



# AFRICAN SWINE FEVER IN WILDLIFE: LESSONS LEARNED

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STATE FOOD AND VETERINARY SERVICE



# CONTENT

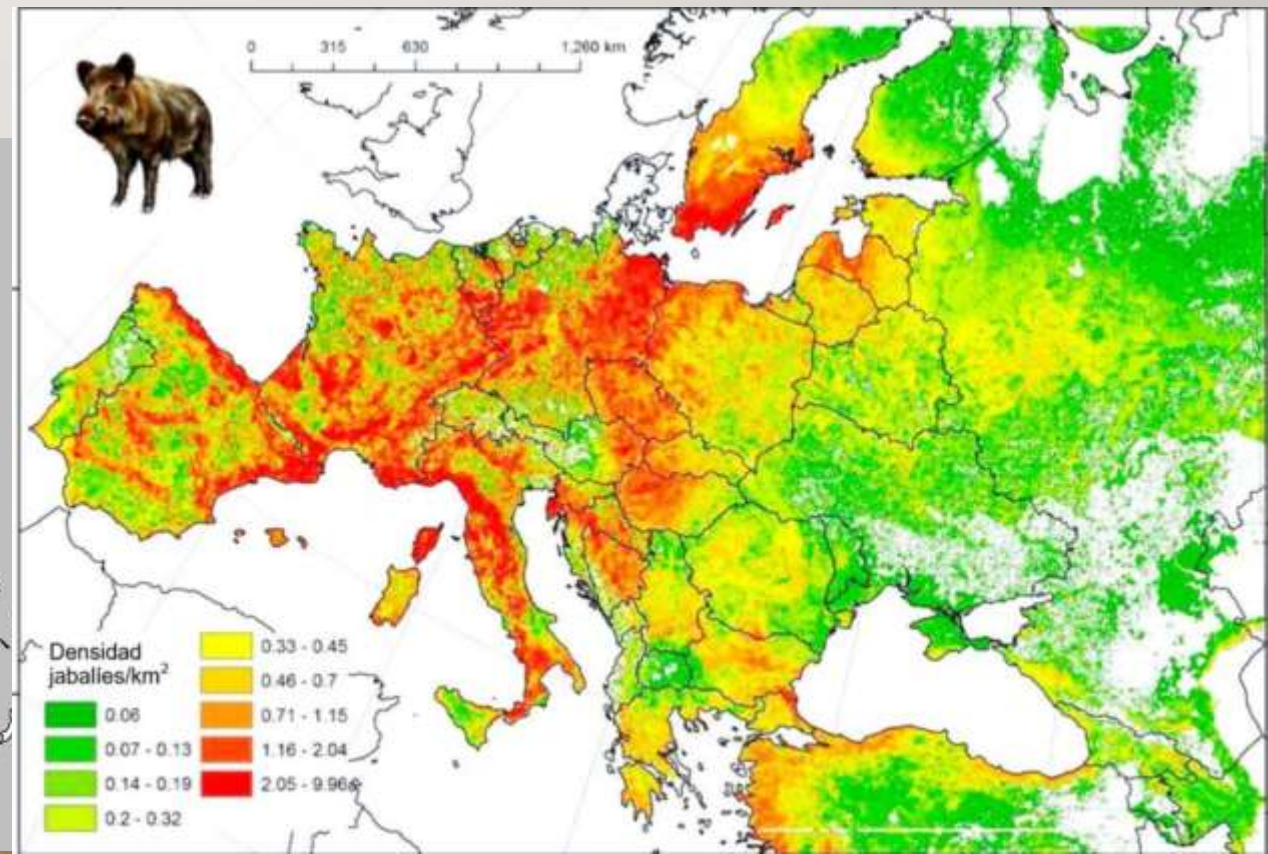
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- The biology of wild boar
- Surveillance
- Control measures
  - Example from Lithuania
- Biosecurity during hunting
- Lessons learned



# THE BIOLOGY OF WILD BOAR

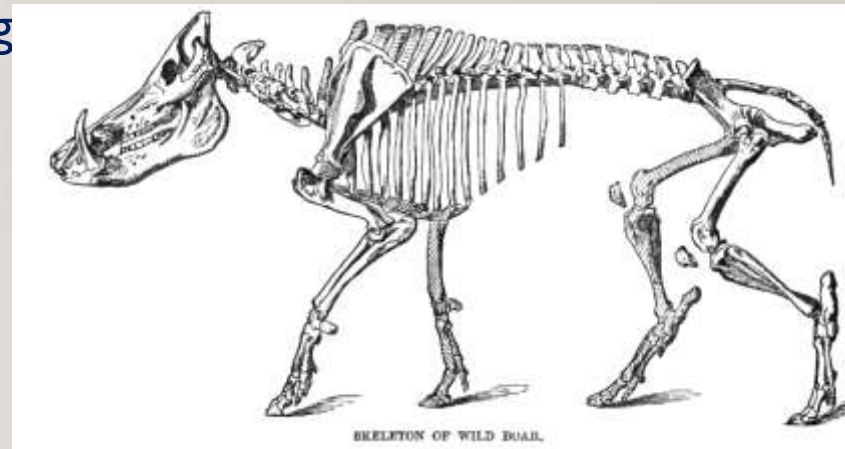
The wild boar (*Sus scrofa*), also known as the wild swine, Eurasian wild pig, or simply wild pig is a suid native to much of Eurasia, North Africa, and the Greater Sunda Islands.



# THE BIOLOGY OF WILD BOAR

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- The animal's head is very large, taking up to one third of the body's entire length.
- The animal can run at a maximum speed of 40 km/h and jump at a height of 140–150 cm.
- In most of Europe, males' average weight is 75–100 kg, whereas females' average weight is 60–80 kg.
- In Western and Central Europe, the largest males weigh 200 kg





# THE BIOLOGY OF WILD BOAR

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- The wild boar produces a number of different sounds, which are divided into three categories:
  - **Contact calls:** Adult males are usually silent, while females frequently grunt and piglets whine. When feeding, boars express their contentment through purring. Studies have shown that piglets imitate the sounds of their mother, thus different litters may have unique vocalisations;
  - **Alarm calls:** Warning cries emitted in response to threats;
  - **Combat calls.**

# THE BIOLOGY OF WILD BOAR



- Human intervention has spread its distribution further, making the species one of the widest-ranging mammals in the world, as well as the most widely spread suiform.
- As of 1990, up to **16 subspecies** are recognized, which are divided into four regional groupings based on skull height and lacrimal bone length.

North African  
boar  
*S. s. algira*



Central  
European  
boar  
*S. s. scrofa*  
Nominate  
subspecies



Carpathian  
boar  
*S. s. attila*



Indian boar  
*S. s. cristatus*



Central Asian  
boar  
*S. s. davidi*



Japanese  
boar  
*S. s.*  
*leucomystax*





# THE BIOLOGY OF WILD BOAR

In hunting terminology, boars are given different designations according to their age.

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The species lives in matriarchal societies consisting of interrelated females and their young (both male and female).



Designation	Age	Image
Squeaker	0–10 months	
Juvenile	10–12 months	
Pig of the sounder	Two years	
Boar of the 4th/5th/6th year	3–5 years	
Old boar	Six years	
Grand old boar	Over seven years	





# THE BIOLOGY OF WILD BOAR

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- The main habitats favoured by boars in Europe are deciduous and mixed forests, with the most favourable areas consisting of forest composed of oak and beech enclosing swamp and meadows.
- Wild boar rest in shelters, which contain insulating material like spruce branches and dry hay.





# THE BIOLOGY OF WILD BOAR DISEASES

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- Pseudorabies (Aujeszky's disease)
- Swine Brucellosis
- Influenza
- Tularemia
- West Nile virus
- E. coli
- Salmonella
- Trichinosis
- Streptococcus
- Ticks, fleas, lice
- Internal parasites
- Toxoplasmosis and Trichinosis

- Classical swine fever
- **African swine fever**
- PRRS
- Anthrax
- Foot and mouth disease
- Porcine circovirus

# AFRICAN SWINE FEVER (ASF) IN WILD BOAR – WAYS OF INTRODUCTION

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- Through direct contact:
- Through infected meat of wild boars.
- Human factor.
- Lack of biosecurity measures applied during hunting.

Wild boar are known to be competent swimmers, capable of covering long distances.



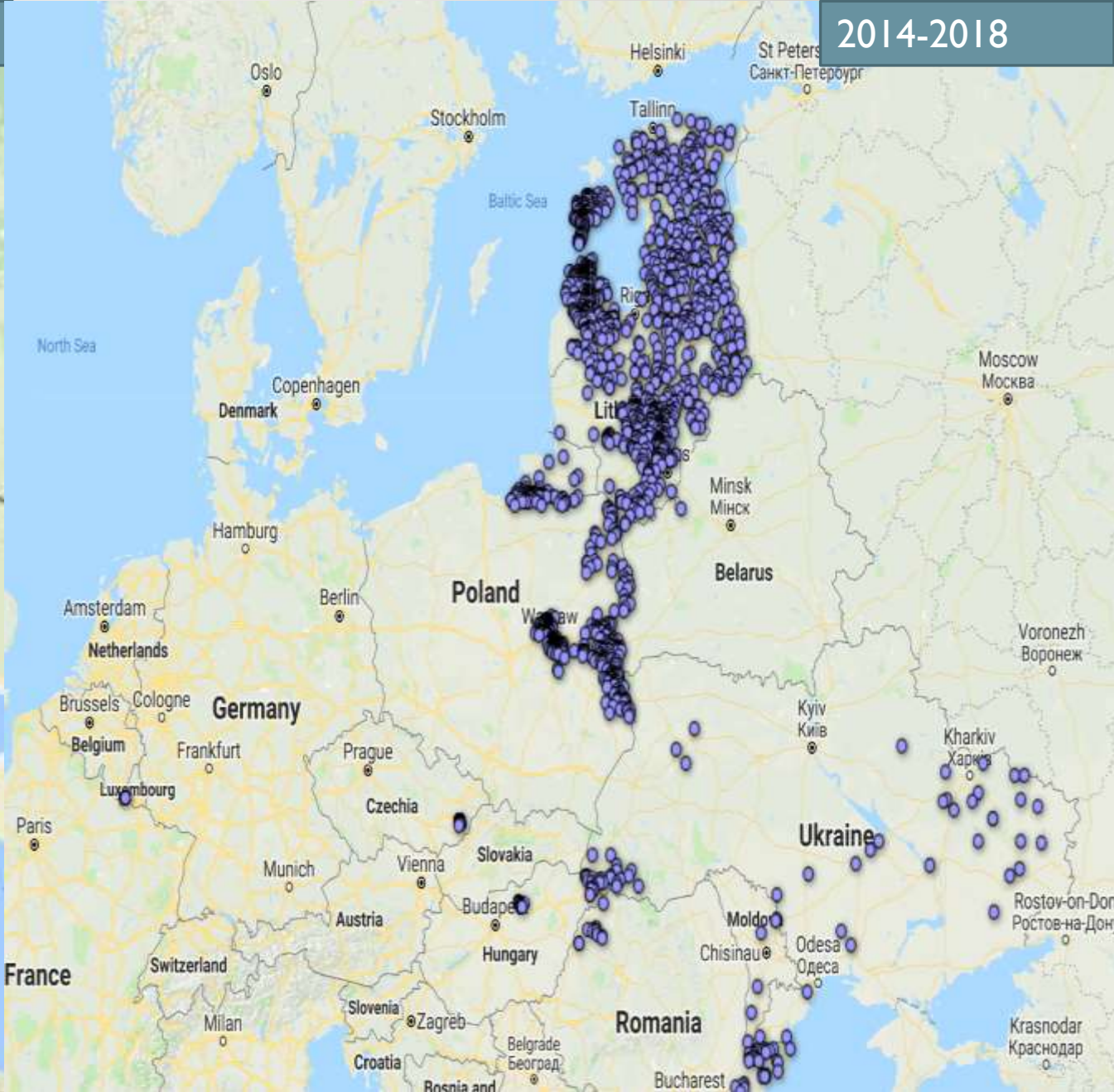
**ASF KNOWS  
NO BORDER  
FOR  
SPREADING  
DISEASE**

**lrytas.tv**





# EVOLUTION OF ASF FROM 2007 TILL NOW





# SURVEILLANCE

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**To know the situation in the country an Early Detection System must be enforced.**

The surveillance strategy needs to be tailored to the situation and take into account:

- ASF situation in the neighbouring countries;
- Risk assessment;
- Presence of wild boars.

Who is responsible for the surveillance?

- Hunters? Vets? Official vets? Farmers?

**EVERYONE**

# SURVEILLANCE

- ✓ **SANCO/7138/2013** - **Guidelines on surveillance** and control of African swine fever in feral pigs and preventive measures for pig holdings
- ✓ **SANCO/7112/2015** – Principles and criteria for geographically defining ASF regionalisation
- ✓ **SANCO/7113/2015** – ASF Strategy for the EU



EUROPEAN COMMISSION  
DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY

Directorate G - Crisis management in food, animals and plants  
Unit G3 – Official controls and eradication of diseases in animals

Brussels  
SANCO G3/FB (19.04.2018)

SANTE/7113/2015 - Rev 9

WORKING DOCUMENT

African Swine Fever Strategy for the EU



# SURVEILLANCE

- Hunters should collaborate with the competent authority in finding and reporting wild boar carcasses.
- Testing of all wild boar carcasses.
- All hunted animals and found carcasses need to be tested by using qRT-PCR.
- According to the 5-year experience of Lithuania and other infected countries, SEROLOGY is not suitable for early detection.
- PASSIVE surveillance should be enforce.



# SURVEILLANCE

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- Places, which are specified as high risk for the introduction and spread of ASF, such as those where wild boars are gathered by the hunters and inspected, should be kept under strict supervision of veterinarians and personnel well-trained in recognizing the signs and lesions caused by the disease and in measures to be applied to avoid its spread.





# SURVEILLANCE

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Hunters are getting more and more important...

Each hunter in an area at risk or in an infected area must be well trained:

- - to recognize the clinical symptoms of ASF in wild boar (even hunted)...
- - to know what kind of samples to take;
- - how to take samples;
- - to notify the suspicion (to whom, when?);
- - in disposal of carcasses (how?);
- - **basic biosecurity requirements;**
- - **hunting hygiene.**





# SURVEILLANCE

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**Cooperation between the competent authority and hunters is crucial.**

- Hunters are our eyes and ears;
- The involvement of hunters and their willingness to cooperate is a success factor in ASF management;
- Hunters are the main players in the implementation of measures in practice;
- Well-trained hunters can work as an early detection system.

# CAN WE MANAGE ASF CASES OR CAN WE CONTROL THE DISEASE?

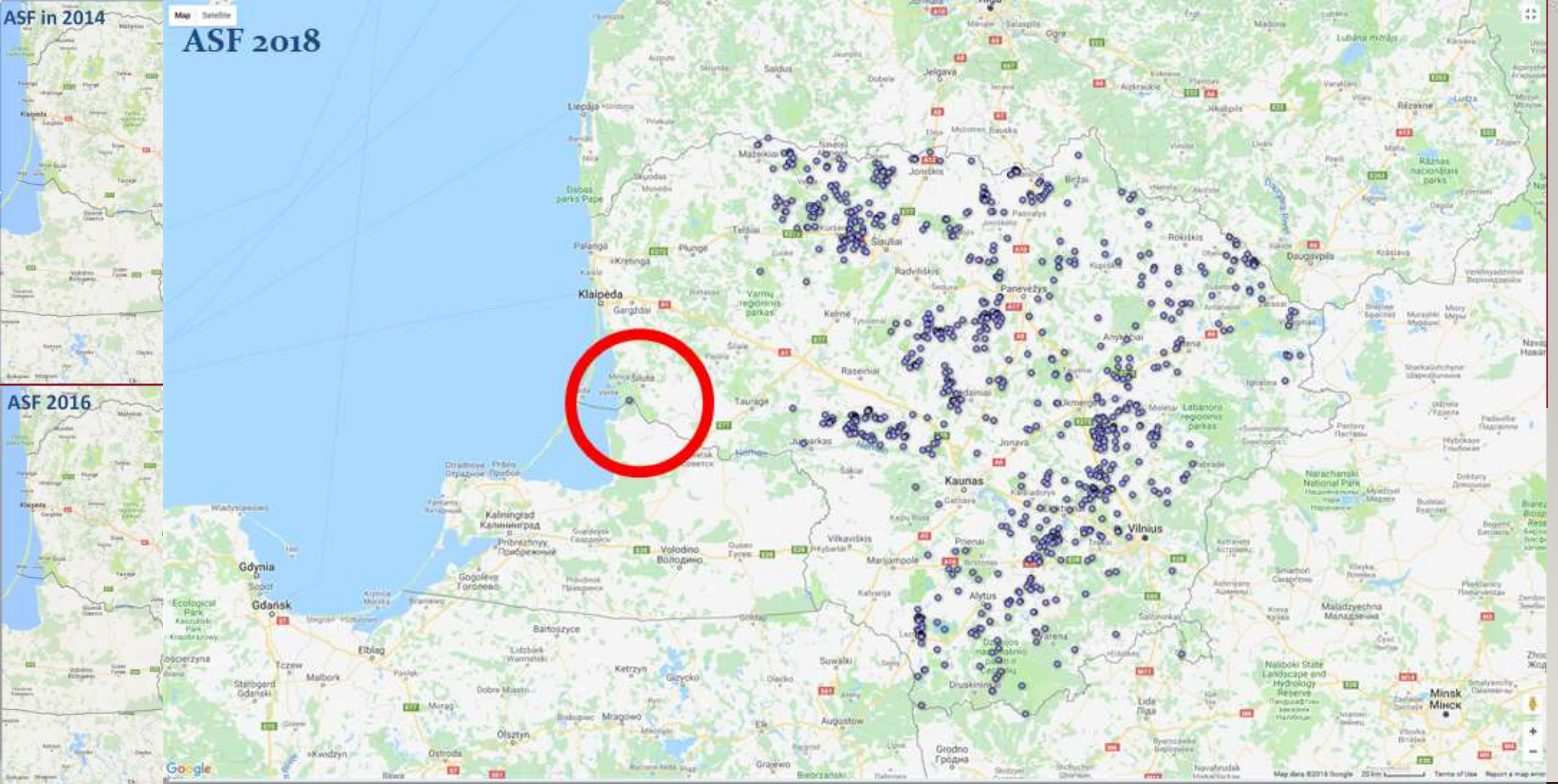
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- African swine fever cannot be managed directly because:
  - No treatment and no vaccine are available.

## Following the detection of ASF cases in wild boars:

- *Definition of the infected area;*
- *Protection of the domestic pig population (census and biosecurity);*
- *Management of the infected wild boar population*







# CONTROL MEASURES IN INFECTED AREAS

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- Total ban of wild boar hunting.
- Restricted access to the infected area.
- Active patrolling (by trained staff) to find carcasses in order to reinforce the passive surveillance.
- Biosecurity measures in hunting grounds applied by all persons searching for and handling wild boar carcasses (e.g. avoiding possible contamination of vehicles, yards and houses)
- **Specific training for hunters to reduce the probability of further spread of the virus in the environment and outside the infected area.**



**YES**

**!!!**

**Can we achieve  
good cooperation  
with hunters ?**

# CONTROL MEASURES-COMMUNICATION WITH HUNTERS

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- Its long time period to change hunters; philosophy especially in near infected areas;
- Regular trainings
  - Theory+practice;
- Clear message why close cooperation can help for hunters;
- The consequences what will happen if ASF will be confirmed in hunting area;



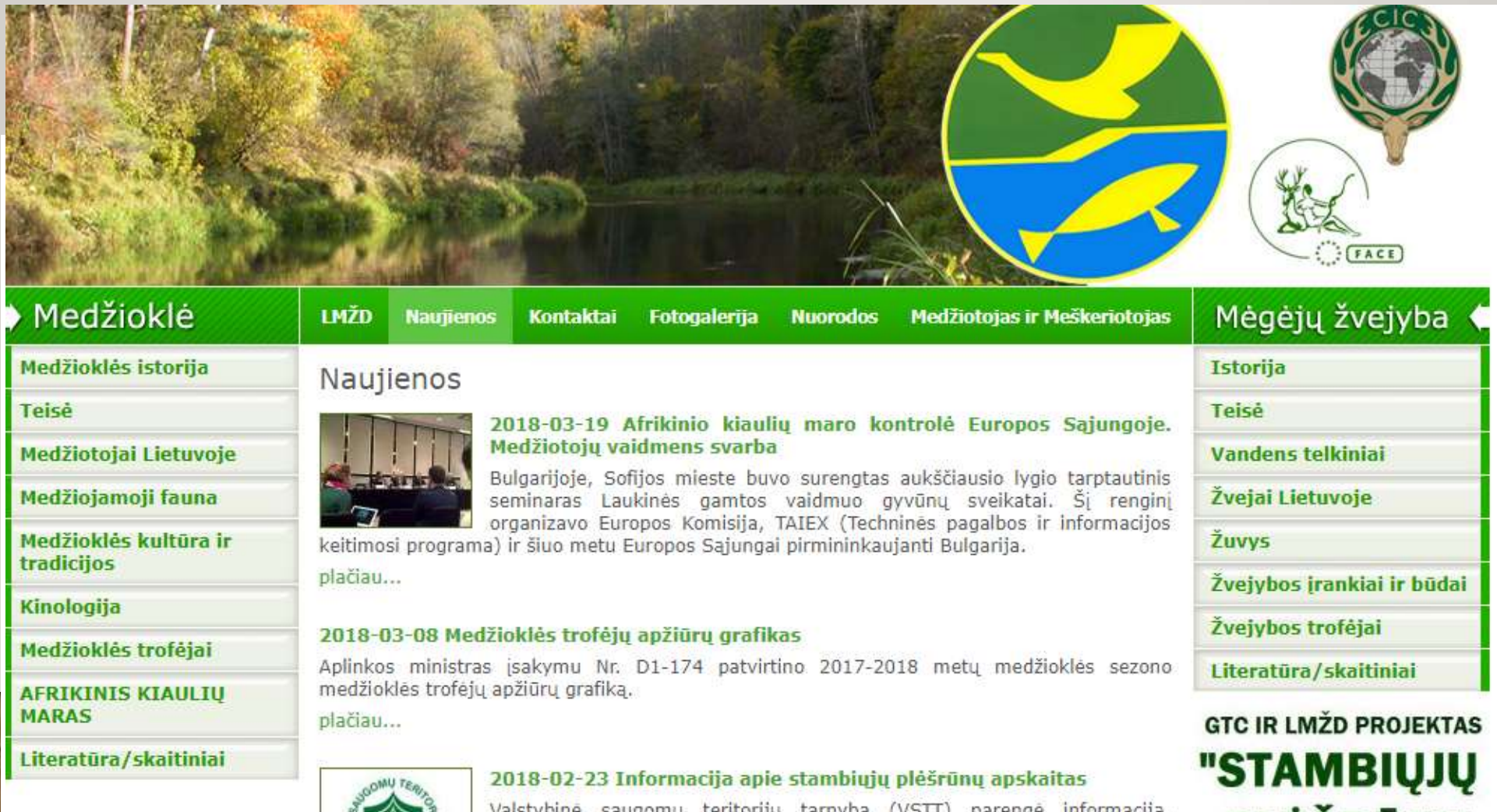




# DIFFERENT TOOLS COULD BE USED TO REACH HUNTERS

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- Leaflets/posters
- TV programmes designated for hunters/internet



The screenshot shows a website with a green and white color scheme. At the top, there is a navigation bar with the following items: Medžioklė, LMŽD, Naujienos, Kontaktai, Fotogalerija, Nuorodos, Medžiotojas ir Meškeriojas, and Mėgėjų žvejyba. Below the navigation bar, the main content area is divided into three columns. The left column contains a vertical menu with items: Medžioklės istorija, Teisė, Medžiotojai Lietuvoje, Medžiojami fauna, Medžioklės kultūra ir tradicijos, Kinologija, Medžioklės trofėjai, AFRIKINIS KIAULIŲ MARAS, and Literatūra/skaitiniai. The middle column is titled "Naujienos" and contains two news items. The first item is dated 2018-03-19 and is titled "Afrikinio kiaulių maro kontrolė Europos Sąjungoje. Medžiotojų vaidmens svarba". It includes a small photo of a meeting and text about a seminar in Sofia, Bulgaria, organized by the European Commission and TAIEX. The second item is dated 2018-03-08 and is titled "Medžioklės trofėjų apžiūrų grafikas". It mentions a decision by the Environment Minister regarding the 2017-2018 hunting season trophy inspection schedule. The right column is titled "Mėgėjų žvejyba" and contains a vertical menu with items: Istorija, Teisė, Vandens telkiniai, Žvejai Lietuvoje, Žuvys, Žvejybos įrankiai ir būdai, Žvejybos trofėjai, and Literatūra/skaitiniai. At the bottom right, there is a logo for "GTC IR LMŽD PROJEKTAS 'STAMBIŲJŲ'".

**Medžioklė** | **LMŽD** | **Naujienos** | **Kontaktai** | **Fotogalerija** | **Nuorodos** | **Medžiotojas ir Meškeriojas** | **Mėgėjų žvejyba**

**Medžioklės istorija**  
**Teisė**  
**Medžiotojai Lietuvoje**  
**Medžiojami fauna**  
**Medžioklės kultūra ir tradicijos**  
**Kinologija**  
**Medžioklės trofėjai**  
**AFRIKINIS KIAULIŲ MARAS**  
**Literatūra/skaitiniai**

**Naujienos**

**2018-03-19 Afrikinio kiaulių maro kontrolė Europos Sąjungoje. Medžiotojų vaidmens svarba**  
Bulgarijoje, Sofijos mieste buvo surengtas aukščiausio lygio tarptautinis seminaras Laukinės gamtos vaidmuo gyvūnų sveikatai. Šį renginį organizavo Europos Komisija, TAIEX (Techninės pagalbos ir informacijos keitimosi programa) ir šiuo metu Europos Sąjungai pirmininkaujanti Bulgarija.  
plačiau...

**2018-03-08 Medžioklės trofėjų apžiūrų grafikas**  
Aplinkos ministras įsakymu Nr. D1-174 patvirtino 2017-2018 metų medžioklės sezono medžioklės trofėjų apžiūrų grafiką.  
plačiau...

**2018-02-23 Informacija apie stambiųjų plėšrūnų apskaitas**  
Valstybinė saugomų teritorijų tarnyba (VSTT) parengė informacija

**Mėgėjų žvejyba**

**Istorija**  
**Teisė**  
**Vandens telkiniai**  
**Žvejai Lietuvoje**  
**Žuvys**  
**Žvejybos įrankiai ir būdai**  
**Žvejybos trofėjai**  
**Literatūra/skaitiniai**

**GTC IR LMŽD PROJEKTAS "STAMBIŲJŲ"**





What to do???

How many samples?

How to destroy?

But the hunter is in good cooperation with the authority and well trained, so he knows all answers what to do!!!







LESSON LEARNED-CLOSE  
COOPERATION WITH HUNTERS IS  
CRUCIAL

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# DISPOSAL OF CADAVERS IN LITHUANIA

10/12/2018

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# DISPOSAL OF CADAVERS IN LITHUANIA

## STEP I. SAMPLES ARE TAKEN FROM THE FOUND DEAD WILD BOAR

10/12/2018

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# DISPOSAL OF CADAVERS IN LITHUANIA STEP 2. DISPOSAL OF CADAVER BY BURRY

10/12/2018

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# MOBILE INCINERATION

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2018



# LESSON LEARNED-TO INVOLVE HUNTERS FOR DEAD WILD BOARS DESTRUCTION

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# WILL IT BE A CHALLENGE TO YOUR COUNTRY TO IMPLEMENT THIS KIND OF MEASURES?

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- Management how to take samples and how to transport them to the lab;
- - how to / where to keep the (entire) carcass until the lab results are available (could be 2-3 days, could be a lot more...)
- - how to keep the hunted wild boar – the carcass with / without the skin and organs separately, meat cut into pieces;
- - how to dispose of offal;
- - how to dispose of an entire carcass in a positive to ASF case;
- - how to dispose of a found dead wild boar
- Which method to choose - burn it or bury it? Maybe to take it to the rendering plant;
- - cleaning and disinfection procedures.



# CONTROL MEASURES

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Minimum biosecurity requirements for hunters should be specified by the competent authority; at least the following aspects should be included:

- a dedicated authorised dressing facility should be available in each hunting ground;
- inside each hunting ground a facility/room should be equipped with a refrigerator;
- a hunted wild boar should remain in the premises of the hunting ground until tested;

# CONTROL MEASURES - DRESSING AREA

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- Could be a source of infection;
- A high risk area for the ASF virus (lot of blood);
- Different types of dressing areas:
  - Open
  - Close





# DRESSING AREAS AND PITS IN LITHUANIA

10/12/2018





# CONTROL MEASURES - TRANSPORT OF HUNTED ANIMALS

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- Private cars should be left outside the hunting ground;
- Special cars should be designated;
- Each hunted wild boar has to be treated as ASF positive in the infected country.





# CONTROL MEASURES - TRANSPORT OF HUNTED ANIMALS









# CONTROL MEASURES

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- Hunted wild boar should never leave the hunting area unless tested for ASF and the carcasses can be released only when the testing result is negative to ASF!
- Animal by-products should be collected and processed by burning, burial or rendering.



LESSON LEARNED-ITS LONG PERIOD TO  
CHANGE PHILOSOPHY OF HUNTERS

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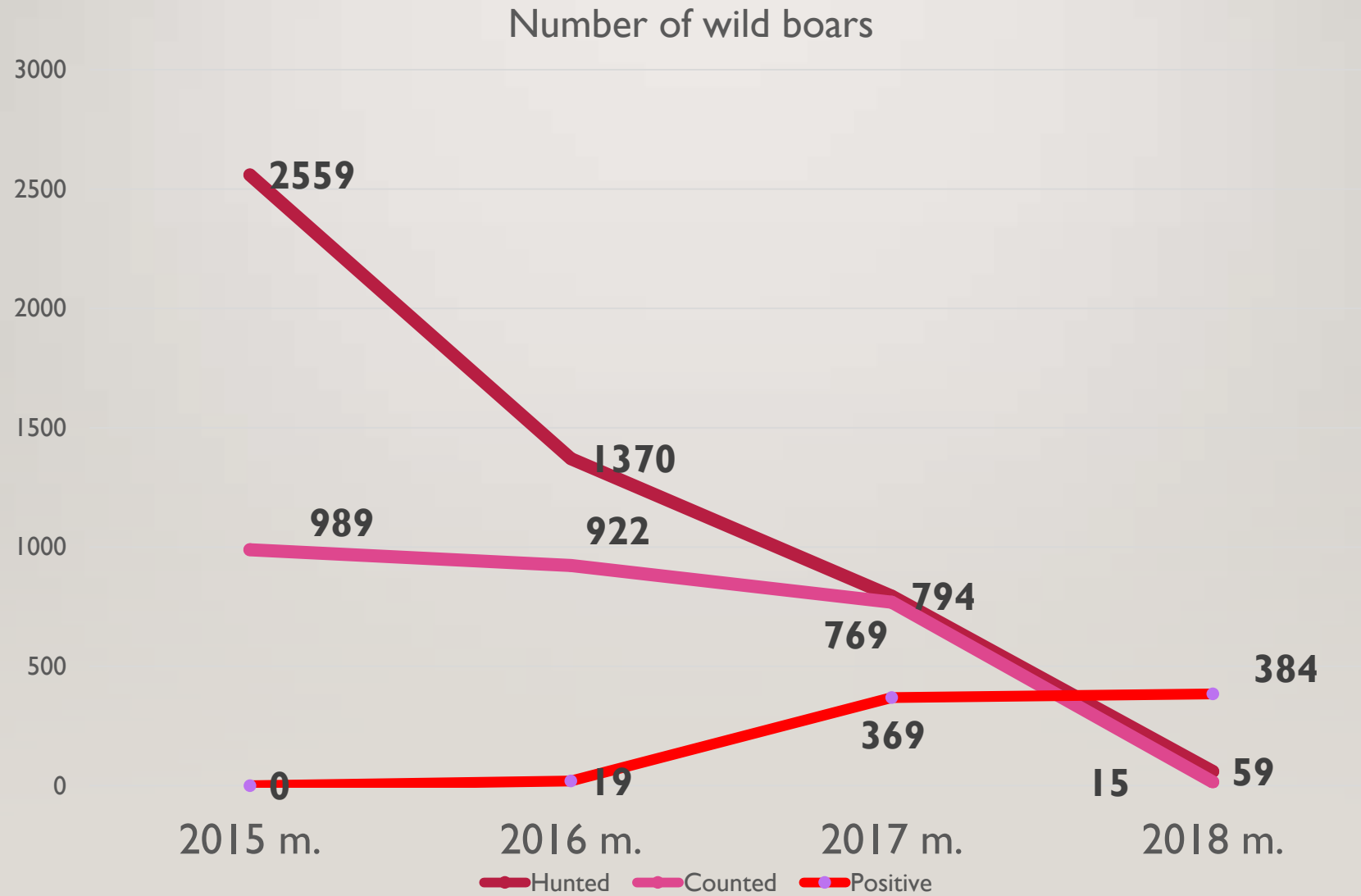
# CONTROL MEASURES - TARGETED HUNTING

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- The targeted hunting of adult and sub-adult females is encouraged;
- The overall hunting bag should be balanced between male and female animals (50% each). The priority in reaching the quotas should be given to adult and sub-adult females.
- Compensation could be established for hunters.

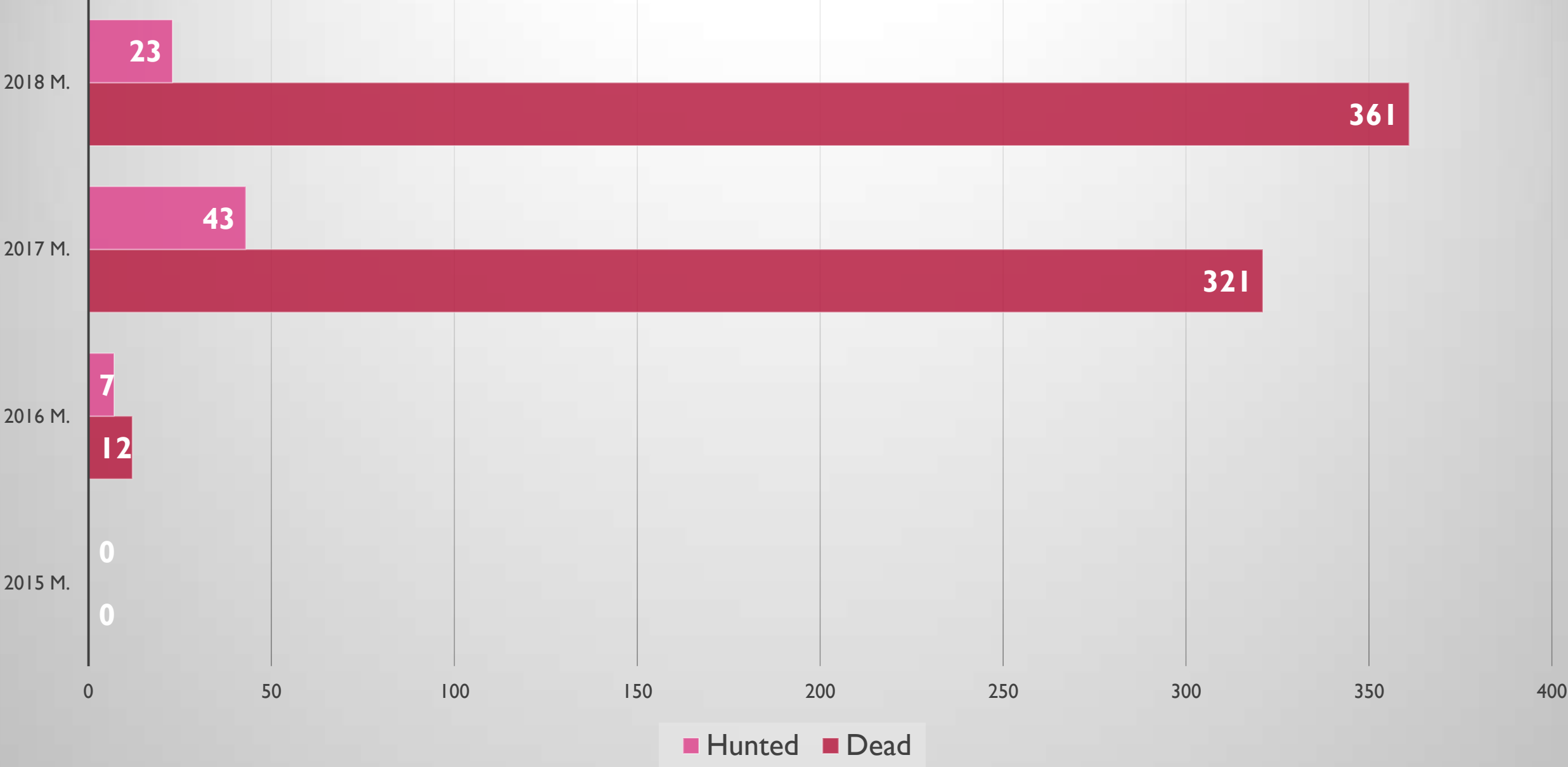
**What will happen if the density is too high?**

# Real example from Lithuania (Panevėžys municipality)

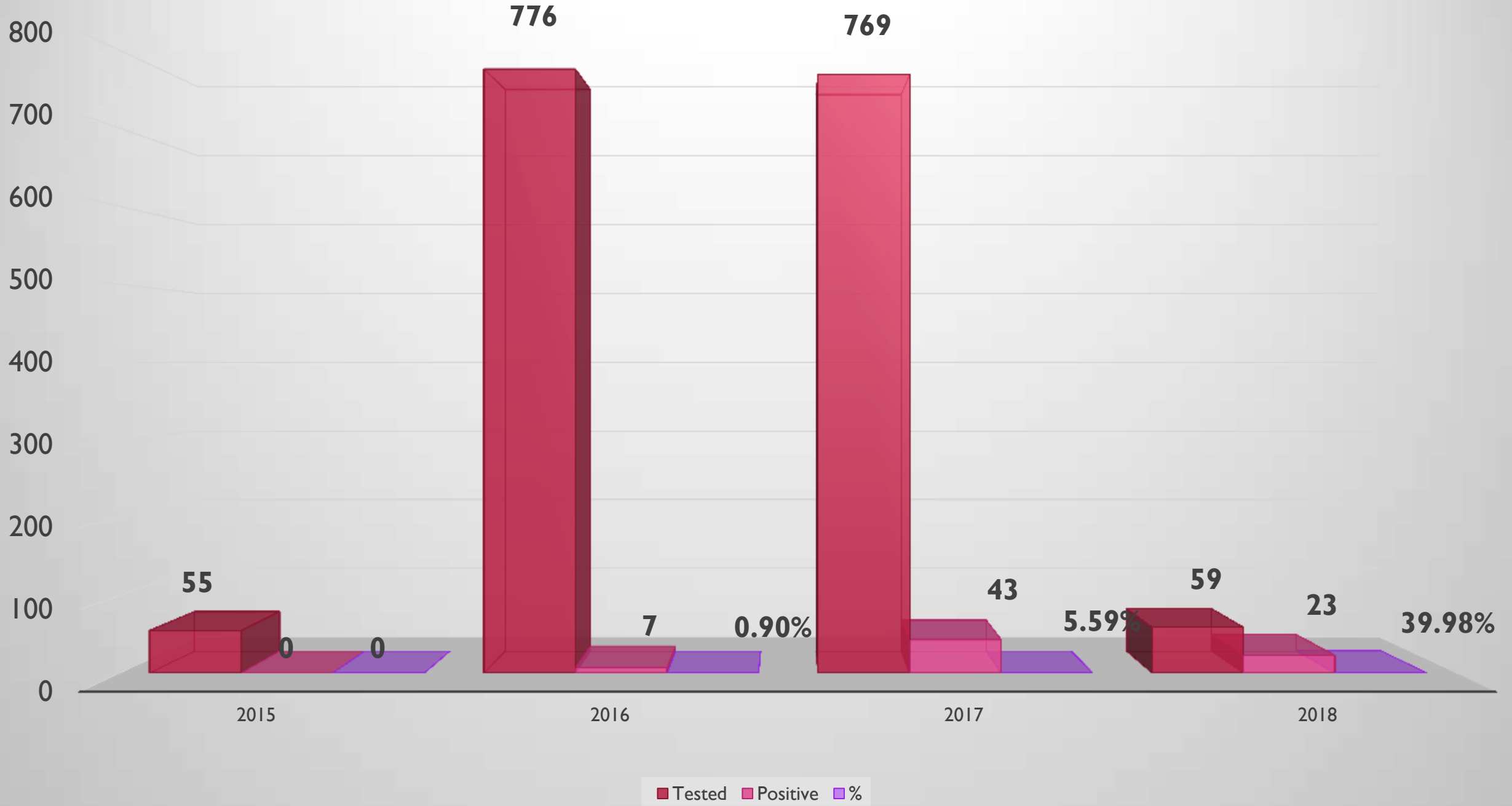




# Positive wildboars

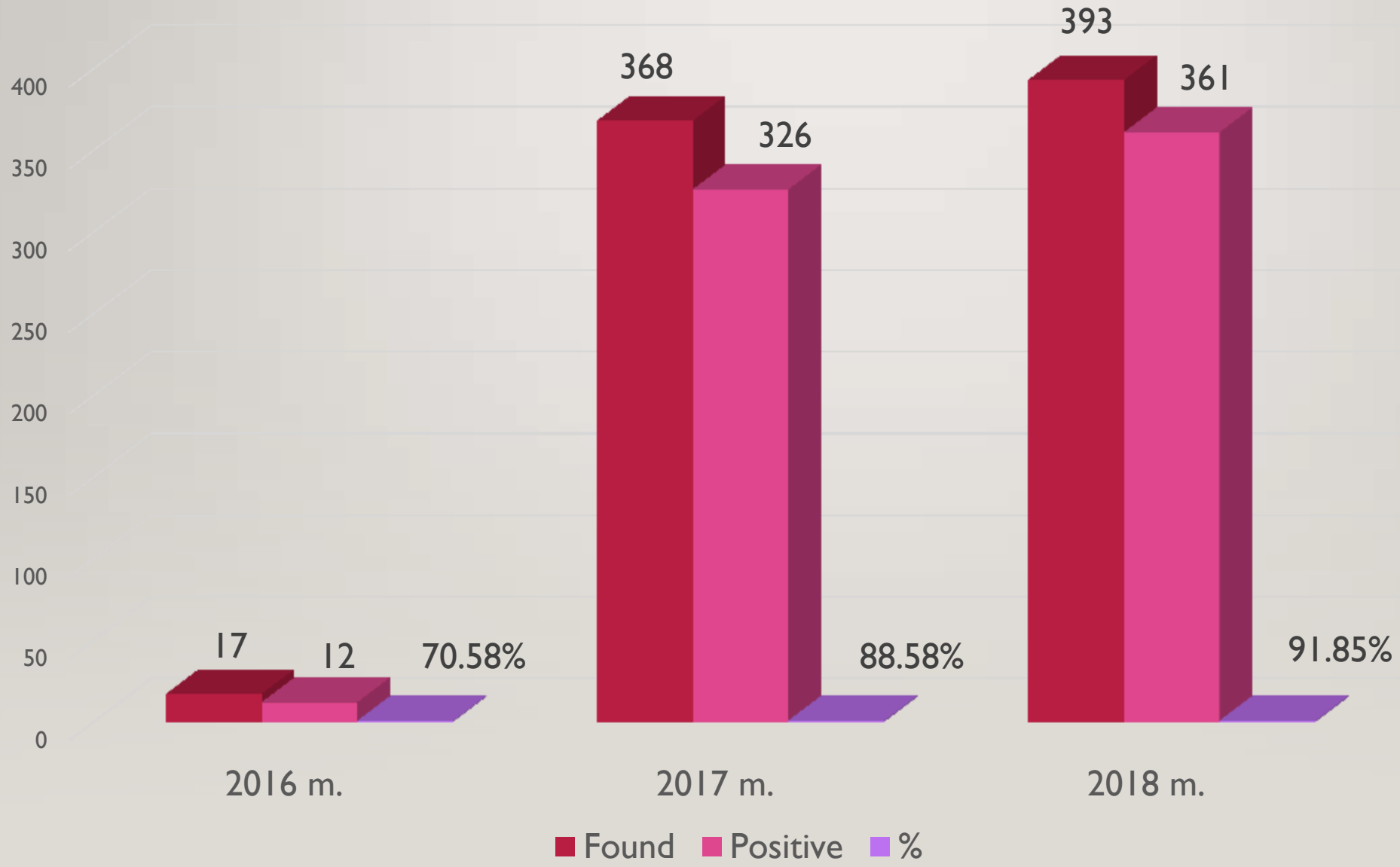


# Hunted wild boars





# Dead wild boars



# MESSAGE OF THE EXAMPLE

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- The risk of the ASF virus introduction is higher in high density hunting grounds;
- The hunting targeting breeding females would reduce the population long-term.
- Better hunting than destruction by the ASF virus





# BIOSECURITY DURING HUNTING

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- Hunters should be carry out with:

Disinfection material



Special equipment for disinfection



Knowledge



# BIOSECURITY DURING HUNTING

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- Hunters should process hunted wild boars in special designated places and all ABPs should not be moved outside but kept in special tightly closed animal waste pits or containers and should further be disposed of according to the legislation.





# BIOSECURITY DURING HUNTING

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- Disinfection must be performed during and after hunt;
- Vehicles must be disinfected;
- Materials must be disinfected;
- Shoes must be disinfected;
- Hunting clothes must be changed and washed after hunting;
- Carcasses positive to ASF must be destroyed.

# LESSONS LEARNED

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- Communication with hunters is crucial;
- Regular training for hunters is needed;
- Explain hunters why the cooperation is needed;
- You cannot push hunters you need to discuss with them;
- Passive surveillance is a golden key to early detection;
- Biosecurity is the simple rule how to avoid the disease;
- Without the human factor the ASF spread is very slowly;
- It is recommended that the countries at risk develop and implement basic hunting biosecurity measures before the arrival of ASF;
- It is better to be prepared now and to be one step ahead of the disease.



# THANK YOU FOR YOU ATTENTION

