Teil 2

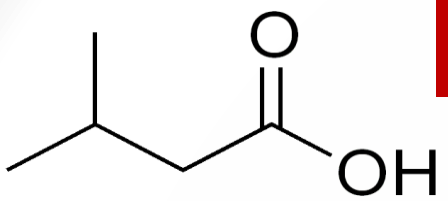
Electric fences around the infected core area

https://www.kr-zlinsky.cz

Luděk Ovesný - MAFRA

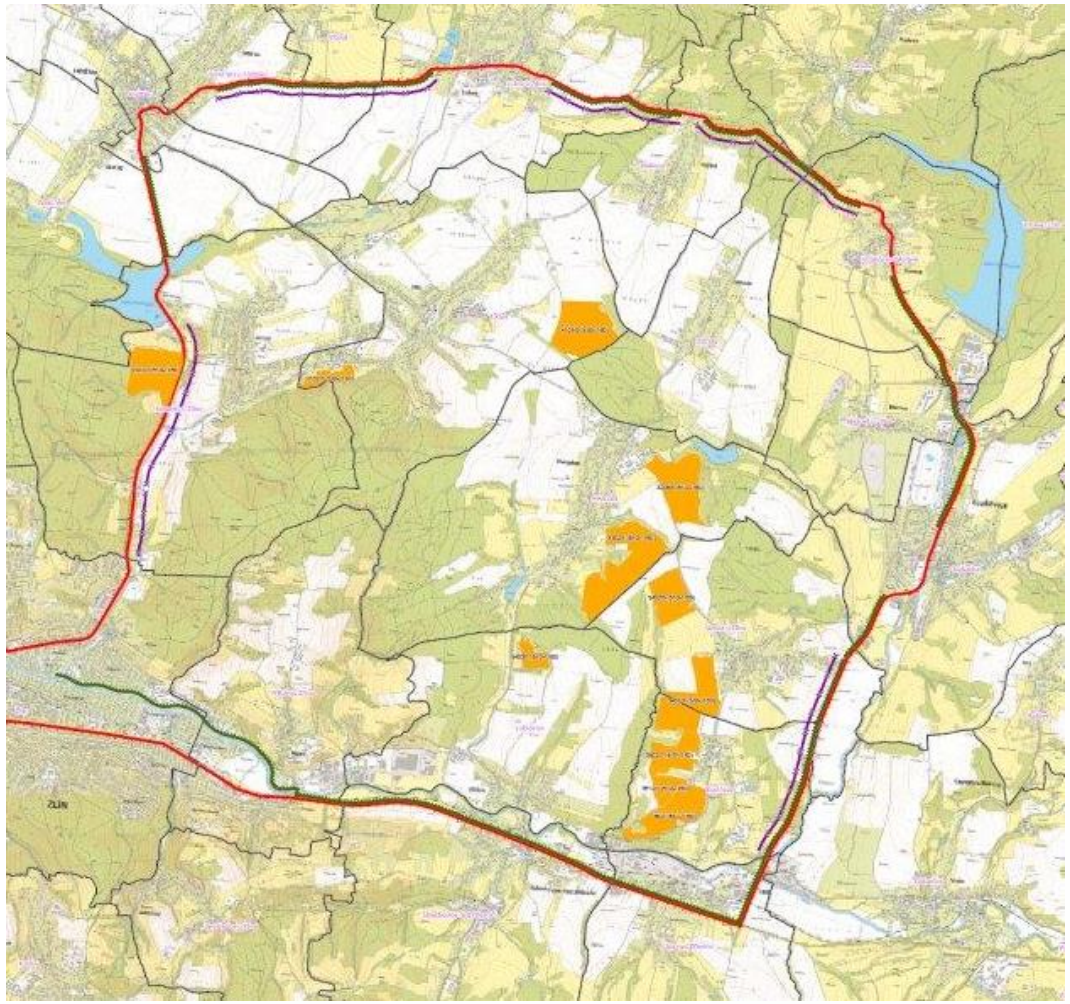
Electric fence installed around the high-risk zone

Odour fences around the infected area



- synthetic foam with **3-Methylbutanoic acid (isovaleric acid)**
- **imitation of typical predators smell /odour**
- **strong pungent cheesy or sweaty smell**
- it is a major component of the cause of unpleasant foot odour
- most durable product chosen – resistant against weather conditions (+ with slow evaporation)
- 5 m distance / 4 weeks period
- product: *Pacholek koncentrát B, Ekoplant, s.r.o.*

Higher risk area (fenced area) - unharvested fields left



115 hectares of unharvested fields (rape, maize and wheat) were left for wild boars providing both food and shelter

Enhanced passive surveillance of WB found dead

Motivated or/and organised searching of carcasses

- very inaccessible terrain
- dense vegetation

Intensive (active) searching of cadavers

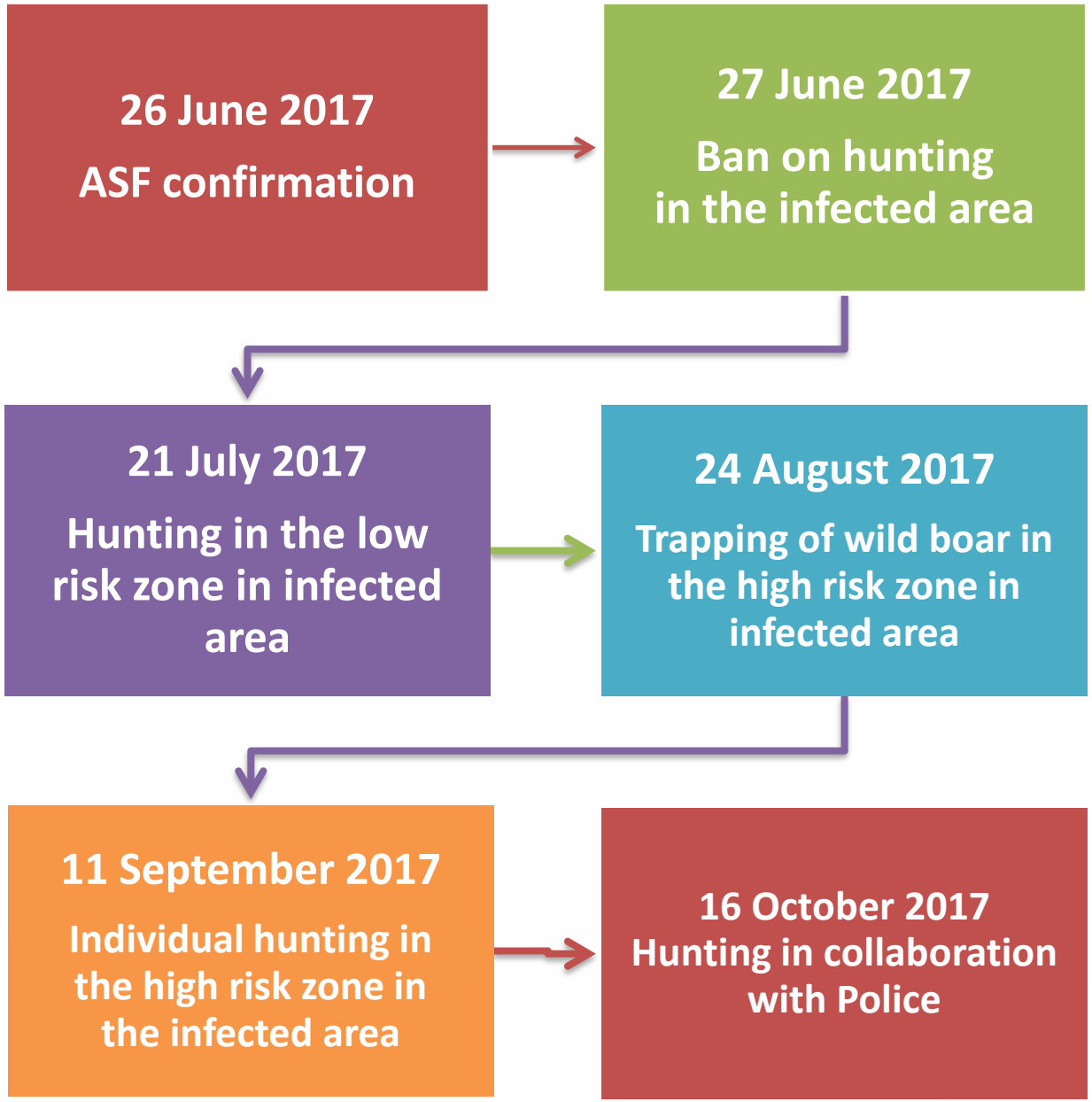
- **Intensive search** for wild boar cadavers from **22/03, 2018 to 22/04, 2018.**
- **After depopulation, before new vegetation season**
- **56 cadavers, 10** of them were PCR ASF positive
- **Cadavers were 3-6 months old**
- **Infections and death of wild boars occurred at the end of 2017 or early 2018**
- Samples with positive results were sent to European Reference Laboratory for ASF, Madrid, Spain - **no live virus detected in these samples.**

Increased passive surveillance of dead WB – motivated searching for carcasses

Ban of Hunting – How long ?

- Developing of **hunting biosecurity measures** aimed in avoiding the further spread of the virus through hunting activities
- **Understanding the geographical extents** of the involved areas
- **Prevention of wild boar disturbance**
- **Hunters have to be trained** to reduce the probability of further spread of the virus in the environment and outside the infected area

Timeline of hunting regulations



Hunting and trapping with rendering

— Each Hunting ground is **equipped with containers** or other means of wild boar temporary storage.

— In each collection point is available an equipment for **cleaning and disinfection**.

— Hunters have to **avoid possible contamination** of vehicles, hunting equipment, yards and houses.

— **Common containers** are allowed only for hunting grounds belonging to the same Wild Boar Management Units and when sharing the same infected hunting area

Hunting in the infected area

— Hunting of wild boar is allowed **only for selected and trained hunters**, motivated by financial compensation.

— **Biosecurity** measures of hunters during + after hunt.

— **Identification** of hunted WB

— All hunted and found dead wild boar **must be disposed in the rendering plant**

— **Sampling at rendering plant,** not in the hunting ground

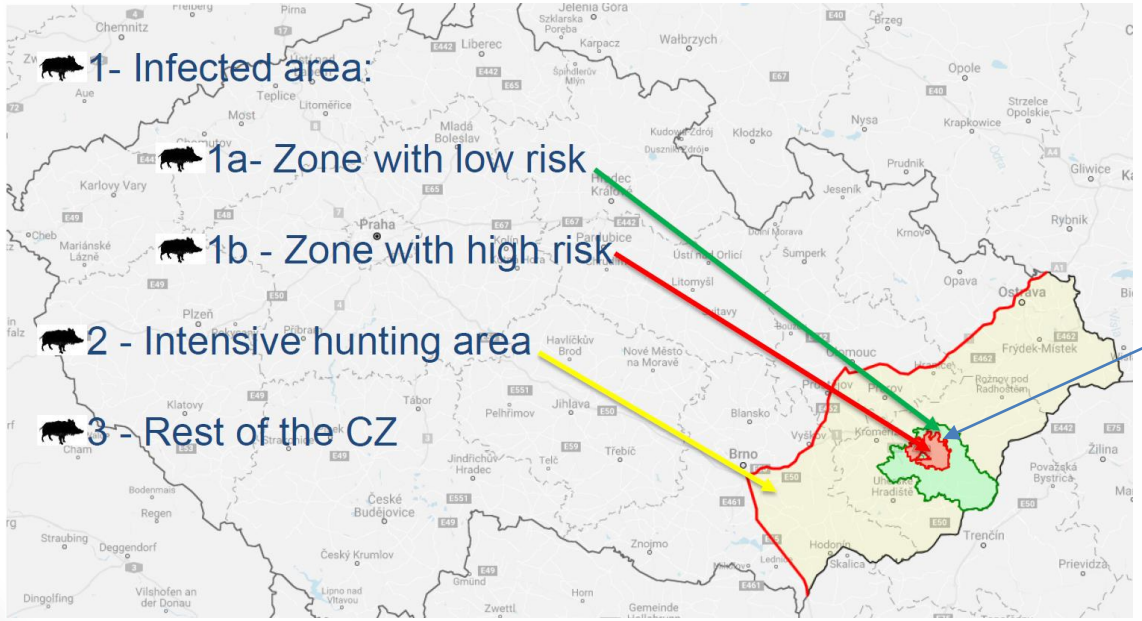
— **Hunters associations are compensated for the lost of venison**

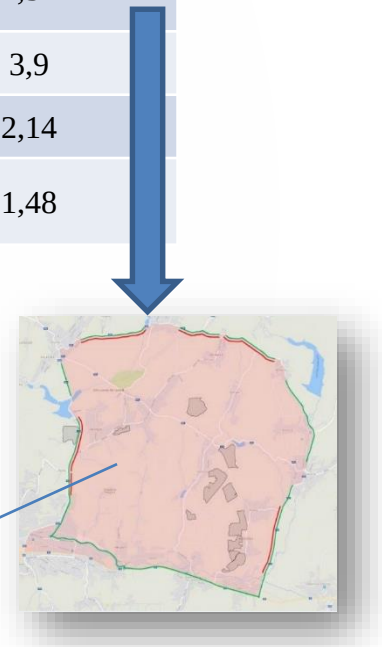
Disposal of hunted wild boars from the infected area to determined rendering plant

Samples taken in rendering plant by official veterinarian

Hunting of wild boars in defined areas from 26/06, 2017 to 31/01, 2018

ASF - hunting of wild boars in defined areas from 26/06, 2017 to 31/01, 2018						
	until 31 January 2018					
Area	Fenced	Size in km^2	Hunting beginn		Culled wild boar	Culled wild boar per km^2
Highest risk area (fenced)	yes	57,2	Sep 17		247	4,32
High risk area	no	102,8	Sep 17		401	3,9
Low risk area	no	874	July 17		1 874	2,14
Intensive Hunting area	no	8500	July 17		12 601	1,48





Trapping of wild boars

- 32 traps in the area
- cage traps with sensors and cameras

Fenced area	total trapped	negat.	posit.	prevalence
in	40	36	4	10%
out	66	66	0	-

Hunting by police snipers in the infected area

task: as fast as possible total depopulation inside the fenced area - quickly, silently, efficiently and with high biosecurity

- **individual hunting by Police snipers (Elite Squad, Police Special Unit, Airport snipers)**
- started from **16 October 2017 (**3 days a week during 10 weeks)
- **in total 157 WB hunted - 8 positive for ASF**
- snipers trained for hunting **biosecurity**
- organization and coordination by RVA and by regional hunters

- over night hunting (18:00 – 6:00)
- **mobile thermovision** used
- snipers with **silencers, especial ammunition**

ALL hunted WB collected + rendered !!!

Training of snipers

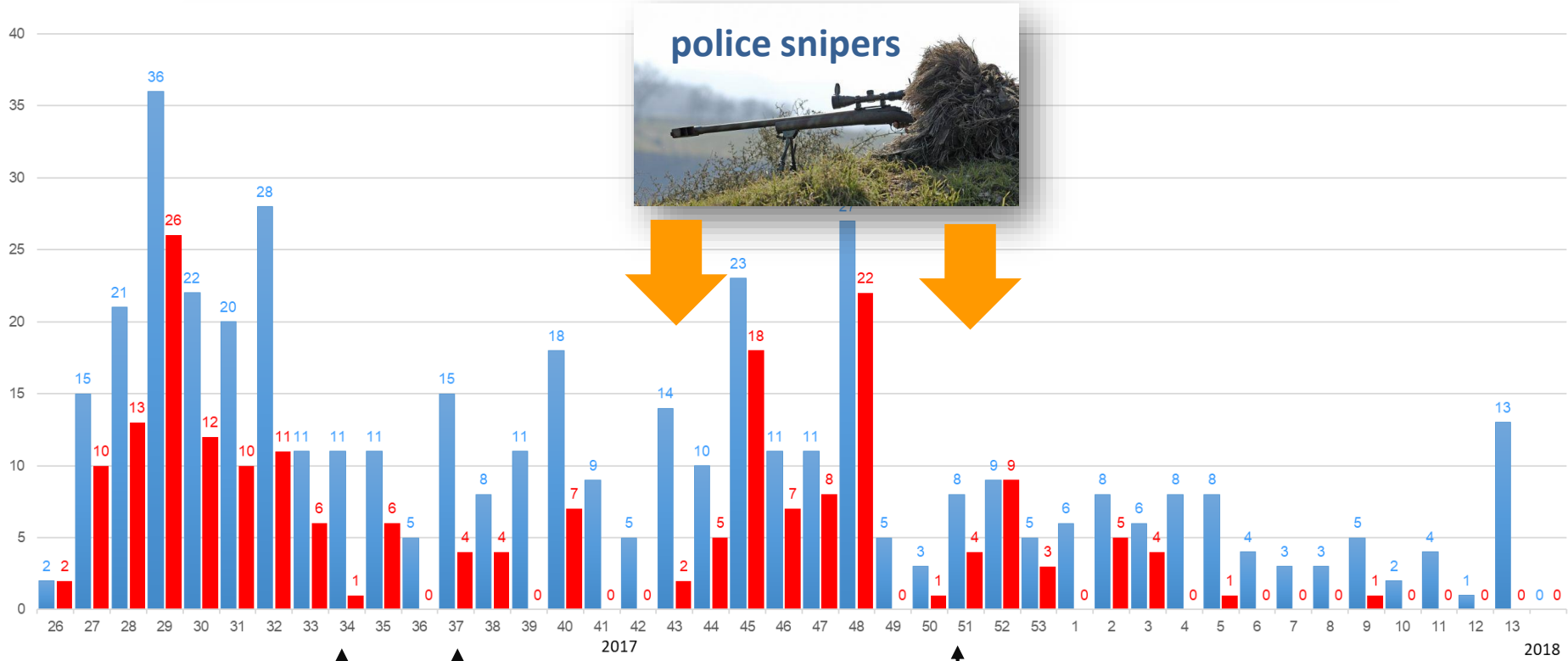
on a moving target

Collection of hunted WB during snipers hunting done by SVA

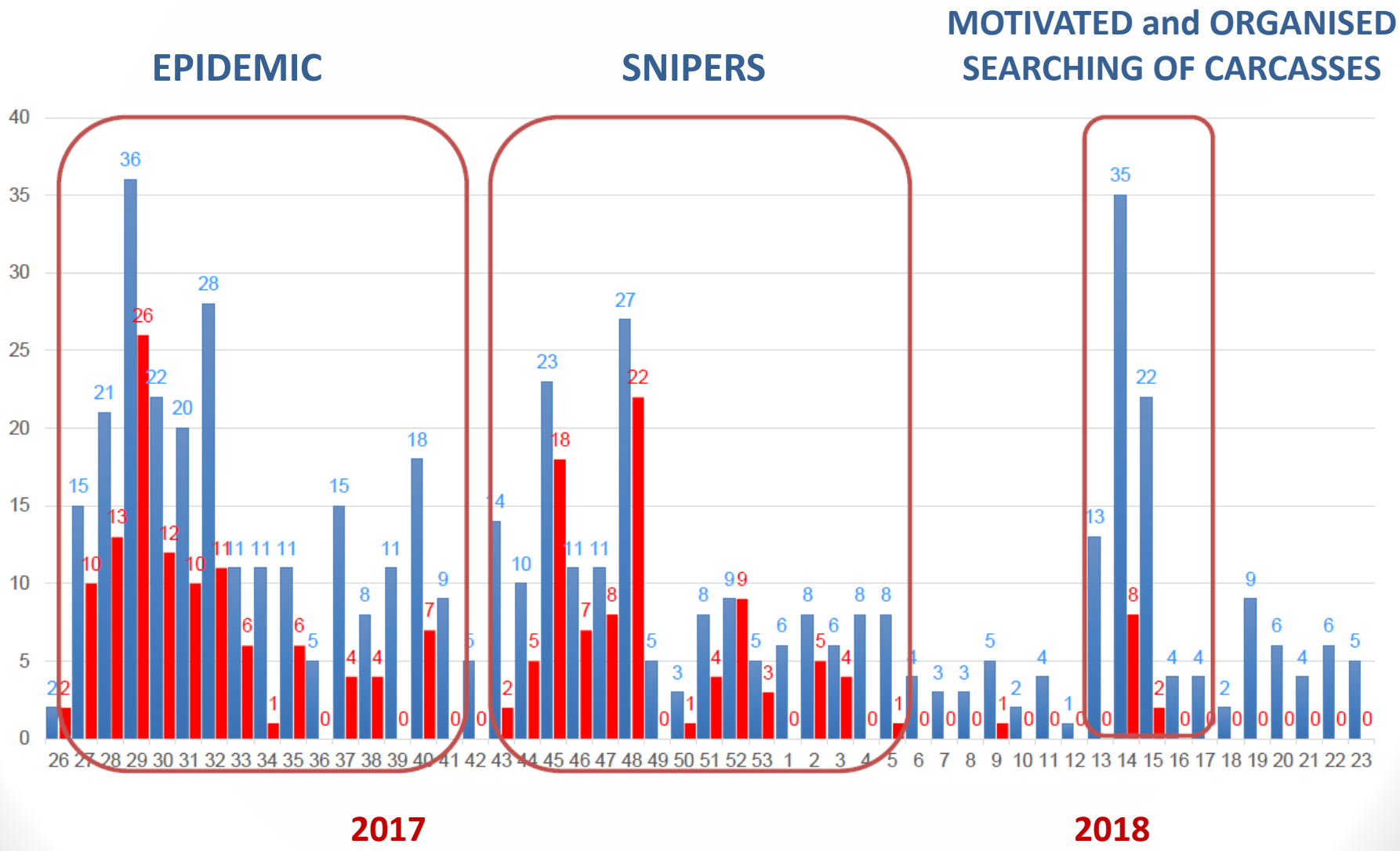
Weekly incidence in relation to hunting measures

number of WB **found dead**

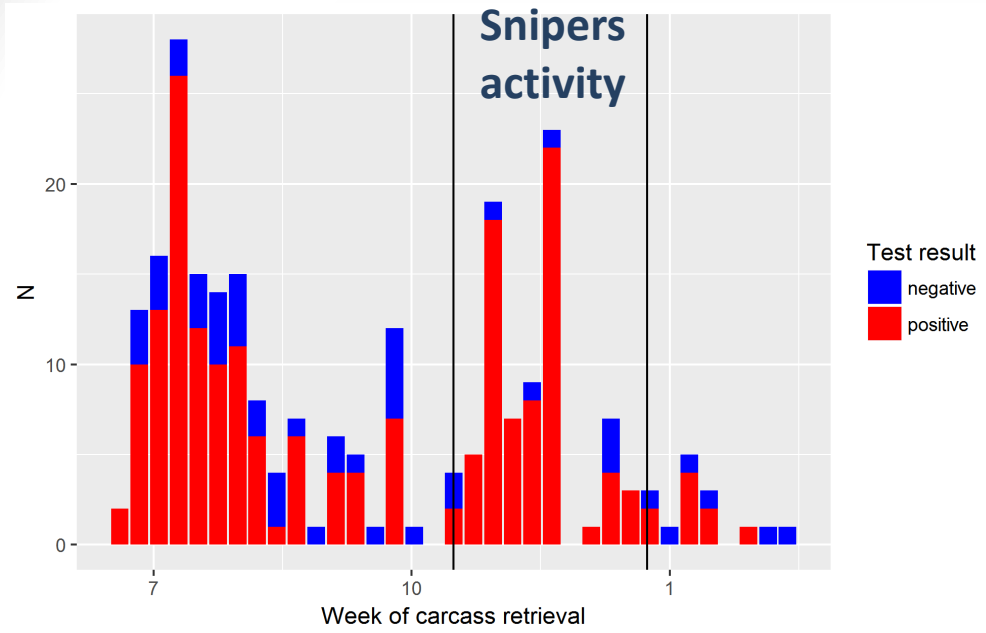
number of ASF PCR positive **found dead WB**

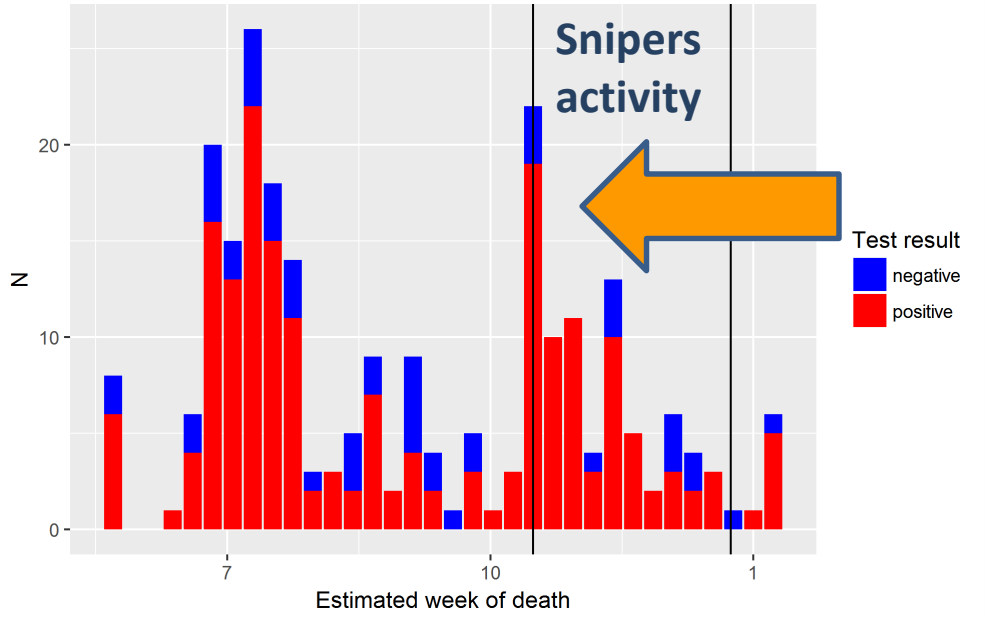


Weekly incidence - 3 epidemic peaks



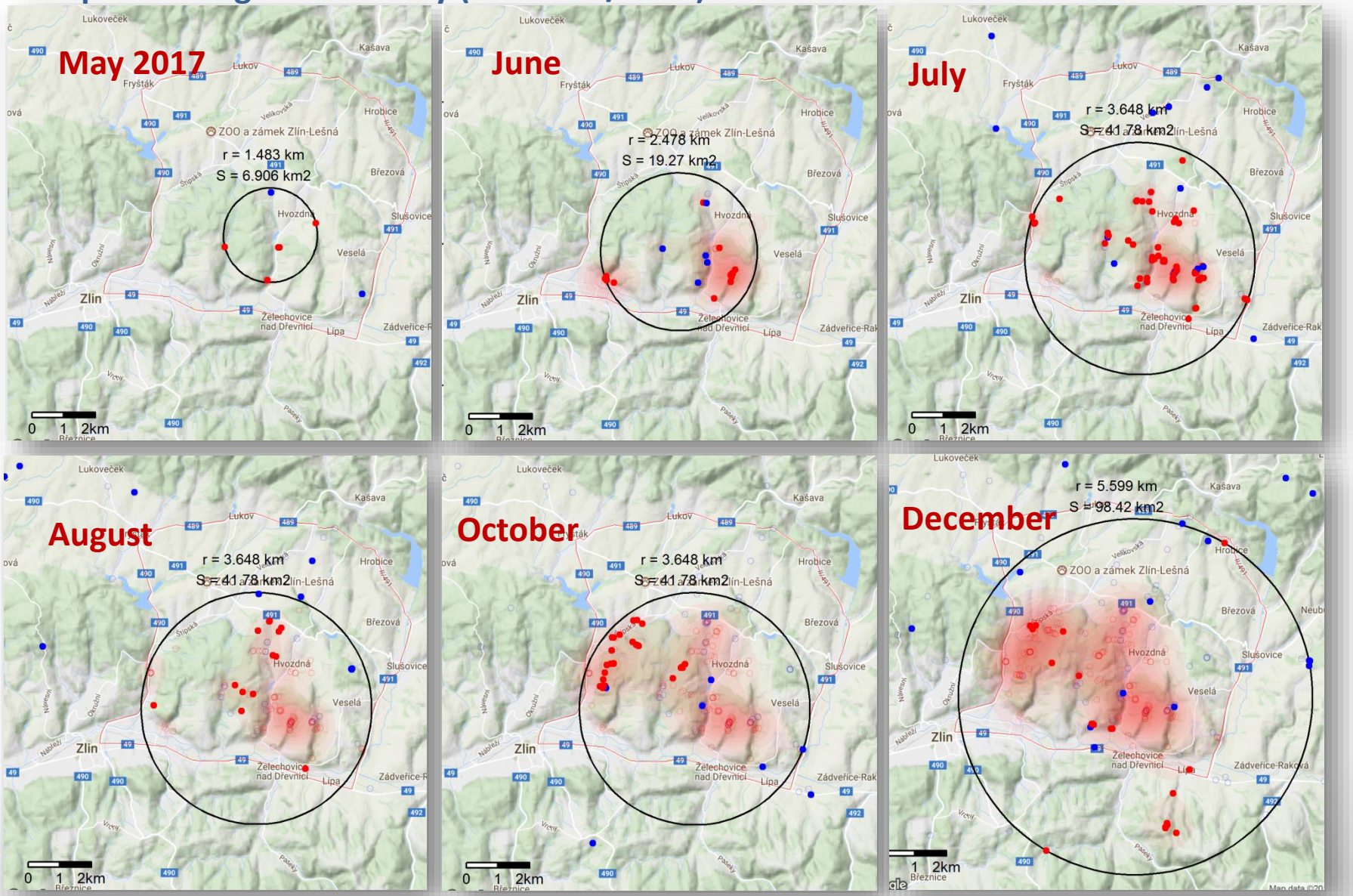
Carcasses „age“ – date of finding vs. date of death (estimated)





The speed rate of disease expansion/spread

DIAMETER 11 KM / 11 MONTHS = SLOW speed = Ø 0,5 km/ 1 month
despite the high WB density (8-10 WB / km2)



based on the estimated date of death of WB found

Estimation of the number of wild boars in the core area (fenced area)

- Original estimate (July 2017) was 150 – 200 (250 max) wild boars only
- Total number of hunted or found dead wild boars is 582 to 17/09, 2018 (299 hunted; 283 found dead)
- New estimates were made in July - August 2018 using trail cameras (game cameras/camera traps), thermovisions and watching by hunters. The total estimated number of WB was 15-20 (August 2018), only individual wild boars were observed.

The current situation confirms that the process of reducing the number of wild boars has been correct and effective.

Summary: What we learned from our „small“ outbreak?

The best rated measures (effectiveness and practicality):

- **motivated and active passive surveillance** – fast systematic removal of carcasses
- **ban on hunting** (despite public/hunters opposition and political pressure)
- **Hunting in infected area is possible only under strict biosecurity conditions**
- **disposal of hunted wild boars** from the infected area - **ALL WB to rendering plant from PART II.**
- **hunters motivation** (financial rewards and compensation)
- **hunting in the infected area by professionals to depopulate WB** (snipers)
- **unharvested fields** in infected area (shelter, feed)

Conclusions

- ✓ **indirect transmission by a human activity seems to be the most probable way of introduction to the Czech Republic**
- ✓ **the uniqueness of the Czech outbreak is the local occurrence in a small solitary area without direct connection to the affected localities in the neighbouring countries**
- ✓ by implementing strict measures in a small isolated area **the human factor (regarding to spreading of infection) has been substantially eliminated**
- ✓ **responsible authorities took both pioneering and alternative measures**
- ✓ **Key point is collaboration of all stakeholders !!!**

If you want to manage the infection, behave like a virus, not like a pig!

State Veterinary Administration

Thank you !!!