



# ASEAN African swine fever (ASF) Prevention and Control Strategy (2023 - 2028)

Adopted at the 45th Meeting of AMAF  
On 4 October 2023



one vision  
one identity  
one community

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# Acronyms

|                     |   |
|---------------------|---|
| <b>ASEAN</b>        | Association of Southeast Asian Nations  |
| <b>AMS</b>          | ASEAN Member States   |
| <b>AMAF</b>         | ASEAN Minister for Agriculture and Forestry                                   |
| <b>ASWGL-ASEAN</b>  | Sectorial Working Group for Livestock   |
| <b>ACCAHZ-ASEAN</b> | Coordinating Centre for Animal Health and Zoonoses                            |
| <b>ALDF-ASEAN</b>   | Laboratory Directors Forum  |
| <b>AVEG-ASEAN</b>   | Veterinary Epidemiology Group   |
| <b>ARAHIS-ASEAN</b> | Animal Health Information System  |
| <b>ACDP</b>         | Australian Centre for Disease Preparedness                                    |
| <b>ASF</b>          | African swine fever   |
| <b>ASFV</b>         | African swine fever virus   |
| <b>CAHEC</b>        | China Animal Health and Epidemiology Centre                                   |
| <b>SOM-AMAF</b>     | Senior Officers Meeting of ASEAN Minister for Agriculture and Forestry        |
| <b>FAO</b>          | Food and Agriculture Organization of the United Nations                       |
| <b>GF-TADs</b>      | Global Framework for the Progressive Control of Transboundary Animal Diseases |
| <b>IUCN</b>         | International Union for Conservation of Nature                                |
| <b>PPP</b>          | Public-Private-Partnership  |
| <b>PFP</b>          | Partnerships and Financing Panel  |
| <b>PVS</b>          | Performance of Veterinary Services  |
| <b>RSC</b>          | Regional Steering Committee of GF-TADs for Asia and the Pacific               |
| <b>SGE-ASF</b>      | Standing Group of Experts for African swine fever                             |
| <b>TADs</b>         | Transboundary Animal Diseases   |
| <b>VLSP</b>         | Veterinary Legislation Support Programme                                      |
| <b>WAHIS</b>        | World Animal Health Information System  |
| <b>WOAH</b>         | World Organisation for Animal Health  |
| <b>WCS</b>          | Wildlife Conservation Society   |

# 1. Introduction



# 1. Introduction

With over 60% of the world's domestic pig population in Asia, pigs play an important role in the livelihoods of rural and peri-urban populations in Southeast Asia, and, in most countries, pork is the most preferred meat. African swine fever (ASF) is an infectious disease of domestic and wild pigs, with devastating consequences due to its high transmission capacity and mortality rates (up to 100% if infected by virulent strain). The disease is caused by the ASF virus (ASFV) which is the sole member of the family *Asfarviridae*. The epidemiology of ASF is complex, with different epidemiological patterns of infection occurring in Africa, Europe and Asia. The transmission cycles of ASF involve domestic pigs, wild boars, wild African suids, and soft ticks. There is a possibility that as ASF spreads in Asia, new host-parasite-environment systems may get established, involving mechanical or competent vectors. Following the introduction and further spread of ASF to East Asia and Southeast Asia, now 9 out of 10 ASEAN Member States (AMS) are affected.

Since 2004, the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health [WOAH, founded as OIE] have cooperated in the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs) to reduce the threat from TADs to food security, livelihoods and safe trade. WOAH, in collaboration with the FAO, has established a global initiative to control ASF. The initiative aims to enhance countries' capabilities to control ASF, establish coordination and cooperation framework for global control of ASF, and facilitate business continuity ensuring safe production and trade using International Standards. The GF-TADs Strategy for 2021–2025: Enhancing control of TADs for global health was launched recently which recommended establishment of strategies for priority TADs at the sub-regional, regional and global levels. The GF-TADs mechanism helps partners involved in animal health at the regional and sub-regional levels to develop common strategies to address their priorities for the control and prevention of TADs.

The Regional Economic Community, the Association of Southeast Asian Nations (ASEAN), is crucial in promoting economic growth and cooperation among its ten member states. Considering ASF is widespread in Southeast Asia and in line with the GF-TADs Strategy 2021-2025 and Global initiative to control ASF, the 29<sup>th</sup> meeting of the ASEAN Sectoral Working Group for Livestock (ASWGL) in May 2021 recommended WOAH to support development of ASEAN ASF Prevention and Control Strategy with the aim to enhance coordination and collaboration among AMS, development partners and key stakeholders to control and mitigate the impact of ASF in Southeast Asia.

The ASEAN ASF Prevention and Control Strategy 2023 – 2028 was developed by the Core Group Members with members from WOAH, FAO, ASEAN lead Country (The Philippines), two ASEAN Members States (Malaysia and Myanmar) and ASEAN Secretariat. The Members of the Advisory Group provided continuous support and guidance to the Core Group Members during the development of the strategy. During the ASEAN ASF workshop held in Manila, The Philippines from 2 – 4 May 2023, the participants from ASEAN Member States (AMS) provided inputs to the draft ASEAN ASF Prevention and Control strategy. Further, the workshop discussed the monitoring and evaluation (M&E) framework for the strategy and came up with Priority Actions for the implementation of ASEAN ASF Prevention and Control Strategy in the first two years (July 2023 to June 2025). The list of contributors appeared as [Appendix 1](#).

This strategy aligns with the global strategies and control programs developed by FAO and WOAH, the regional collaborative framework for ASF, ASEAN Strategies and the evolving ASF situation in Southeast Asia. This strategy is expected to enable coordinate actions to effectively control and prevent the spread and mitigate the impacts of ASF in Southeast Asia.

## 2.

# The Pig Sector in Southeast Asia



## 2. The Pig Sector in Southeast Asia

### 2.1. Pig Production Systems

Pigs play an important role in the livelihoods of rural and peri-urban populations in Southeast Asia, and in most countries, pork is the most preferred meat. Pigs are raised in various settings in Southeast Asia, from small family units of scavenging, and backyard pigs, to small-to-medium-scale semi-commercial units and large intensive units. Today, small pig-rearing operations in the backyard with no or limited biosecurity are the predominant practice and the ones most vulnerable to disease risks. The practice of swill feeding in the back yard and small holder farms exacerbates the risk of ASF spread in the region. Uncontrolled trade in live pigs and sub/by-products poses another major challenge to its effective management.

Pig farming in peri-urban areas is becoming more commercially oriented, and such farms are usually well-equipped and managed, with a high level of biosecurity and productivity. For example, Myanmar, Vietnam, and the Philippines exhibit a more advanced pig-raising industry, with Myanmar having the largest pig-raising industry in the region with a population of 21.604 million pigs in 2019. Indonesia, Thailand, Laos and Cambodia also possess a considerable pig-rearing industry, while Brunei and Singapore do not have domestic pigs (Research Report on Southeast Asia Pig Raising and Pork Industry 2023-2032). While Singapore does not have domestic pig production, live pigs are regularly being imported from the neighboring countries.

### 2.2. Live pig and pork value chains

Traditionally, town traders, including slaughterhouse operators and market sellers, come to villages to purchase pigs to supply local demand. Improved road infrastructure has also facilitated long-distance trade from rural producers to big cities and even overseas markets. However, in most areas, pig movements are difficult to monitor due to the lack of animal identification and effective tracing systems, and there are many unregulated movements. Furthermore, the current spread of ASF dramatically affects the price of pigs and pork, leading to changes in trade and movement patterns, both locally and internationally.

The growing demand for meat has driven the development of intensive animal production in large- and medium-scale farms, along with the application of high technology in the industrialization and modernisation of the livestock sector, including

improvements in biosecurity protocols, informed by scientific risk assessment thus facilitating improved levels of disease surveillance and control as compared to traditional smallholder backyard systems. Furthermore, improved transportation infrastructure and cold-chain techniques have led to an increase in domestic and cross-border movements of live animals and their products, following the market demand and price differentials. These improvements have greatly increased meat availability in areas with high population density; however, they have also augmented the risk of rapid and far-reaching transmission of animal diseases such as ASF.

### 2.3. Wild pigs

There are 11 species of locally endemic wild pig species in the region. This includes seven *Sus* spp., three *Babirusa* spp. and *Porcula salvania*. These species contribute significantly to the diversity of *Suidae* species globally and are an important conservation resource for the world. These 11 species are declining in population distribution and abundance. Their conservation status varies from near threatened to critically endangered due to various threatening processes (including habitat loss and over hunting), placing them at high risk to ASF impacts (Luskin *et al.* 2020). There are some unique features of the wild pig species that could contribute to the epidemiology of ASF. For example, bearded pigs (*S. barbatus*) are group dwellers and can migrate vast distances to forage for masting fruits, which could facilitate the spread of ASF.

Regarding *S. scrofa*, a recent study has shown that the environmental conditions of a significant part of the region are suitable for wild boars, indicating that the presence of this species may be underestimated (Cadenas-Fernandez *et al.* 2022). In the absence of species population surveys and hunting bag statistics it is difficult to provide reasonably reliable estimates of wild boar population densities, but they are expected to be orders of magnitude higher than in temperate climates. *S. barbatus* does not breed in burrows but in nests of foliage, and their offspring remain with their mothers for around a year. *S. barbatus* are highly social and live in groups similar to *S. scrofa*, often forming large herds by joining with other groups. However, they migrate based on the availability of fruit, led by old males. The Critically Endangered Visayan warty pig (*S. cebifrons*) occurs on 2-3 Philippines islands, with several hundred animals remaining, having undergone a dramatic population decline (Meijaard *et al.* 2017). Very little is known about *S. philippensis* (Meijaard and Melletti,



2017). They also live in groups and have a home range of up to 10 km, although some groups practice migration. They face similar threats to *S. barbatus*, with hunting and poaching being conducted by farmers to reduce crop raiding and by indigenous people, who consider it an important source of

income with high local demand, peaking from August until early October and then again from February to April. The captive wild pigs are kept by some of the members in Southeast Asia whose habitat and management is different from those wild pigs in the forest.

# 3.

## ASF Situation



## 3. ASF Situation

### 3.1. Global ASF situation

ASF was first identified in Kenya in 1921 and subsequently spread to up to 8 Sub-Saharan countries before reaching Europe in 1957. Although ASF persisted in the Iberian Peninsula for over 30 years, it was eventually eliminated in 1995 (Arias and Sánchez-Vizcaíno, 2002). While other European and American countries managed to control and eliminate the disease, ASF has remained endemic on the Italian island of Sardinia for several decades. A new ASFV genotype entered Europe through the port of Poti, in Georgia, from Africa, in 2007 and has since spread to several countries, including the European Union member states. The disease has led to global depopulation of millions of pigs and remains a challenging disease to control. In fact, since January 2021, 7 countries have reported ASF as a first occurrence, while 9 countries have reported its spread to new zones. Currently, the disease is present in all continents, except Antarctica. This demonstrates the continuous spread of ASF into new countries and zones, confirming the global threat of the disease.

### 3.2. ASF virus incursion in Asia

The first confirmation of ASF in Asia – Pacific region happened in August 2018 in the Liaoning province of China. Up to 22 outbreaks were notified at the same time in that same province in August 2018. The ASF virus responsible for the outbreak was a highly virulent strain belonging to ASFV p72 genotype II, closely related to the 2007 Georgia isolate (Le *et al.*, 2019). Since then, the ASF epidemic has progressively propagated in the region (Figure 1). By 2019, ASF had spread to a further eight provinces and Hongkong SAR within China and 10 countries, namely Mongolia, Vietnam, the Democratic People's Republic of Korea, Cambodia, Lao People's Democratic Republic, the Philippines, Myanmar, Indonesia, the Republic of Korea, and Timor-Leste. ASF continued to spread to other countries in Asia and the Pacific: India and Papua New Guinea in 2020; Malaysia and Bhutan in 2021; Thailand and Nepal in 2022; and Singapore in 2023. In total, 17 countries in Asia-Pacific have notified 3566 ASF events in the last 5 years in both domestic and wild pigs to WOAHS through the World Animal Health Information System (WAHIS).

The Republic of Korea and the Philippines have recorded the highest number of ASF notifications and outbreaks in the Asia-Pacific region, with 2019 accounting for the highest numbers of reports. The number of notifications has since declined, but the Republic of Korea and the Philippines still have more than three times as many notifications as other countries, and ASF is widespread throughout the entire countries. However, this may not reflect the true situation of the ASF in the region due to under-reporting in some countries.

### 3.3. Epidemiology of ASF in Southeast Asia

#### 3.3.1. ASF in domestic pigs

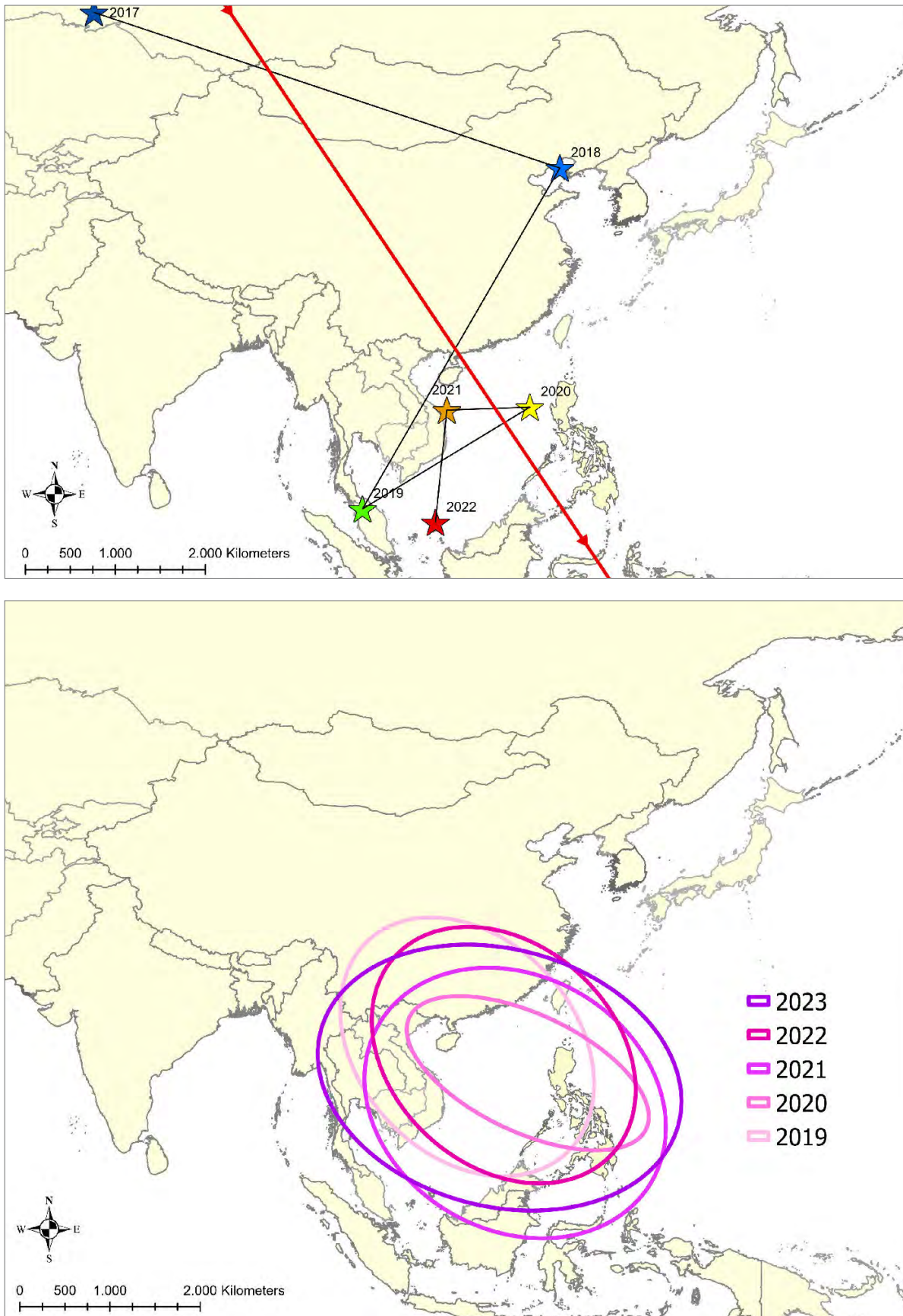
According to immediate notifications and follow-up reports (INFUR) submitted by the Members via WAHIS (as of February 2023), ASF has rapidly spread to ASEAN Member States (9 out of 10 countries affected) with 1496 notifications in domestic pigs out of a total of 1598 (94%). The remaining notifications have been for cases in wild boar. Once ASF is confirmed, the disease tends to persist in most areas for an extended period. While most of the affected countries have reported ASF in domestic pigs, in Malaysia, around 50% of notifications have been in wild boars, and Singapore has reported few cases in wild boars and imported domestic pigs in 2023

ASF has predominantly spread from East Asia to Southeast Asia, with the Philippines and Vietnam being heavily impacted. Notably, village pigs make up 92% of the 1495 ASF notifications in the Southeast Asia region. Other epidemiological categories include farm (5%), backyard (1.4%), other (1.34%), and slaughterhouse, zoo, or livestock market (1 notification each).

#### 3.3.2. Emergence of ASFV variants

The ASFV isolated in China since 2018 has belonged to genotype II, and is the same strain as the highly virulent isolate that emerged in Eastern Europe (Li *et al.*, 2018). Genotype II is the most prevalent ASFV genotype in Southeast Asia. The virus has mutated

### 3. ASF Situation



*Figure 1: Annual spatial spread directional analysis of ASF in domestic pigs in the Asia-Pacific region (above) and in Southeast Asia (below). The disease followed a south-eastern spread of direction and has remained since 2019 in Southeast Asia*

over time, with new variants emerging, such as naturally mutated genotype II low virulent strains that were found in the field in 2020 (Sun *et al.*, 2021). In 2021, aside from the genotype II strain, genotype I ASFV was discovered in China, causing chronic forms of the disease, including intermittent fever, arthrosis, and cutaneous necrosis (Sun *et al.*, 2021). HeN/ZZ-P1/21 and SD/DY-I/21, two genotype I non-haemadsorbing ASFVs, were isolated from pig farms in the provinces of Shandong and Henan, respectively. A phylogenetic analysis of the full genome sequences showed high similarity to two genotype I ASFVs that were previously isolated in Portugal (NH/P68 and OURT88/3). The source of these viruses and the nature of their introduction into China is still unclear, and it is reasonable to assume these viruses may also emerge in other regions of China and Southeast Asia. It was also hypothesized that the emergence of this new genotype could be due to use of unauthorized ASF vaccines (Sun *et al.*, 2021a, 2021b).

#### 3.3.3. ASF in wild pigs

With the exception of Malaysia and a few notifications in Singapore, all reported cases of ASF in the Southeast Asian region have been in domestic pigs. However, the habitats of wild boars are widely

distributed, and unofficial cases of ASF in wild boars have been reported (Denstedt *et al.*, 2018), suggesting that ASF could have potentially spread among wild boars in Southeast Asia. While ASF has been officially reported in wild boar in Malaysia, Singapore and in bearded pigs on Borneo Island, the lack of reported cases in other wild pig populations does not necessarily indicate a lack of infection, as surveillance of wild pig populations is limited or non-existent in many countries.

Of the two indigenous species known to have been affected by ASF so far (*S. barbatus* and *S. philippensis*), the domestic pig farming was identified as high risk factor for *S. philippensis* (Luskin *et al.* 2020). Both species were found to have a high risk of transmission through trade within range, while human density was a high risk for *S. barbatus* and a very high risk for *S. philippensis*. Furthermore, human consumption of pork within range posed a high risk for *S. barbatus* and a very high risk for *S. philippensis*.

# 4.

## Socio-economic impact of ASF



## 4. Socio-economic impact of ASF

The impact of ASF in Asia has been significant, both in terms of its direct impact on the pig population and its broader socioeconomic consequences. ASF has a significant impact on the socio-economic aspects in Southeast Asia, where pork is a primary source of protein. Pigs are a crucial part of the rural and peri-urban populations' livelihoods and pig farming plays a vital role in the family economy and cultural values in countries such as Myanmar, Laos, Cambodia and the Philippines including for health and education expenses, particularly in rural areas (Holt *et al.*, 2019, Berends *et al.*, 2021a and b; Cooper *et al.*, 2022, Cambodia presentation at GF-TADS 2nd SGE, 2019).

ASF outbreaks can have devastating consequences for affected households, resulting in increased housing and feed costs, and a reduction in 20-30% of family incomes. ASF has also significant impacts on the global protein supply, causing a looming food crisis and affecting smallholders the most. Feral pigs are also an essential food and cultural resource for the local population of several Southeast Asian countries (Indonesia, Malaysian Borneo). According to the survey conducted by Cowled *et al.* (2022), the utilization of *S. scrofa* was predominantly for sustenance purposes (45.5% diet and 12.7% ceremonial), recreational activities such as hunting (29.1%), and financial incentives (5.5%). *S. barbatus*, on the other hand, was the most cited alternative wild pig species utilized, with food (42.9% diet and 28.6% ceremonial) and hunting/sport (28.6%) being the primary purposes. In the Philippines, warty

pigs (*S. philippensis*) are considered a healthy source of meat and thus hunted. In Vietnam and the Philippines, pigs are the main source of meat, and pork represents over 70% of meat consumption in Vietnam. ASF outbreaks have caused a decline

in pork production in both countries, resulting in significant economic losses for farmers. Large-scale farms with standardized production systems and biosecurity are necessary for the survival of the pig industry, especially in Vietnam, where urbanization and demand for pork and processed products are expected to grow rapidly over the coming years. With the recent detection of ASF in imported pigs at the slaughter house, Singapore has stopped the export of live pigs which affected 15% of their pork supply.

Myanmar has the largest pig-raising industry (21 mill pigs in 2019) in the ASEAN region together with Vietnam and Philippines where the pig sector is the largest livestock contributor and second largest agriculture contributor after rice (Cabantac, 2020). It was the 8th country in the world in 2019 in terms of pork production volume and number of breeding sows. Thailand has a high level of industrialized production and is a net exporter of pigs, with a consistently high level of pork exportation. Vietnam is the second largest producer and consumer of pork in Asia after China.

ASF is currently the main challenge to pig production in AMS. In the Philippines, pork production declined 23.4% from January to October 2021 compared with the same period in 2020. In some areas, like Central Luzon (a top pork producing region), pork production declined by 71% (Pig333.com). Vietnam lost 20-30% of its pigs in 2021 due to ASF (pig333.com; Nguyen *et al.*, 2021). In Vietnam, the most severe economic losses were experienced by the medium and large farms but for the modernised farms with higher levels of biosecurity and technology were not affected at the same levels, and even benefited under the outbreak situation due to uninterrupted market access and increases in pork prices (Nguyen *et al.*, 2021).

# 5.

## **Overarching principles for the development of the ASEAN ASF Prevention and Control Strategy**





## 5. Overarching principles for the development of the ASEAN ASF Prevention and Control Strategy

The ASEAN ASF Prevention and Control Strategy is in line with and refers to:

- ASEAN Strategic Plan of Action for Cooperation on Livestock (2021-2025)
- ASEAN Strategy for Exotic, Emerging, Re-emerging Diseases and Animal Health Emergencies (2021)
- The GF-TADs founding document, the 2004 GF-TADs Agreement - Since 2004, the FAO and WOAHA have cooperated in the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs) to reduce the threat from TADs to food security, livelihoods and safe trade.
- The GF-TADs Strategy for 2021–2025: Enhancing control of TADs for global health launched recently recommended the establishment of strategies for priority TADs at the sub-regional, regional and global levels.
- Global control of African swine fever: GF-TADs initiatives 2020-2025 aiming to achieve global control of ASF, which will protect health and ensure the welfare of both domestic and wild pigs.
- WOAHA Standards – Chapter 15.1. Infection with African swine fever virus of the WOAHA Terrestrial Animal Health Code, Chapter 3.9.1. African swine fever of the Terrestrial Animal Health Manual and other relevant chapters and WOAHA guidelines such as Compartmentalisation, Diagnostic laboratory algorithm and Guide: African swine fever diagnostic tests for field application and other guidance like the laboratory algorithm.
- WOAHA ASF Reference Laboratories Network objectives
- FAO publications: Addressing African swine fever: Laboratory protocols and algorithms, African swine fever: Detection and Diagnosis, Guidelines for African swine fever (ASF) prevention and control in smallholder pig farming in Asia series, risk communication in animal disease outbreaks and emergencies.
- FAO-WOAHA Regional collaborative framework for ASF for Asia and the Pacific.
- The FAO Strategic Framework (2022-2031), and the WOAHA 7th Strategic Plan (2021-2025), are the ‘corporate’ Strategies of the FAO and the WOAHA, respectively;
- FAO, IUCN SSC, WOAHA, ‘Conservation impacts of African swine fever in the Asia-Pacific region Joint communique of the Food and Agriculture Organization of the United Nations (FAO), International Union for Conservation of Nature Species Survival Commission (IUCN SSC) and the World Organisation for Animal Health (OIE),. 24 June 2021.’

**6.**

# **Strategic challenges to the control of ASF in the ASEAN region**



## 6. Strategic challenges to the control of ASF in the ASEAN region

The rapid spread of ASFV in Southeast Asia highlights some key challenges for effective cross-border coordination, exchange of information and collaboration:

- ASF has been widespread in the ASEAN region, with 9 out of 10 AMS affected, and the scale of the national and regional challenges to control ASF should not be underestimated. It will require a long-term commitment by all involved to tackle this threat.
- The extensive small-scale pig production system with low-biosecurity measures in Southeast Asia poses a significant risk of ASF outbreaks. Furthermore, surveillance and control of ASF must consider the local production system and social and cultural aspects of the communities.
- According to WAHIS reports received from the Members, there are significant delays in submitting immediate notifications after confirmation of ASF. In order to enhance the regional early warning system, it is important to report any cases of ASF through WAHIS or any other platform agreed upon by the Members in the region.
- Effective control of ASF in Southeast Asia requires a coordinated approach focused on addressing the main challenges to disease management. There is scope to leverage the existing ASEAN mechanism to enhance ASF prevention and control in Southeast Asia.
- International standards, guidelines, standard operating procedures and tools for the control of ASF already exist, as does expertise to support implementation. However, to date, effective implementation of these international recommendations has had limited success under the diverse and challenging scenarios that countries face.
- The absence of an effective and authorized ASF vaccine is another well-recognized challenge (including the risks associated with use of non authorized ASF vaccine) in the control of ASF; thus, coordinated research and programmes are needed for the development of safe and efficient vaccines including post vaccination monitoring.
- Identifying regional specificities and differences within the pig sector (e.g. highly industrialised, smallholders, free-ranging, etc.) and timely exchange and dissemination of information and best practices are crucial to building and implementing science-based national and regional control strategies.
- Despite the reports of ASF in wild pigs, there is still a poor understanding of the role of wild pigs in ASF epidemiology in the region, including which wild pig species are susceptible, how severely populations in the wild have been impacted, and what knock-on effects a putative decline may have had on their predators, such as tiger, and rural communities. Stronger coordination and collaboration among the veterinary and wildlife/environment sector is required to understand the epidemiology of ASF in wild pigs and to enhance surveillance and biosecurity, thus reducing the ASF risk at the domestic-wildlife interface.
- Multi-stakeholders' engagement and multisectoral synergies in TADs control programs are still often very limited. Public and private sectors and local community engagement in livestock programs should be strengthened to reinforce animal health service delivery systems for the prevention and control of TADs, including ASF. This would facilitate the development of food production systems more resilient to the risk of infectious diseases;
- Access to adequate and sustainable resources to implement the recommended measures on preparedness, prevention, detection and control will be a challenge for many countries and will require support from development partners.

The ASEAN ASF Prevention and Control Strategy aims to tackle strategic challenges to reduce the adverse impact of ASF on the pig sector and wild suid populations in Southeast Asia by defining the objectives and providing the structure for specific outputs and outcomes to be achieved for the control of the ASF in the ASEAN region.

**7.**

# **ASEAN ASF Prevention and Control Strategy (2023 – 2028)**



# 7. ASEAN ASF Prevention and Control Strategy (2023 – 2028)

## 7.1. Goal

The goal of the ASEAN ASF Control Strategy is to achieve regional control of ASF that will result in a reduction of the adverse impact of ASF on the pig sector and wild suid populations in Southeast Asia through multi-stakeholder cooperation and promotion of cooperation amongst the AMS.

The strategy will be considered successful if a meaningful change in one or more of the following performance indicators has been achieved: (i) reduction in the number of countries and territories affected by ASF, (ii) reduction of the number of ASF outbreaks within affected countries and territories (segregated by domestic pigs and wild pigs), (iii) reduced losses due to ASF and (iv) increased number of AMS that implement zoning and compartmentalisation, and (v) increased number of multisectoral collaboration for ASF prevention and control through One Health approach.

Effective control of ASF in Southeast Asia will make an important contribution to improved health and welfare of both domestic and wild pigs, towards ensuring business continuity and to the achievement of the United Nations Sustainable Development Goals (SDGs), in particular the alleviation of poverty (SDG 1) and zero hunger (SDG 2).

## 7.2. Objectives

1. To improve regional coordination and cooperation for more effective mitigation of the impacts of ASF in Southeast Asia and beyond.
2. To enhance the understanding and capability of ASEAN Member States for effective prevention and control of ASF using best practices.
3. To improve the effectiveness and sustainability of ASF prevention and control through multi-sectoral stakeholders engagement and multidisciplinary partnerships.

## 7.3. Outcomes

**7.3.1. Outcome 1: Regional coordination and cooperation for more effective prevention and control of ASF is improved**

**Output 1.1 Set up ASEAN ASF Governance structure**

The ASEAN ASF lead country can provide support to ASEAN Secretariat in the day-to-day coordination and implementation of the strategy. Further, in implementing the strategy, ASEAN Secretariat and AMS will closely work with FAO, WOAHA, and other partners, such as IUCN to expedite its implementation (Figure 2).

As the ASEAN sectoral bodies overseeing the ASEAN animal health and livestock sector, the ASEAN Sectoral Working Group on Livestock (ASWGL) should be responsible for providing overall policy guidance for implementing the strategy. In executing the works, ASWGL will be supported by ASEAN Secretariat/ ACCAHZ to facilitate the implementation of the Strategy.

The ASEAN Lead Country for ASF means a Member State appointed by the ASEAN Sectoral Working Group on Livestock (ASWGL) to lead the ASEAN ASF activities and implement the ASF strategy. A lead country should be identified to lead in implementing this strategy. The ASEAN ASF lead country can provide support to ASEAN Secretariat/ ACCAHZ in the day-to-day coordination and implementation of the strategy. ASEAN Lead country for ASF will report the ASEAN ASF situation to ASWGL/ ACCAHZ annually or when needed, with support from WOAHA and FAO. The ASEAN Lead Country for ASF to be recognized as a member of the Standing Group of Experts (SGE) on ASF for Asia and the Pacific will attend SGE meetings as needed and report back to ASWGL/ ACCAHZ.

Further, in implementing the strategy, ASEAN Secretariat, ACCAHZ and AMS will closely work with FAO, WOAHA, and other partners, such as IUCN to expedite its implementation (Figure 2).

## Theory of Change - ASEAN ASF Prevention and Control Strategy

**Goal**  
To achieve regional control of ASF that will result in a reduction of the adverse impact of ASF on the pig sector and wild suid populations in Southeast Asia

- Reduction in the number of countries and territories affected by ASF\*
- Reduction of the number of ASF outbreaks within affected countries and territories\*
- Increased number of AMS that implement zoning and compartmentalisation\*
- Increased number of multisectoral collaboration for ASF prevention and control\*

\* The goal is achieved by meeting the four defined criteria.

### Problem statement

ASF is threat to food security with negative socio-economic impact. The ASF also cause adverse impact on wild suid populations in Southeast Asia.

### Objectives

| Objective 1   | Objective 2   | Objective 3   |
|---|---|---|
| Strengthen regional coordination and cooperation framework for ASF and other TADs control | Improve capability of ASEAN Member States to control ASF and other TADs | Ensure the effectiveness and sustainability of ASF prevention and control |

### Outputs

|   |   |   |
|---|---|---|
| 1.1 Set up ASEAN ASF Governance structure   | 2.1 Systematic evaluation of the capability of Veterinary Services, in particular to control AS                           | 3.1 Strengthen engagement and coordination with relevant stakeholders, including private sector   |
| 1.2 Harmonize Regional Coordination Mechanism in line with GF-TADs and other relevant frameworks                  | 2.2 Provision of technical guidelines and resources for ASF prevention and control including facilitation of safer trade. | 3.2 Apply Multisectoral and Multidisciplinary partnerships to control ASF and other priority TADs |
| 1.3 Establish mechanisms to facilitate immediate notification, reporting and dissemination of disease information | 2.3 Capacity building programmes to prevent and control spread of ASF and priority TADs.                                  | 3.3 Promote a sustainable funding mechanism for ASF prevention and control                        |
|   | 2.4 Strengthen legislation and policy on prevention and control of ASF and other TADs                                     |   |

### Outcomes

| Outcome 1  | Outcome 2   | Outcome 3   |
|--|---|---|
| Regional coordination and cooperation for more effective prevention and control of ASF is improved | The ASEAN region has enhanced capacity for early detection and rapid response to PPR incursions and other priority small ruminant diseases. | The animal health workforce in the ASEAN region has enhanced capabilities for risk assessment, surveillance, PPR detection and emergency response |

Noting the complexity of the ongoing activity to control and eliminate ASF, each AMS should nominate a National LSD Focal Person who will coordinate LSD activities at the national level and with other AMS and Partners in the region. The National LSD Focal Person should also ensure the implementation of this strategy at the country level. Besides the National Focal Person oversee alignment of this Strategy with the national LSD action plans and available regional and international guidelines and standards, including the Global Framework for the progressive control of transboundary animal diseases (GF – TADs) Strategy, Regional GF-TADs Strategy for Asia and the Pacific, and WOA standards.

Considering that close collaboration is crucial for the successful implementation of the Strategy, other relevant ASEAN groups, such as ASEAN Laboratory Directors Forum (ALDF), ASEAN Veterinary Epidemiology Group (AVEG), ASEAN Communication Group on Livestock, as well as other ASEAN initiatives related to swine diseases, should also actively be engaged and participated in the implementation of the strategy.

The ASEAN Lead Country for ASF means a Member State appointed by the ASEAN Sectoral Working Group on Livestock (ASWGL) to lead the ASEAN ASF activities and implement the ASF strategy. A lead country should be identified to lead in implementing this strategy. ASEAN Lead country for ASF will report

the ASEAN ASF situation to ASWGL annually or when needed, with support from WOA and FAO.

The ASEAN Lead Country for ASF to be recognized as a member of the Standing Group of Experts (SGE) on ASF for Asia and the Pacific will attend SGE meetings as needed and report back to ASWGL. ASEAN Lead Country for ASF will ensure the ASEAN ASF Strategy is in line with the Global control of ASF: a GF-TADs initiative and the regional GF-TADs strategy for Asia and the Pacific and WOA standards.

The ASEAN Reference Laboratory for ASF means a laboratory nominated by a Member State and appointed by the ASEAN Sectoral Working Group on Livestock (ASWGL) to serve as a reference to all ASEAN Member States in accordance with its Terms of Reference (Appendix 2). ASWGL makes the decision to establish an ASEAN ASF Reference Laboratory (AARL) in consultation and consensus of all ASEAN Member States through the recommendation of the ASEAN ASF Taskforce. In line with output 1.3, ASEAN should establish AARL with clear terms and references.

With support from the WOA, and FAO, and in collaboration with the WOA ASF Reference Laboratories Network, AARL will collect and disseminate information available for ASF diagnosis and field testing.

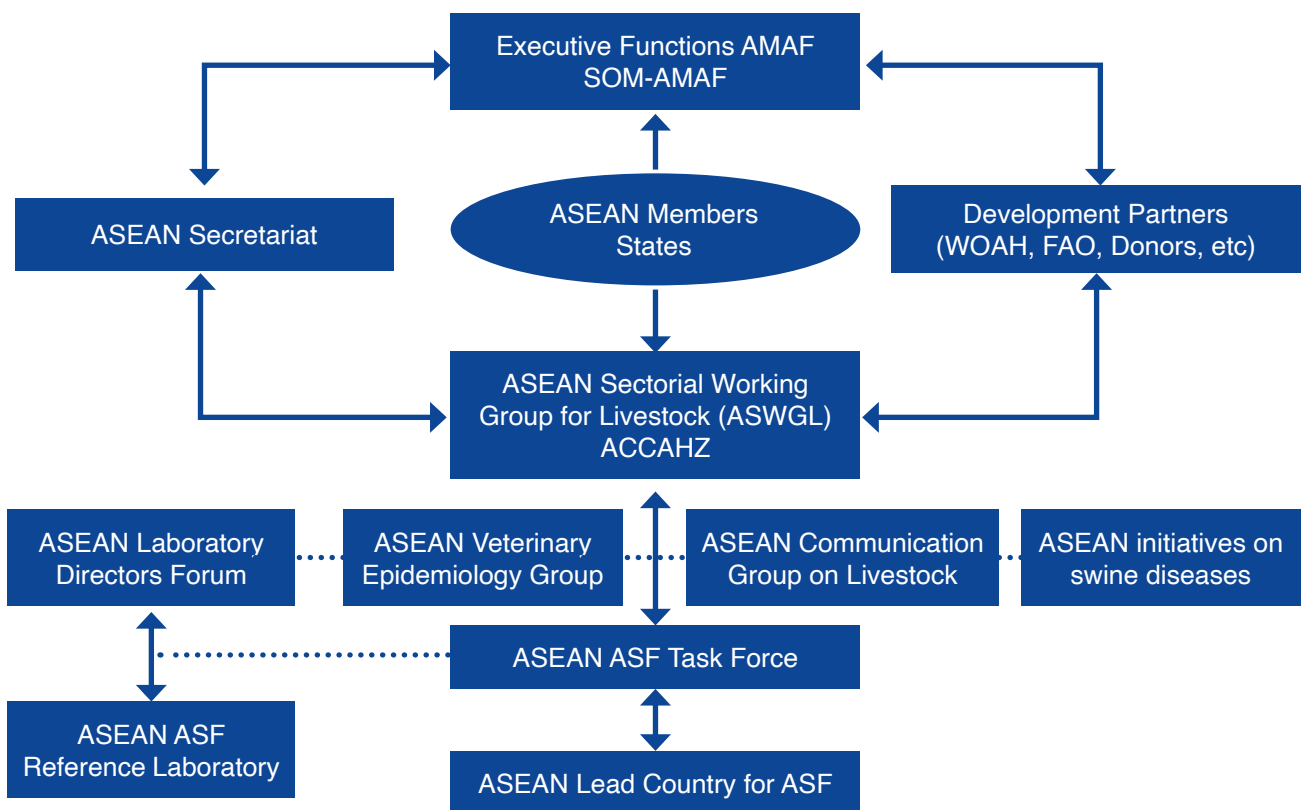


Figure 2: ASEAN ASF Coordination Mechanism

**Output 1.2. Harmonize Regional Coordination Mechanism in line with GF-TADs and other relevant frameworks**

Since 2004, the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health [WOAH, founded as OIE] have cooperated in the Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs) to reduce the threat from TADs to food security, livelihoods and safe trade (Figure 3). At the Global level, the GF-TADs Global Steering Committee provide guidance on technical activities of global scope to be implemented by the GF-TADs Global Secretariat under the supervision and agreement of the GF-TADs Management Committee. The specific disease groups, such as the Global ASF Working Group, support and guide the implementation of GFTADs strategy and Global ASF Control Initiatives.

The GF-TADs for Asia and the Pacific is the regional branch of the GF-TADs tasked with addressing disease priorities in the context of emerging threats and through a One Health approach. The governing structure of GF-TADs for Asia and the Pacific is composed of a Regional Steering Committee (RSC) for the GFTADs supported by a Secretariat. The RSC acts as a regional stakeholder platform involving WOAHR Regional Commission, FAO Regional Representation, the leading regional technical organisations, country representatives, and regional and international donors. The Chair of the ASWGL is the Voting Member of RSC.

The RSC for GFTADs meets every two years or on an ad hoc basis to monitor progress and coordinate the activities related to regional priority TAD as well as to promote harmonized and coordinated planning amongst FAO, WOAHR, Member Countries and other development partners.

In between the RSC Meetings, the sub-regional GF-TADs meetings are organized by WOAHR and FAO, which serve as a coordination mechanisms at the sub-regional level amongst its members, secretariats of Regional Economic Communities such as ASEAN, FAO and WOAHR. The Sub-Regional GFTADs Meetings are organized by WOAHR and FAO in close collaboration with the ASEAN Secretariat back-to-back with ASEAN Sectoral Working Group for Livestock (ASWGL) meetings or on its own.

Following the introduction of ASF in Asia and the Pacific, the Standing Group of Experts on African swine fever (SGE-ASF) for Asia and Pacific was launched under the GF-TADs umbrella to coordinate information sharing and support the region in the prevention and control of ASF. The launching meeting of the SGE-ASF for Asia and the Pacific was held in China on 10 March 2019, followed by a series of in-person and virtual SGE-ASF meetings.

Several other coordinated regional activities have been carried out under the GF-TADs label, such as the establishment of the SGE-ASF for Asia-Pacific, workshops and training for TADs and network meetings such as ASF Expert Network Meeting, ASF Reference Laboratory Network etc.

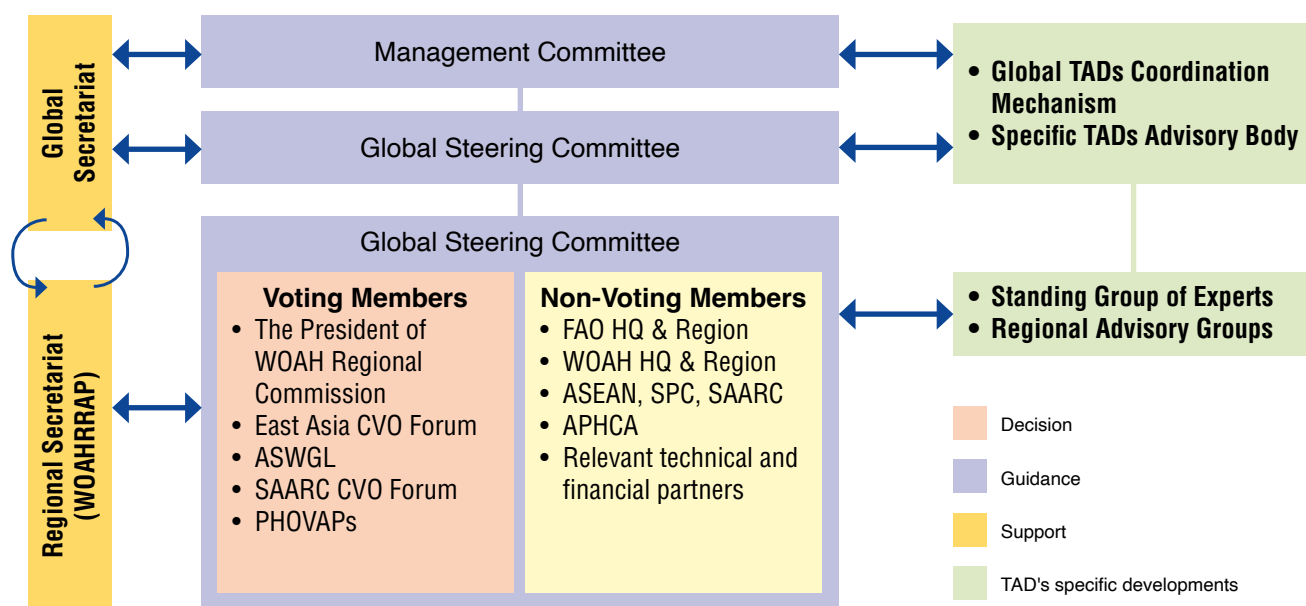


Figure 3: Mechanism of the Global Framework for the Progressive Control of Transboundary Animal diseases (GF-TADs) mechanism (adapted from Regional GF-TADs Strategy for the Asia and the Pacific)



Given the complexity of ASF, multisectoral and multi-institutional cooperation is required. GF-TADs have identified key roles to be played by countries, WOA and FAO, for the global and regional control of the disease. The FAO and WOA should continue to guide and support ASF control in the Sub-Region in close collaboration with ASEAN Secretariat, ASWGL, ACCAHZ and Members under the GF-TADs umbrella.

**Output 1.3**     *Establish mechanisms to facilitate immediate notification, reporting and dissemination of disease information*

ASEAN has established the ASEAN Regional Animal Health Information System (ARAHIS), which is intended for the use of authorized representatives of members of ASEAN countries to share timely information on livestock diseases to improve regional disease control. Therefore, ASF should be included in ARAHIS reporting list and AMS ARAHIS Focal Point should immediately report any ASF outbreak via ARAHIS. .

In line with [Chapter 1.1.](#) of the WOA Terrestrial Animal Health Code, the WOA Member Countries shall make available to other Member Countries, through the WOA, whatever information is necessary to minimise the spread of important animal diseases and their pathogenic agents and to assist in achieving better worldwide control of these diseases. WOA Members are required to share the information about the listed disease ([Chapter 1.3](#)) with other Members via WAHIS through immediate notification, six monthly reports and annual reports. Since ASF is WOA listed disease, Members are required to notify through an Immediate Notification via WAHIS within 24 hours after confirming the event, followed by a weekly follow-up report. The epidemiological information related to ASF should be collected and reported via the prescribed immediate notification and follow-up report form via WAHIS reporting platform. Members are also required to submit six-monthly reports on the absence or presence and evolution of the listed diseases and information of epidemiological significance to other Member Countries.

Members are encouraged to monitor the ASF situation in the region and, in particular, in neighbouring countries that share borders. An effort should be made to establish good relationships and communication with neighbouring countries and trading partners to share information about any suspected ASF outbreaks among the Members.

AMS could utilize available disease intelligence system, such as the Epidemic Intelligence from Open Sources (EIOS), to strengthen the country's capacity to track disease rumours.

**7.3.2.**            **Outcome 2: Capability of countries to prevent and control ASF is enhanced.**

**Output 2.1**     *Systematic evaluation of the capability of Veterinary Services, in particular to control ASF*

The capability of veterinary services to identify gaps and needs at sub-regional and national levels may be conducted and priorities for capacity building are defined through existing and new evaluation mechanisms and tools. The FAO, WOA and other regional and sub-regional members of GF-TADs bodies provide the tools and expertise to analyse capacity gaps. National Authorities can leverage on a voluntary basis, seek support from the FAO, WOA and Partners to identify and prioritize gaps in their capacity to prevent and control ASF and other TADs using the available tools. These include evaluation tools to assess the performance of veterinary services, surveillance system, laboratory capacity, emergency preparedness and response capacity, gaps in legislation, economic impact of TADs including ASF etc (Refer [Appendix 3](#) for the list of available evaluation tools).

**Output 2.2:**     *Provision of technical guidelines and resources for ASF prevention and control including facilitation of safer trade.*

There is a number of technical guidelines and resources developed by FAO, WOA and other Partners on prevention and control of ASF and other TADs. These guidelines and tools may be used by the AMS to enhance ASF prevention and control in their respective countries and to strengthen coordination and collaboration in the ASEAN region. The lists of available guidelines and resources are provided in [Appendix 4](#). This could range from surveillance, laboratory diagnosis, 3Ds (depopulation, disposal and decontamination), risk management measures, risk communication, compartmentalisation through to strategies for disease control and continued trade. An effort should be made to translate some of these guidelines into local languages to maximise the benefit of such technical guidelines for effective ASF prevention and control.

**Output 2.3**     *Capacity building programmes to prevent and control spread of ASF and priority TADs.*

The FAO, WOA and other Partners, including Donors should take the existing gap analysis into account and coordinate among themselves to identify which capacity-building priorities they will address in a holistic way. The capacity building should address the critical needs of the Members, promote synergy, and avoid duplications.

The training for animal health officials at the national and regional levels should be organized based on the needs assessment. The training may be organized either virtually or in person after a careful assessment of the effectiveness and cost implications. Members should be encouraged to attend self-paced virtual learning courses as and when made available by WOA, FAO and other Partners.

The training of wildlife/ environment/ forestry sectors on surveillance and biosecurity through a one health approach should also be conducted to prevent ASF infection from domestic to wild pigs and vice versa.

To support the implementation of the ASEAN ASF strategy, an ASEAN ASF Reference Laboratory (AARL) should be identified, which will, in close collaboration with WOA and FAO, play a key role in providing technical support to the members in relation to ASF control. The AARL should also closely liaise with WOA Reference Laboratories in the region [Australian Centre for Disease Preparedness (ACDP) and China Animal Health and Epidemiology Centre (CAHEC)] and eventually apply to obtain WOA Reference Laboratory status. It is also an objective of the WOA ASF Reference Laboratories Network to include selected laboratories from AMS as part of a broader network to facilitate collaboration and capacity building.

The AMS, ASEAN Secretariat and Partners should facilitate the strengthening of existing regional networks of epidemiology and laboratory (known as ASEAN Veterinary Epidemiology Group and ASEAN Laboratory Directors Forum) to disseminate ASF surveillance and epidemiological data among the AMS. The strengthening of epidemiology and laboratory network is pivotal to better coordinate activities, harmonise approaches and enhance the quality of ASF information sharing, which are critical in the implementation of the ASEAN ASF Prevention and Control Strategy.

AMS should work towards sustainable recovery from ASF outbreak, including: conducting risk assessments at the farm and community level, develop comprehensive restocking guidelines and regulations and their application during restocking programmes, performing value chain analysis, setting up a community-based approach to educate farmers on biosecurity measures and disease monitoring, accreditation/certification of ASF free farm and explore mechanisms for the risk mitigation measures such as farm insurance. ASF-free countries should focus on enhancing ASF prevention, detection, response and recovery including development and testing of their ASF Contingency Plan. An effort should be made to establish a mechanism for obtaining emergency funding for the containment of any reported ASF outbreaks and other emerging TADs.

**Output 2.4**     *Strengthen legislation and policy on prevention and control of ASF and other TADs*

Since ASF has recently emerged in the ASEAN region and control of this deadly disease can have significant socio-economic impact, it is critical to review and revise the existing legislation and policies or develop legislations and policies that support effective ASF prevention and control.

The WOA Terrestrial Animal Code [Chapter 3.4](#) provides some tips on the development of Veterinary Legislation. Members may request WOA for a Veterinary Legislation Support Programme (VLSP) to systematically review their legislation by the WOA VLSP Experts to identify gaps and weaknesses and to strengthen their capacity in developing legislation.

Some of the critical areas to be considered in the revised legislation and policies are compensation, depopulation, disposal, and decontamination (3D), restocking, swill feeding, wild pig trade etc.

It is important that AMS review and, if relevant, update legislation to include provisions for financing the control of ASF and other TADs in the legislative framework, including financing under the GF-TADs Partnerships and Financing Panel (PFP) mechanism.

Policy on the allocation of resources for the development of the pig sector, ASF control (including enhancing ASF preparedness and response for ASF free countries and facilitating safer trade should be considered by the Members.

AMS should effectively implement the relevant legislations and policies to enhance ASF prevention and control in their respective countries, thus contributing towards regional control of this deadly disease.

**7.3.3. Outcome 3: Multisectoral and multi-disciplinary partnership to ensure sustainable ASF prevention and control is enhanced**

**Output 3.1** *Strengthen engagement and coordination with relevant stakeholders, including private sector*

A number of organisations and stakeholders are involved at all levels in the prevention and control of TADs, including ASF. The public and private stakeholders should be mapped and categorised based on their interests and influence on ASF prevention and control at the country and regional level. Following the stakeholder mapping, stakeholder engagement strategy can be developed to liaise, coordinate, and collaborate, in order to foster connections, trust, and buy-in to implement the strategy.

The public sector stakeholders consist of the animal health, livestock and wildlife authorities, including relevant ministries and law enforcement such as police, customs, immigration, border control and disaster management. These stakeholders have a key role to play in the ASF Prevention and control.

Similarly, the private sector representatives of pig producers, pork producers associations, and cooperatives, pork industry (mega, large, medium, and small), feed manufacturers and suppliers, pharmaceuticals, private veterinarians including swine practitioners, slaughter houses and other private stakeholders may have an equally important role to play for achieving the objectives of the strategy. With the recent evolution of the E-Commerce platform for procurement of pig and pig products, it will also be important to engage with emerging industry players. The role of unregulated actors involved in the pork value chain, such as middlemen, traders, and transporters, cannot be underestimated.

The International, regional, and national level veterinary associations, producer associations, and wildlife organisations; research institutions including academia, universities, international, regional and local development organisations are capable of

providing a wider reach and expertise in niche areas to be able to better prevent and control ASF.

The coordination amongst animal health and livestock authorities is one of the prerequisites of any disease prevention and control programme, as is regional cooperation amongst Veterinary Authorities for transboundary animal disease as described in [Chapter 4.1](#) of the WOAHS Terrestrial Animal Health Code. This coordination and cooperation amongst authorities should be encouraged at National and regional levels to enhance the efficiency of ASF prevention and control.

Effective collaboration and cooperation between the public and private sectors should be promoted through public-private partnerships. Public and private stakeholder engagement and collaboration should be promoted through meetings, consultations, workshops, advocacy, and communication, particularly through social media outreach and digital awareness.

Regional and Sub-Regional FAO and WOAHS Representations, and other development partners will play a pivotal role in supporting implementation of the ASEAN ASF Prevention and Control Strategy, contributing to the GF-TADs initiative for the global control of ASF.

**Output 3.2** *Apply Multisectoral and Multidisciplinary partnerships to control ASF (and other priority TADs)*

The strategy encourages multidisciplinary planning and an integrated approach for the prevention and control of ASF and priority TADs control. AMS are encouraged to explore the opportunities to integrate and synergise with other disease monitoring, surveillance and control initiatives or with livestock production-related activities to improve the working efficiency and optimise the use of limited resources.

The engagement of stakeholders identified under output 3.1 from various disciplines and expertise, particularly in niche areas such as animal health economics, environmental science, epidemiology, socio-anthropology, value chain analysis and wildlife ecology etc., are encouraged through the regional and national activities, including training, joint studies, surveys, interdisciplinary research and site based joint projects.

The WOAHS Guidelines on [Public-Private Partnership \(PPP\)](#) provide some tips on how to develop or

strengthen partnerships with the private sector such as pig producers, pork producers associations and cooperatives, pork industry, feed manufacturers, private veterinarians etc. The partnerships will be crucial to identify together ways to enhance ASF prevention and control, including safer trade and reducing the impact of ASF.

Raising awareness amongst key stakeholders and building or strengthening capacity in risk communication is encouraged to enhance in-country and regional communication capability. The strategy supports utilising different platforms, including social and digital media, to increase the visibility of activities, including coordination meetings, training and sharing of success stories from AMS during the implementation of the strategy.

Community-based interventions and participatory approaches should be encouraged by the public and private sector, including commercial farms in order to enhance small holder participation in ASF prevention and control programmes. The overall disease prevention and control actions on the ground must be guided by the socio-economic context, interest and priorities of the communities.

**Output 3.3** *Promote a sustainable funding mechanism for ASF prevention and control*

Sustainable funding helps to ensure that investment supports the implementation of ASF prevention and control measures and achieves sustainable resilience of livelihood, economies and food security of the AMS and region as a whole. It also contributes to the recovery of the affected communities and industries from the impact of ASF.

AMS are encouraged to review all the existing resources for ASF prevention and control to explore the most cost-efficient approaches for implementing the strategy.

Based on the identified needs and gaps, additional resources from their respective governments and potential external donors can be explored, including

opportunities for cooperation and partnerships with private industry.

The strategy aims to promote a sustainable funding mechanism for ASF prevention and control through various funding mechanism including support from the development partners.

Advocacy to ministries, politicians, policymakers and high-level decision-makers within the ASEAN mechanism can play a vital role in persuading decision-makers at all levels to the allocation of adequate resources for the implementation of the strategy.

The strategy supports the development of an ASEAN policy brief, particularly highlighting the impact of ASF and the benefits of the strategy and proposed actions to help the policy makers to make an informed decision based on the evidence.

ASWGL and AMS are encouraged to review and, if relevant, update legislation to include provisions for financing TADs prevention and control in the legislative framework, including financing under the PPP mechanism to create and strengthen the enabling environment for sustainable funding for priority TADs, including ASF.

The strategy encourages investing partners' engagement and support through pragmatic approaches that contribute to the regional and national investment plans for ASF prevention and control.

AMS are encouraged to explore the opportunities under public as well as PPP mechanisms for affordable risk prevention and coping mechanisms for farmers, smallholders, industry and other stakeholders along the pork value chain. The approaches to examine include insurance, microfinance for smallholders, access to the markets, incentives for traders, compensation policy, restocking policy etc. The mechanism has the potential to contribute towards sustainable development that is inclusive and risk-averse.

**8.**

# **Implementation arrangement**



## 8. Implementation arrangement

### At the regional level:

The implementation of the strategy can be facilitated through several mechanisms at national, regional, or international levels (Figure 2). In the short term, the implementation of the Strategy will be coordinated by the ASEAN Secretariat, which will be transferred to ACCAHZ once it is established, in close consultation with the Regional GF-TADs and Standing Group of Experts on ASF for Asia and the Pacific. Existing development partners, including FAO, WOAAH, and WOAAH/ FAO Reference Laboratories, can provide technical guidance, inputs, and financial contributions along the implementation process. Financial inputs are available from several regional and national projects and programs.

To ensure engagement with the relevant ASEAN sectoral bodies, the ASEAN lead country for ASF will report the ASEAN ASF situation and the progress of implementation of the strategy to ASWGL and, once established, to ACCAHZ annually or when needed. Further, the ASEAN Reference Laboratory for ASF is responsible for serving as a reference to all ASEAN Member States following its Terms of Reference (TOR) in executing this strategy.

As and when needed, other relevant individuals, organizations and agencies such as pig producers, pork producer associations, cooperatives, the pork industry, feed manufacturers, private veterinarians, international, regional and national veterinary statutory bodies, wildlife management authorities, NGOs etc., will also be engaged in the implementation of the strategy.

### At the national level:

In the mid-and long-term, the Member States that implement the national ASF strategy will assume responsibility for ensuring the successful execution of the Regional Strategy. With support from the relevant stakeholders identified by the strategy, national animal health and livestock authorities are responsible for implementing actions and activities set out in this strategy. Some key areas identified are as follows:

- Nominate a National ASF Focal Point who will coordinate LSD activities at the national level and with other AMS and Partners in the region.
- Establish a national steering committee to ensure the collaboration of the public and private sectors should their intervention be required, including for foreign trade, finances, customs, environment, law enforcement and transport, pig industry, among others relevant.
- Assign adequate financial and logistical resources, as well as legal and regulatory tools to implement or put in place the recommendations of the GF TADs.
- Promote and establish Public Private Partnership initiatives in relevant areas for the prevention, control and eradication of the ASF.
- Initiate and develop a country-level risk-based ASF Prevention and Control Strategy.
- Implement the recommendations and proposals of the GF-TADs Standing Group of Experts on ASF for the Asia and the Pacific, ASWGL meetings, ASF Task Force Meetings and recommendations of GFTADs Meetings (Global, regional and sub-regional) related to ASF.

The priority actions for the implementation of ASEAN ASF Prevention and Control Strategy for the first two years (July 2023 – June 2025) is provided in [Appendix 5](#).

# 9.

## Monitoring and evaluation



## 9. Monitoring and evaluation

A monitoring and evaluation (M&E) framework for the ASEAN ASF Prevention and Control Strategy was developed to provide guidance to monitor the efficiency and effectiveness in the implementation of the strategy. Key indicators for the outcomes and outputs, as well as methodologies for how each indicator will be measured (Means of verification) including the routine collection of data to substantiate evidence of progress of the ASF prevention and control, was also developed.

The baseline and targets for each indicators are required to measure the progress of ASF prevention and control at the country and regional level.

- A **baseline** will be set for each indicator in 2023 by a) using existing data, or b) measuring the indicator in cases where there is no existing data. This will be done by the relevant stakeholder (member country, regional platform) involved in measuring that indicator and collated at regional level.
- A **target** for each indicator will be set for 2028 (if mid term target is required, then set for 2025 as well) by the relevant stakeholder (member country, regional platform) involved in measuring that indicator and collated at regional level.

The M&E system for the ASEAN ASF Prevention and Control Strategy should be improved progressively to provide clearer definitions of targets and indicators, more explicit descriptions of achievements, systematic data collection methods and to support the proper allocation of resources. The M&E Logical framework for ASEAN ASF Prevention and Control is provided in [Appendix 6](#).



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# Appendix 1

## List of Contributors to develop ASEAN ASF Prevention and Control Strategy

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## Appendix 2

# Terms of reference for ASEAN ASF Reference Laboratory (AARL)

### I. Introduction

The need to develop diagnostic capacity for ASF was identified as a priority by the Standing Group of Experts on ASF for Asia and the Pacific (SGE-ASF Asia Pacific). The fourth ASEAN Laboratory Directors Forum (ALDF)s Meeting recommended the establishment of ASEAN Reference Laboratories (ARL) and the elements for the ARL was discussed during this meeting. Following this, the core countries (Malaysia, Thailand, and Viet Nam) with assistance from the ASEAN Secretariat developed the Terms of References (TOR) for the ASEAN Reference Laboratories (ARL) based on the key elements agreed at the ALDF Meeting. The TOR was endorsed by the 27<sup>th</sup> ASWGL Meeting prior to SOM-AMAF Meeting. The TOR also covers the procedure for AMS to apply as ASEAN Reference Laboratory for the priority diseases (Refer Section IV).

### II. Objective and scope of activities

1. To act as reference laboratory for ASFV in the ASEAN region including confirmatory diagnostic test on specimens received from AMS in accordance with procedures described in the *WOAH Terrestrial Manual*.
2. To facilitate harmonised diagnostic techniques to make results comparable between different laboratories/ AMS, which could be achieved by:
  - a. Promoting the use of harmonized laboratory manuals and SOPs
  - b. organizing inter-laboratory proficiency testing with laboratories of the AMS for the relevant tests to ensure equivalence of results
  - c. providing reference materials and other standardized reagents used for the diagnosis and control of ASF
3. To provide scientific and technical training for the ASEAN Member States in collaboration with WOAHS ASF Reference Laboratories.
4. To maintain a system of quality assurance, biosafety and biosecurity for ASF virus.
5. To collaborate and exchange with the WOAHS ASF Reference Laboratory Network to ensure that diagnostic tests and methods employed as well as harmonisation of techniques are in line with international standards and Reference Laboratories in the region
6. Contribute to the sharing of ASFV genetic data which would provide a better understanding of the ASF molecular epidemiological features and virus transmission pathways.

### III. Mode of operation/ Prerequisites:

1. The AARL should closely liaise with the National ASF Reference Laboratories of the AMS to enhance ASF diagnosis in the region.
2. The AARL is expected to test at least 20 samples per year from the AMS for free of cost. However, cost of shipping the samples to AARL should be borne by AMS referring the samples.
3. To provide results of laboratory test (isolation and molecular test) within 14 working days.
4. To respect intellectual property rights on samples received and keep all information on cases handled as confidential except to the relevant senders and share information only upon consent from the senders.
5. To provide an annual report summarising the activities of the AARL for ASF.
6. To report the activities of the reference laboratory to the ASEAN laboratory Directors Forum, ASWGL and SGE-ASF for Asia and the Pacific.
7. The AARL should seek commitment of their respective Government to fund the activities including support to other AMS.
8. The AARL should seek technical and financial support from the international organisations and partners to support its programmes and activities.

### IV. Procedures for establishment of ASEAN ASF Reference Laboratory

In line with the agreed ASEAN procedures to recognize as ASEAN Reference Laboratories:

- Any ASEAN Member States (AMS) may propose the establishment of an ASEAN ASF Reference Laboratory from any suitable government laboratory in their respective country.
- The proposal must be submitted to the ASWGL for discussion and recommendation to SOM-AMAF approval.
- Based on the recommendation from SOM-AMAF, AMAF will approve the establishment of ASEAN Reference Laboratories.

## Appendix 3

# Lists of available evaluation tools to enhance ASF and other TADs prevention and control

- WOAH Tool for the Evaluation of Performance of Veterinary Services (PVS) missions with ASF specific methodology.
- WOAH Veterinary Legislation Support Programme (VLSP) to systematically review Members legislations by the VLSP Experts to identify gaps and weakness and to strengthen their capacity in development of legislation.
- PVS Sustainable Laboratories Mission to provide in-depth analysis of the pertinence, efficiency, and sustainability of the national laboratory network, including an appropriate balance of personnel, infrastructure, equipment and operational resources, based on national diagnostic needs.
- WOAH Emergency Preparedness and Response Evaluation Tool
- FAO Surveillance Evaluation Tool (SET)
- FAO Laboratory mapping tool (LMT),
- FAO Epidemiology Mapping Tool (EMT)
- FAO Progressive Pathway of Emergency Preparedness (PPEP)
- FAO Outbreak costing tool (OutCost) to assess the financial burden of TADs including ASF
- Relevant tools developed by other Partners



## Appendix 4

# Lists of available guidelines and resources to enhance prevention and control of ASF and other TADs

### General tools and guidelines

1. WOAHS ASF Portal have ASF related tools, guideline and resources (<https://www.woah.org/en/disease/african-swine-fever/>)
2. WOAHS Asia-Pacific ASF webpage (<https://rr-asia.woah.org/en/projects/asf/>)
3. FAO Virtual Learning Centers launched new self-paced virtual learning course on ASF with an aim to raise awareness on ASF and to develop capacity on its detection and prevention. <https://virtual-learning-center.fao.org/mod/page/view.php?id=6593>
4. Infection with ASF virus – Chapter 15.1. of the WOAHS Terrestrial Animal Health Code

### Risk Assessment

5. WOAHS ASF Cross-Border Risk Assessment Manual: Southeast Asia ([https://rr-asia.woah.org/wp-content/uploads/2023/01/asf-risk-assessment-manual-update\\_10jan23-2.pdf](https://rr-asia.woah.org/wp-content/uploads/2023/01/asf-risk-assessment-manual-update_10jan23-2.pdf))
6. Import Risk analysis - Chapter 2.1. of the WOAHS Terrestrial Animal Health Code Biosecurity

### Farm Biosecurity

7. Guidelines for African swine fever (ASF) prevention and control in smallholder pig farming in Asia – Farm Biosecurity, Slaughtering and Restocking (<https://www.fao.org/documents/card/zh/c/cb9187en>)
8. WOAHS ASF Compartmentalisation Guidelines ([https://www.woah.org/fileadmin/Home/eng/Animal\\_Health\\_in\\_the\\_World/docs/pdf/ASF/ASF-CompartmentalisationGuidelines\\_EN.pdf](https://www.woah.org/fileadmin/Home/eng/Animal_Health_in_the_World/docs/pdf/ASF/ASF-CompartmentalisationGuidelines_EN.pdf))
9. Zoning and Compartmentalisation - Chapter 4.4. of the WOAHS Terrestrial Animal Health Code
10. FAO guidelines for African swine fever (ASF) prevention and control in smallholder pig farming in Asia – Clean chain approach (<https://www.fao.org/documents/card/en/c/cb9114en>)
11. Good Practices for the biosecurity in pig Sector (2010) by FAO, WOAHS and World Bank (<https://www.fao.org/3/i1435e/i1435e.pdf>)

### Outbreak investigation

12. WOAHS Field Manual for Animal Disease Outbreak Investigation and Management (<https://rr-asia.woah.org/en/projects/foot-and-mouth-disease-fmd/seacfmd-campaign/seacfmd-manual/>)

### Surveillance

13. FAO Guidelines for African swine fever (ASF) prevention and control in smallholder pig farming in Asia – Monitoring and Surveillance for monitoring of ASF (<https://www.fao.org/documents/card/en/c/cb6238en>).
14. Animal health surveillance - Chapter 1.4. of the WOAHS Terrestrial Animal Health Code.
15. Infection with African swine fever virus - Chapter 15.1. of the WOAHS Terrestrial Animal Health

## Emergency Preparedness Response

16. WOAH Manual for Emergency Preparedness and Response Planning (<https://rr-asia.woah.org/en/projects/foot-and-mouth-disease-fmd/seacfmd-campaign/seacfmd-manual/>)

## Culling and disposal

17. FAO Guidelines for African swine fever (ASF) prevention and control in smallholder pig farming in Asia – Culling and disposal (<https://www.fao.org/documents/card/fr/c/cb9188en/>)

## Laboratory and field diagnosis

18. The WOAH ASF Reference Laboratory Network's overview of African swine fever diagnostic tests for field application ([https://rr-asia.woah.org/wp-content/uploads/2022/03/2022-02-09-oie-asf-poc-tests-guide\\_eng\\_final.pdf](https://rr-asia.woah.org/wp-content/uploads/2022/03/2022-02-09-oie-asf-poc-tests-guide_eng_final.pdf))
19. Diagnosis of African swine fever virus – Chapter 3.9.1. of the WOAH Manual of Diagnostic Tests and Vaccines for the Terrestrial Animals 2022.
20. WOAH ASF Reference Laboratories (<https://www.woah.org/en/what-we-offer/expertise-network/reference-laboratories/>)

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## Wild Pigs

21. African swine fever in wild boar ecology and biosecurity ([https://www.woah.org/en/document/en\\_manual\\_asfinwildboar\\_2019\\_web/](https://www.woah.org/en/document/en_manual_asfinwildboar_2019_web/))
22. African swine fever in wild pigs in the Asia and the Pacific region ([https://rr-asia.woah.org/wp-content/uploads/2022/09/woah\\_african-swine-fever-in-wild-pigs\\_final\\_23-sep-2022.pdf](https://rr-asia.woah.org/wp-content/uploads/2022/09/woah_african-swine-fever-in-wild-pigs_final_23-sep-2022.pdf))

## Communications and awareness materials

23. ASF Communication materials developed by FAO and WOAAH (<https://trello.com/b/GloiZoik/african-swine-fever-woah-fao>)
24. ASF Communication and awareness materials for the animal health staff (<https://www.woah.org/en/disease/african-swine-fever/#ui-id-3>)
25. ASF Communication and awareness materials for the travellers and general citizens (<https://www.woah.org/en/disease/african-swine-fever/#ui-id-5>)
26. How to protect pigs and livelihoods against [#AfricanSwineFever](#) – (English), [#AfricanSwineFever](#) (Bahasa Indonesia), [#AfricanSwineFever](#) (Thai), [#AfricanSwineFever](#) (Vietnamese), [#AfricanSwineFever](#) (Chinese)
27. ASF Communication materials developed by WOAAH Members (<https://rr-asia.woah.org/en/projects/asf/awareness-materials-in-members/>)

## Appendix 5

# Priority Actions for the implementation of ASEAN ASF Prevention and Control Strategy for the first two years (July 2023 to June 2025)

| Results  | Priority Actions  |
|--|---|
| <ul style="list-style-type: none"> <li><b>Goal:</b> To achieve regional control of ASF that will result in a reduction of the adverse impact of ASF on the pig sector and wild suid populations in Southeast Asia through multi-stakeholder cooperation and promotion of cooperation amongst the ASEAN Member States (AMS).</li> </ul> |   |
| <b>Outcome 1:</b> Regional coordination and cooperation for more effective prevention and control of ASF is improved   |   |
| <b>Output 1.1</b> – Set up ASEAN ASF Governance structure  | <ul style="list-style-type: none"> <li>ASEAN to endorse the formation of ASF task force and designation of Reference laboratory and lead country through ASWGL/ACCAHZ mechanism with agreed ToR</li> </ul>  |
| <b>Output 1.2</b> – Harmonize Regional Coordination Mechanism in line with GF-TADs and other relevant frameworks   | <ul style="list-style-type: none"> <li>Conduct ASWGL/ASF task force meetings back to with sub-regional GFTADs meeting and other WOA and FAO ASF related meeting</li> </ul>  |
| <b>Output 1.3</b> – Establish mechanisms to facilitate immediate notification, reporting and dissemination of disease information  | <ul style="list-style-type: none"> <li>Propose inclusion of ASF in the ARAHIS disease list</li> <li>Share ASF outbreak case definition of the individual country to other AMS</li> <li>Immediately notify ASF outbreaks via ARAHIS and WAHIS platform by the AMS</li> </ul>   |
| <b>Outcome 2:</b> Capability of countries to prevent and control ASF is enhanced   |   |
| <b>Output 2.1:</b> Systematic evaluation of the capability of Veterinary Services, in particular to control ASF  | <ul style="list-style-type: none"> <li>Interested AMS to propose WOA to conduct PVS evaluation with ASF specific content</li> </ul>   |
| <b>Output 2.2:</b> Provision of technical guidelines and resources for ASF prevention and control including facilitation of safer trade.   | <ul style="list-style-type: none"> <li>Promote use of available tools and resources to AMS by WOA, FAO and other Partners</li> <li>Share the best practices and lessons learnt from the community based ASF biosecurity interventions which is currently piloted in some AMS</li> </ul>   |
| <b>Output 2.3:</b> Capacity building programmes to prevent and control spread of ASF and priority TADs.  | <ul style="list-style-type: none"> <li>Develop capacity of laboratories in AMS to diagnose ASF with molecular diagnostic techniques.</li> <li>Conduct inter-laboratory proficiency testing of the National ASF Laboratory with WOA Reference Laboratory and in-country PT of the National Reference Laboratory with the sub-national laboratories</li> <li>Develop capacity of AMS on ASF surveillance and outbreak investigation</li> </ul>  |
| <b>Output 2.4:</b> Strengthen legislation and policy on prevention and control of ASF and other TADs   | <ul style="list-style-type: none"> <li>Bench mark available policies and legislations related to prevention and control of ASF and other pig diseases</li> </ul>  |
| <b>Outcome 3:</b> Multi-disciplinary partnership to ensure sustainable ASF prevention and control is enhanced  |   |
| <b>Output 3.1:</b> Strengthen engagement and coordination with relevant stakeholders, including private sector   | <ul style="list-style-type: none"> <li>Conduct stakeholder mapping at national and regional level</li> </ul>  |
| <b>Output 3.2:</b> Apply Multisectoral and Multidisciplinary partnerships to control ASF (and other priority TADs)   | <ul style="list-style-type: none"> <li>Identify and implement activities that are in synergy with other priority TADs and swine diseases (ASF, FMD, LSD and other swine diseases activities)</li> <li>Promote multisectoral and interdisciplinary partnerships through regular meetings and workshops to enhance ASF prevention and control at the national and regional level</li> <li>Reinforce communication activities to sensitize all the key stakeholders on ASF prevention and control</li> </ul> |
| <b>Output 3.3:</b> Promote sustainable funding mechanism for ASF prevention and control  | <ul style="list-style-type: none"> <li>Prepare policy briefs highlighting the impact of ASF and benefit of its control to the country's economy and livelihood of stakeholders.</li> <li>Organize advocacy activities for the Policy Makers, high-level decision makers and Partners to allocate resources for ASF prevention and control</li> </ul>  |

# Appendix 6

## Logical Framework for the ASEAN ASF Prevention and Control Strategy (2023 – 2028)

| Results   | Success Indicators  | Baseline  | Targets |      | Means of Verification   | Assumptions and Risks  |
|---|---|---|---------|------|---|--|
|   |   |   | 2023    | 2025 |   |  |
| <p><b>Goal:</b> To achieve regional control of ASF that will result in a reduction of the adverse impact of ASF on the pig sector and wild suid populations in Southeast Asia through multi-stakeholder cooperation and promotion of cooperation amongst the ASEAN Member States (AMS).</p> | <ul style="list-style-type: none"> <li>• **These indicators serve to monitor the ASF situation**</li> <li>• Number of AMS affected by ASF</li> <li>• Number of new ASF outbreaks within affected AMS (segregated by domestic pigs and wild pigs)</li> <li>• Number of AMS that implement zoning and compartmentalisation</li> </ul> | <ul style="list-style-type: none"> <li>• Baseline to be obtained from WAHIS</li> <li>• Baseline to be obtained from the National ASF Focal Person and key informant interviews (KII)</li> </ul> |         |      | <ul style="list-style-type: none"> <li>• Annual report of the ASEAN ASF Prevention and Control Strategy</li> <li>• WAHIS</li> <li>• ARAHIS</li> <li>• Obtain information from ASF focal person</li> <li>• ASWGL meets every year, propose to measure the indicators on a yearly basis to align with the meetings</li> </ul>             | <ul style="list-style-type: none"> <li>• Countries show political and policy commitment to ASF prevention and control, and transparency in disease notification.</li> <li>• Sufficient financial and human resources support from national budgets, Partners and donor countries</li> </ul>  |
| <p><b>Outcome 1:</b> Regional coordination and cooperation for more effective prevention and control of ASF is improved</p>   | <ul style="list-style-type: none"> <li>• 1.1 Functional and operational ASF prevention and control Governance structure in the ASEAN region in place</li> </ul>   | <ul style="list-style-type: none"> <li>• ASEAN ASF task force, ASF reference laboratory and ASF lead country do not exist</li> </ul>  |         |      | <ul style="list-style-type: none"> <li>• Functional ASEAN ASF task force with agreed ToR</li> <li>• Functional ASF Reference laboratory including TOR</li> <li>• Assigned ASF lead country with ToR</li> <li>• Annual report of the ASEAN ASF Prevention and Control Strategy</li> <li>• Meeting reports of different groups</li> </ul> | <ul style="list-style-type: none"> <li>• Key partners, such as FAO and donors, continue collaborations with the ASEAN and AMS to enhance ASF control</li> <li>• Sufficient human and financial interest from donors and target countries</li> <li>• Countries continue to provide information on diseases outbreaks</li> <li>• The right people are being trained; knowledge retained by trained participants</li> </ul> |
| <p><b>Output 1.1</b> – Set up ASEAN ASF Governance structure</p>  | <ul style="list-style-type: none"> <li>• 1.1.1: ASEAN ASF Task Force established with ToR</li> <li>• 1.1.2: Designated ASEAN ASF Reference Laboratory</li> <li>• 1.1.3: Number of ASF related initiatives to strengthen existing ASEAN regional networks (ALDF, AVEG etc).</li> </ul>   | <ul style="list-style-type: none"> <li>• ASEAN ASF task force, ASF reference laboratory and ASF lead country are not existing.</li> </ul>   |         |      | <ul style="list-style-type: none"> <li>• TORs of different Group</li> <li>• Meeting report</li> <li>• Activity reports</li> </ul>   | <ul style="list-style-type: none"> <li>• Willingness of organisations and countries to participate in platform activities</li> <li>• Donor interest in ASF control is sustained</li> </ul>   |
| <p><b>Output 1.2</b> – Harmonize Regional Coordination Mechanism in line with GF-TADs and other relevant frameworks</p>   | <ul style="list-style-type: none"> <li>• 1.2.1: Number of GFTADs meeting recommendations implemented to enhance ASF prevention and control (at all level).</li> <li>• 1.2.2: Number of AMS participating in SGE for ASF for the Asia-Pacific region</li> </ul>  | <ul style="list-style-type: none"> <li>• Baseline to be obtained from the GFTADs Secretariat at the global and regional level</li> </ul>  |         |      | <ul style="list-style-type: none"> <li>• GFTADs Meeting recommendations</li> <li>• Activity Reports</li> <li>• SGE Meeting reports</li> </ul>   |  |
| <p><b>Output 1.3</b> – Establish mechanisms to facilitate immediate notification, reporting and dissemination of disease information</p>  | <ul style="list-style-type: none"> <li>• 1.3.1: Average time for reporting of ASF outbreaks via ARAHIS</li> <li>• 1.3.2: Average time for immediate notification of ASF, six-monthly and annual reports of disease situation by AMS (WAHIS)</li> </ul>  | <ul style="list-style-type: none"> <li>• ASF not included for ARAHIS reporting Baseline information for WAHIS to be obtained from WOAHS-WAHIS by WOAHS SRRSEA.</li> </ul>                       |         |      | <ul style="list-style-type: none"> <li>• WOAHS ASF situation report, FAO ASF updates</li> <li>• WAHIS Report</li> <li>• ARAHIS Report</li> <li>• Country reports</li> </ul>   |  |

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| <b>Outcome 2:</b> Capability of countries to prevent and control ASF is enhance  | <ul style="list-style-type: none"> <li>2.1: Number of countries with ASF prevention and control plan endorsed by the relevant Ministry</li> </ul>   | <ul style="list-style-type: none"> <li>Baseline to be obtained through survey of AMS and Key Informant Interviews (KII) - National ASF Focal Pint</li> </ul>  |         |   | <ul style="list-style-type: none"> <li>Country level Risk-based ASF Prevention and Control Plan</li> </ul>  | <ul style="list-style-type: none"> <li>AMS and their veterinary services committed to develop and implement a risk-based ASF prevention and control plan</li> <li>The political and health environment allows for field missions</li> </ul>   |
| <b>Output 2.1:</b> Systematic evaluation of the capability of Veterinary Services, in particular to control ASF                          | <ul style="list-style-type: none"> <li>2.1.1: Number of evaluations completed (in-country specific missions on ASF, PVS missions, performance of veterinary services, surveillance system, laboratory capacity, emergency preparedness and response capacity, gaps in legislation etc)</li> <li>2.1.2: Number of AMS that agree to undertake PVS mission with ASF specific content</li> </ul>   | <ul style="list-style-type: none"> <li>Baseline to be obtained from ASF Focal Point or through questionnaire surveys</li> <li>0</li> </ul>  | x       | x | <ul style="list-style-type: none"> <li>Evaluation Reports (PVS, FAO Laboratory Mapping Tool evaluation and other evaluations)</li> </ul>  | <ul style="list-style-type: none"> <li>Members willing to adopt new tools</li> <li>The right people are being trained, knowledge retained by trained participants</li> <li>Funds are available on time to support implementation and maintain laboratory diagnostics and surveillance activities</li> <li>AMS willingness and interest to revise legislations and policies</li> </ul> |
| <b>Output 2.2:</b> Provision of technical guidelines and resources for ASF prevention and control including facilitation of safer trade. | <ul style="list-style-type: none"> <li>2.2.1: Number of tools and guidelines to enhance ASF prevention and control developed and made available to AMS</li> <li>2.2.2: Number of tools and guidelines to enhance ASF prevention and control adopted/used by the AMS</li> </ul>  | <ul style="list-style-type: none"> <li>Bench mark available tools</li> <li>Baseline to be obtained from ASF Focal Point or through questionnaire surveys</li> </ul>   |         |   | <ul style="list-style-type: none"> <li>Activity Report/ Developed tools &amp; guidelines documents</li> <li>Training Report</li> </ul>  |   |
| <b>Output 2.3:</b> Capacity building programmes to prevent and control spread of ASF and priority TADs.                                  | <ul style="list-style-type: none"> <li>2.3.1: Number of regional training activities conducted by WOA, FAO and other Partners on ASF prevention and control</li> <li>2.3.2: Number of people trained during the regional trainings</li> <li>2.3.3: Number of in-country training activities conducted on ASF prevention and control by AMS</li> <li>1.3.4: Number of people trained during the in-country trainings</li> <li>1.3.5: Number of laboratories in AMS that can confirm ASF with molecular diagnostic techniques</li> <li>1.3.6: Number of countries participating in inter-laboratory proficiency testing.</li> </ul> | <ul style="list-style-type: none"> <li>To ask during consultation with Partners or through surveys</li> <li>Baseline to be obtained through and surveys and KII - National ASF Focal Pint</li> <li>Assessed based on laboratory capacity evaluation and obtain information from ALDF Focal Point</li> </ul> |         |   | <ul style="list-style-type: none"> <li>Training reports</li> <li>Reports</li> <li>Survey results</li> <li>Laboratory capacity evaluation reports</li> <li>Proficiency test results</li> </ul> |   |
| <b>Output 2.4:</b> Strengthen legislation and policy on prevention and control of ASF and other TADs                                     | <ul style="list-style-type: none"> <li>2.4.1: Number of countries who developed policies and legislations related to ASF</li> <li>2.4.2: Number of countries whose National legislation related to ASF (and other related TADs and swine diseases) have been reviewed, revised and enforced</li> </ul>  | <ul style="list-style-type: none"> <li>Benchmark existing policies and legislations of the AMS</li> <li>Baseline to be obtained through and surveys and KII - National ASF Focal Point</li> </ul>   |         |   | <ul style="list-style-type: none"> <li>Policies and legislations developed/ revised</li> <li>Bench mark reports</li> </ul>  |   |

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| <b>Outcome 3:</b><br>Multisectoral and multi-disciplinary partnership to ensure sustainable ASF prevention and control is enhanced | <ul style="list-style-type: none"> <li>Percentage of targeted stakeholders engaged in ASF prevention and control</li> </ul>  | <ul style="list-style-type: none"> <li>Baseline to be established through surveys, KII, focused group discussions (FGD) with the AMS and Partners</li> </ul> |         |   | <ul style="list-style-type: none"> <li>Annual report of the ASEAN ASF Prevention and Control Strategy</li> <li>Activity reports</li> <li>Survey reports</li> <li>Analysis of stakeholder data annually</li> <li>Scientific publications</li> </ul> | <ul style="list-style-type: none"> <li>Technical partners, Private sector value chain actors and countries continue to commit to ASF control including willingness to establish or participate in inter-sectoral and interdisciplinary task forces</li> <li>Target countries continue to show political and policy commitment to ASF safe trade standards</li> <li>Donor and AMS interest in ASF control is sustained</li> <li>Funds are available on time to support implementation</li> </ul> |
| <b>Output 3.1:</b> Strengthen engagement and coordination with relevant stakeholders, including private sector                     | <ul style="list-style-type: none"> <li>3.1.1 Number of AMS that have performed stakeholder mapping</li> </ul>  | 0  | 1       | 1 | <ul style="list-style-type: none"> <li>Activity reports</li> <li>Stakeholder mapping report</li> </ul>   |   |
| <b>Output 3.2:</b> Apply Multisectoral and Multidisciplinary partnerships to control ASF (and other priority TADs)                 | <ul style="list-style-type: none"> <li>3.2.1: Number of ASF activities/partnerships co-organized with the public and private sectors.</li> <li>3.2.2: Number of activities identified and implemented that are in synergy (ASF and other TADs activities)</li> <li>3.2.3: Number of disciplines/technical resource persons involved in ASF prevention and control</li> </ul> | <ul style="list-style-type: none"> <li>Baseline to be obtained from the AMS/Partners through questionnaire surveys and KII</li> </ul>                        |         |   | <ul style="list-style-type: none"> <li>Activity Reports</li> <li>Meeting/ Events Reports</li> <li>Country Reports</li> <li>Joint research, studies and publications</li> </ul>   |   |
| <b>Output 3.3:</b> Promote sustainable funding mechanism for ASF prevention and control  | <ul style="list-style-type: none"> <li>3.3.1: Number/ Proportion of ASF activities with committed funding</li> </ul>   | <ul style="list-style-type: none"> <li>Baseline to be obtained through questionnaire surveys or KII of the AMS and Partners</li> </ul>                       |         |   | <ul style="list-style-type: none"> <li>Annual budget of the AMS to support ASF Program</li> <li>Annual fund provided by the development partners to support ASF prevention and control to the AMS and ASEAN region</li> </ul>                      |   |

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