

## REPORT

### Expert Mission to Montenegro on African swine fever

**Period: from 7 to 9 February 2024**

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#### **Places visited during the mission:**

- Podgorica: Administration for Food Safety, Veterinary and Phytosanitary Affairs (hereinafter AFSVPA): opening and closing meeting with the staff of AFSVPA.
- Nikšič: visiting large commercial pig farm, visiting middle size commercial pig farm, meeting with local AFSVPA office representatives and private veterinary practitioners, pig keepers.
- Grachovo: visiting infected hunting ground and hunting ground in the free area, meeting with representatives of the hunting ground managers, rangers, hunters, and official veterinarians.

#### **Terms of Reference of the SGE<sup>1</sup> Expert Missions to Montenegro**

1. The experts should perform on-the-spot visits (as detailed in the Annex) in order to gather data and be in a position to formulate recommendations on disease management.

2. The experts should work with the Veterinary Services in order to determine the following aspects: a. If African swine fever (ASF) is occurring in domestic pigs (both in the commercial sector and the so-called backyard sector) and extent of the areas of occurrence.

b. If ASF is occurring in wild boar and geographical distribution of ASF in wild boar.

c. Formulate a hypothesis on the drivers of ASF occurrence.

3. Propose measures intended for the control and eradication of ASF under local conditions, in line with the WOAH International Standards and the Recommendations formulated by the GF-TADs SGE on ASF.

4. The experts should report to the Standing Group of Experts on African swine fever in Europe under the WOAH/FAO GF-TADs and to the Veterinary Services of the country being visited. A written report should be produced for each mission.

#### **I. GENERAL INFORMATION**

At the time of the visit, Montenegro reported the first two cases of African swine fever in the wild boar population.

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<sup>1</sup> SGE: Standing Group of Experts on African swine fever in Europe under the GF-TADs umbrella

The Ministry of Agriculture, Forestry, and Water Management (hereinafter MAFWM) is the competent authority for the Food Safety, Veterinary, and Phytosanitary policy.

Administration for Food Safety, Veterinary and Phytosanitary Affairs (hereinafter AFSVPA) is the competent authority (CA) for food safety, veterinary and phytosanitary legislation enforcement, and verification of compliance with the requirements set out in legislation.

AFSVPA is organized into 3 main technical sectors: the Food Safety Sector, the Veterinary Sector, and Phytosanitary Sector. Each sector, besides other Units, has also a Unit for inspection service.

In particular:

- The Food Safety Sector (including food safety inspectors) is in charge of legislation enforcement in the area of food and feed safety at all stages of production, processing, and distribution, and animal by products as well.
- The Veterinary Sector (including veterinary inspectors) is in charge of legislation enforcement in the area of animal health, welfare, animal I&R, veterinary medicines (use and control), antimicrobial resistance and residue monitoring.
- The Phytosanitary Sector (including phytosanitary inspectors) is in charge of legislation enforcement in the area of plant health, plant protection products, seed and planting material, protection of plant varieties, and GMOs.

The AFSVPA has delegated official controls and veterinary activities to authorised veterinarians who work through field veterinary clinics, known as Veterinary Ambulances. These veterinarians are contracted to help implement the Annual Programme of Mandatory Animal Health Protection Measures. These activities include surveillance and control of endemic and exotic diseases, as well as holding registration, identification, and animal movements. Regarding pig production systems, Veterinary Ambulances provide identification, movement control (with Animal Health Certificates), and annual veterinary inspections of holdings, supported by a well-defined checklist.

Veterinary inspectors supervise and control the implementation of delegated activities.

AFSVPA has a wide range of animal health legislation that has been aligned with relevant EU rules in recent years as part of the accession negotiation process. However, it has not yet achieved alignment with the EU Animal Health Law, the EU Official Controls Regulation, and their implementing and delegated regulations.

AFSVPA controls the import of live pigs and pig products through designated border control posts. Currently, most of these imports come from EU Member States, such as Denmark, rather than neighbouring countries due to outbreaks of ASF there.

In cases of suspicion of ASF, the AFSVPA follows existing procedures (in national legislation, contingency plans, and instructions). These procedures are aligned with the measures provided for in EU legislation. The Veterinary Authority has a pre-defined procedure for investigating confirmed cases of ASF and other notifiable diseases. Official veterinarians conduct epidemiological investigations. However, there is a shortage of resources, including human resources, for investigating and responding quickly to ASF.

Notifications and communications regarding outbreaks of notifiable diseases, including ASF, are sent to the WOAHA via the World Animal Health Information System (WAHIS) and to the European Union through the Animal Disease Information System (ADIS). These communications have been proactive and have provided the necessary information in previous instances of notifiable diseases.

There are 25 municipalities in Montenegro (see the map below):



The surveillance activities for the ASF and control are implemented throughout the whole country.

### **Domestic pig sector**

The pig industry in Montenegro is not very large, however, the country imports pig meat for “prosciutto” production and it appears in 11th place of the export of Montenegro.

In 2023, there were approximately 34,000 pigs before pig slaughter season (November-December). The Veterinary Information System (VIS) is not working yet, and CA has trouble with migrating data from the old database. Also, the first problem with having an exact number occurred because of a cyber-attack in 2022, which then was followed by issues related to the VIS activation and data migration from the old information system (information systems have not worked for months with a huge impact on data collection and management).

In 2023, the Ministry of Agriculture provided financial subsidies for animal keepers with ten or more sows who fulfilled animal welfare requirements for sows, which official veterinarians controlled. However, legal requirements for the biosecurity measures to be implemented in all types of pig holdings



are under development and not yet approved, required, and controlled. There are no definitions available for non-commercial (backyard) holding and commercial pig holdings.

Usually, backyards get piglets in March – April and slaughter them for personal needs mainly in November - December. From December till March backyards are empty, and the holdings are repopulated in April-May.

The CA has regional-level private veterinarians under contract (authorization) which is renewed or withdrawn every two years by new public procurement, working under veterinary ambulances, which are engaged in certain national strategic activities like performing prescribed measures in accordance with programme for mandatory preventive measures for protection of animal health, such as vaccination campaigns, sampling activities and issuing of pig movement documents. Private veterinarians must contact the regional veterinary inspector in case they suspect a notifiable disease. In case of suspicion or within the framework of the surveillance activities, private veterinarians take samples for laboratory testing.

Before the animal is moved, the veterinarian should issue the veterinary certificate and register the animal in paper form. While the database is under construction, data for animal movements are available only in a paper form.

## **II. SURVEILLANCE ACTIVITIES**

During the meetings, representatives of the CA presented information about the pig sector, the wild boar population, biosecurity recommendations, ASF surveillance and control strategy.

The AFSVPA, as a competent veterinary authority, has taken all ASF surveillance, control, and eradication measures. There is no separate ASF surveillance programme established for ASF, however, ASF surveillance principles are included in the annual programme for mandatory preventive measures for protection of animal health. ASF surveillance in domestic pigs is based on passive surveillance. For early detection of African swine fever in domestic pigs, it is mandatory to exclude African swine fever virus infection by laboratory examination of all cases with clinical signs of African swine fever and samples of dead pigs submitted with suspected African or classical swine fever in:

- holdings where 5 or more sows are bred, as well as from holdings where 50 or more fattening pigs are bred, all dead animals older than two months are tested on classical swine fever, and at least two per week (if there is a higher number of deaths per week, only the first two deaths are examined),

- at all other holdings, every dead pig, older than two months, is examined, when ante and postmortem examination reveals suspicion during the pig's slaughter.

- any pig where Classical swine fever is excluded.

Samples under passive surveillance are collected exclusively from the abovementioned animals, and all samples are tested for the presence of virus (PCR).

The passive surveillance in domestic pigs is slightly improved in comparison to 2022 when 24 pigs were tested for ASF. In 2023, a total of 52 samples originating from dead domestic pigs (spleen, kidney, lymph nodes, blood) were submitted and examined at the Diagnostic Veterinary Laboratory to rule out African swine fever. The testing was performed using the Real-time PCR method. Roche kits were used for DNA extraction and Qiagen kits for amplification.

Enhanced passive surveillance (weekly testing of at least the first two dead pigs older than 60 days) in commercial pig farms still needs to be improved to make it fully operational for early detection of ASF.

For example, the largest commercial pig farm in Montenegro visited during the mission did not submit weekly samples in a frame of enhanced passive surveillance.

From the submitted samples of the internal organs of domestic pigs, the presence of the DNA sequence of the African swine fever virus was not detected.

**The results are shown in Table 1.**

<b>Redni broj</b>	<b>Municipality</b>	<b>Vet practice</b>	<b>No. of lab. report</b>	<b>No. of samples</b>
1.	Berane	VA NIK-VET	2046	1
2.	Bijelo Polje	VA Bijelo Polje doo	2101	1
3.	Bijelo Polje	VA Bijelo Polje doo	2232	1
4.	Bijelo Polje	VA Bijelo Polje doo	2340	1
5.	Bijelo Polje	VA Bijelo Polje doo	2561	1
6.	Bijelo Polje	VA Vet-Sanus	2877	2
7.	Bijelo Polje	VA Bijelo Polje doo	2879	1
8.	Bijelo Polje	VA Bijelo Polje doo	3048	1
9.	Bijelo Polje	VA Bijelo Polje doo	3166	1
10.	Bijelo Polje	VA Grandov	3179	1
11.	Bijelo Polje	VA Grandov	3183	1
12.	Bijelo Polje	VA Grandov	3286	1
13.	Bijelo Polje	VA Vet-Sanus	3342	1
14.	Bijelo Polje	VA Bijelo Polje doo	3531	1
15.	Bijelo Polje	VA Grandov	3666	1
16.	Bijelo Polje	VA Grandov	3900	1
17.	Bijelo Polje	VA Grandov	3970	2
18.	Bijelo Polje	VA Bijelo Polje doo	4024	1
19.	Bijelo Polje	VA Grandov	4196	1
20.	Bijelo Polje	VA Grandov	4355	1
21.	Bijelo Polje	VA Bijelo Polje doo	4443	1
22.	Bijelo Polje	VA Grandov	4636	1
23.	Bijelo Polje	VA Grandov	5756	1
24.	Bijelo Polje	VA Grandov	6042	1
25.	Cetinje	VA Pet Vet	3246	3
26.	Danilovgrad	VA Prima-Vet	687	1
27.	Danilovgrad	VA Prima-Vet	1191	1
28.	Danilovgrad	VA Prima-Vet	1550	1
29.	Danilovgrad	VA Prima-Vet	1584	1
30.	Herceg Novi	VA Novi Vet	3537	1
31.	Kolašin	VA Saša Drljević	3824	1
32.	Kotor	VA Petričević	1017	1
33.	Mojkovac	VA Dr Vaso Đurović	1435	1
34.	Mojkovac	VA Dr Vaso Đurović	2502	1
35.	Mojkovac	VA Dr Vaso Đurović	4030	4
36.	Nikšić	VA Mićunović doo	4420	2
37.	Pljevlja	VA Savić	3372	2
38.	Podgorica	VA Ibričevina doo	3180	1
39.	Zeta	VA Montvet	5302	2

40.	Mojkovac	VA Vaso Đurović	4234	3
<b>In total:</b>				<b>52 - negative</b>

From the beginning of 2024 until January 25, 2024, a total of 4 samples originating from domestic pigs were tested. The test was performed using the Real-time PCR method. Roche kits were used for DNA extraction and Qiagen kits for amplification. All samples were negative.

As part of the surveillance of the wild boar population in 2023 in Montenegro, a total of 786 body fluid samples of hunted wild boars submitted in cooperation with the Hunting Association of Montenegro and private veterinary clinics were examined (using the Ab ELISA method, produced by Ingenas, Spain). The results are shown in Table 2.

Table 2. Tested samples of wild boars shot at the ASF by ambulances – Ab ELISA

Municipality	Vet. ambulanta	No. of Samples	Result	Total per Municipality
Podgorica	Mont - Vet	21	negativno	135
	Ibričevina doo	114	negativno	
Nikšić	Nikšić doo	7	negativno	8
	VA Bogdan	1	negativno	
Mojkovac	Dr Vaso Đurović	42	negativno	46
	VA Ibričevina	4	negativno	
Herceg Novi	Novi Vet	24	negativno	24
Cetinje	Mont Vet	1	negativno	26
	VA Cetinje	4	negativno	
	VA Pet Vet	21	negativno	
Pljevlja	Savić	206	negativno	206
Plužine	VA Bogdan	5	negativno	5
Danilovgrad	VA Ibričevina	1	negativno	2
	VA Prima Vet	1	negativno	
	Mont Vet	4	negativno	
Kolašin	Ibričevina doo	17	negativno	195
	Saša Drljević	169	negativno	
	Dr Vaso Đurović	5	negativno	
	Bijelo Polje doo	25	negativno	
Bijelo Polje	Grandov	66	negativno	100
	Vet Sanus	9	negativno	
	VA Žabljak	3	negativno	
Žabljak	VA Žabljak	3	negativno	3
Šavnik	VA Nikšić	2	negativno	2
Rožaje	Vet Prom DEN	2	negativno	2
Kotor	VA Petričević	7	negativno	7
Bar	Popović	25	negativno	25
<b>Total:</b>			<b>negativno</b>	<b>786</b>

In addition to testing the body fluids of hunted wild boars for the presence of specific antibodies, in 2023 the delivered internal organs of these animals were also tested for the presence of the virus that causes this disease using molecular diagnostic techniques. A total of 786 samples of delivered internal organs of shot wild boars were examined in the molecular diagnostic laboratory of SVL for the presence of the

ASF virus sequence. DNA extraction was performed using the High Pure Viral Nucleic Acid Kit, and amplification was performed using a kit from Qiagen and primers and probes from Applied Biosystems. The test results are shown in Table 3.

Table 3: Tested samples of hunted wild boars by ambulances - Real-Time PCR

Municipality	Vet. ambulance	No. of samples	Results	Total per Municipality
Podgorica	Mont - Vet	21	negativno	135
	Ibričevina doo	114	negativno	
Nikšić	Nikšić doo	7	negativno	8
	VA Bogdan	1	negativno	
Mojkovac	Dr Vaso Đurović	42	negativno	46
	VA Ibričevina	4	negativno	
Herceg Novi	Novi Vet	24	negativno	24
Cetinje	Mont Vet	1	negativno	26
	VA Cetinje	4	negativno	
	VA Pet Vet	21	negativno	
Pljevlja	Savić	206	negativno	206
Plužine	VA Bogdan	5	negativno	5
Danilovgrad	VA Ibričevina	1	negativno	2
	VA Prima Vet	1	negativno	
Kolašin	Mont Vet	4	negativno	195
	Ibričevina doo	17	negativno	
	Saša Drljević	169	negativno	
	Dr Vaso Đurović	5	negativno	
Bijelo Polje	Bijelo Polje doo	25	negativno	100
	Grandov	66	negativno	
	Vet Sanus	9	negativno	
Žabljak	VA Žabljak	3	negativno	3
Šavnik	VA Nikšić	2	negativno	2
Rožaje	Vet Prom DEN	2	negativno	2
Kotor	VA Petričević	7	negativno	7
Bar	Popović	25	negativno	25
<b>Total:</b>			<b>negativno</b>	<b>786</b>

The expert team highlights the need to further improve passive surveillance in domestic pigs, including enhanced passive surveillance in all commercial pig holdings irrespective of their size and perform the sampling on at least the first two dead kept porcine animals over the age of 60 days (if there are dead sows or boars - they should be primary sampled), or, in the absence of such dead animals over the age of 60 days, on any dead kept porcine animals after weaning, in each epidemiological unit. The samples should be tested by PCR and the pooling of samples (2-5 samples per pool) should be considered as an option for cost reduction.

Taking into consideration the current number of staff available at the CA dealing with animal health issues and in particular with ASF, the allocation of additional human resources is necessary to strengthen the animal health surveillance and control system.

### III. ASF in wild boar

The first two positive ASF wild boars were found on 12 January 2024 by hunters during a driven hunt. The wild boars were close to the border with Bosnia and Herzegovina. They were sampled and disposed of by burning on the spot. On 14 January 2024, Montenegro officially reported via ADIS and WAHIS the presence of ASF in the country in the wild boar population.

Infected areas have been established by a group of experts and are in line with the national legislation. A hunting ban was imposed in the infected area for 60 days with the possibility of extending this period to 30 more days. Around the infected area, a high-risk area was established. The search for the dead wild boar has been carried out a few times, however, due to the local circumstances and specificity of the terrain, it is very difficult to perform it properly and therefore difficult to find the dead animals.

Currently, there are no legal requirements for hunters to have any biosecurity measures and no prohibition of the evisceration of hunted wild boar in the field. CA informed that minimum biosecurity measures have already been drafted and could be approved during the next months. In previous 5 years a lot of training and workshops for biosecurity in hunting were performed, including two training from FAO, yearly awareness raising campaign, etc.

Biosecurity measures are becoming mandatory through official Order for ASF.

#### **IV. Awareness**

In 2023, a large awareness-raising campaign was conducted. The campaign was co-financed through a European Commission Grant. The campaign contained two parts.

First, the media part: TV spots on National programs, radio commercials, Google pop-ups with a reach of 4,000,000 impressions, road panels, leaflets, and posters.

The second part of the campaign was training and workshops with veterinarians, hunters, forestry workers, national park rangers, etc. It was done as thematic weekends with great and experienced lecturers from the Western-Balkan region, and they were very well attended.

The campaign also included meetings with bigger producers from all municipalities and local authorities.

Competent authority informed the experts that awareness campaigns are also foreseen in 2024.

#### **IV. Places visited**

##### **Commercial pig farms**

- Discussions with the representatives of AFSVPA (both central and local levels) and the owners of the pig farms visited indicated a general knowledge of the disease and biosecurity measures applicable to prevent the disease introduction.
- We visited the biggest commercial farm with a closed production cycle and met the owners of the farm and the official veterinarian. The farm is supported by 8 workers. The commercial holding with approx. 5200 pigs kept visited in the non-infected area have biosecurity measures in place, however, the biosecurity measures need to be revised, improved, and supervised by the farm managers. Despite



being requested by the CA since the detection of ASF in the country, the farm hasn't submitted any samples of the dead pigs within the framework of passive surveillance in 2023 and 2024 (so far).

- Disinfection is performed before the vehicles enter the territory of the farm using a hand sprayer or an automated disinfection system.



- The middle-size commercial holding with 16 sows, 2 boars, and 60 piglets visited has stepped up some biosecurity measures recently after receiving information about ASF's presence in the country. These mainly restrict other people from visiting pigs and limit contact of family members with the pigs. This farm produces piglets for trade. The owner keeps 2-3 piglets for fattening for their own consumption annually. The owner explained that pigs on the farm have never died with the exception of a few piglets during the farrowing. In case of suspicion or single pig death owner would inform the authorised veterinarian immediately to take samples for ASF testing.

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### **Infected hunting ground**

#### **Basic information:**

The size of the hunting ground is 51,000 ha, and 28 thousand ha are suitable for hunting. Number of hunters is 200, the number of active hunters is 110. Last year hunters estimated a population of 230 wild boars, there are other species of animals in the hunting ground - wolf, bear, fox, rabbit, some jackals, deer. Hunting season for wild boar in Montenegro is from 1st October to 31st January.

By 1 April each year, each hunting ground should present their data on the wildlife population estimation. Quotas are established by the Ministry of Environment and can be changed only under specific circumstances. For this particular hunting ground, the annual hunting quota for wild boars was 45, however, within the last season, 18 wild boars were hunted, mainly – adult males. The type of hunt practiced is a group hunt, individual hunt is not used. Evisceration is carried out on the spot where the animal was shot, and carcasses are delivered to the car. Carcasses are dressed and divided at one of the hunter's houses. For surveillance purposes samples are taken for trichinella and ASF testing, sampled by hunters, and delivered to official vets.

Hunters informed that incentives for the searching of dead animals and disposal of them on the spot by burial are insufficient, as the terrain is difficult for walking, and after the finding all equipment should be carried to the spot for wild boar disposal.

### **Hunting ground in ASF-free area:**

#### **Basic information:**

The hunting ground area is 22,000 ha, and the estimated wild boar population is 300. Hunters hunting in the hunting ground number 150 active hunters and the annual plan for hunting is for 35 – 40 wild boars. Last year the quota was fulfilled.

More than 50 percent of the hunters keep a few pigs at home for their own consumption.

Hunters have been participating in several trainings on ASF, were aware of the consequences of the disease, and during the discussion have agreed that biosecurity measures would be acceptable and even targeted shooting of female wild boar, if ordered, would be implemented.

## **V. CONCLUSIONS AND RECOMMENDATIONS**

### **I. General provisions**

#### **I. 1. Human resources in AFSVPA**

##### **Conclusions:**

- The recent outbreak in the wild boar population in the border area with Bosnia and Herzegovina, and the current epidemiological situation of ASF in the Western Balkan region poses a significant risk of its spreading to the other parts and even the entire territory of Montenegro. It will bring more challenges to national authorities to control and fight the diseases, namely if the ASF virus enters the domestic pig population.

- The current number of staff at the central level and veterinary inspectors at regional and local levels is insufficient to effectively carry out official veterinary control and respond promptly to ASF outbreaks.

- Despite efforts by the Government, the Ministry, and AFSVPA to address the issue of insufficient human resources, by increasing the number of veterinary professionals, there remains a significant gap in this capacity, particularly in the animal health sector responsible for the prevention and control of animal diseases.

- Addressing the shortage of human resources is vital for enhancing ASF prevention and control measures, including early detection, rapid response, and effective outbreak elimination.

##### **Recommendations:**

- Allocate additional human resources to the AFSVPA for animal disease control and epidemiology at both the central and regional levels.

- Collaborate with other Veterinary Services, such as the Veterinary Laboratory in Podgorica and private Veterinary Services, to supplement human resources and expertise where needed, and to allocate adequate human resources for key activities.

- Prioritize restructuring of the current system, recruitment, and training efforts to fill gaps in staffing, ensuring that sufficient personnel are available for rapid alert and response activities. Emphasize the importance of early detection, rapid response, and effective outbreak elimination in ASF prevention and control strategies, providing training and resources to enable personnel to carry out these tasks efficiently, in accordance with the ASF Contingency plan.

- Provide ongoing support and resources to encourage more individuals to pursue careers in veterinary medicine, addressing the long-term need for skilled professionals in the field.

#### **I.2. Non-human resources**

##### **Conclusions:**

- To effectively prevent and control ASF outbreaks, Montenegro must ensure the availability of various non-human resources to enhance the capacities of national veterinary and wildlife authorities. It was observed, however, that there is a lack of different tools, including vehicles (CA staff sometimes use personal cars for business purposes), and animal disease eradication equipment,

- Efficient animal disease surveillance and control systems are essential for early detection and eradication of ASF outbreaks, requiring investments in technologies and diagnostics to track the spread

of the disease among wild boars and domestic pigs, but also for rapid and efficient elimination of positive cases and decontamination of ASF areas, including safe disposal of contaminated materials.

- The Veterinary Authority of Montenegro does not build Rapid Response Teams equipped with trained personnel, specialized equipment, and emergency protocols for swiftly containing ASF outbreaks in domestic pigs and wild boars, conducting epidemiological investigations, culling infected animals, safe disposal of carcasses and ABPs, and implementing biosecurity measures.

### **Recommendations:**

- Invest in the development and implementation of robust animal disease surveillance and control systems, including real-time monitoring, geographic information systems, and diagnostic tools, to enable early detection of ASF outbreaks.

- Establish Rapid Response Teams with trained personnel and with necessary equipment such as personal protective equipment, decontamination, transportation and containment equipment, detection equipment, communication devices, vehicles, and other equipment. It is a significant capacity of CA, to be used for any other transboundary animal diseases.

- Promote collaboration and information sharing among national veterinary authorities, wildlife management agencies, research institutions, and international organizations to strengthen ASF prevention and control efforts.

- National Focal Point on Communication should use WOA/FAO/EC and other communication tools to improve communication on ASF (including e-repository of communication tools under Regional GF-TADs SGE on ASF).

### **I.3. Public Private Partnership**

#### **Conclusions:**

- Pork production plays a significant role in Montenegro, with the value chain supporting traditional products such as "Njeguški prosciutto", and other products.

- Mapping the pig production value chains is essential for developing risk-based strategies to prevent the spread of ASF and facilitate rapid outbreak containment.

- Effective control of ASF requires collaboration through public-private partnerships, aligning with guidelines from the WOA/FAO/EC, and knowledge sharing from the FAO.

- A united approach involving the private and public sectors, including farmers, hunters, the meat industry, traders, and the tourism industry, is necessary to combat ASF effectively.

#### **Recommendations:**

- The AFSVPA and Ministry should lead efforts to enhance private sector engagement in ASF prevention and control activities, recognizing the importance of public-private partnerships in addressing this issue.

- Undertake activities to map pig production value chains comprehensively, identifying key stakeholders and potential points of vulnerability for ASF transmission.

- Facilitate knowledge sharing and collaboration between public and private stakeholders, to develop and implement best practices for ASF management.

- Encourage active participation and cooperation from farmers, hunters, the meat industry, traders, and the tourism industry in ASF prevention and control efforts, emphasizing the shared responsibility in safeguarding Montenegro's pork production sector.

- Establish ongoing communication and coordination mechanisms between the public and private sectors to ensure a united approach in addressing ASF challenges and achieving effective outcomes.

## **II. Domestic pigs**

## **II.1. Animal identification and registration:**

### **Conclusions:**

- The pig population in Montenegro was approximately 34,000 pigs in 2023, with assessments typically conducted before the traditional slaughtering season for household consumption.
- The detection of ASF in the wild boar population underscores the importance of robust registration and identification of pigs, as well as effective control measures.
- While pig holdings are registered and data included in a national database, the cyber-attack in 2022 has disrupted access to this data in electronic format, hindering the AFSVPA's ability to monitor and trace pig movements effectively.
- The lack of electronic data availability poses a significant challenge to animal health prevention, surveillance, and control, potentially leading to delays in responding to ASF outbreaks and conducting epidemiological investigations on pig farms.
- It is encouraging that the AFSVPA's current project to introduce a new Veterinary Information System, funded by the World Bank, is in its final stages, with a strong component of animal identification and registration, including for the pig population.

### **Recommendations:**

- The AFSVPA, in collaboration with stakeholders, should prioritize the re-establishment of the animal identification system in accordance with EU requirements and World Organization for Animal Health (WOAH) standards.
- Efforts should focus on restoring electronic access to pig registration data to enhance the AFSVPA capacity to monitor and trace pig movements accurately.
- Capacity-building initiatives and training programs should be implemented to ensure that relevant stakeholders are equipped with the necessary knowledge and skills to effectively utilize the animal identification system.
- Regular audits and assessments should be conducted to evaluate the effectiveness of the re-established system and identify any areas for improvement to enhance pig traceability and disease control measures.

## **II.2. Movement control:**

### **Conclusions:**

- Seasonal pig keeping in backyard farms, typically from April to November (before seasonal slaughtering), poses a unique challenge for ASF disease control and surveillance due to the increased movement of piglets during this period.
- With neighbouring countries such as Bosnia and Herzegovina and Serbia reporting cases of ASF in domestic pigs, there is a heightened risk of illegal pig movement into Montenegro.
- Effective control measures are necessary to prevent the introduction and spread of ASF within Montenegro's pig population, particularly during the upcoming months when piglet movement is expected to increase.

### **Recommendations:**

- Implement heightened controls on pig movement, particularly during the April-November period, to prevent illegal movement from neighbouring ASF-infected countries.
- Strengthen surveillance and monitoring mechanisms at border checkpoints and entry points to detect and intercept any unauthorized pig movement.



- Ensure strict enforcement of the pig movement ban from ASF-infected and high-risk areas to other territories of Montenegro, with penalties for non-compliance to deter illegal transport.
- Enhance public awareness campaigns to educate backyard farmers and the general public, but also other stakeholders (e.g. customs services at borders, local authorities, and their services) about the risks associated with illegal pig movement and the importance of complying with control measures to prevent ASF spread.
- Collaborate closely with neighbouring countries to share information and coordinate efforts in disease control and surveillance to collectively mitigate the risk of ASF transmission across borders.

### **II.3. Biosecurity on pig farms:**

#### **Conclusions:**

- Establishing minimum biosecurity requirements through national legislation is crucial for ensuring consistent standards across all types of pig farms, distinguishing between non-commercial (backyards) and commercial pig farms.
- Implementation of biosecurity measures must be mandated for pig farms nationwide within a defined transitional period set by the AFSVPA.
- Early initiation of official veterinary control through biosecurity inspections is imperative to mitigate the risk of ASF transmission and outbreak occurrence.

#### **Recommendations:**

- The AFSVPA should swiftly establish and enforce minimum biosecurity requirements for all pig farms, ensuring clarity in definitions and adherence to standards.
- Develop and implement comprehensive training and education programs on biosecurity for commercial pig farmers, farm managers, and employed veterinarians. These programs should cover ASF disease information, transmission routes, clinical signs, and prevention strategies, and emphasize the critical importance of biosecurity measures and passive surveillance for early ASF detection.
- Prioritize the commencement of regular biosecurity inspections in active pig farms located within areas where ASF is present in wild boar populations and high-risk areas, neighbouring the infected areas. Extend inspections to other territories based on risk assessments conducted by the Competent Authority.
- Provide support and guidance to pig farmers in implementing and maintaining effective biosecurity measures, including assistance in acquiring necessary resources and technologies.
- Foster collaboration between relevant stakeholders, including governmental agencies, industry associations, and veterinary professionals, to ensure coordinated efforts in enforcing biosecurity measures and preventing ASF outbreaks.

### **II.4. ASF surveillance program**

#### **Conclusions:**

- The development of an effective ASF surveillance program is crucial for ensuring early detection of the virus in both domestic pig and wild boar populations across Montenegro.
- The surveillance program should primarily rely on passive surveillance methods, requiring proper implementation and allocation of additional human and financial resources.
- Enhanced passive surveillance measures, including regular PCR testing of deceased pigs over 60 days of age in commercial pig farms and testing of all deceased pigs in backyard farms, are necessary components of the surveillance program.
- While there have been slight improvements in passive surveillance of domestic pigs in 2023, further enhancements are needed, particularly in backyard and commercial pig farms.

## **Recommendations:**

- Develop and implement a comprehensive ASF surveillance program covering the entire territory of Montenegro, with a focus on early detection and rapid response to outbreaks.
- Allocate sufficient human and financial resources to ensure proper implementation of the surveillance program, including staffing, testing equipment, and training.
- Enhance passive surveillance efforts in i) commercial pig farms by implementing weekly PCR testing of at least 2 deceased pigs over 60 days of age, as well as ii) testing of all dead pigs in backyard farms.
- Implement measures to improve passive surveillance in both backyard and commercial pig farms, such as providing training to farmers on recognizing ASF symptoms and reporting procedures.
- Collaboration between field veterinary services, laboratory, inspection, farmers, hunters, and other stakeholders to raise awareness about the importance of passive surveillance and encourage compliance with testing protocols, is of crucial importance.
- Monitor and evaluate the effectiveness of the ASF surveillance program regularly, making adjustments as needed to address any deficiencies and improve overall performance in detecting and controlling ASF outbreaks.

## **II.5. ASF Awareness Raising**

### **Conclusions:**

- ASF remains a significant animal health concern globally, requiring concerted efforts from international organizations such as the WOA, FAO, the EU, and Montenegro. Montenegro has collaborated with partners both domestically and internationally to implement various ASF awareness campaigns aimed at preventing human activities from further spreading the disease.
- While progress has been made in raising awareness, there is a continued need to enhance these efforts to ensure widespread understanding of the issue, promote behavioral changes, and prevent further spread of ASF.
- Utilizing resources such as the GF-TADs regional coordination mechanism, specifically the SGE on ASF, provides valuable opportunities for Montenegro to learn from the best practices of other member countries in conducting effective awareness-raising campaigns: <https://rr-europe.woah.org/en/Projects/gf-tads-europe/standing-groups-of-experts-on-african-swine-fever-in-europe/depository-on-african-swine-fever/awareness-material-on-asf/>

### **Recommendations:**

- Continue and expand ASF awareness campaigns in collaboration with domestic and international partners, targeting a wide range of stakeholders to ensure a comprehensive understanding of ASF risks and mitigation measures.
- Continuous awareness campaigns focused on pig farmers (including non-commercial farms), pig traders, butchers, slaughterhouses, hunters, and the public shall be foreseen to ensure ongoing education and engagement in ASF prevention and control efforts.
- Utilize resources provided by organizations like WOA, EC, and FAO, such as risk communication and community engagement toolkits translated into multiple languages, to enhance outreach efforts along the entire pig value chain, including farmers, authorities, transporters, and market sellers.
- Learn from successful community intervention pilots, such as the one promoted on regional GF-TADs webpages, to co-create biosecurity interventions and provide training on good biosecurity practices for non-commercial and commercial pig farms. Consider implementing similar interventions in Montenegro to engage communities in ASF prevention and control efforts (<https://rr->

### III. Wild boar:

#### Conclusions:

- Following the detection of the first two positive wild boars, the AFSVPA in Montenegro promptly established an infected area and a high-risk area surrounding it, implementing a hunting ban and conducting searches for dead wild boars to monitor the evolution of ASF.
- The development and implementation of minimum biosecurity measures, as outlined in the relevant Commission Notice and Manual from FAO/WOAH/EC (links below), are crucial for preventing, controlling, and eradicating ASF, with an initial focus on infected and high-risk areas before expansion to the entire country.
- Effective management of wild boar populations through hunting activities must be contingent upon the implementation of biosecurity measures, with strict protocols for sample collection and carcass disposal to prevent further spread of ASF.
- Enhancing passive surveillance of wild boars, particularly through increased testing of found dead animals, is essential for early detection of ASF and monitoring of disease epidemiology.

#### Recommendations:

1. Continue efforts to search for dead wild boars in infected areas, focusing on water sources and wild boar resting/feeding places to monitor ASF evolution.
2. Develop, approve, and implement minimum biosecurity measures for ASF-infected and high-risk areas, with timely expansion to cover the entire country, preferably before the next wild boar hunting season in October 2024. Consider the guidelines recognized above:
  - i. <https://eur-lex.europa.eu/eli/C/2023/1504/oj>
  - ii. <https://www.fao.org/3/cc0785en/cc0785en.pdf>
3. Suspend wild boar hunting activities in infected areas until minimum biosecurity requirements are established, then proceed cautiously with hunting activities following estimation of ASF evolution and implementation of strong biosecurity measures.
4. Implement targeted reduction strategies for wild boar populations, focusing on females to achieve long-term wild boar population control goals, with incentives for hunters to target female wild boars.
5. Reinforce passive surveillance of wild boars throughout the country, including increased testing of found dead animals, while maintaining or increasing financial incentives to encourage the participation of the hunters, forest managers, or rangers.
6. Develop and implement continuous awareness campaigns on biosecurity measures for hunters, forest managers, and rangers to promote compliance and enhance ASF prevention efforts.
7. Strengthen cross-border collaboration and information exchange with neighbouring countries on ASF epidemiological situations and disease control measures to improve regional coordination and mitigate the risk of ASF spread.

#### Other guidelines:

Montenegro will gain valuable insights from its participation in the GF-TADS SGE on ASF, starting with the inaugural meeting in April 2024. The collective experience shared by other European members, accessible through the GF-TADS regional webpages on the WOAH website, offers valuable lessons, in particular, regarding the control of ASF in wild boar populations, the culling of animals in infected areas and the use of tools to monitor wild boar populations.



Together with the representatives of AFSVPA discussed best practices in hunting areas, explaining how to set up facilities for the evisceration, dressing, and cutting of wild boar carcasses, as well as the safe disposal of leftovers in the European Region.

The principles outlined are quite simple. Within the fenced area, provision is made for the carcass to be hung for dressing, while a designated pit is provided for the disposal of offal. Some facilities include water tanks and cover or open areas with tables for carving.

Adherence to the main requirements for open-air dressing area is imperative:

- The open-air dressing area must be situated in regions of the hunting ground unit unaffected by runoff or rainwater.
- It should be enclosed by a fence at least 1.2 meters in height, featuring a lockable gate to deter wild boars and unauthorized entry.
- Proper disinfection measures must be in place, either by using sprayers or a disinfection barrier filled with authorized veterinary biocidal products before entering and exiting the area.
- Adequate provision must be made for storing animal waste within a covered and locked pit.
- The dressing area should be equipped with necessary devices for decontamination and access to disinfectants, either stored on-site or brought by authorized personnel.

The animal waste pit should be a minimum of 3 meters deep and equipped with a secure lid to prevent entry by rodents and larger animals. It should only be opened when containing animal by-products. The pit can be constructed by digging into the ground and reinforcing its walls, or by burying a reusable sealed container with a lockable lid. A pit filled to a depth of 1.5-1 meter can be buried or reused after removal of waste and disinfection. If the pit is buried at this depth, it is necessary to inform the territorial unit of the Veterinary Service. When using a reusable container with a lockable lid, it should be filled to prevent leakage. Waste should be manually removed and buried within the hunting ground.

A more detailed description might be found in [FAO/WOAH/EC Animal Production and Health Manual 28 African swine fever in wild boar: ecology and biosecurity. Second edition \(https://www.fao.org/3/cc0785en/cc0785en.pdf\)](https://www.fao.org/3/cc0785en/cc0785en.pdf) under Chapter 6 Biosecurity during hunting.

### **Final Remark**

The working atmosphere during the mission was very positive. The Montenegro colleagues were transparent in providing the information and gave support and assistance to facilitate the mission. The Team also thanks the interpreters for their support during the mission.