



# Better Training for Safer Food Initiative

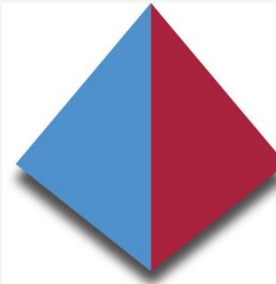
## Wild Boar ecology

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# BTSF

## GF-TADs

GLOBAL FRAMEWORK FOR THE PROGRESSIVE CONTROL OF TRANSBOUNDARY ANIMAL DISEASES



Food and Agriculture  
Organization of the  
United Nations



# Wild Boar

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



# Wild boar

**North African  
boar**

*S. s. algira*



**Carpathian  
boar**

*S. s. attila*



**Indian boar**

*S. s. cristatus*



**Central Asian  
boar**

*S. s. davidi*



**Maremman  
boar**

*S. s. majori*



**Northern  
Chinese boar**

*S. s.  
moupinensis*



**Japanese  
boar**

*S. s.  
leucomystax*



**Mediterranean  
boar**

*S. s.  
meridionalis*



**Formosan  
boar**

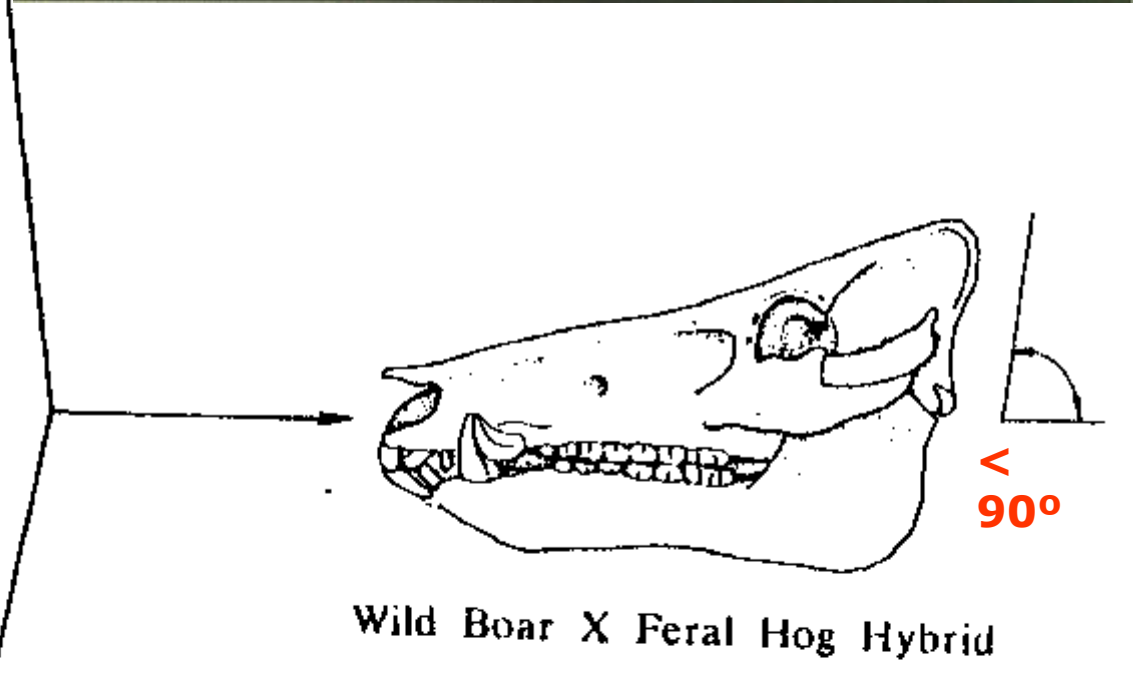
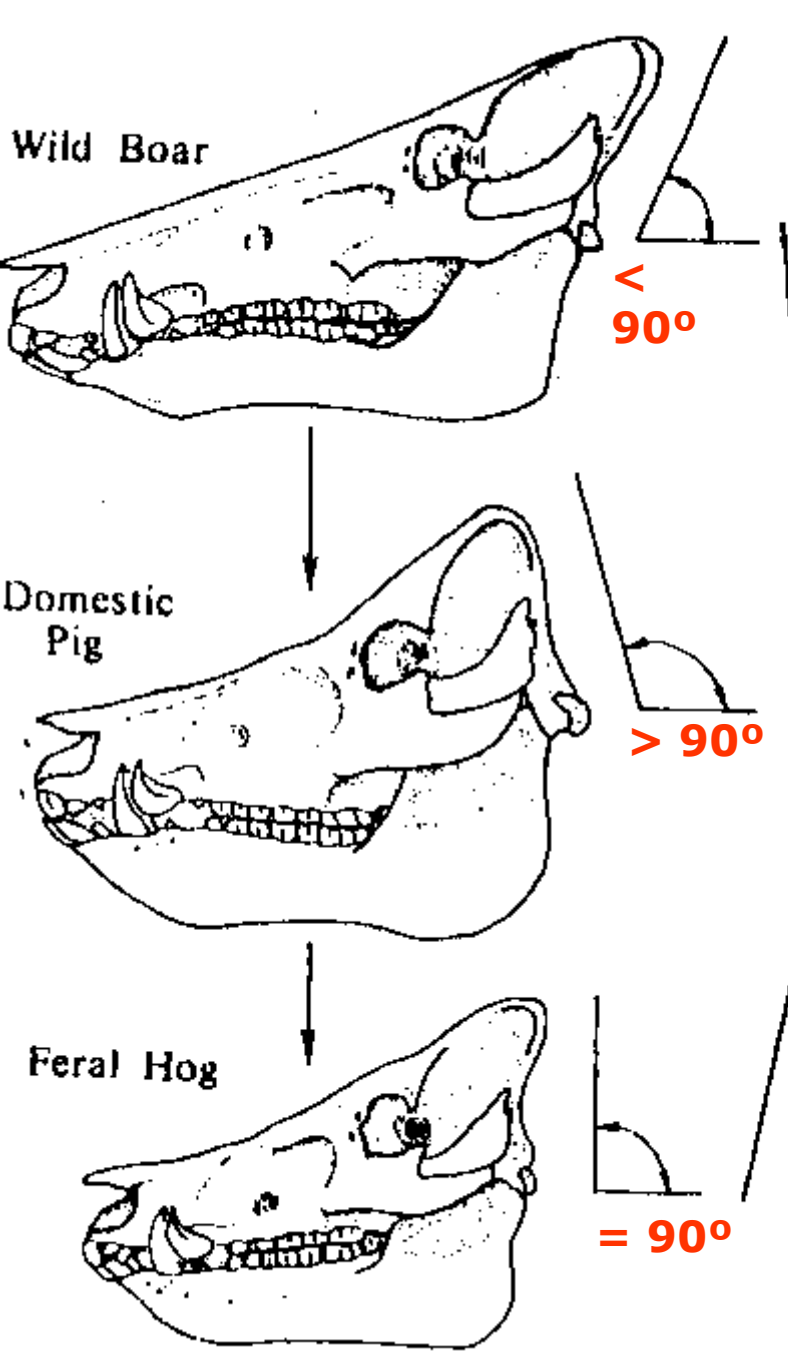
*S. s. taivanus*



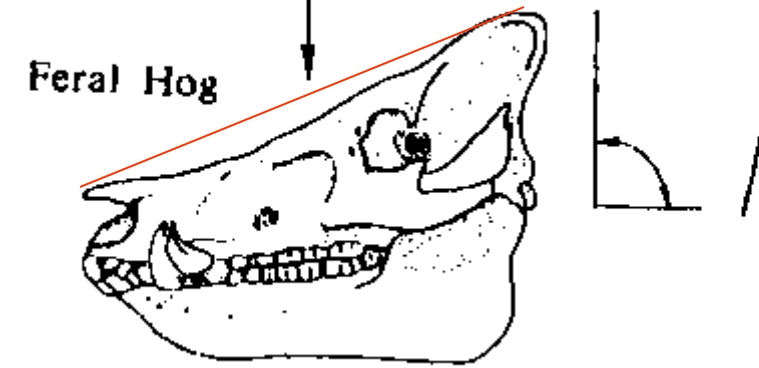
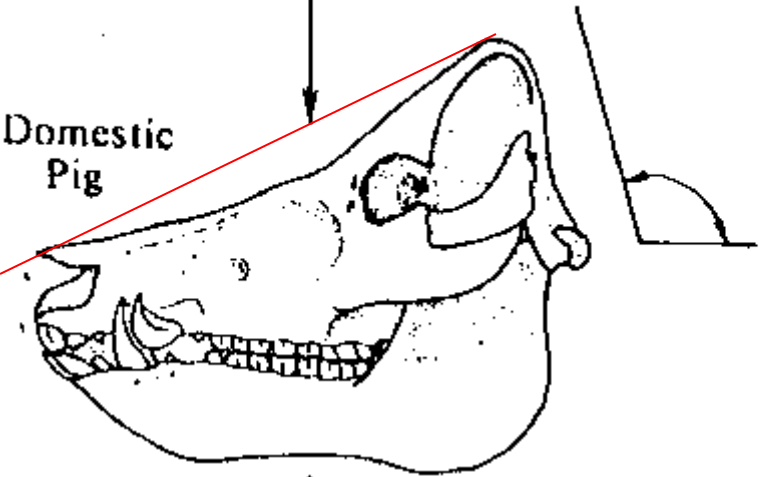
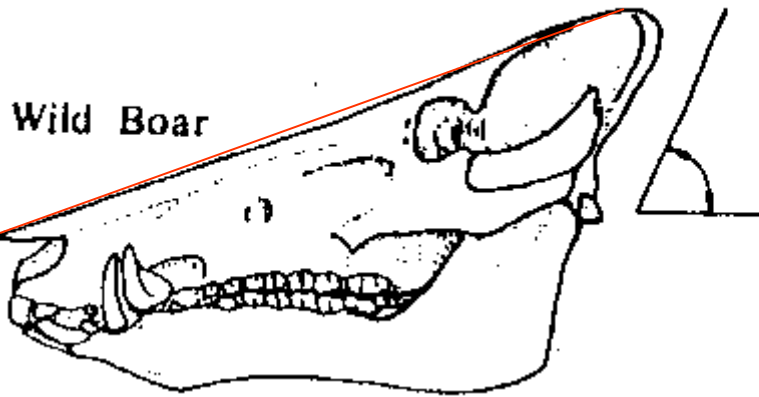
**Anatolian  
boar**

*S. s. libycus*

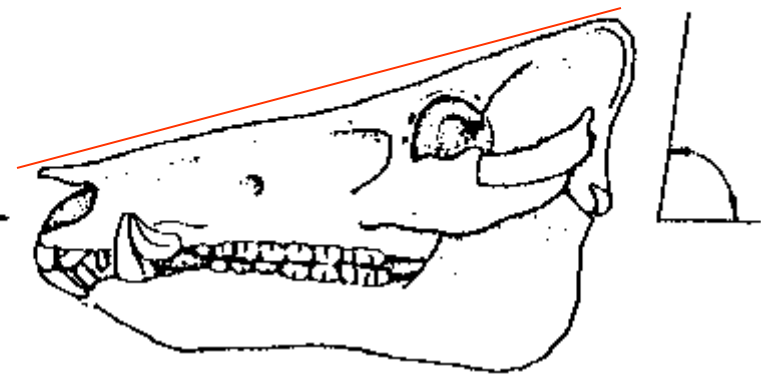




**Angle of Occipital wall**



# Depth of Dorsal Profile



# Central European boar



A medium-sized, dark to rusty-brown haired subspecies with long and relatively narrow lacrimal bones

Northern Spain, northern Italy, France, Germany, Benelux, Croatia, Belarus, Denmark (few), Lithuania, Poland, Czech Republic, Slovakia and possibly Albania



# Ecology

- The wild boar inhabits a diverse array of habitats from boreal taigas to deserts.
- In mountainous regions, it can even occupy alpine zones, occurring up to 1,900 metres in the Carpathians, 2,600 metres in the Caucasus and up to 3,600-4,000 metres in the mountains in Central Asia and Kazakhstan.
- The main habitats favored by boars in Europe are deciduous and mixed forests, with the most favorable areas consisting of forest composed of oak and beech enclosing marshes and meadows.

# Ecology

- In the Białowieża Forest, the animal's primary habitat consists of well developed, broad-leaved and mixed forests, along with marshy mixed forests, with coniferous forests and undergrowth's being of secondary importance.
- Wild boar are known to be competent swimmers, capable of covering long distances. In 2013, one boar was reported to have completed the seven mile swim from France to Alderney in the Channel Islands. Due to concerns about disease it was shot and incinerated.





## Diet

The wild boar is a highly versatile omnivore  
choice of food rivals that of humans





# How far can wild boar move?

## Example of Bulgaria







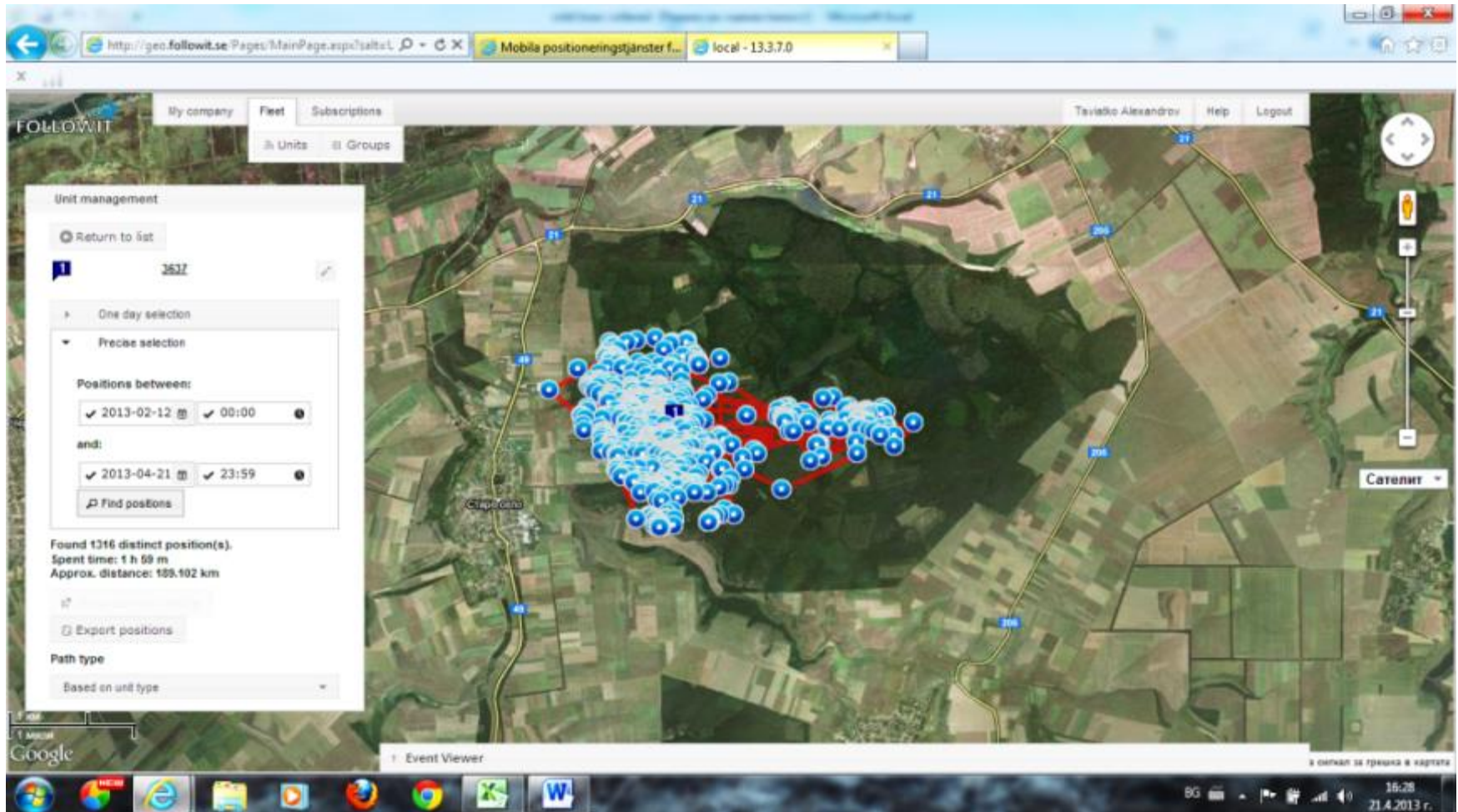
ВІСЬКО  
НАПРЕНЕНІЕ  
ОПАСНО ЗА ЖИВОТА





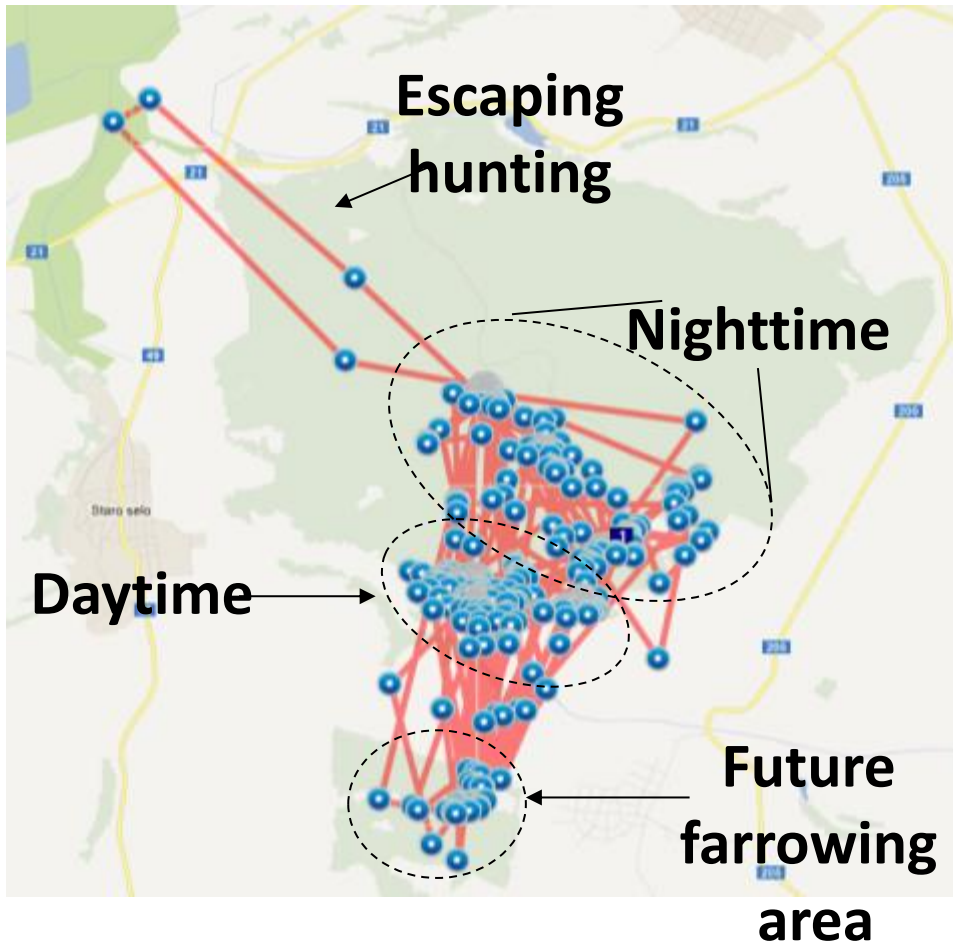






**4 years old female**  
**Tracked for 87 days**  
**Positions received: 2149**  
**Home range: 7 km<sup>2</sup>**

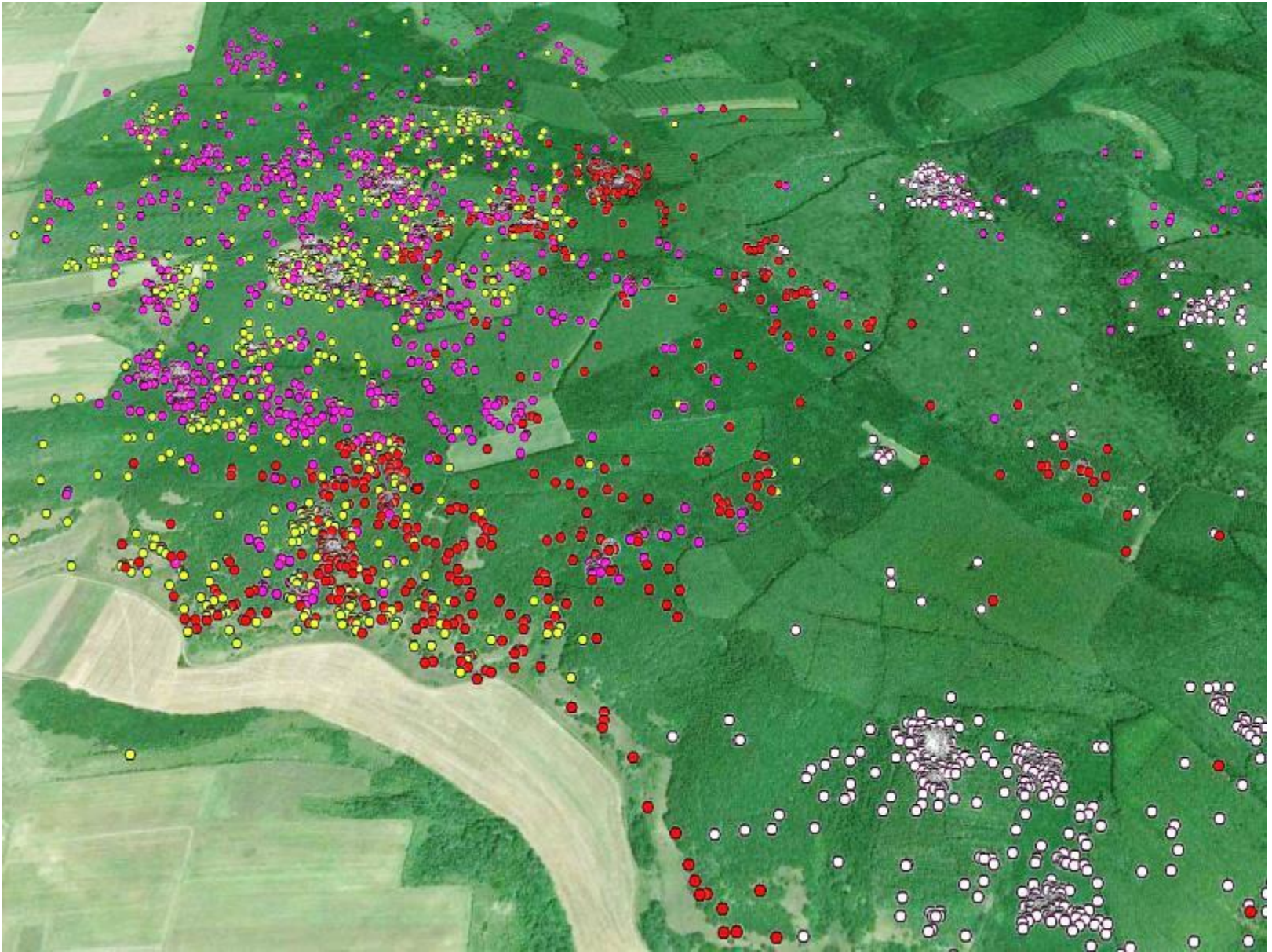
# Movement



**1 hour resolution movements of a tracked wild boar saw in Bulgaria**

**WB normally very small home ranges (4 - 20 km<sup>2</sup>);**

**Disrupted by only food availability or disturbance**



4 different groups of wild boar overlapping.....

# How far can wild boar go?



## Diseases

- 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 in wild boar – risk factors

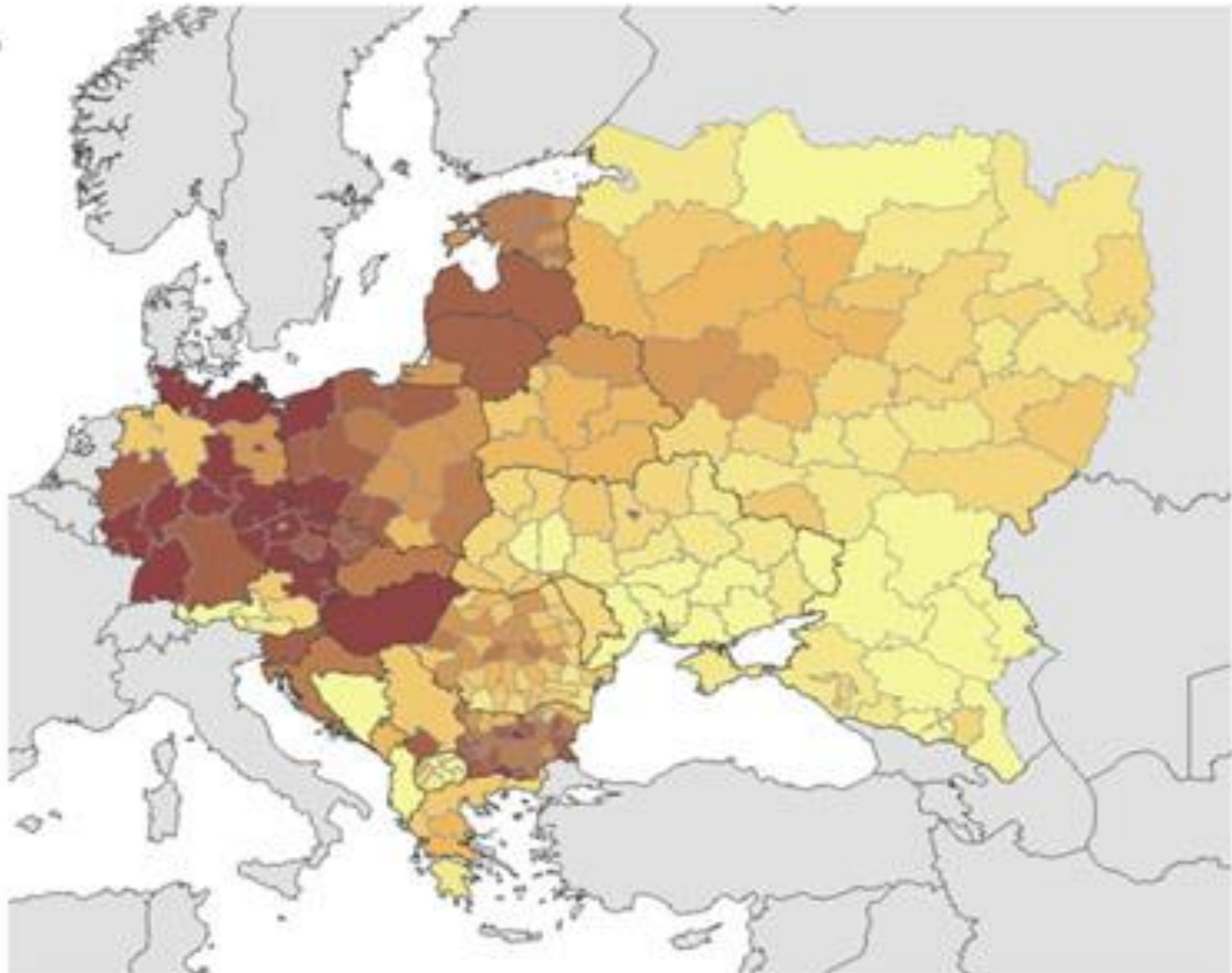
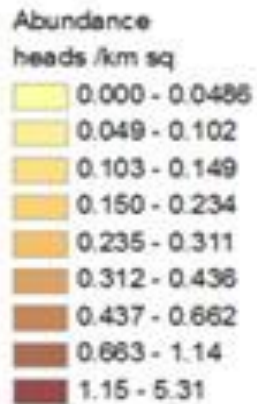
- ✓ *Presence of the virus;*
- ✓ *Size of the population;*
- ✓ *Density of the population;*
- ✓ *Size and density define the wild boar geographical distribution;*
- ✓ *Age and gender of the infected wild boar population;*
- ✓ *Type of hunting;*
- ✓ *Period of the year during which the virus has been detected/introduced.*



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# Wild boar density

0 250 500 1,000 km





# Can we control the hunters?



# Wild boar density - how to estimate??

Type of survey	Measurement tool(s)	Potential measurements	Potential metrics of abundance
Track	Tracking plots	Number of track intrusions Presence-absence	Index
Dung	Defined areas for Pellet counts DNA analysis	Number of pellet groups Number individuals and "recaptures"	Index Known to be alive M-R density estimate
Road counts (counts from vehicles)	Human observers Spotlight Night vision Thermal imaging	Counts Distance to animals observed	Index Density estimate
Aerial surveys	Human observers Video Thermal imaging	Counts Number of animals in strip transect(s) Distance to animals from aerial transect	Index Density estimate
Animal marking	Trap and mark Bait markers	Resight/recapture Capture and check for mark	Density estimate Known to be alive index
Take rates	Hunter survey	Hunter take Hunter effort	Take index Take/effort index
Camera	Camera traps	Number photographed Resight (recapture)	Index Known to be alive index Density estimate
Plot occupancy	Geographic units	Assessed occupancy within a unit	Density estimate Occupancy index

## Estimation methods

**Trail drive away** – counting of animals driven away from a forest

area surrounded by observers (direct method) with silent beater:

- on 10% of the area covered by animals' counting;
- with a use of observers and beater (app. 50-70 persons);
- calculation error – around 20%;
- experienced personnel (discipline – extremely important) – to avoid double counting of the same animals;
- in winter – lack of leaves on the trees – good vision;
- additional information on animals age and sex can be obtained.

## Wild boar density - how to estimate??



## Estimation methods

### Other estimation methods:

- **indirect :**

- snow traces calculation,
- faces groups calculation (moose's);

- **direct :**

- annual observation,
- counting in habitats,
- counting of animals entering open areas,
- aerial surveys (open areas),
- thermal counting (deer's and moose's).



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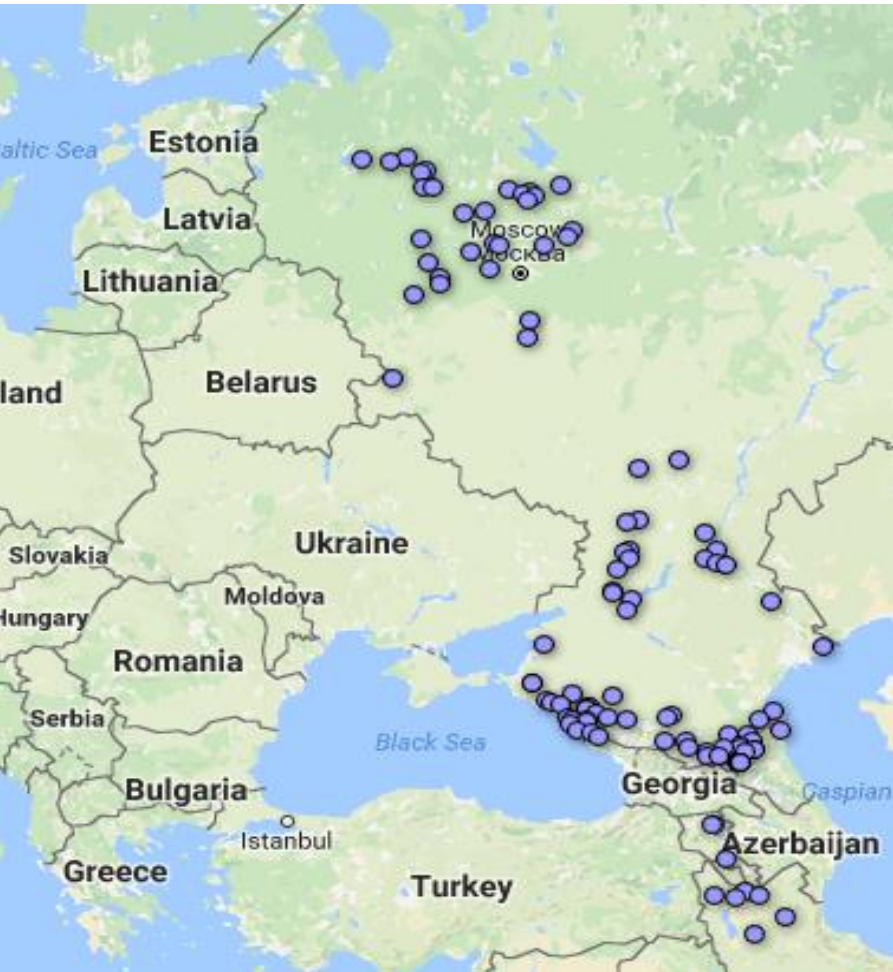
Wild

	2014	2016
No of WB counted in Lithuania	22325	19699
No of hunted WB during a season (data presented 15/04) in Lithuania	50172	42188

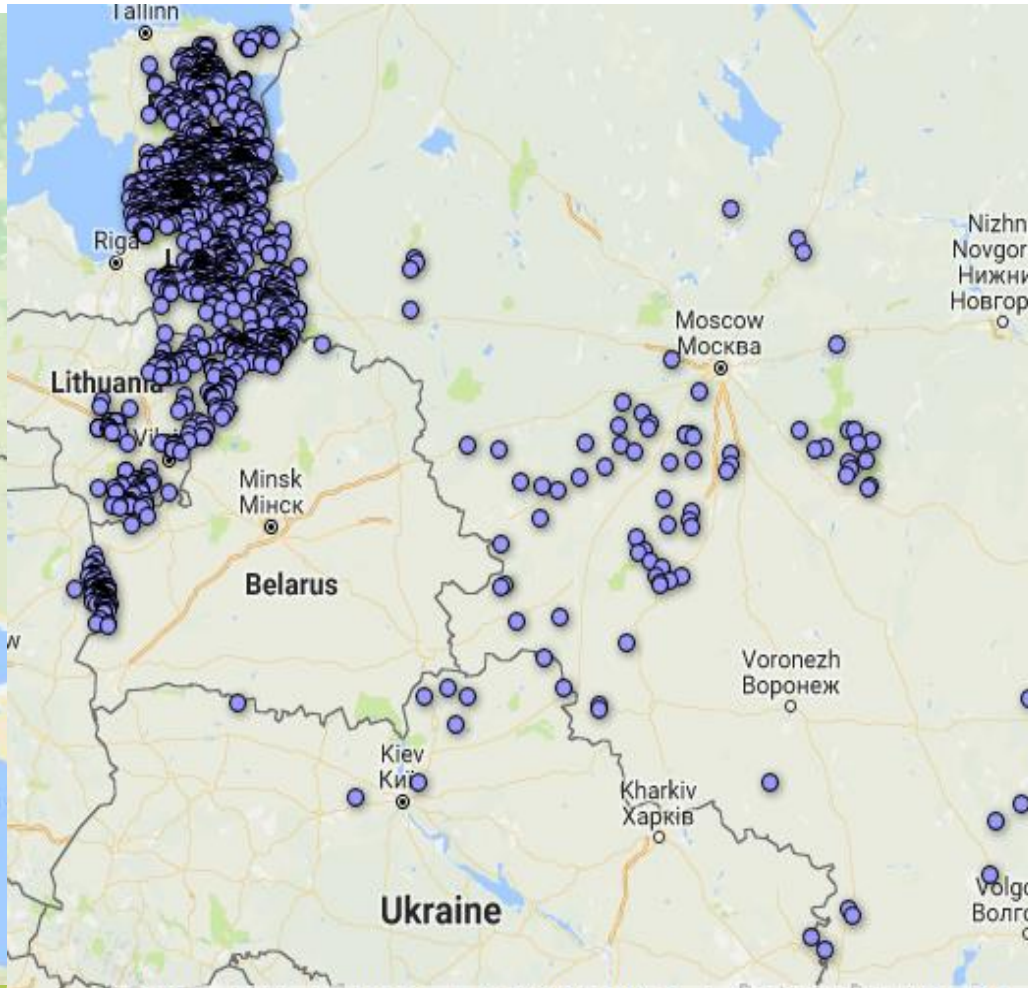


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# ASF distribution in wild boar since 2007



2007-2014



2014-2016

*Continuous awareness campaigns should be foreseen for hunters for informing about the new strategy and the intended goals so to encourage the participation of hunters in the strategy.*

**NETAPKITE AFRIKINIO KIAULIŲ MARO (AKM) PLATINTOJU!**

**MEDŽIOKLĖS ATMINTINĖ**

- AKM virusas gali plisti per užrašę žemieną ar kiauliens, maisto atliekas, škyčius ir kt.
- Je gali būti pamešamas ant avylenės, pavėsių.
- Užbrato šaltiniu gali tapti nedezinfekuota mėginams pristatyti
- AKM virusas gali išplisti, kai nesantamai transportuojant mėginus dienių šieno galimose – nuo 2 iki 6 mėnesių.






**STOP AKM**

Afrikinio kiaulių maro virusas atsparus apšvičios veikimams, netoje virusas gali išliaklyti iki 500 dienių šieno galimose – nuo 2 iki 6 mėnesių.

- Sumedžiotus šernus gabenkite į jį mažuose ar kitap supakuotose, kad neteikėtu škyčiais.
- Išdoroję šernus, jį dorojimo vietą, aikštelę ir teritoriją apšvičkite gyvūnų medžiagomis, vėdinčiomis AKM ir klasikinio kiaulių maro sukėlėjus.
- Išdezinfluokite tara, kurioje buvo diaktus, kurie ležetai su gamini užkrečiamu šernu.
- Šernų atliekas, iššlytus trofėjus, gyvūnų atliekių duobę, šlyti, išlaista aukštazemėje, kurioje neapšvičios vietose, lėtus vanduo. Pradide duobę 1,5 m arba užbraukite.
- Ji gyvūninių atliekių duobė šlyti atliekas galite tik gavę VMVT teritorinio padalinio raščio leidimą.

Daugiau informacijos apie AKM: [www.vmyt.lt](http://www.vmyt.lt)  
Valstybinė maisto ir veterinarijos tarnyba

**KAIP TEISINGAI PAIMTI ORGANŲ MĖGINIŲ SUMEDŽIOTAM ŠERNUI**

1. Mėginytis turi būti paimamas švariomis rankomis.
2. Adhizivams ir klasikiniam kiaulių marui diagnozuoti reikalingi organai:
  - **Inkstai:**


  - **Blužnis:**

  - **Limfiniai mazgai:**



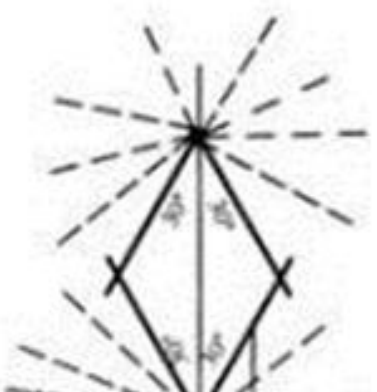
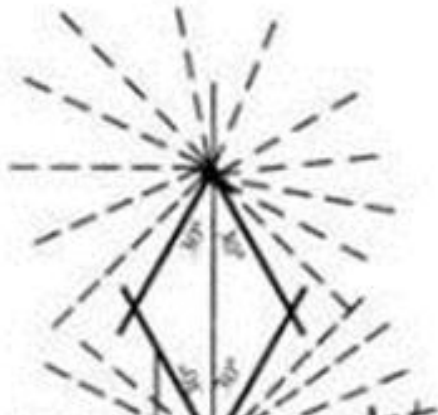
➤ kraujas mėginiai turi būti paimami iš sandarius medžiagatvėkšius ar indelius;

➤ organų mėginiai turi būti sušaldyti (švarų plauštelė) maišeliu ir paguldomas į kitą plauštelės maišlą ar korpelį, kad nebūtų išplitusius AKM ir klasikinio kiaulių maro virusus!



# Hunting methods

## Driven hunt



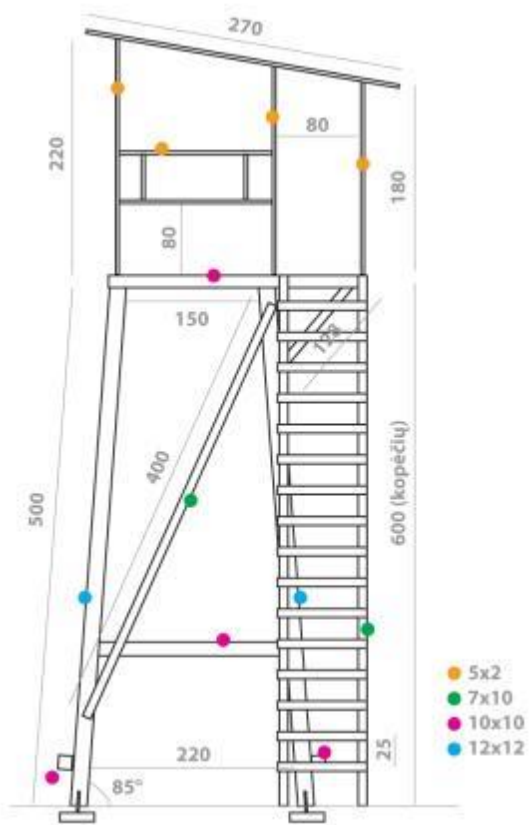
Food safety



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# Hunting methods

## Solo hunt



# Thank you for attention! Questions?





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## **Better Training for Safer Food BTSF**

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