ່ຽວຂ້ອງກັບຄວາມຈິງຂອງການດ້ານບໍລິຫານຂອງທ່ານບໍ່?

26 réponses



Do you think you could use this training in your work?

ທ່ານຄິດວ່າທ່ານສາມາດນຳໃຊ້ຄວາມຮູ້ຈາກການຝຶກອົບຮົມຄັ້ງນີ້ໃນໜ້າວຽກຕົວຈິງຂອງທ່ານບໍ່?

26 réponses



Copier le graphique



Cambodia

The training was held in Kampot, on 24-25 October, still with the logistical support of AVSF.

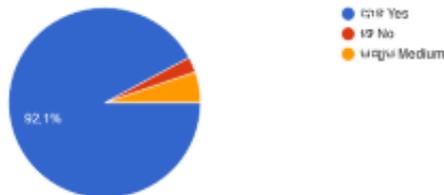
It was followed by 57 participants, 49 of whom received certificates: the private sector was represented by 4 companies, there were 3 university representatives, 3 CAHWs, 26 provincial vets (all 24 provinces were represented), and 8 officials from the central level (GDAH).

As in Laos, 93% thought they could use the training in their work, and 34% thought they could pass it on to their colleagues. The smallholder module video was released in its entirety and was well received. Some comments indicated a desire for more training for village workers.

ເປົ້າໝາຍຫຼັກຂອງການຝຶກອົບຮົມກ່ຽວກັບການກວດສອບມາດຕະການຄວາມປອດໄພທາງຊີວະພາບ ຈາກທ່ານ Dr Corrégé (IFIP) ແລະ Dr Rossel ມີຄວາມກ່ຽວຂ້ອງກັບຄວາມຈິງຂອງການດ້ານບໍລິຫານຂອງທ່ານບໍ່?

Did you find the main course from Dr Corrégé (IFIP) and Dr Rossel on the audit of biosecurity measures relevant ?

38 réponses



Do you think you could use this training in your work?

ທ່ານຄິດວ່າທ່ານສາມາດນຳໃຊ້ຄວາມຮູ້ຈາກການຝຶກອົບຮົມຄັ້ງນີ້ໃນໜ້າວຽກຕົວຈິງຂອງທ່ານບໍ່?

38 réponses



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4.2.3 Activity 1.3: Long-term sustainability of the training through a continue distance learning program and Residential Courses (ENSV-FVI)

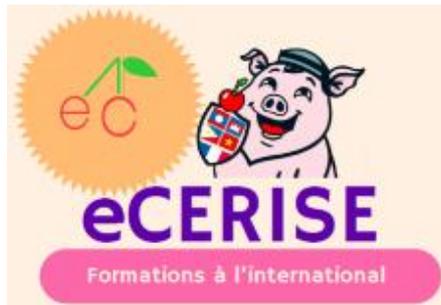
Thanks to STDF funding, two Residential Courses organized in France by ENSV-FVI were arranged for participants from the 4 beneficiary countries:

- ✓ In October 2022, a two-week residential course in France aimed to enhance leadership skills for Veterinary Services. The course focused on key concepts of leadership, developing leadership skills, and meeting local, national, and international institutions, including WOH

in Paris. Participants included 5 veterinary officials from Cambodia, the Philippines, Vietnam, and Laos. During the visit, ENSV-FVI conducted a questionnaire on inspection methodology, revealing that only Vietnam and the Philippines have established inspection grids, which require further development in all four countries and harmonized training to enhance follow-up processes and inspection practices across the countries.

- ✓ The Residential Course "Biosecurity and fight against transboundary animal diseases" was organised from 15 – 27 May 2024 (<https://ensv-fvi.fr/2024-international-training-offer/>). Over 18 counterparts from 15 countries participated while 6 of them were enrolled thanks to the BIG program (representing the 4 ASEAN countries). 3 main sequences during the training were developed (Training and change management support to biosecurity implementation, field visit in Bretagne, and special institutional opportunity during WOAH General Session in Paris). The CVO of the Philippines sent a letter of thanks to ENSV-FVI for this event.

<i>Disaggregated data:</i>	Cambodia	Laos	Philippines	Vietnam	<i>F/M ratio</i>
Residential Course "Leadership in the Veterinary Services" October 2022	2	1	1	1	40%
Residential Course "Biosecurity and fight against transboundary animal diseases" May 2024	1	2	2	1	17%



eCERISE ("online Continuing Education for veterInary Services") is an online accredited training program designed for the training of official veterinarians, in collaboration with French veterinary schools and WOAH (the program follows the WOAH PVS Pathway).

Each module is co-led by a pair of experts. This creates a comprehensive learning experience, thanks to the educational role of the instructor and the field experience provided by the official veterinarian.

For the 2023-2024 session, out of the 55 participants from the public sector, 6 project participants (including 3 women) - 2 from Cambodia and 4 from the Philippines - have validated e-CERISE learning modules, on International Trade, or Emergency Risk Management.

5 other participants (male) are progressing towards completion of the total eCERISE training program (one from Cambodia, two from Vietnam, and two from the Philippines). Laos did not propose candidates for the course. They have completed the required modules and presented a personal project to finish the whole training program. They finally received a certificate in February 2025.

4.3 Output 2: Develop the skills of farm managers and pig operators in strengthening the management of pig farms and the implementation of biosecurity measures

4.3.1 Activity 2.1: Mapping of needs for the design of modern pig farming modules and support to its implementation for the reinforcement of biosecurity measures in pig farming

The exploratory missions in the four countries, carried out by IFIP together with ENSV-FVI, enabled the project team to assess the situation and collect training needs. The design of the different

training tools was based on this diagnosis and on the results of studies financed by the FSPI (implemented by CIRAD and AVSF).

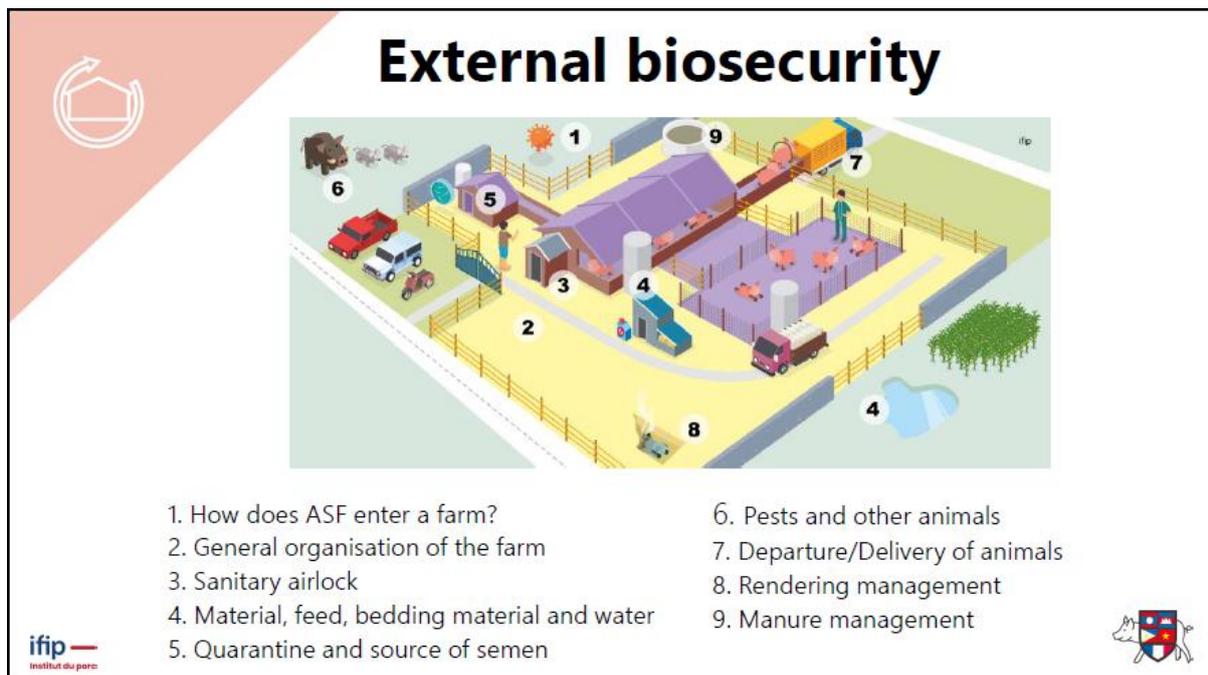
In order to get acquainted with existing procedures regarding the audit of biosecurity on the countries' livestock farms, IFIP participated with ENSV-FVI in the practice-sharing workshops on the subject developed in § 4.2.1 (in Manila and Hanoi, in June and October 2023).

This gave further inputs to adapt the framework of the trainings, both face-to-face and remote.

4.3.2 Activity 2.2: Design and adaptation of modern pig farming modules and support to its deployment to reinforce biosecurity measures in pig farming

Based on the results of the above-mentioned missions, IFIP designed training contents on biosecurity taking into account ASEAN countries' specific characteristics, in order to increase their relevance and facilitate the work of the future trainers.

The main part of the training course is based on the biosecurity audit grid drawn up by IFIP and amended during the workshops. It goes through external and internal biosecurity, and cleaning - disinfection. The chapter on external biosecurity (the more relevant for ASF) is divided into 9 sequences:



The chapter on internal biosecurity covers: the separation of units, the flow of pigs and workers, the batch management, the worker hygiene, the husbandry intervention and the infirmary.

The chapter on cleaning and disinfection protocol presents the 8 steps of the cleaning and disinfection protocol.

This course was run by French biosecurity experts during face-to-face training sessions organized together with ENSV-FVI in the 4 countries in 2024 (Activity 2.3).

It was also adapted to be followed online. Two e-learning modules have been developed by IFIP:

- The first is for technical advisors and commercial farms. It consists of around one hundred slides.
- The second is for small farms and backyards: it presents in around twenty slides the main biosecurity measures to be applied in these types of settings.

Activity 2.3: Dissemination and face-to-face training in modern pig farming modules and support for its implementation to strengthen biosecurity measures in pig farming

For the implementation of the face-to-face trainings, please refer to the § 4.2.2 (activity 1.2), as the training of trainers were finally organized jointly by IFIP and ENSV-FVI for both public and private stakeholders.

Below are the disaggregated data for the different training sessions (training of trainers):

	Vietnam (IFIP/ENSV) Hanoi and HCM	Philippines (IFIP/ENSV) 17-18 Oct. 24	Cambodia (IFIP/ENSV) 24-25 Oct 24	Laos (IFIP/ENSV) 21-22 Oct. 24
Public Veterinary Services	67	26	34	24
Private sector (farmers, other stakeholders)	22	2	5	4
University / Training center	28	4	3	3
Village workers, AH auxil.			3	3
Civil society organisations			1	
Total	117	32	46	34
ratio F/M	40%	47%	13%	26%

In order to facilitate the dissemination of the training by the participants, who are expected to be future trainers, the training contents and the e-learning modules were made available on a unique website: <https://big-program.com> (training and tools section).

A video explains how to follow them: <https://www.youtube.com/watch?v=53cCx29wtTY>

4.4 Output 3: Develop the skills of central animal health laboratories for better identification of ASF and other transboundary animal diseases

The results of this output are lower than expected, due to lower needs identified both by the beneficiaries and our team during the implementation of the project on the side of the prevention of ASF. Only one mission was performed for this output.

As part of the « diagnostic laboratories » component of the program, an evaluation mission was conducted in Cambodia, composed of Mr. Rami Abi Khalil (ENSV-FVI), Mr. Olivier Bourry from the National Agency for Food Safety, Environmental and Occupational Health (ANSES), and Mr. Sylvain Letellier from the Association of Veterinary Laboratory Directors and Executives (ADILVA).

The main objective of this mission was to assess the current ASF diagnostic capabilities at the National Institute of Animal Health and Production Animal Health (NAHPRI). The mission examined the infrastructure, equipment, and laboratory supplies necessary for effective ASF virus diagnosis.

Two laboratory persons from Laos, Mrs. Vilayvanh Soukvilay and Khamphok Phithacthep, members of the National Animal Health Laboratory of the DLF (Laotian Ministry of Agriculture and Forestry), were also invited, facilitating a fruitful exchange of experiences, including a comparison of methodologies and regulations among the three countries.

It appeared from this mission that the level of equipment of the laboratory and the knowledge of laboratory staff from Laos and Cambodia was sufficient. On the contrary, the laboratory's activity seemed abnormally low (very few analyses in progress) given the ASF situation on the ground.

From the exchanges we had with the Philippines counterpart, an audit mission in their country was not needed. BAI indicated that an audit mission was not expected from their side, as it had already been implemented internally in 2023.

In Vietnam, during the meeting held in Hanoi on 16 June 2023 between the French manager of the BIG program, the French Embassy, and the central veterinary services, the DAH stressed the need for the development of the training of official veterinary officers on the new circular 24/2022, both at the regional and at the sub-DAH level (approx. 80 trainees). This new request was involving a larger-than-expected audience in training courses. In order to address the demand, the organization of training courses for trainers was prioritized in Vietnam. A larger budget was allocated to this activity, via the organization of two major training sessions, in the south and north of the country (cf § 4.2.2), to enable all regional offices to be represented. On the other hand, in accordance with the DAH, laboratory training activities, which were not identified as a priority by the Vietnamese authorities, did not take place.

4.5 Other unexpected results

A commitment to international health governance

The project's work had a sub-regional scope, thanks to the sharing between several ASEAN countries, as well as the participation of the FAO and WOA. H.

The FAO delegations (regional and country) and the WOA. H. regional delegation were first invited to attend the workshops on biosecurity audits in 2023. WOA. H.'s recommendations⁷ have been incorporated into the activities and objectives of the BIG program :

- Information sharing (recommendation 1) with the participation of FAO and WOA. H. in BIG events, such as BIG regional workshop (3 countries) on biosecurity in Hanoi (October 2023), the dissemination workshops of AVSF studies in Laos and Cambodia (January and March 2024), and Cirad debriefing workshop in November 2024 in Vietnam.
- At the level of surveillance and control measures, the recommendation 2 invites to *strengthen the application of biosecurity, including the adoption of immunity-based biosecurity [...] and leverage on social and behavioural sciences [...] take into account the attitudes and practices of pig holders*. That was exactly the purpose of AVSF surveys on Knowledge, Attitudes and Practices a community level⁸. CIRAD's studies have also taken behavioral sciences as a research angle (through stakeholder mapping analysis, review of the implementation of Circular 24).
- A recommendation 3 on collaboration and cooperation is to *engage the private sector and relevant associations in the formulation of control strategies and participation of technical meetings and communicate research needs to the Global Alliance for Research in African swine fever (GARA) to advocate research in identified gaps*. The concrete translation of this recommendation into the project is illustrated by the intervention of BIG program members to share the project results during the 90th PVMA⁹ Scientific Conference in Philippines (IFIP speaker), or during the GARA conference in November (Cirad intervention).

Complementarity of cooperative actions has been sought, for example, the FAO and WOA. H. guides have been cited during ENSV-FVI/IFIP training courses, and the posters distributed by AVSF have been updated with the help of ENSV-FVI using materials previously developed by FAO and USAID.

Several events have linked the work of the BIG program with WOA. H.'s actions and recommendations:

- The Cirad dissemination seminar on 21 November 2024, was attended by academics, commercial livestock farms and regional veterinary services. WOA. H. delegation was also present. The seminar focused on connecting the Vietnam's DAH and WOA. H. regarding

⁷ In particular the Standing Group of Experts on ASF (SGE-ASF) recommendations (last meeting for the Asia-Pacific Region in China – July 2023)

⁸ More information available on the website : <https://www.big-program.com/studies/avsf-surveys-on-the-implementation-of-biosecurity-measures>

⁹ Philippines Veterinary Medical Association

"zoning", aiming to help Vietnam negotiate with importing countries. This will require scientific evidence, including further research and demonstrations of the current epidemiological situation, as well as continued public-private partnerships (as recommended by WOAH).

- The BIG program manager, and AVSF and Cirad French partners were invited by WOAH to its fourth ASF Coordination Meeting for South-East Asia, Hanoi, Vietnam, 26-28 November 2024. The coordination manager, AVSF and Cirad presented final outputs from the BIG program (final studies, trainings, and dissemination including the website).

That shows the relevance of the outcomes of the BIG program to achieve the recommendations of the Regional GF-TADs for Asia and the Pacific. This link with the guidelines of organizations such as WOAH was given prominence.

Other unexpected results

An additional envelope paid by ENSV-FVI from FSPI funds (37,652 euros, from unspent funds in the "governance" section) and the remainder of the AVSF budget have been allocated to **additional activities**:

- Training of trainers in Laos in April 2024: training of Veterinary Services inspectors at regional end local level, and training of village auxiliaries (CAHWs). Details on the number of participants can be found below:

	Laos (AVSF) ToT April 2024
Public Veterinary Services	18
Private sector (farmers, other stakeholders)	2
University / Training center	
Village workers, AH auxiliaries	43
Civil society organisations	
Total	63
<i>ratio F/M</i>	<i>10%</i>

- New training and update training of CAHWs in Laos and Cambodia in 2024, including biosecurity measures in livestock farming but also at the interface with wildlife.

	Laos (AVSF) VVWs Sept. 24	Cambodia (AVSF) VAHWs June-Sept. 24	Cambodia (AVSF) VAHWs 21 Oct. 24
Public Veterinary Services			
Private sector (farmers, other stakeholders)			
University / Training center			
Village workers, AH auxiliaries	22	24	37
Civil society organisations			
Total	22	24	37
<i>ratio F/M</i>	<i>18%</i>	<i>4%</i>	<i>3%</i>

- Support for the deployment of the national strategy for the prevention and control of ASF in Laos: after a discussion phase in May 2024, involving 15 participants from the Department of Livestock and Fisheries (DLF), a first version of the plan was prepared. A second phase in June 2024 extended consultations to the provinces (26 participants in total at this second session). The strategic plan for the prevention and control of ASF in Laos was finalized and officially approved by the Head of DLF.
- Support for ENSV-FVI and IFIP between August and September 2024 in preparation for the October 2024 training of trainers: some remaining budget on FSPI funds were allocated to help the preparation of the ToT trainings, in particular via AVSF local representations in Laos and Cambodia who were able to work and discuss with the authorities on how to manage all logistics and facilitate the validation of the training contents (translation of training materials into local languages, organization of transport of participants, etc.).

5. CROSS-CUTTING

5.1 Gender

CVOs in each of the 4 countries were men. Few positions of responsibility were held by women, like the director of the Bureau of Animal Industry (BAI) of the Philippines. Regarding the official focal points, 2 out of 4 were women (the Philippines and Vietnam). Disaggregated data, especially ratio between female and male participants to the training events, are shown in § 4.2.1, 4.2.3 and 4.3.2.

If all BIG program activities are taken into account (including FSPI activities), women's participation averaged around 1/3 of the public sector in the 4 countries, with greater representation of women in the Philippines and Vietnam than in Laos and Cambodia.

As explained in the studies from AVSF on CAHWs (<https://www.youtube.com/watch?v=0kjLhtdfCsY>), in Laos and Cambodia these functions tend to be assigned to men.

Regarding the positions of civil servants, our focal point in Vietnam explained "*I confess that there are very few female staff working in the field of your training within our system. In addition, DAH leaders are travelling and the process for replacement will take a long time (we need to identify new candidates, get their acceptance to the courses, report to DAH leaders, DAH leaders will contact their direct bosses, etc.). From Vietnam side, we totally understand the gender issue for both domestic and international education, training and professional development.*"

5.2 Environment, Biodiversity and Climate Change

One of the challenges regarding the implementation of a project involving experts from France to South-East Asia was the **carbon impact**. In that matter, and also to reduce experts' fatigue (long flights needing between 12 and 16 hours for one-way), certain missions were pooled together, such as the 3 (Laos-Cambodia-Philippines) training courses of October, organized back-to-back.

By addressing the issue of applying biosecurity measures in livestock farming, the project indirectly helped to disseminate good practices that also promote global health / **One Health**:

- The issue of inappropriate use of antibiotics as a response to the treatment of ASF has been raised, which reinforces the issue of antibiotic resistance. These elements were recalled during training sessions, in particular during the training of CAHWs by AVSF, whose training program leads to a specific qualification, and includes not only biosecurity but also the proper use of veterinary products.
- In general, waste water and carcasses are not treated as they should be in order to prevent virus diffusion. Practices may on the contrary foster virus cycles (for instance with waste thrown in forests).
- In general, the application of good external biosecurity measures confers a protection against every kind of diseases that can affect pigs, even helps reduce the circulation of viruses to which pigs are not susceptible, but which they can be reservoirs for. This is

particularly true of influenza viruses, for which pigs are known to facilitate reassortment (possibly between avian and human viruses).

AVSF and CIRAD, which are based in the beneficiary countries, have historical knowledge of the local context and organizations. The studies carried out by these French organizations in the upstream phase of the project take into account the economic context, as well as the **social sciences** (adapting working methods to the profile of village communities, for example).

"KAP" (Knowledge, Attitudes and Practices) surveys enabled to assess the gaps to be filled in terms of prevention and control of African swine fever (ASF), highlighting simple biosecurity measures that are not known, understood or whose application still requires awareness-raising or the removal of certain obstacles.

Value chain mapping carried out by CIRAD provided stakeholders with an insight into the socio-economic impacts of ASF.

6. FINANCIAL OVERVIEW (MAX. 1 PAGE)

Here is a table summarizing the level/percentages of expenses regarding each main output of the project, with associated comments.

Regarding STDF funding, the global expenses represent 94,5 % of the envelope.

It's worth noting that that BIG program benefited from the co-funding of the French government (806 000 euros), which supported several activities such as AVSF and Cirad studies, ENSV-FVI workshops, as well as several trainings and workshops led by AVSF and Cirad.

Several activities were co-financed by both STDF and FSPI: the biosecurity Residential Course in May 2024, the final evaluation, and of course the whole program's oversight and communication.

Activities	Provisional Costs/ US \$				Final expenses				Comments
	STDF (US dollars)	In kind contribution	Other (cofunding)	TOTAL	STDF (US dollars)	contribution	Other (cofunding)	TOTAL	
Output 1 total amount	279976	59400	9520	348896	119%	30%	84%	103%	
Develop the skills of official veterinarians in SPS and trade in a context of ASF prevalence									
Activity 1.1: Adaptation of French training content on SPS and trade for the 4 partner target audiences	24940		9520	34460	91093,4	375	8000	289%	initially unplanned additional exploratory missions for ENSV-FVI
Activity 1.2: Dissemination of training modules for the implementation and enforcement of SPS in trade (face-to-face trainings in the 4 countries)	120804	57000		177804	94325	15665		62%	Lower in kind : use of premises in Vietnam only
Activity 1.3: Long-term sustainability of the training through a continue distance e-learning program and Residential Courses	134232	2400		136632	146768	1925		109%	
Output 2 total amount	281240	6040		287280	109%	100%		109%	
Develop the skills of farm managers and pig operators in strengthening the management of pig farms and the implementation of biosecurity measures									
modern pig farming modules and support to its implementation for the reinforcement of biosecurity measures in pig farming (Experts' missions to the 4 countries)	75980	4800							
Activity 2.2: Design and adaptation of modern pig farming modules and support to its deployment to reinforce biosecurity measures in pig farming	128200				307857,1	6040			2 additional enveloppes (US \$ 20170+21074) for higher-than-forecast expenditure (by IFIP)
Activity 2.3: Dissemination and face-to-face training in modern pig farming modules and support for its implementation to strengthen biosecurity measures in pig farming	77060	1240							
Output 3 total amount	70552	4000		74552	27%	3%		26%	
Develop the skills of central animal health laboratories for better identification of ASF and other transboundary animal diseases									
Activity 3.1 : Identification of capacity building needs of central animal health laboratories									
Activity 3.2 : Technical and operational support for central laboratories, face-to-face training of laboratory operators and professionals related to	70552	4000			19200,1	120			Less needs for this output identified during the project
Project management total amount	179204	30240		209444	60%	101%		66%	
Project governance - internal and external communication	179204	30240			107723,6	30540			Less expenses (use of remote meetings, shared governance with FSPI co-funding)
Total amount activities	810972,00	99680	9520	920172	766967,2	54665	8000		
Management costs ENSV-FVI 11%	89206,92				84366,4		880		
Total PG	900 178,92	99 680,00	9520	1 009 378,92	851333,6	54665	8880	914878,59	
					94,57%	54,84%	93,28%	90,64%	

7. CHALLENGES, RISKS & MITIGATION

7.1 Coordination and communication problems

Coordination with local authorities and veterinary services was difficult in several countries. In Laos, a change of the focal point within the government delayed the start-up of activities. In Cambodia, despite reminders, communication with the national veterinary services (GDAH) was ineffective during the first two years, also delaying activities.

Similar problems were encountered in the Philippines, where frequent changes of Chief Veterinary Officer (CVO) and internal political issues (between national and local level) disrupted the continuity of actions, and in Vietnam, where the inconsistent involvement of government representatives generated confusion about project priorities. ENSV-FVI consistently arranged for French agricultural advisers to intervene on site to help raise awareness among the authorities.

7.2 Adapting the work plan

Activities planned in year 1, particularly those related to pedagogical engineering, had to be readjusted due to the need for a better understanding of national contexts, and because of delays in obtaining the results of field studies. This had an impact on the production of training tools, which had to start with only partial results of these studies, and required consultations with veterinary services, notably during workshops on biosafety tools in 2023.

The change of project manager with the departure of Marie-Laure Martial at the end of 2022 created a period of uncertainty for several months, while the new project manager took on the whole context.

7.3 Adaptation to the economic and sanitary context

Unavoidable obstacles remain, such as the absence of financial compensation for losses in the event of an outbreak, leading to very low reporting rates in Laos and Cambodia, and the reuse of contaminated meat, and thus the spread of the disease. Faced with this imponderable problem of animal owners' livelihoods, all training courses will have only a limited effect as long as the authorities in countries like Laos and Cambodia do not have the means to help affected farmers offset the direct and indirect costs of the required slaughter measures.

This also explains why improving the processing capacity of analytical laboratories is not a priority, and why the authorities of Laos and Cambodia don't report cases to WOA.

Vietnam, on the other hand, has introduced vaccine policies to complement biosecurity barrier measures. Although this mass vaccination was initially effective, the appearance of new recombinant virus variants resistant¹⁰ (less pathogenic) to the vaccine shows that the protection of farms by biosecurity measures remains essential. Farmers are concerned about the vaccine's limitations and risks.

8. COMMUNICATIONS AND OUTREACH

An initial brochure presenting the program was edited at the start, available here: <https://www.vetagro-sup.fr/programme-biq-biosecurity-in-pig-industry/>

Several press releases were published during the project, most of them appearing on ENSV-FVI website (links below). Similar posts were published on LinkedIn by IFIP and Cirad.

- workshop Manila June 2023: <https://www.vetagro-sup.fr/le-programme-triennal-de-cooperation-internationale-biq-biosecurity-in-pig-production-biosecurite-en-filiere-porcine/>

¹⁰ This scientific article explains the evolution of the resistance to ASF vaccines in Vietnam: <https://www.mdpi.com/2076-393X/12/10/1114>

- mission on laboratories: <https://www.france-vet-international.fr/programme-de-cooperation-big-mission-dexperts-francais-ensv-fvi-anses-adilva-en-appui-au-laboratoire-nahpri-au-cambodge-avec-la-participation-du-laos-du-05-au-07-septembre-2023/>
- workshop in Hanoi October 2023: <https://www.france-vet-international.fr/programme-big-seminaire-a-hanoi/>
- [COPIL in Hanoi](#)
- Training of trainers in Vietnam: <https://www.france-vet-international.fr/2840-2/>
- [Training of trainers in the Philippines](#)
- [Closing event](#)

A video edited by Cirad captures quotes from key project stakeholders and summarizes the BIG program's framework: it is available on the homepage of the BIG website or directly via YouTube: <https://www.youtube.com/watch?v=KuBmGqVH0H0&t=74s>

And a final brochure presenting the main outputs of the BIG program was produced for the closing event of 27-28 of February 2025. This closing seminar in itself was an opportunity to communicate on the achievements of the project, in presence of the beneficiaries, funders, French officials, and WOA. The brochure is available on the homepage of the BIG website: <https://big-program.com/>

To September 2025, 507 unique visitors (different IP addresses) had visited the website.

9. SUSTAINABILITY & FOLLOW-UP

9.1 Sustaining skills: a participatory approach to continuous training

Participatory approaches with the authorities, universities, and research institutions have been developed to promote sustainability, in order to secure beneficiaries' support for the project's activities and to encourage them to pursue the objectives beyond the duration of the BIG program. The presence of French partner delegations like Cirad in Vietnam and AVSF in Laos and Cambodia will also help ensuring a continuity in further cooperation.

- With Competent Authorities :

The 2023 workshops on biosecurity and the training of trainers were organized in close collaboration with competent authorities of the beneficiary countries to disseminate harmonized and validated training tools to participants.

In Laos, through the support of AVSF, the National Strategic Plan for the Prevention and Control of ASF was adapted together with the Laos Department of Livestock and Fisheries (DLF), and validated for 2025-2030 (FSPI activity).

In Vietnam, this participatory approach is also illustrated by two other results: the evaluation of the national action plan, highlighting the strengths, weaknesses, opportunities and threats associated with the implementation of national biosecurity measures, and the assistance with the implementation of circular n°24/2022 by the Vietnamese authorities, on animal disease-free zones (FSPI activity).

- With the Universities :

The close relationships that already existed between local universities (e.g. NUOL in Laos, NLU and VNUA in Vietnam) and the national authorities, were promoted, facilitating fieldwork, the organization of provincial workshops, and trainings of trainers. The recruitment of PhD students to carry out certain FSPI-funded studies (scoping review, stakeholder mapping analysis) encouraged local ownership of the work carried out, as the students and future teacher-researchers who participated in this work can then contribute to disseminating best practices with local stakeholders.

France has also maintained close ties with Vietnam, which is reflected at the academic level by the fact that some Vietnamese veterinary students attend French universities. This facilitated exchanges between teachers and managers in their respective curricula.

An additional co-financed activity was carried out with a view to continuing training activities: Training to Universities in Laos ¹¹. A one-day training on 26 December 2024 was organized by AVSF to introduce and train participants on the BIG program e-learning tools for biosecurity in pig production in Laos. Key objectives included disseminating these tools, training on their usage, and discussing their integration into university curricula. Participants included academic institutions, public sector officials from the Department of Livestock and Fisheries, and NGOs. The agenda featured presentations on challenges, e-learning tools, practical training, group discussions, and Q&A sessions. The workshop aimed to enhance biosecurity education and strengthen the response to diseases like African swine fever. Participants provided recommendations to adapt the tools and an action plan was implemented by the group in order to develop and disseminate trainings through the curriculum of the 4 Universities.

9.2 Accessible Tools for Ongoing Work

The project has created and delivered training programs using face-to-face and online tools to improve learning outcomes. The training tools developed by IFIP have been inspired by training methods that have proved their worth in France for training pork industry professionals. Numerous short videos were produced and published online. Teaching aids adapted to local populations (posters, posters or banners) were used to promote key messages during visits by farmers to villages (Laos, Cambodia) and during awareness-raising campaigns among villagers in Laos.

Finally, all deliverables were published on the BIG-program website (<https://big-program.com/>). This availability of materials will help stakeholders to find all presentations and reports online, in order to use them to continue adapting their action plans, training their colleagues (like the actions carried out by Universities of Laos, cf § 9.1). These documents are also available to any future initiative undertaken by national/local bodies, or international cooperation programs.

A short video illustrates how to access the documents on the BIG website:
<https://www.youtube.com/watch?v=53cCx29wtTY>

After the end of the project, particularly following the closing seminar on 27-28 February 2025, exchanges continued with:

- the transmission of links to online documents to beneficiaries.
- continued mentoring of e-CERISE program participants (for instance for Cambodia, one participant follows his study on the improvement of biosecurity based on AVSF's Knowledge – Attitude and Practices survey with the BIG program's Project Manager serving as his supervisor);
- the post-project evaluation will also provide information on beneficiaries' intentions regarding the extension of BIG's activities.

The French team involved in this project wishes to pursue cooperation in the SPS field with ASEAN countries benefiting from BIG, which could build on the links already forged and some of the work already undertaken, in order to further the development of livestock sectors in the region.

10. LESSONS LEARNED

10.1 A success story of co-financing and public-private collaborations

The entire program, co-financed by MEAE and STDF, was implemented in an integrated manner. Rather than the two donors operating separately, a common identity was established under the BIG, banner, was quickly resonated with the beneficiaries.

¹¹ The following universities were involved:

National University of Laos
Souphanouvong University
Savanakhet University
Champhasack University

In terms of coordination, ENSV-FVI orchestrated the link between the activities of CIRAD and AVSF (financed by FSPI) and those carried out with IFIP, the main provider of STDF co-financing, while maintaining adaptability and relative flexibility, as facilitated by the donors. The result was a synergy superior to that originally envisaged, within the framework of the overall BIG program, leading to a set of relevant results, with CIRAD and AVSF FSPI studies partly feeding into FSPI and STDF-funded training courses.

On the one hand, the studies financed by the FSPI and implemented by CIRAD and AVSF provided insight in themselves for decision-makers in the beneficiary countries, but they also constituted a resource for making recommendations during training courses organized both under the FSPI and the STDF projects during training of trainers' sessions. The latter, initially planned separately for the public and private sectors, were finally grouped together in view of the needs expressed by beneficiaries.

STDF co-financing therefore enabled training to be rolled out, but also contributed to the development of public-private collaborations, both at the level of the French partners (IFIP as a private partner working in conjunction with ENSV-FVI, CIRAD) and the beneficiaries: training sessions brought together representatives of the authorities, universities, private veterinarians and private players, nurturing exchanges of practice between the players.

The activities financed by the FSPI and STDF complemented each other in terms of stakeholder training, particularly in Laos and Cambodia (where AVSF has a presence), with training initiatives geared more towards village communities: cross-visits to livestock farmers, awareness-raising campaigns on biosafety in villages, training of CAHWs. They have also helped to update or implement national action plans (in Laos, with the DLF's strategic plan, and in Vietnam, with circular 24/2022).

Another example of this complementarity is the STDF-funded awareness-raising videos for BIG program stakeholders and beneficiaries, based on studies (FSPI) by CIRAD and AVSF.

Co-financing with STDF has also enabled economies of scale in terms of steering and governance: pooling of Steering Committees, of the end-of-program seminar (financed by STDF), of the final evaluation (co-financed, but grouped together in the same joint evaluation).

10.2 Possible improvements

In Laos and Cambodia, understanding of biosecurity has progressed in the focus regions, but there is still room for improvement, and awareness-raising and training for livestock farmers, traders and veterinarians will need to continue. In these two countries, the network provided by the community animal health workers (CAHWs), is very important in compensating for the lack of resources of the Veterinary Services. Beyond enhanced collaboration with the authorities, the project has also drawn on the support of universities, which will help sustain the dissemination of training tools after the BIG program is over. The participatory approaches developed by CIRAD and AVSF have facilitated the appropriation of knowledge.

If the project were to be repeated, one possible improvement would be to carry out the exploratory phase upstream of the project (which would require upstream funding), so as to improve beneficiary buy-in on the basis of a shared work plan from the outset of the project, and also to provide useful inputs for pedagogical engineering beforehand.

Another possible improvement would be to ensure from the outset of the project that all activities included in the work plan are validated by the beneficiary, as soon as possible (e.g. CIRAD activities proposed for the Philippines were not validated in part).

Another avenue to explore in this type of project would be to recruit a project manager on site, funding permitting. Indeed, in this project, some partners of the implementation team were on site (AVSF and Cirad), but not the main partners for the STDF-funded activities (IFIP experts, French experts coming from France). For the coordination of these actors, a project manager on site who would be able to follow each mission and in particular to meet regularly the beneficiary counterparts would help in the involvement of the latter.

11. RECOMMENDATIONS

The aim of the BIG program was to help strengthen the Veterinary Services, but it was not intended to improve all the structural aspects of these services on its own. Through the gap analysis studies, the project has highlighted shortcomings in the application of biosecurity measures, which the authorities or other future projects can build on. There are some fundamental requirements which must be in place first for an efficient veterinary service, such as well-educated staff, funds and tools required for emergency measures on farms, animal identification and movement controls, and the associated IT solutions to manage these.

The priorities identified through the gap analysis studies should be prioritized, particularly before work on laboratories. The local partners (AVSF and CIRAD) who have actively contributed to this project will be able to continue supporting the Veterinary Services (not only the official authorities, but also the CAHWs) using the tools already developed. We also recommend universities and private stakeholders continue to integrate these biosecurity modules in their training programs.

Other areas for development would be to continue supporting the four countries in developing or updating national ASF contingency plans, including risk mapping, outbreak simulation exercises, and emergency fund mechanisms. This would help ensure field teams have ready-to-activate SOPs for outbreak investigations, stamping out, compensation, and movement control, and promote regional alignment of contingency protocols to handle cross-border ASF threats.

As described in the § 4.1.1.b, regional trade between ASEAN countries is vulnerable to animal health issues. Countries in the region have turned away from sourcing from their neighbors, in favor of distant producer countries. In order to limit this impact, reciprocal trust between neighbouring countries must be developed, in particular through bilateral guarantees on health certification for trade and cross-border control procedures, regional disease surveillance platforms and data-sharing agreements.

In order to avoid any duplication, and favor synergies, a body in charge of the coordination of cooperation programs would be necessary in each applicant country. This exists between FAO and WOAH through the GF-TAD, but this doesn't involve other initiatives that could be undertaken (for instance bilateral, World Bank or regional bank-funded programs, etc.). In addition to avoiding redundancies, this body would have the advantage of better directing cooperation funds to the benefit of one country, by refining needs upstream of projects, and ensuring counterparts availability to work on the project.

12. ANNEXES

Attach additional relevant information/documents to be uploaded as a .zip file, including:

- 1. Updated logical framework matrix with actual results achieved for each project indicators*
- 2. Final signed financial report*
- 3. List of key documents produced under the project (e.g. training manuals, codes of good practice, etc.).*
- 4. List of key training workshops, outreach events, study tours, etc. organized under the project including dates, location, number of persons (M/F)*
- 5. List of key persons (including names and contact details) involved in the project from the implementing organization, other partners, beneficiary organizations, etc.*
- 6. Any other relevant documents*

ANNEXE I: updated logical framework with actual results achieved for each project indicator

I.1. Main Outcome

Outcome	Indicator	Sources of Information	Values		Detail for Cambodia	Detail for Laos	Detail for the Philippines	Detail for Vietnam
			Reference	End of Project				
1 - Improve implementation of biosecurity measures to control ASF across much of the value chain (official veterinarians, pork operators and laboratories)	1.1 Progress measured by number of control/ contingency plans implemented, updated and evaluated	Data from the veterinary services of the 4 partner countries, Animal health reports Number of connections to the educational training platform (designed for the pig operators) Rate of development of structured pork producer organizations	0	2		National Plan for ASF 2025-2030 in Laos		Circular 24 on Animal free-diseases certification in Vietnam
	1.2 Number of embargoes of pork products in the 4 countries concerned				2 embargos periods over 2024-2025	2022 : 1 embargo 2023 : 1 embargo 2024 : 0 embargo	<i>data requested from the PH authorities (awaiting response)</i>	<i>data requested from the VN authorities (awaiting response)</i>
	1.3 Number of illegal pork trade flows diverted				In 2024, 20 recorded cases involving illegal animal products (chicken, pork, and beef), totaling 20,897 kg destroyed	2022 : no published or official info 2023 : destroyed 4,405 kilograms of buffalo hides and pork products smuggled in illegally. 2024-2025 : No published info	<i>data requested from the PH authorities (awaiting response)</i>	<i>data requested from the VN authorities (awaiting response)</i>
	1.4 Number of zoning implemented				Officially zero in Cambodia in 2024-2025	2022-2024 : no zoning officially implemented 2025 (february) : 1 zoning (Xaysomboun & Borikhamxay Provinces) to contain ASF spread	<i>data requested from the PH authorities (awaiting response)</i>	<i>data requested from the VN authorities (awaiting response)</i>
	1.5 Number of WAHIS notifications of ASF by the 4 countries involved		2021 : 2100 in Vietnam + 2190 in the Philippines	2024 : 573 in Vietnam, 1720 in the Philippines 2025 : not available yet	Cambodia: no notification since 2019	Laos: no notification since 2020	Philippines: fluctuating (cf graph available here : https://rr-asia.woah.org/app/uploads/2024/12/Philippines_poster.pdf)	in 2024, also due to new ASFv genotype resistant to used vaccines : https://rr-asia.woah.org/app/uploads/2024/12/Vietnam_poster.pdf
2- National policies and strategies and plans developed/ reviewed for better control of ASF in accordance with OIE standards	2.1 - Number of policies, strategies and plans for progressive control of ASF		0	2		National Plan for ASF 2025-2030 in Laos		Circular 24 on Animal free-diseases certification in Vietnam

I.2. OUTPUTS

Outputs	Indicator	Sources of Information	Value	
			Target	End of Project
1. Improvement by central laboratories of diagnostic methods for the analysis of cross-border animal diseases, including ASF	Number of laboratory diagnoses on ASF and transboundary diseases	Labs data collected by veterinary services	4	1
2. Improved understanding of the SPS standards to be implemented by official veterinarians with regard to the prevalence of ASF (focus on surveillance, control, biosecurity measures, certification, etc.)	2.1 - Number of trainers trained in the 4 countries	Analyses of the Veterinary Services (plans to carry out surveillance complying with OIE standards (early detection, rapid response, diagnosis etc.)	200	266
	2.2 - Integration of 3 official veterinarians per country in the e-cerise distance e-learning program during a year		12	15
3. Pig operators and farmers supported (understanding and dissemination of the educational training platform modules dedicated	3.1 - Setting up of digital databases of teaching aids for the design of modules based on the situation in the field in the 4 countries	Foreign trade figures		4

to biosecurity, animal health, maternity, fattening)	3.2 - Design of 5 e-learning modules on the management of breeding at the 4 physiological stages and of a transversal module on the implementation of good hygiene and biosecurity measures for the prevention of ASF			2 per country
	3.3 - Number of farmers and operators trained on modern pig farming			114
	3.4 - Number of e-training modules developed for each country by ENSV-FVI and IFIP	20		12

1.3. Activites

Activity	INDICATOR / TARGET	END OF PROJECT ACHEIVEMENT	COMMENT
Output 1: Develop the skills of official veterinarians in SPS and trade in a context of ASF prevalence			
Activity 1.1: Adaptation of French training content on SPS and trade for the 4 partner target audiences			
Sub-activity 1.1.1: Needs mapping based on a pilot project (AVSF CIRAD) implemented in Laos mid 2021	Reports of missions AVSF and CIRAD	<i>mission prior to the BIG program</i>	

Sub-activity 1.1.2: Development of face-to-face training content (pedagogical engineering) and associated training plan in agreement with partner ministries / translation	Satisfaction rate of the technical coordinators of the 4 partner countries with the proposed module and the associated training plan (adaptation to needs, feasibility and impact criteria taken into account, proposal for tools to evaluate the skills acquired by the official veterinarians regarding OIE standards)	Training contents validated by the 4 countries, after co-co-construction workshops involving public and private representatives	
Activity 1.2: Dissemination of training modules for the implementation and enforcement of SPS in trade (face-to-face trainings of trainers)			
Sub-activity 1.2.1: Training of official veterinarians in Vietnam	Satisfaction expressed by the trained agents	96%	organisation of 2 sessions in Vietnam, to train official vets from the 60 provinces
	15% of women trained per country,	40%	
	Follow-up of the good dissemination of the training in the field,	96-100%	<i>estimated by survey of intent</i>
	Analysis of the knowledge acquired through the knowledge survey.	<i>not carried out during the implementation period of the project</i>	
Sub-activity 1.2.2: Training of official veterinarians in the Philippines	Satisfaction expressed by the trained agents	93%	
	15% of women trained per country,	47%	
	Follow-up of the good dissemination of the training in the field,	72%	<i>estimated by survey of intent</i>
	Analysis of the knowledge acquired through the knowledge survey.	<i>not carried out during the implementation period of the project</i>	
Sub-activity 1.2.3: Training of official veterinarians in Laos	Satisfaction expressed by the trained agents	96%	
	15% of women trained per country,	10%	
	Follow-up of the good dissemination of the training in the field,	27%	<i>estimated by survey of intent</i>
	Analysis of the knowledge acquired through the knowledge survey.	<i>not carried out during the implementation period of the project</i>	
Sub-activity 1.2.4: Training of official veterinarians in Cambodia	Satisfaction expressed by the trained agents	96%	
	15% of women trained per country,	13%	
	Follow-up of the good dissemination of the training in the field,	34%	<i>estimated by survey of intent</i>
	Analysis of the knowledge acquired through the knowledge survey.	<i>not carried out during the implementation period of the project</i>	
Activity 1.3: Long-term sustainability of the training through a continue distance learning program			

Sub-activity 1.3.1: Integration of 3 official veterinarians per country in the e-cerise distance e-learning program during a year	360° evaluation: trainees evaluate the training and trainers evaluate their trainees' achievements.	carried out and documented	document "Clôture de e-CERISE 2024 : bilans, évaluations et perspectives"
	ENSV-FVI analysis from a social and human sciences perspective: what impact does the STDF training have on the change of practices of OVs in the implementation of SPS measures?	An impact assessment was carried out directly with e-CERISE participants (impact on technical knowledge on the one hand and professional impact on the other)	
	20% of women participating in the e-cerise distance learning program	20%	1 out of 5 for the complete program (participants selected by CAs)
Output 2 : Develop the skills of farm managers and pig operators in strengthening the management of pig farms and the implementation of biosecurity measures			
Activity 2.1 : Mapping of needs for the design of modern pig farming modules and support to its implementation for the reinforcement of biosecurity measures in pig farming			
Activity 2.1.1 : Experts' mission to Vietnam, assessment of the situation, collection of needs and creation of contextual digital teaching materials	Diversity and number of farms visited/audited. Audit reports and number of major deviations impacting the proper implementation of hygiene and biosecurity measures. Definition of priority areas of progress for the prevention of ASF. Number of contextual teaching aids (library of photos, animations, illustrations, graphics and videos).	See §4.2 of STDF final activity report and reports of the exploratory missions	
Activity 2.2: Design and adaptation of modern pig farming modules and support to its deployment to reinforce biosecurity measures in pig farming			
Sub-activity 2.2.1: development of the content of the e-learning modules (pedagogical engineering) and exchanges/ validation/ translation with local partners	Satisfaction rate of technical coordinators and partners in the 4 countries with the pedagogical approach of the proposed modules and its impact on the prevention of ASF (adaptation to needs, criteria of priorities, contextual feasibility, evaluation of acquired skills)	Training contents validated by the 4 countries, after co-co-construction workshops involving public and private representatives	
Sub-activity 2.2.2: Design, adaptation and translation of swine management and biosecurity implementation modules in Vietnam	Satisfaction rate of the VN technical coordinator in view of the proposed modules and the associated pedagogical content (adaptation to the needs, quality of the pedagogical supports, evaluation tools of the acquired skills).	Validated	
Activity 2.3: Dissemination and face-to-face training in modern pig farming modules and support for its implementation to strengthen biosecurity measures in pig farming			

Sub-activity 2.3.1: Implementation of e-learning modules: hosting on an LMS platform, training of professionals and future trainers to the modules of pig farming and implementation of biosecurity measures in the 4 partner countries	Number of training courses organized	see activity 1.2 : face-to-face trainings organised jointly with ENSV-FVI	
	Number of learners connected to the e-learning server	The choice made by IFIP is that of a free access site. By the end of August 2025, there were 507 visitors (different IP addresses)	
	Number of learners having completed all modules on the LMS platform		
Output 3: Develop the skills of central animal health laboratories for better identification of ASF and other transboundary animal diseases			
Activity 3.1: Identification of capacity building needs of central animal health laboratories			
Sub-activity 3.1.1: Mapping needs to adapt technical support and capacity building for central analysis laboratories (animal health)	Identification of the technical support needed by laboratories in the 4 countries for priority animal transboundary diseases (including ASF)	1 laboratory out of 4 (Cambodia). 2 country staff trained (Laos and Cambodia)	due to prioritization during the project of biosafety training (particularly for Vietnam) or import-export (for the 4 countries)
Activity 3.2: technical and operational support for central laboratories, face-to-face training of laboratory operators and professionals related to laboratory activities			
Sub-activity 3.2.1: Training central laboratory staff in animal health	Organization of training sessions according to the transboundary animal diseases identified as priorities (including ASF)	2 country staff trained (Laos and Cambodia) out of 4	due to prioritization during the project of biosafety training (particularly for Vietnam) or import-export (for the 4 countries)
	15% of women trained	75%	

ANNEXE II: final signed financial report (attached)

ANNEXE III: list of key documents produced under the project

All the key documents are available on the website of the BIG program: <https://www.big-program.com/>

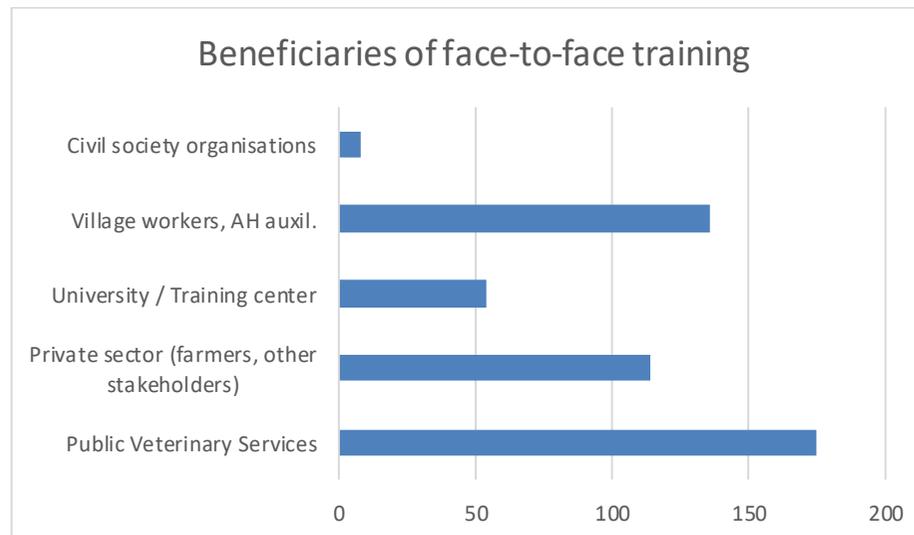
They are sorted by country (choose language via flag). For each beneficiary country, the following documents are available:

Events and feedback	Studies and surveys reports	Trainings and tools
Workshops presentations	Village workers reviews Knowledge, attitude and practices surveys	Training support for face-to-face training of trainers
Presentations of the studies and surveys results	Scoping review, stakeholder mapping analysis	e-learning module for smallholders
Closing event presentations	Link to videos summarizing the studies (You Tube)	e-learning module for commercial farms

ANNEXE IV: list of key training workshops, outreach events, study tours, etc. organized under the project including dates, location, number of persons (M/F)

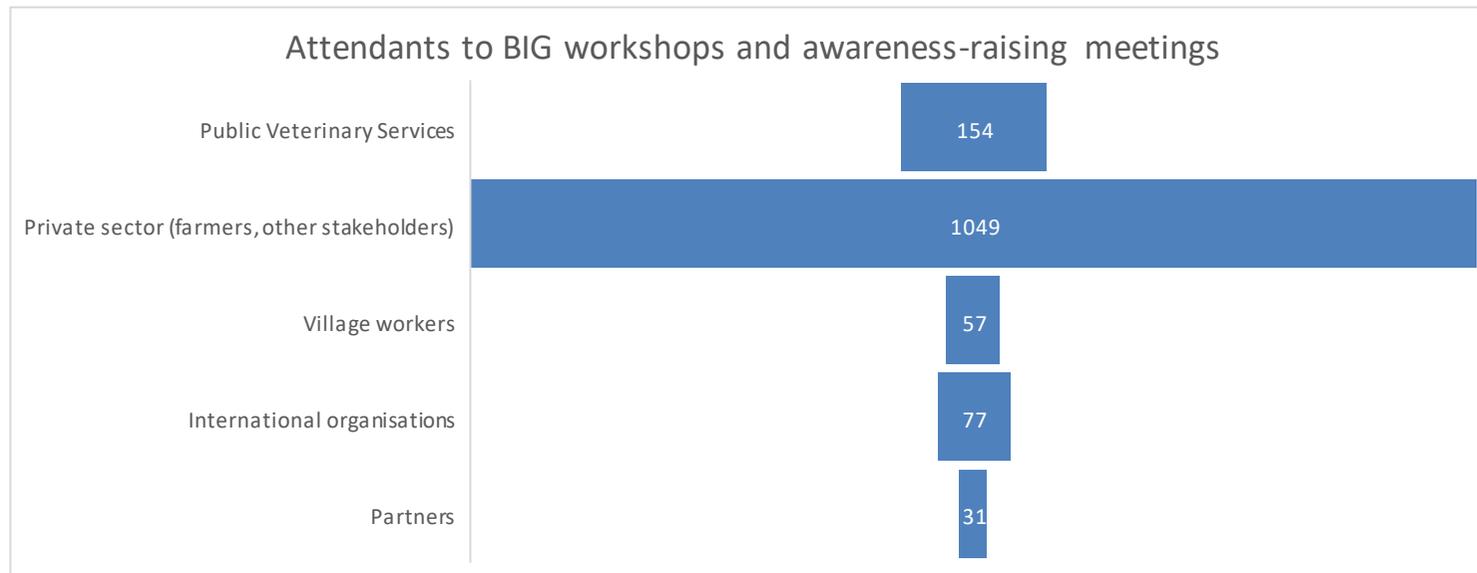
1. **Trainings** (in green: co-funded by French Ministry of foreign affairs)

	Vietnam (IFIP/ENSV) ToT Hanoi and HCM	Philippines (IFIP/ENSV) ToT 17-18 Oct. 24	Cambodia (IFIP/ENSV) ToT 24-25 Oct 24	Laos (IFIP/ENSV) 21-22 Oct. 24	Laos (AVSF) ToT April 2024	Laos (AVSF) VVs Sept. 24	Cambodia (AVSF) VAHWs June-Sept. 24	Cambodia (AVSF) VAHWs 21 Oct. 24	Cross visits (AVSF) Laos - April 2024	Cross visits (AVSF) KH - April 2024	Training to Universities (AVSF) Cambodia	Total
Public Veterinary Services	67	26	34	24	18						6	175
Private sector (farmers, oth	22	2	5	4	2				26	53		114
University / Training center	28	4	3	3							16	54
Village workers, AH auxil.			3	3	43	22	24	37	4			136
Civil society organisations			1								7	8
Total	117	32	46	34	63	22	24	37	30	53	29	487
<i>ratio F/M</i>	40%	47%	13%	26%	10%	18%	4%	3%	23%	55%	32%	



2. **Workshops, seminars** (in green: co-funded)

	Workshop Manila June 2023 (IFIP/ENSV-FVI)	Workshop Hanoi October 2023 (IFIP/ENSV-FVI)	AVSF regional workshops Cambodia	AVSF regional workshops Laos	AVSF national workshops Cambodia	AVSF national workshops Laos (Jan & Jul 24)	Cirad SMA workshop Laos juillet 2024	Cirad technical workshop in Laos sept. 2024	Cirad SMA workshop - Vietnam June 2023	Cirad national seminar Vietnam Nov 2024	Cirad regional restitution Kampong Oct 2024	Cirad regional restitution Takeo Oct 2024	Raising awareness campaign (Laos)	Total
Public Veterinary Services	12	17	11	24			20	11	20	24	7	8		154
Private sector (farmers, ot	3	3	16	39			53	22	6	17	25	16	849	1049
Village workers			5	22				4	2	2			22	57
International organisations		3								74				77
Partners		2	5	3			3	4	4	4	3	3		31
Total	15	25	37	88	40	48	76	41	32	121	35	27	871	1456
<i>ratio F/M</i>	<i>60%</i>	<i>16%</i>					22%	20%	20%	22%	31%	24%	24%	38%



3. Study visits in France (Residential Courses)

	Cambodia	Laos	Philippines	Vietnam	<i>F/M ratio</i>
Residential Course "Leadership in the Veterinary Services" October 2022	2	1	1	1	40%
Residential Course "Biosecurity and fight against transboundary animal diseases" May 2024	1	2	2	1	17%

ANNEXE V. List of key persons (including names and contact details) involved in the project from the implementing organization, other partners, beneficiary organizations, etc.

French implementing team

Location	Name	First name	Function
French Ministry of Agriculture	Evain	Loïc	BiG program leader
VetAgro Sup / ENSV-FVI	Leboucq	Nadège	deputee director of ENSV-FVI
VetAgro Sup / ENSV-FVI	Pietruszewski	Cyril	BIG program project manager
VetAgro Sup / ENSV-FVI	Abi Khalil	Rami	ENSV-FI pedagogical project manager
VetAgro Sup / ENSV-FVI	Brioudes Vincent	Vincent	ENSV-FI pedagogical unit head
IFIP (Institut français du porc)	Corrégé	Isabelle	Veterinarian
IFIP (Institut français du porc)	Bienassis	Edouard	Pedagogical engineer
French Embassy in Hanoi	Chaminade	Marion	Agri-food counsellor (for Laos, Cambodia and Vietnam)
French Embassy in Singapore	Lintanf	Philippe	Agri-food counsellor (for the Philippines)

Associated with (for FSPI co-funded activities):

Location	Name	First name	Function
AVSF-France	Renaut	Véronique	Veterinarian, PhD
AVSF-Cambodge	Sophoan	Min	Program Manager/Country representative in Cambodia
AVSF-Laos	Intavong	Sommay	Program Manager/Country representative in Lao PDR
CIRAD Asie	Goutard	Flavie	Veterinarian, PhD in epidemiology
CIRAD Asie	Thu	Ha	Veterinarian

Main contact points in the beneficiary countries:

Laos	PHITHACTHEP	Laphinh	Dr.	Acting Director of Veterinary Services Division, DLF Coordinator of BIG Program
Laos	BOUTTA	Somchanh	Dr.	Head of Epidemiology Unit, Division of Veterinary Services, DLF
Cambodge	NOU	Vonika	Dr.	Deputee Director General of the General Directorate of Animal Health and Production (GDAH)
Cambodge	LIM	So Cheat	Mrs	Vice-chief of Slaughterhouse and Processing Office, GDAH
Cambodge	UNG	Bunsong	Mr	Vice-chief of investigation, surveillance and control of animal disease office, GDAH
Vietnam	PHAN	Quang Minh	Dr.	Deputy Director General of the Department of Animal Health (DAH)
Vietnam	NGUYEN	Kim Dung	Mr.	Head of Epidemiology Unit of RAHO6
Vietnam	PHAM	Thanh Long	Mr.	Veterinary Officer of Epidemiology Division of Department of Animal Health (DAH), BIG program focal point
Philippines	Baltazar	Mary Anne Christine R.	Atty.	Bureau's Legal Officer
Philippines	Rada	Stephani	Ms.	BIG program focal point and technical officer for import controls
Philippines	Sevilla	Diosamia	Ms.	Officer-in-Charge, Director DA-Bureau of Animal Industry