

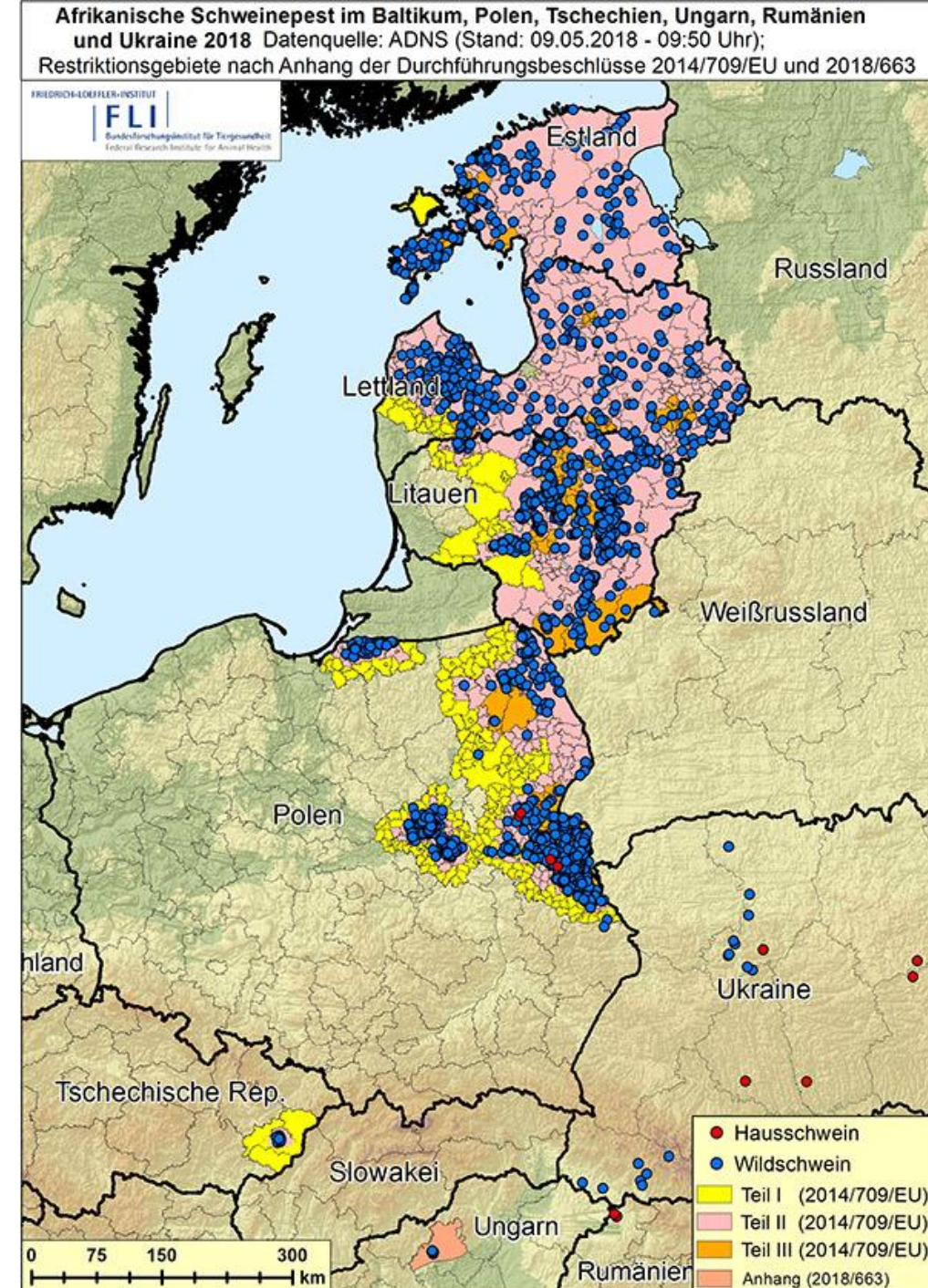
Wild Boar in Europe :

The African Swine Fever challenge

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African Swine Fever in Europe

- Since 2007 in Europe
- Since 2014 within European Union (Lithuania, Latvia, Estonia) and spreading
- Poland, Czech Republic, Hungary, ...
- ASF is changing the game and landscape!

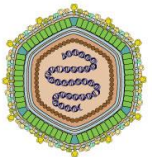




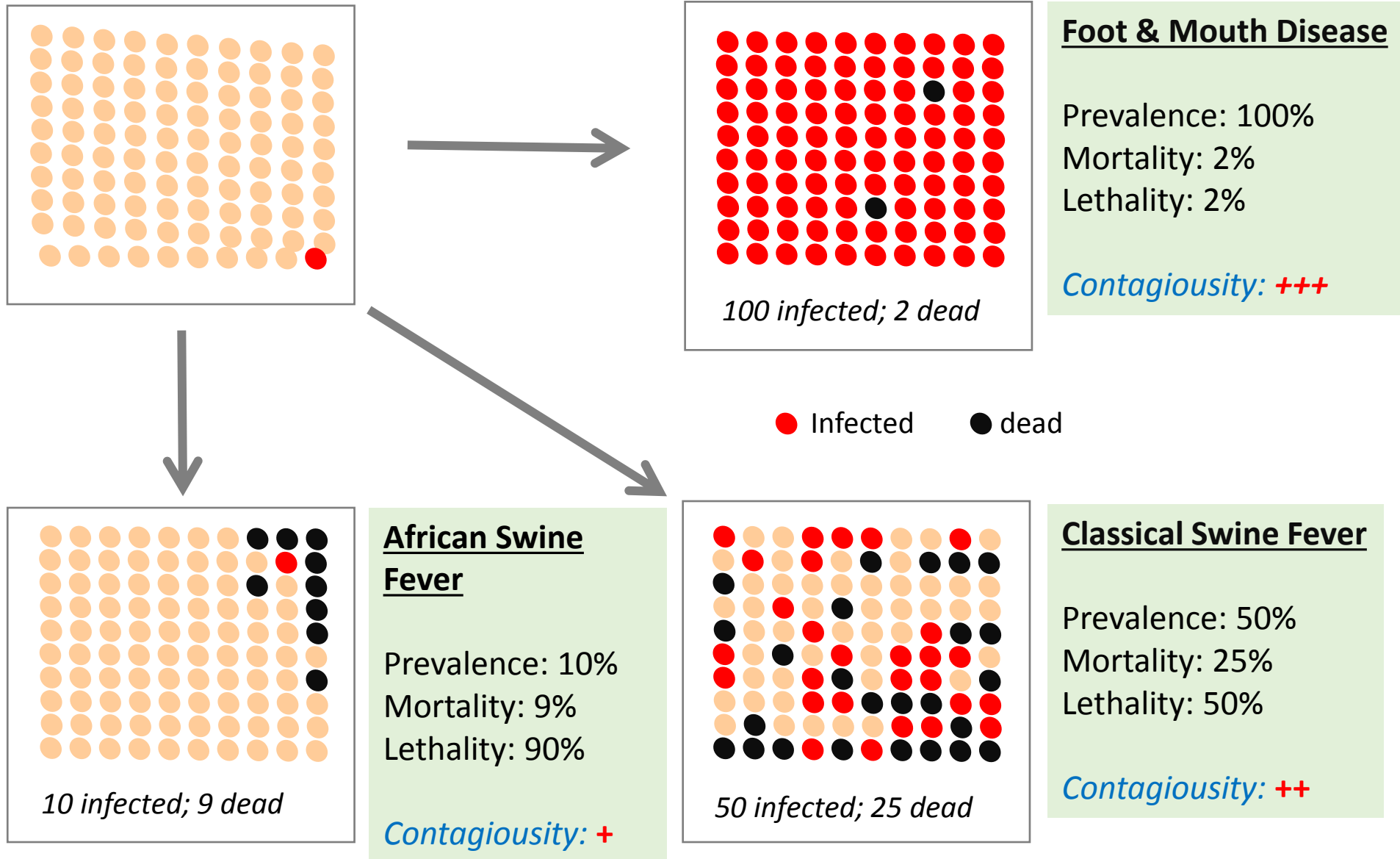
High fever (41-42 °C), depression, loss of appetite, hemorrhages in the skin (tips of ears, tail, distal extremities, chest and abdomen).

What is ASF?

- An infectious viral disease of pigs & wild boars, usually **deadly**,
- It does not affect **humans** nor does it affect other animal species other than pigs and wild boars
- Not really a (human) sanitary problem but **economic** problem : non-EU countries will ban imports of pork meat/living pigs from countries where ASF is recorded.
- **No vaccine** exists to combat this disease
- **Low contagiousity** but **high resistance** of the virus
- It can be transmitted either via **direct** animal **contact** or via dissemination of contaminated **food** or **material**
- **Humans contribute to the spread of ASF and let the virus jump hundred(s) of Km** (3 jumps in 1 year : Czech Rep., Warsaw, Hungary)



LOW CONTAGIOUSITY



HIGH RESISTANCE



10 days

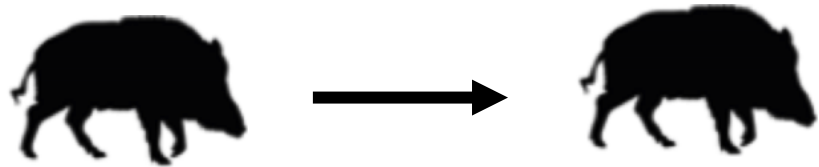
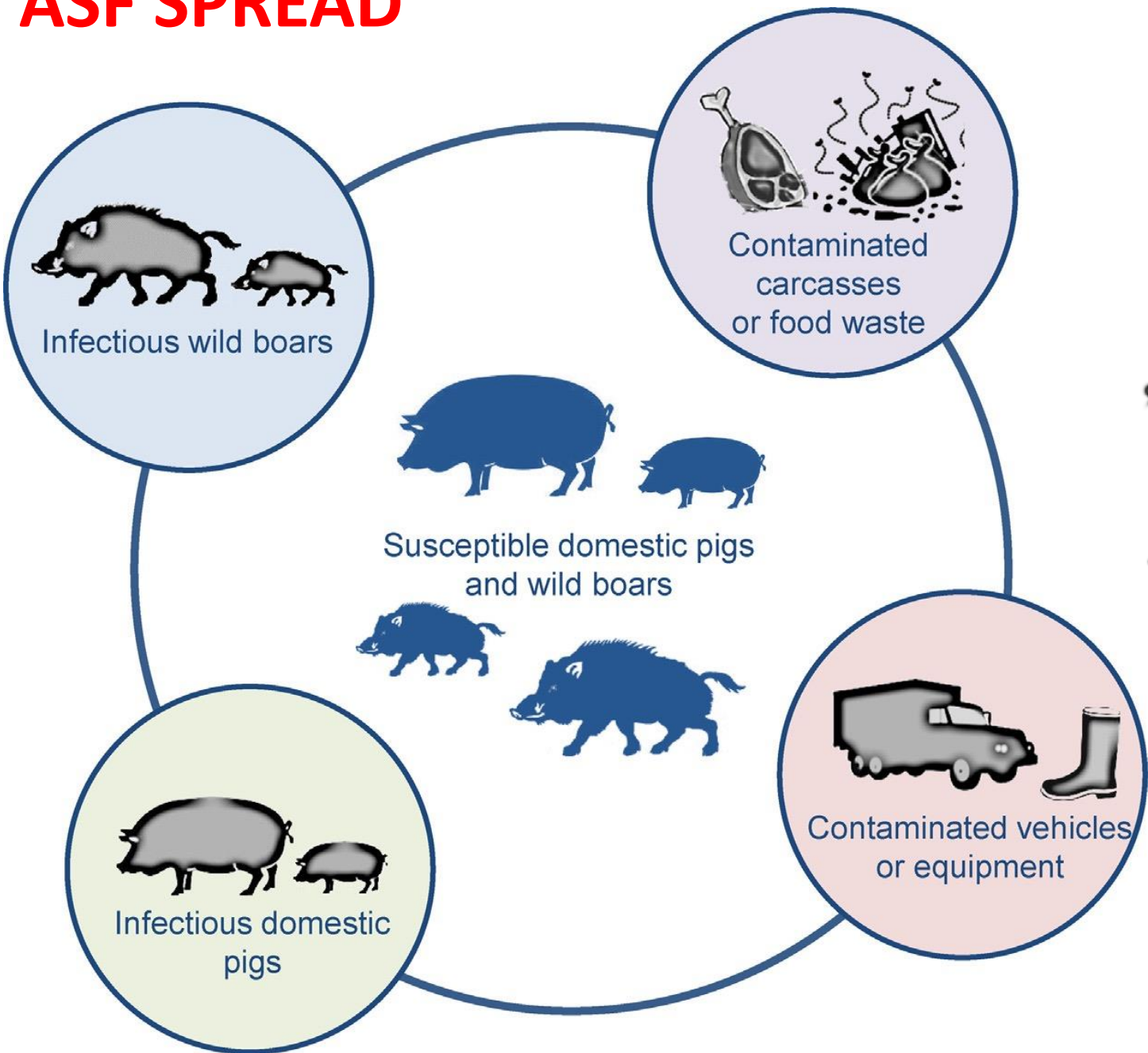


3 weeks



**months (sausages, salami, ...)
or years (frozen meat)**

ASF SPREAD



1 to 2 Km/month



500 Km+/day

What to do in non infected countries 1 ?

***avoiding human transmission of the virus is the most important strategy**

**Good information, good communication
to the right people**

***Passive (and active) monitoring
collaboration of hunters**

What to do in non infected countries 2 ?

***Reducing the wild boar densities ?**

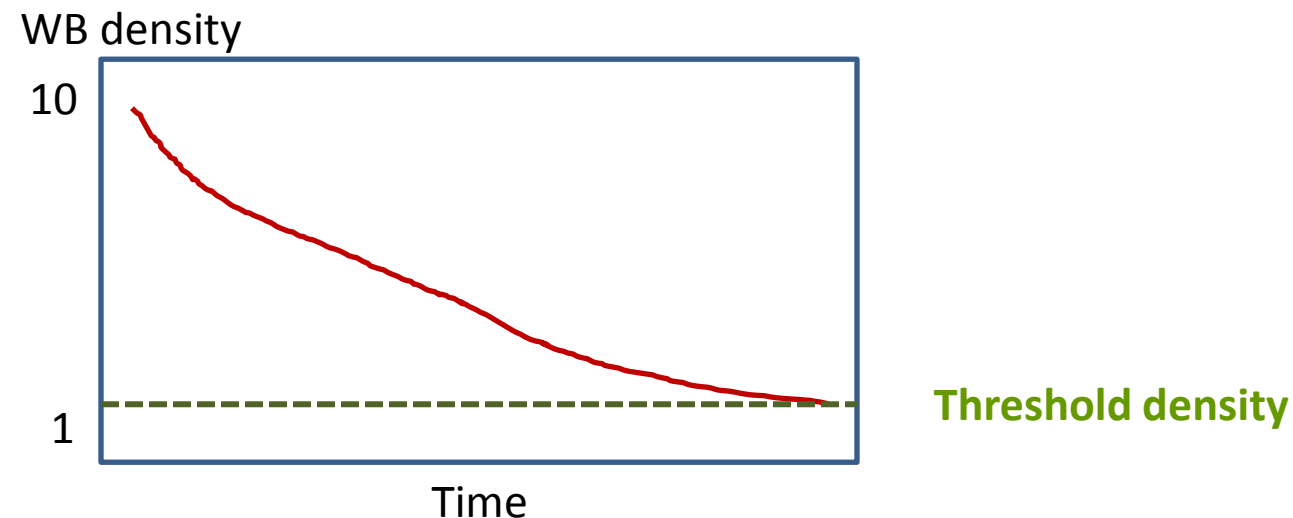
**Seems to be logical & easy to explain
Asked by some stakeholders for other
reasons**

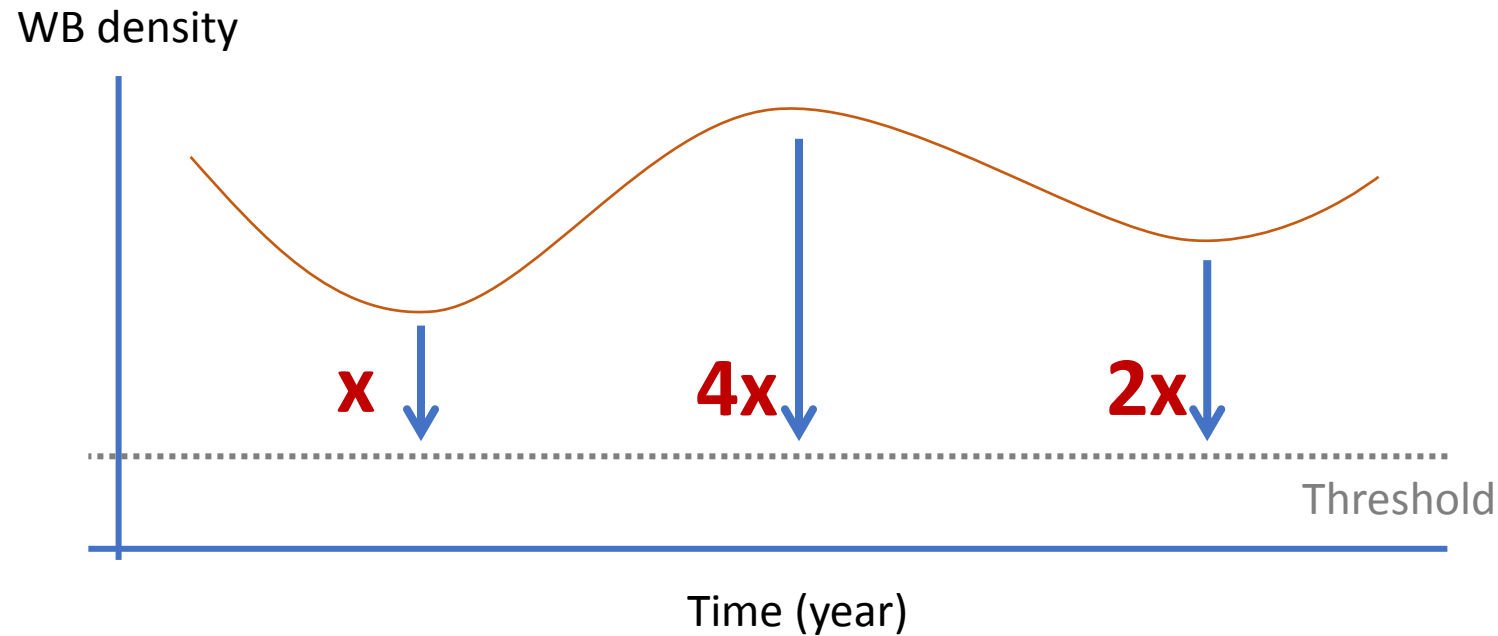
Can we define the threshold density?

The critical density at which an infection stops (an infectious wild boar does not encounter any susceptible wild boar in due time to spread the infection)

If the number of susceptible individuals is decreased till a certain density, the infection fades out through a density dependent mechanism

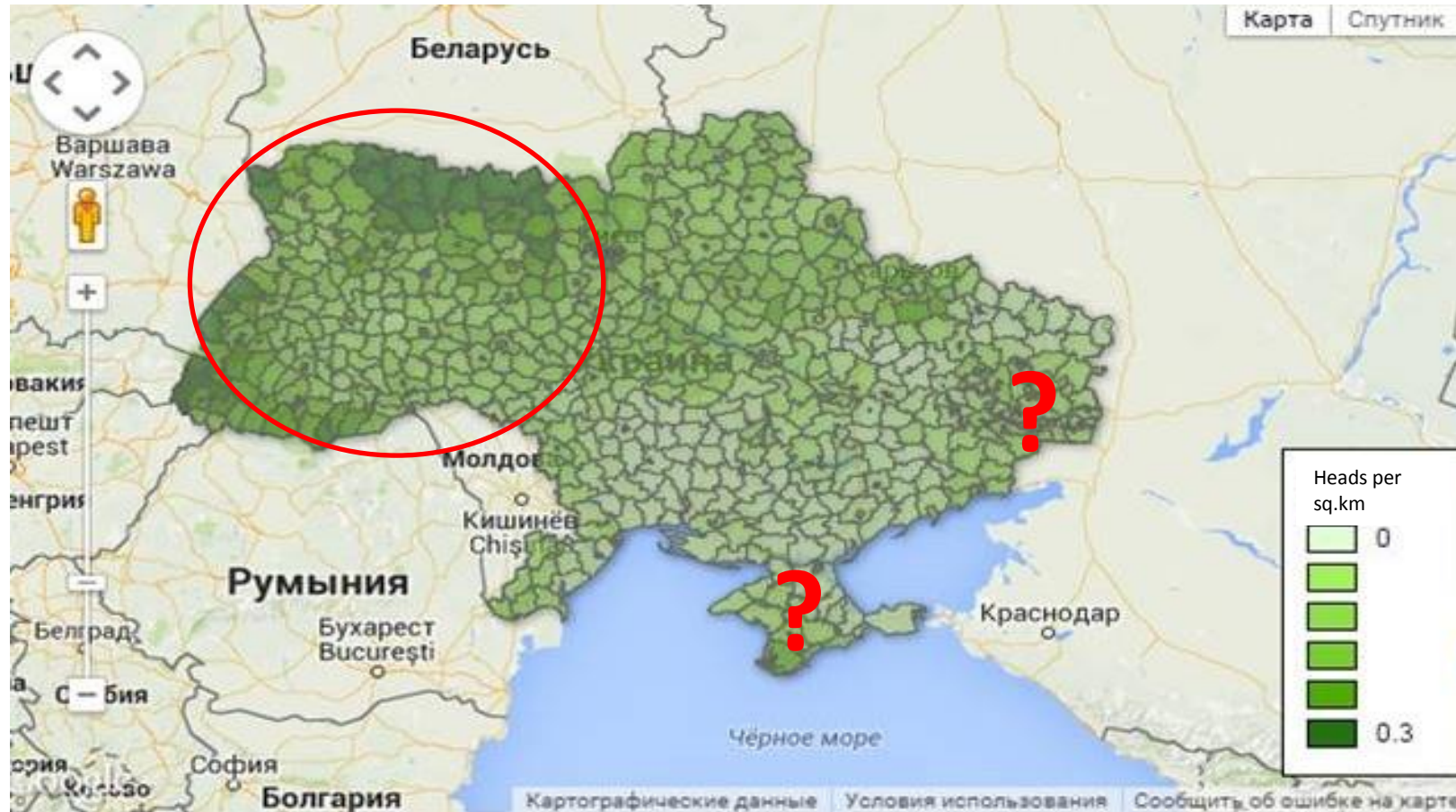
NO WILD BOAR = NO DISEASE





- Even if we set an upper limit for the threshold (TH), we haven NOT solved much.
- The challenge is not to estimate the TH, the problem is that we do not know how many WB we have in a habitat. We cannot say how many animals should be removed (killed) to reach the desired TH.
- The animal number (density) varies dramatically between habitats and seasons,
and all estimates are wrong
- We will not know, if in a particular region we have to hunt 100, 500, or 1000 WB (in summer or winter) to reach the desired TH ...
- On top of that, since ASF transmission is not 100%-density-dependent, we will not have the guarantee that reaching the theoretically calculated TH, the epidemic will fade out...
- **Best is, do not disturb the animals and remove carcasses as effectively as possible...**

Density of wild boars



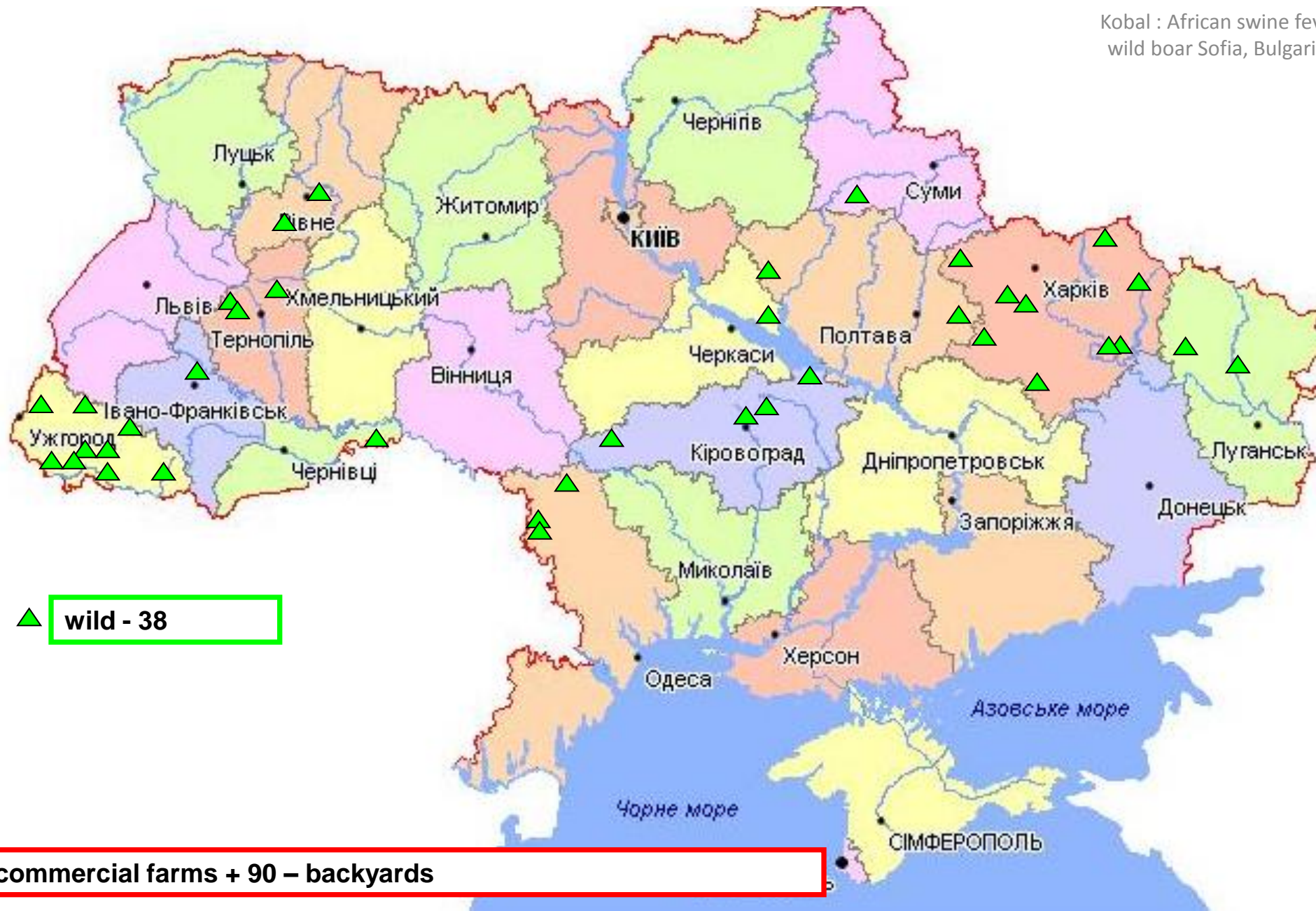
UKRAINE

Kobal : African swine fever management in wild boar Sofia, Bulgaria, 8-9 March 2018

2017 (163 ASF outbreaks)

UKRAINE

Kobal : African swine fever management in wild boar Sofia, Bulgaria, 8-9 March 2018



What to do in non infected countries 3 ?

Reducing the wild boar densities?

**We cannot know how many animals must be
killed** (because threshold & population unknown)

**Threshold probably very low ($< 0,1/100$ ha).
We do'nt have field experience of the efficacy
of this method.**

What to do in non infected countries 4 ?

Reducing the wild boar densities?

Unrealistic task because the present density (4 to 5/100 ha or more) in a lot of places is so much higher than 0,1/100 ha.

Wild boar very adaptative species (behaviour & reproductive physiology)

What to do in infected countries ?



: easy to eradicate the virus
(“we go quicker than the virus”)



: much more difficult
ASF becomes endemic for tens of years
“virtual pigpen in the forest” (as Czech Rep.)

Vaccination (?) as for CSF

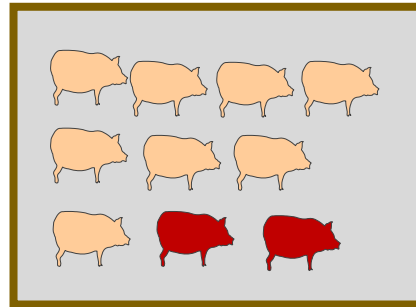
Hunters cooperation shooting, removing carcasses, ...

ASF control and eradication

Key characteristics of ASF:

- low contagiousity, slow spread, few secondary infections
- no transmission by wind or insects
- site fidelity (stable disease / habitat disease)

Pig : farm disease

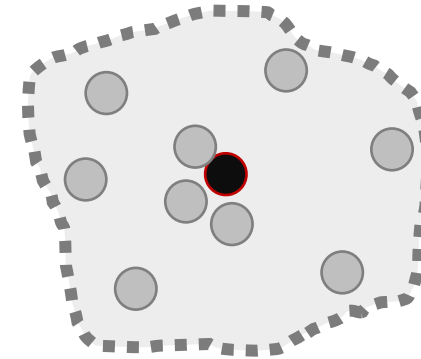


Measures:

1. Standstill
2. Culling
3. Cleaning & Desinfection

Successful approach!!

Wild Boar : habitat/local disease



Measures:

1. Standstill (no disturbance of WB, no hunting, electrical fence, feeding)
2. (Trapping)
3. Disposal of carcasses

“Virtual pigpen” in forest

Klaus Depner

Sofia

9 March 2018

Consequences

- Huge economic losses in pig farming sector
- Increase in damages caused by wildlife (Latvia: Damages to forestry increased with 200%)
- Wild Boar numbers decrease because of disease & shooting
- Disease becomes endemic for tens of years by wild boars



Need for:

- Collaboration (landowners, farmers, hunters, veterinarians, government, ...)
- Exchange of knowledge
- Targeted campaigns on Biosecurity and awareness
- Passive and active surveillance (remove carcasses, test them)
- More research on ASF (eg vaccination)
- Better knowledge on wild boar biology
- Financial compensation for the hunters if shooting is ordered

Thank you for your attention!

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