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Organization of the  
United Nations

# Template for a control and eradication plan for African swine fever in wild boar



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Published by

Food and Agriculture Organization of the United Nations  
Regional Office for Europe and Central Asia

Budapest, 2022

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## About this document

When African swine fever (ASF) is confirmed in wild boar, certain measures must be introduced to control its spread in the affected wild boar population.

For harmonized and efficient control and eradication of ASF in wild boar, following the confirmation of the primary case, it is critical that affected countries develop a Plan to control and eradicate ASF in the wild boar population (hereafter – Plan).

European Union (EU) Member States have used this approach since 2002 as required by the relevant EU legislation. By writing and implementing such a plan, Czech Republic<sup>1</sup> (2019) and Belgium<sup>2</sup> (2020) successfully eradicated ASF in wild boar.

The plan should not only list measures taken by the Competent Authorities (CAs) to control and eradicate ASF in the wild boar population, but also consider measures to prevent the spread of the disease to the domestic pig population in infected and non-infected areas.

This document provides a template for structuring such a plan. It has been developed by FAO Regional Office for Europe and Central Asia (REU). It is intended for central level veterinarians tasked with preparing and implementing a control and eradication plan for ASF in wild boar.

**Adapt the template to your country's situation, paying particular attention to the bold red text.**

<sup>1</sup> [https://www.oie.int/fileadmin/Home/eng/Animal\\_Health\\_in\\_the\\_World/docs/pdf/Self-declarations/2019\\_05\\_CzechRep\\_ASF\\_ANG.pdf](https://www.oie.int/fileadmin/Home/eng/Animal_Health_in_the_World/docs/pdf/Self-declarations/2019_05_CzechRep_ASF_ANG.pdf)

<sup>2</sup> [https://www.oie.int/fileadmin/Home/eng/Animal\\_Health\\_in\\_the\\_World/docs/pdf/Self-declarations/2020\\_12\\_Belgium\\_ASF\\_self-declaration\\_ENG.pdf](https://www.oie.int/fileadmin/Home/eng/Animal_Health_in_the_World/docs/pdf/Self-declarations/2020_12_Belgium_ASF_self-declaration_ENG.pdf)

# Template for a control and eradication plan for African swine fever in wild boar

## INTRODUCTION

A key instrument in the control of a disease emergency in the wild boar population, the plan should:

- Enable Veterinary Authorities and the other CAs to respond to and effectively manage an ASF outbreak in a wild boar population to control and/or eradicate the disease and achieve ASF-freedom as fast as possible.
- Outline the roles and responsibilities of veterinary staff at all levels during an ASF outbreak in the wild boar population.
- Help hunting authorities, relevant environmental services, and hunting communities (over which the veterinary administration has no direct control) to co-operate with the Veterinary Authorities and assist veterinary services in disease control and eradication.
- Ensure that personnel, equipment, and financial resources are quickly available to avoid any delays in dealing with the emergency.
- Consider the following when drafting your plan:
  - geographical location of the newly infected ASF territory;
  - ASF disease status and epidemiological situation of neighbouring countries;
  - domestic pig population and its ASF health status;
  - level of farm biosecurity of the domestic pig population;
  - wild boar population and its health status;
  - wild boar hunting management practices;
  - hunting biosecurity;
  - animal disease surveillance already in place (especially for ASF and classical swine fever (CSF));
  - ASF prevention measures already in place;
  - ASF control measures already in place;
  - administrative organization of the country; and
  - national incident management system.

Revise and improve the plan whenever necessary but at least once a year, according to the evolution of ASF in your country. Such revisions should be made by the appointed person/unit within the Veterinary Authority. However, it is strongly recommended to establish an ASF Expert Group to regularly review and discuss the results of ASF surveillance and eradication activities in the wild boar population.

Making your plan publicly available and sharing it with others will ensure that other countries and international organizations have a good understanding of the surveillance and control measures in place for ASF in wild boar.

Amend or supplement the plan, considering developments and changes in the epidemiological situation.

## 1. LEGISLATIVE BACKGROUND

List all relevant local, national, and supranational laws and regulations, covering notification, the control and eradication of ASF in domestic pigs and wild boar populations. In addition, list national legislation regarding:

- powers to enter affected holdings or hunting grounds and take samples if ASF is suspected;
- powers to quarantine infected and suspected premises and hunting grounds, and ban hunting;
- powers to impose movement control of susceptible live animals, both domestic pigs and wild boar and their meat and products;
- legislation on wildlife including wild boar management;
- governmental budget for ASF control and eradication (if any exists);
- international notification of ASF in wild boar.

## 2. AIM AND OBJECTIVES

Define the aim and objectives of the plan. Generally, the aim is to control and/or eradicate ASF in the wild boar population and to achieve freedom from the disease.

To achieve this aim, the main objectives of the plan should include the following:

- Detect ASF early in the wild boar population.
- Prevent the spreading of ASF in the wild boar population.
- Prevent the introduction of the disease to domestic pig holdings.
- Manage the wild boar population.
- Eradicate ASF in the wild boar population.

## 3. TIMEFRAME FOR IMPLEMENTATION

All measures should be continuously implemented until it is proven that ASF is controlled and eradicated.

According to the Terrestrial Animal Health Code of the World Organisation for Animal Health (WOAH), the country can be considered free from ASF if there has been no case of ASF infection in the past 3 years. This period can be reduced to 12 months when surveillance has demonstrated no evidence of the presence or involvement of *Ornithodoros* ticks in the epidemiology of ASF.

A country seeking recovery of free status for the entire country or a zone should have a surveillance programme to demonstrate that no evidence of infection with ASF virus exists.

All measures within the framework of the plan should be implemented to demonstrate the absence of ASF virus circulation in the infected zone or the entire country for at least 12 months after the last confirmed outbreak in the wild boar population; however, surveillance activities should continue after regaining ASF freedom.

#### 4. THE COMPETENT AUTHORITY RESPONSIBLE FOR IMPLEMENTING THE PLAN

Add the organization chart and a detailed description of the Veterinary Authority or other CAs directly responsible for implementing this plan.

#### 5. CHAIN OF COMMAND RESPONSIBLE FOR IMPLEMENTING THE PLAN

Describe the chain of command including the responsible ministries, governmental institutions, central and regional veterinary services, the Chief Veterinary Officer (CVO), and different related unit managers and their responsibilities in the field of animal health and wildlife management.

Add information on the close cooperation between biologists, hunters, hunting organizations, wildlife services, and veterinary authorities (animal health and public health).

##### 5.1 National Disease Control Centre and the chain of command

Add the NDCC's organization chart. Describe the NDCC's duties and responsibilities, human resources, materials, available equipment, and location with the physical address.

##### 5.2 Local Disease Control Centre and the chain of command

Add the LDCC's organization chart. Describe the LDCC's duties and responsibilities, human resources, materials, available equipment, and location with the physical address.

#### 6. DESCRIPTION AND DEMARCATION OF THE GEOGRAPHICAL AND ADMINISTRATIVE AREAS THAT FALL WITHIN THE ESTABLISHED INFECTED AREA, HIGH-RISK AREA, AND/OR BUFFER ZONE, AS WELL AS THE MEASURES IMPLEMENTED

Describe the administrative regions or the geographic area, where the plan will be implemented. Add a map with the geographical demarcation of the infected area.

**An example:** *The plan is implemented in all regions/xxx regions of the country (map included). The infected area was established according to recommendations by the established expert group, which includes veterinarians, hunters, wildlife biologists, and epidemiologists, and based on the results of the epidemiological investigation carried out after the detection of ASF in the wild boar population, the geographical distribution of ASF (**indicate here** how many hunting grounds or administrative units were affected or where the disease was detected and might spread further), the wild boar population in the area (according to the estimation of the hunters/hunting ground managers/forest rangers/environmental service), and the existence of natural or artificial barriers to the movement of wild boar (**list here** the fenced roads, speedways and highways, fenced areas, cities, mountains, rivers, lakes, or other artificial or natural obstacles used as borders of the infected area).*

**Note!** The infected area should not be too large to hinder regular sampling activities in areas where infected or at-risk wild boar are present. If data on the wild boar population density and size is not available when establishing an infected area, the continuous presence of wild boar and the presence of natural or artificial

barriers that effectively prevent the animals from moving freely should be taken into account. If there are no such barriers or in the case of large areas, identifying sampling areas of not more than 200 km<sup>2</sup> with an established population of about four hundred to one thousand wild boar is recommended.

Around the established infected area (core area), high-risk area, and/or buffer zone, different measures must be implemented.

### **Zoning**

To eradicate ASF in the wild boar population **in the infected area (core area)**, surveillance activities should focus on passive surveillance, which will help to define the current epidemic phase of the disease. If many dead wild boar are found, the epidemic phase is likely still increasing. If fewer carcasses are found, the epidemic is likely entering a post peak phase and the epidemic curve decreasing. Hunting of all species should be banned to prevent the disease spreading. For the same reason, other activities in the infected forest should be banned or severely limited. Ideally, there should be no hunting or forestry activity in the area(s) until the decrease in the epidemic curve is stabilized and identified through a continuous system of passive surveillance. If the infected (core) area is very small and there is a way to limit wild boar movement by using fences, such fencing (whether electrical or physical) should be regularly maintained. This will require considerable human and financial resources. If possible, access to the infected area should be restricted or limited to authorised personnel only.

Surveillance activities should focus on searching for dead wild boar and testing them using polymerase chain reaction (PCR). The search for dead wild boar should be carried out by staff trained in biosecurity in order not to spread the virus. Such staff should wear designated boots and clothes, which should be cleaned, disinfected, or washed after the search. The dead wild boar should be sampled and safely disposed of – rendered, incinerated, buried, or burned – observing national legislation and following biosecurity principles. Places where dead wild boar are found and collected should be properly disinfected with authorized disinfectants.

When the epidemic curve starts decreasing (i.e. fewer carcasses are found) and the expert group confirms this decrease, hunters trained in biosecurity and sampling protocols can resume hunting. All activities should target eradicating ASF and decreasing the remaining susceptible wild boar population in the infected (core) area as much as possible – no driven hunts; only solo hunting, and baiting to attract wild boar for shooting, trapping, sampling, and testing. Eviscerations should only be performed in areas specially designated for that purpose, i.e. fenced areas or in hunting lodges within the same hunting ground. It is advisable to dispose of the shot wild boar after sampling; however, after negative laboratory results, the country can decide to allow the meat to be used for personal consumption. The carcass should be stored within the infected area until the laboratory result is available.

**In the high-risk area and/or buffer zone** around the infected (core) area, wild boar hunting management should aim to reduce the wild boar population as much as possible. Contact of wild boar populations from the infected area with the high-risk area or buffer zone should be limited. Biosecurity measures for hunters should be implemented. Supplementary feeding should be forbidden but baiting for hunting or trapping should be allowed. Driven hunts and solo hunting can be

performed without any restriction and every wild boar that is hunted, found dead, or killed on the road should be sampled and tested for ASF by PCR. After a negative PCR, hunted wild boar can be consumed locally (i.e. placed on the local market under strict veterinary control, or designated for personal consumption). Wild boar found dead or offal should be disposed of according to the instructions provided by the Veterinary Authority.

## 7. DESCRIPTION OF THE SENSITIVE POPULATIONS

### 7.1 Wild boar population

**Describe the number of wild boar in the country (as per the spring census) for the past 3 years or provide the latest available data. Describe also the population estimation method(s) used.**

**Describe the numbers of hunted wild boar based on the hunting bag for the past 3 years or provide the latest available data. The data can be summarized in this table.**

Year	Spring census of wild boar	Hunting bag (Number of hunted wild boar)

**Add a map with the wild boar density in the country if available.**

One of the problems with the sustainable management of wild boar is the difficulty in assessing the size of the population. Countries with stable snow cover often use approaches such as track counts with correction indices or closed transect surveys repeated two to three times. These approaches can be supplemented with counts at feeding locations, driven counts (especially in snow-free areas), and camera traps. Existing population estimates differ by methods, timing, accuracy, and reliability from country to country and even from place to place within the same country. Census data coming from the hunting grounds usually comprises self-reports by hunters and gamekeepers, who are not always well coordinated and adequately trained to carry out such surveys using standardized methods. The census is estimated in spring and usually only the parent population is considered. In some countries, only hunting bag statistics are available for analysis as a relative measure of wild boar abundance.

In many countries, the hunting year does not correspond to the calendar year but runs from March/April to March/April the following year.

## 7.2 Domestic pig population

Provide data at the administrative unit level on the number of registered pig holdings over the past 3–5 years. Include the number of pigs kept in these holdings. The data can be tabulated.

An example:

Administrative unit/Region	Year		Year		Year	
	Number of holdings	Number of pigs kept	Number of holdings	Number of pigs kept	Number of holdings	Number of pigs kept

Describe the system of pig identification and registration, movement control, and database.

Add a map with the density of domestic pigs in the country.

## 8. CURRENT EPIDEMIOLOGICAL SITUATION

Describe in detail the epidemiological situation of ASF in the country and provide the results of the epidemiological investigations carried out.

Provide the following information as a minimum:

- details of the first occurrence of ASF in the wild boar population;
- where and how ASF was confirmed, in how many animals, which samples were taken, in which area/s, and whether it was through active or passive surveillance;
- active surveillance data until the detection of the first case of ASF in wild boar from the beginning of the year or for the last 3 months;
- passive surveillance data until the detection of the first case of ASF in wild boar from the beginning of the year or for the last 3 months; and
- any relevant information found during the investigations.

**An explanation:**

Describe the epidemiological situation in detail, providing as much information as possible.

*Example: On .... (date), the first case of ASF in the population of wild boar was confirmed. The laboratory confirmation was performed by PCR (if other methods were used, explain here) at the National Reference Laboratory for ASF (indicate the exact name of Laboratory) on ... (date) confirmed presence of ASF in ... (indicate number) hunted/found dead wild boar, hunted/found on ... (date) in the territory of ... (write the exact location where positive wild boar were located). The samples ..... (indicate which tissue samples and how many) were taken in the framework of active/passive (choose the relevant type) surveillance.*

Describe *active surveillance* activities, providing the number of hunted wild boar from the beginning of the year (or at least for the last 3 months) in the infected area (or particular administrative region/hunting ground units included in the infected area), the number of tested wild boar, and the test results.

Describe *passive surveillance* activities, providing data on the wild boar found dead and killed on the roads from the beginning of the year (or at least for the last 3 months), the number of wild boar tested in the framework of passive surveillance, and the test results.

Describe the data collection and data management systems, i.e. how the data is collected from the field and how it is collated and analysed.

The following table can be useful to capture the main results:

Date (month)	Administrative region/hunting ground in the infected area	Number of hunted wild boar	Number of wild boar found dead	
			Number of wild boar found (excl. roadkill)	Number of wild boar killed on the roads

## 9. AWARENESS CAMPAIGN

Describe the information campaign being carried out in the country. For example:

- The provision of updated information to different stakeholders involved – farmers, hunters, private and official veterinarians, universities, institutes, slaughterhouses, wild game processing plants, general population, etc.;
- workshops, meetings, and training organized, especially for hunters in the infected area, indicating the number of hunters trained; and
- informational leaflets printed and distributed to the targeted stakeholders and the public in general.

## 10. GENERAL MEASURES APPLIED

Describe the main measures applied in the country before confirmation of the first ASF case in the wild boar population. Measures should cover both domestic pigs and wild boar.

For domestic pigs, provide the following information as a minimum:

- categorization of domestic pig holdings (based on their level of risk, number of pigs kept, or commercial activities) according to the national legislation and definition of the categories;
- method and frequency of official inspections;
- biosecurity measures in place for commercial and non-commercial (i.e. backyard) holdings;

- information on swill feeding practices;
- surveillance activities in commercial and non-commercial pig holdings – active and passive surveillance, and sampling and testing procedures; and
- procedures and methods used for pig carcass disposal.

For wild boar, the description should cover at least:

- wild boar hunting management;
- early detection system;
- hunting biosecurity (if any) in the hunting areas;
- sampling procedures of wild boar:
  - found dead;
  - killed in road incidents;
  - hunted;
  - shot due to showing abnormal behaviour;
  - killed (culled) due to disease control measures; or
  - trapped (if applicable).
- surveillance activities in the hunting areas – active and passive surveillance, and sampling and testing procedures; and
- Procedures and methods to dispose of dead wild boar and offal.

## **11. SURVEILLANCE PROGRAMME AND PREVENTIVE MEASURES APPLIED TO DOMESTIC PIGS**

Describe the surveillance programme and preventive measures applied to domestic pigs after confirmation of the first ASF case in wild boar:

- 1.in the affected area (infected area and buffer zone; if they have been established); and
- 2.in the non-affected area.

For the affected area and the non-affected area, provide separate descriptions of:

- classification of the domestic pig holdings according to their biosecurity level, number of pigs kept, or commercial activities (e.g. commercial and backyard holdings);
- official inspection and investigation regimes, including official surveillance;
- movement control, restrictions (if any imposed), and census in domestic pig holdings;
- biosecurity measures in place for commercial and non-commercial (backyard) holdings;
- slaughtering activities (including home-slaughtering), official supervision, and control;
- procedures and methods for disposing of pig carcasses; and
- information/awareness campaign/s.

## **12. SPECIFIC MEASURES IN THE WILD BOAR POPULATION**

Describe the surveillance programme and preventive measures applied to wild boar after confirmation of the first ASF case in wild boar:

- 1.in the affected area (infected area and buffer zone - if established); and
- 2.in the non-affected area.

**For the affected area and the non-affected area, provide separate descriptions of:**

- **wild boar hunting management (including feeding/baiting activities) and the early detection system;**
- **biosecurity in the hunting areas;**
- **rules/instructions for dressing wild boar and disposing of offal;**
- **documentation on hunted or wild boar found dead (add an example of the document) with the following information as a minimum:**
  - **geographic area in which the wild boar was hunted/found dead (cadastral territory, GPS);**
  - **date of shooting/found dead;**
  - **identification of the hunter;**
  - **age and sex of the wild boar;**
  - **symptoms before shooting/description of the state of the carcass; and**
  - **results of laboratory testing.**
- **sampling scheme of wild boar (dead, roadkill, hunted, shot, killed, and trapped);**
- **ban on hunting or intensify the hunting pressure;**
- **surveillance activities in the hunting areas – active and passive surveillance, and sampling and testing procedures; and**
- **carcass and offal disposal procedures and methods.**

### **13. LABORATORY TESTING**

**Describe the National Reference Laboratory and the network of laboratories responsible for ASF testing.**

**Provide information on the sampling procedures, and the type of samples collected from domestic pigs and wild boar.**

**Finally, describe the diagnostic tests used, which should be in line with WOAH Terrestrial Manual Chapter 3.9.1. African swine fever (infection with African swine fever virus).**

***An example:***

- *Blood from the sampled animal is collected in two blood tubes: one for antibodies (by ELISA) and one for ASF viral DNA (by PCR) detection.*
- *Tissue samples are collected from the spleen and kidney (if appropriate), and a bone marrow sample is collected from a long bone or sternum (in the case of decomposed carcasses).*

*All samples are taken following basic biosecurity protocols for sampling according to the national procedures described in legislation.*

**Provide the information on the testing methods:**

***An example:***

*All blood samples taken from domestic pigs and wild boar are tested for:*

- *the presence of the ASF virus using PCR; and*
- *the presence of antibodies against the ASF virus using ELISA.*

*Tissue samples are tested for the presence of the ASF virus using PCR.*

## REFERENCES

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## Further reading

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