

# Crisis management in case of African swine fever - wild boar - Belgian example

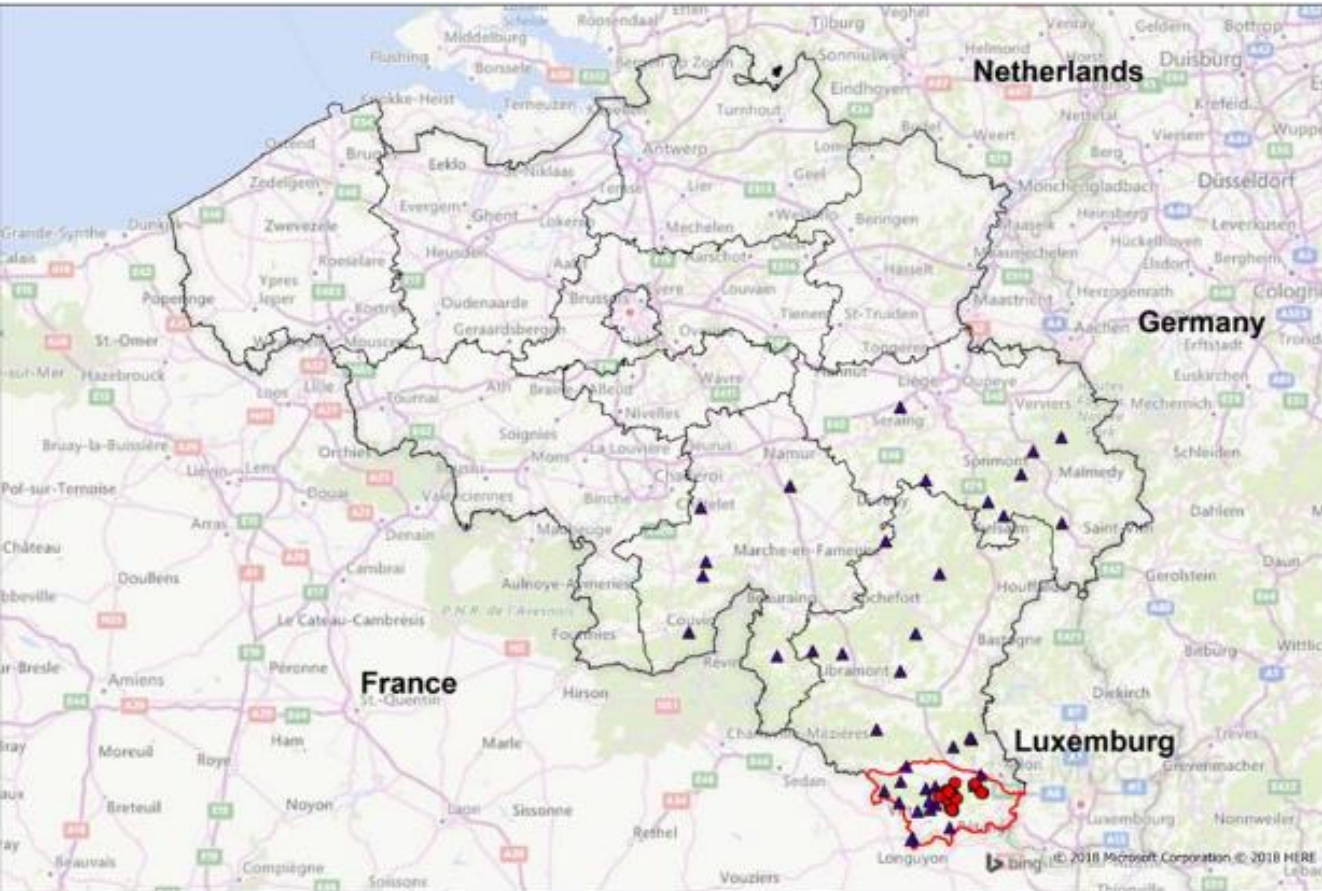
A. Linden and A. Licoppe

**Standing Group of Experts on ASF in Europe**  
under the GF-TADs umbrella  
15<sup>th</sup> meeting (SGE ASF15)  
06 May 2020

# BELGIUM - ASF Outbreak in WB - 13/09/2018



- 2 wild boars (1 found dead and 1 sanitary shot)
- ASFV confirmed cases 13/09/2018 - NRL
- Prov. Lux - Belgium
- South-east of Wallonia
- France 12 Km and GD Lux 17 Km
- Preventive culling of pigs in the provisional infected zone (26/09 → 03/10/2018)





# Today - overview - 27/04/2020 (20 months later)

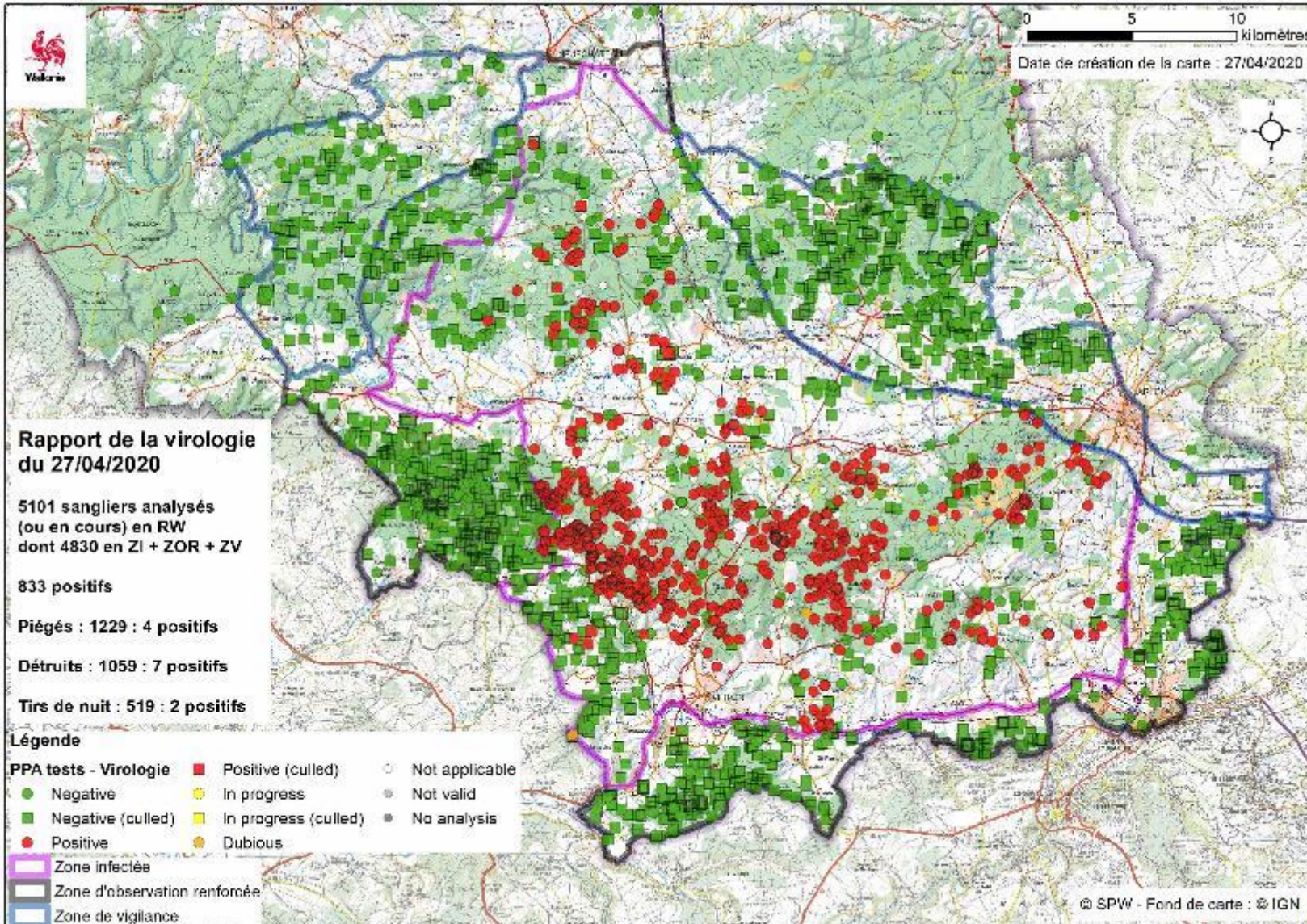


## ASF - WB - BELGIUM



5101 qPCR analysis including 4830 in ASF zones II & I

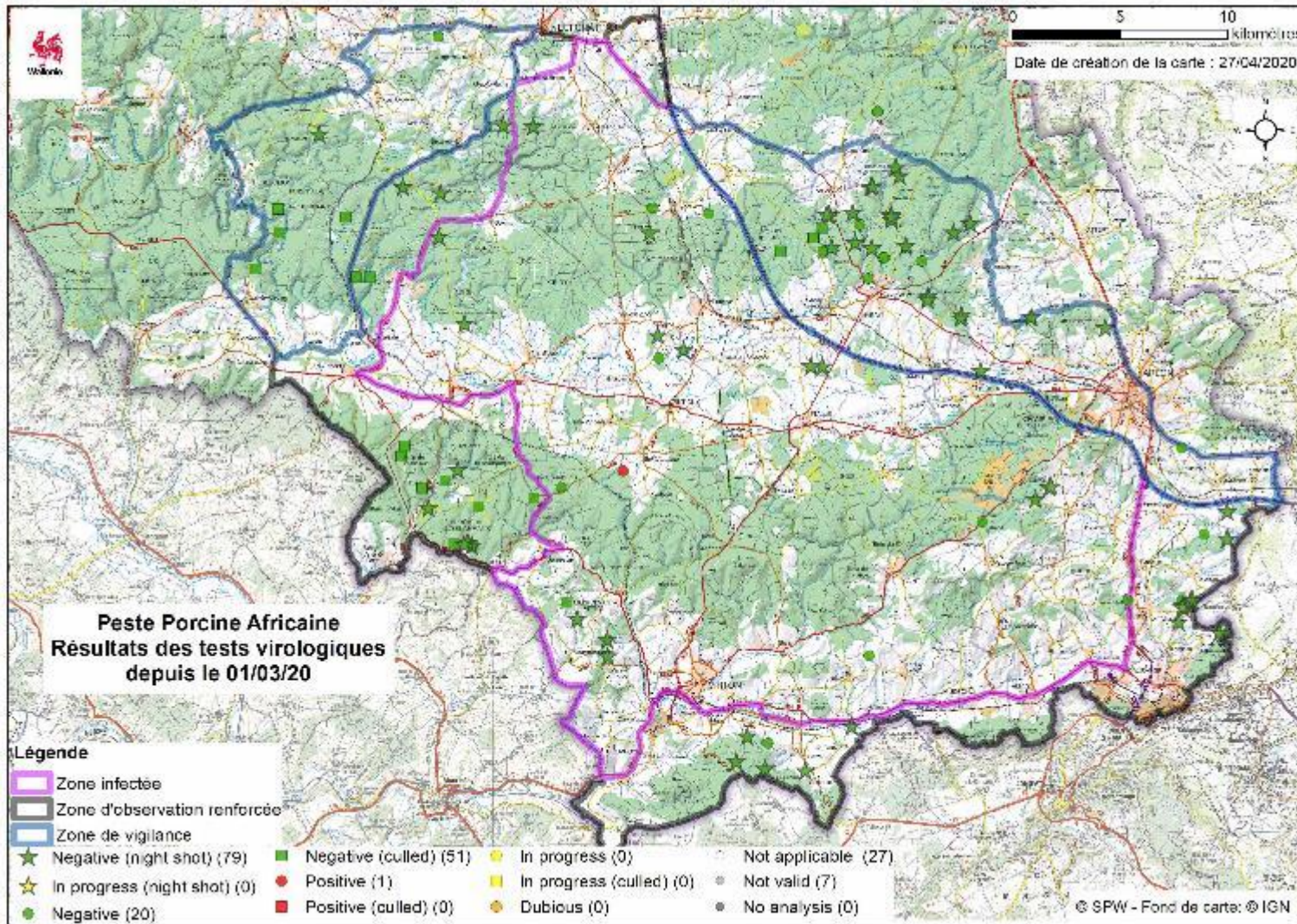
● 833 ASFV positive cases



**REGULATED ZONES II + I = 1106.64 Km<sup>2</sup>**



# Today - last results - 01/03/2020 → 27/04/2020



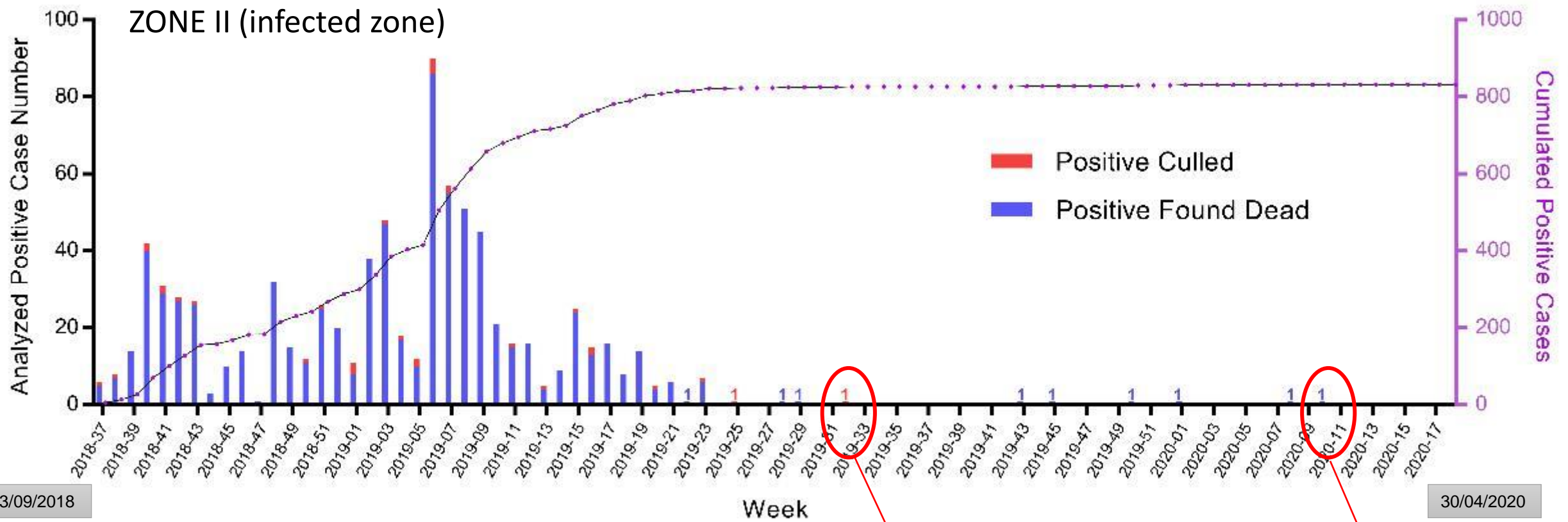
Last ASFV positive case  
Bones discovered 04/03  
Ref A19-4748  
Dry, completely emaciated  
PMI estimated to several months  
qPCR ASFV : Very low viral load : Ct 35,09



GF-TADs (SGE ASF 15) 06/05/2020, Belgium



# Weekly evolution of ASFV + → 30/04/2020



Last fresh ASFV +  
August 2019

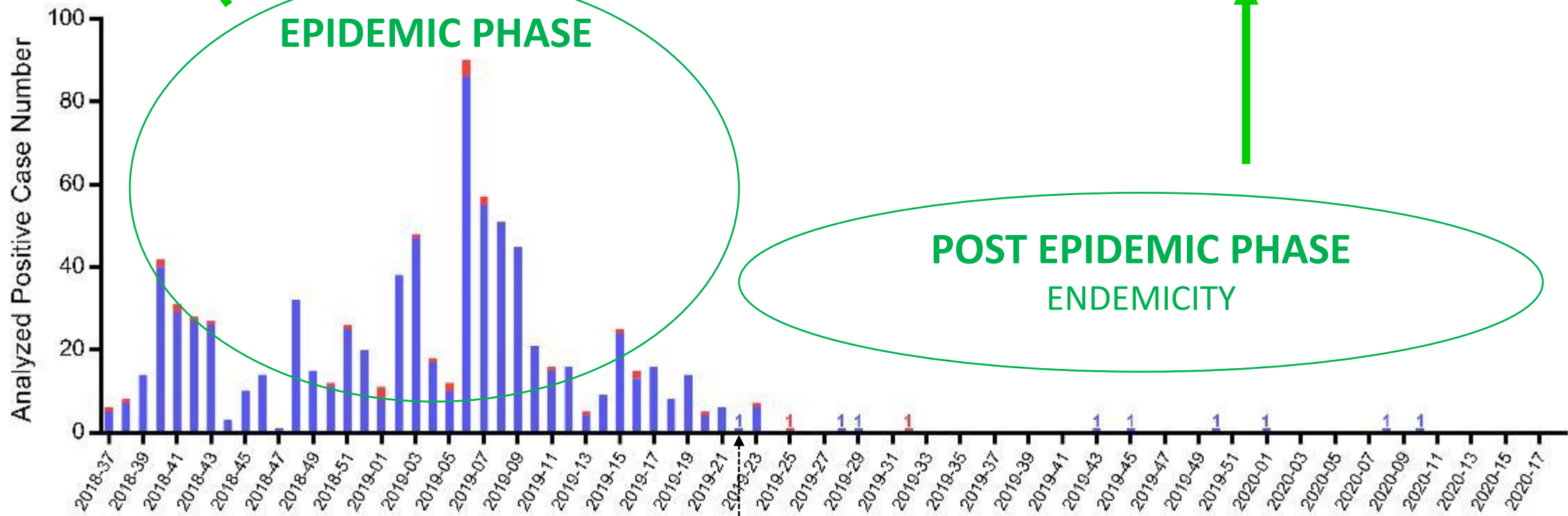
Last bone ASFV +  
March 2020

# Adaptation of control measures to the epidemiological situation and the zone

ZONE II (infected zone)

Early in the epidemic : ban on destruction

Today : full destruction of the « last » WB to avoid endemic situation

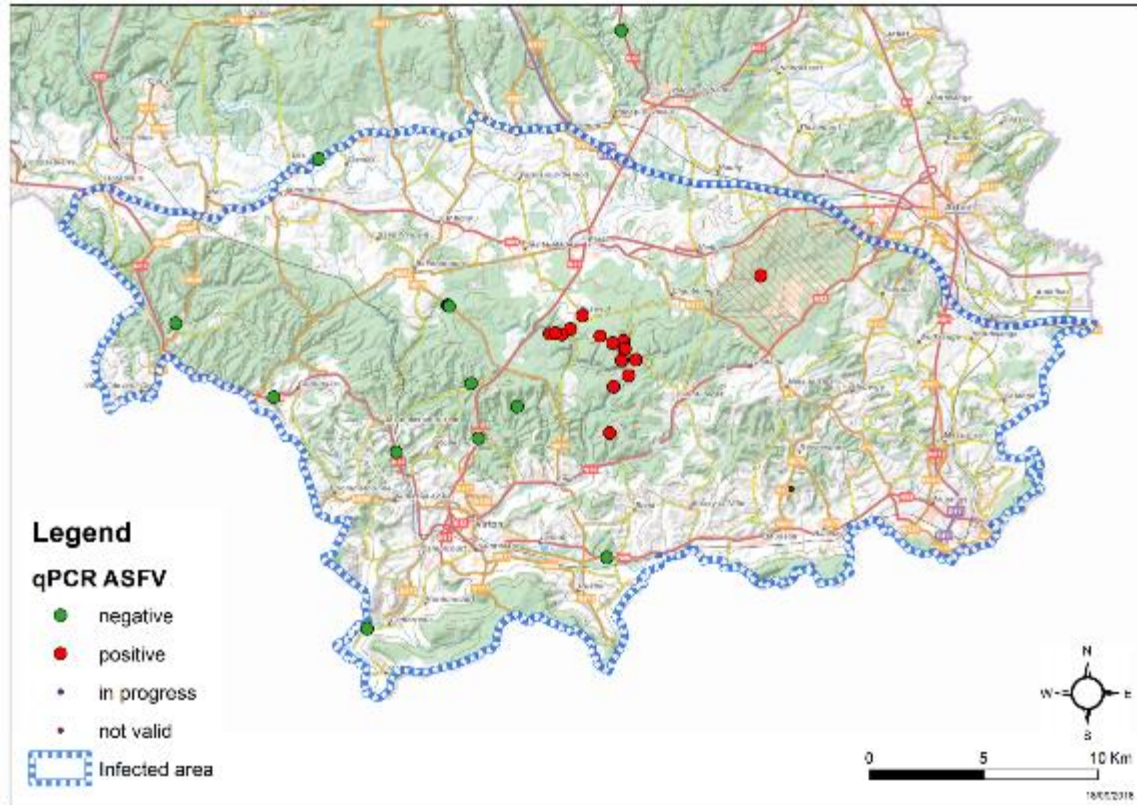


# Adaptation of control measures to the epidemiological situation and the zone

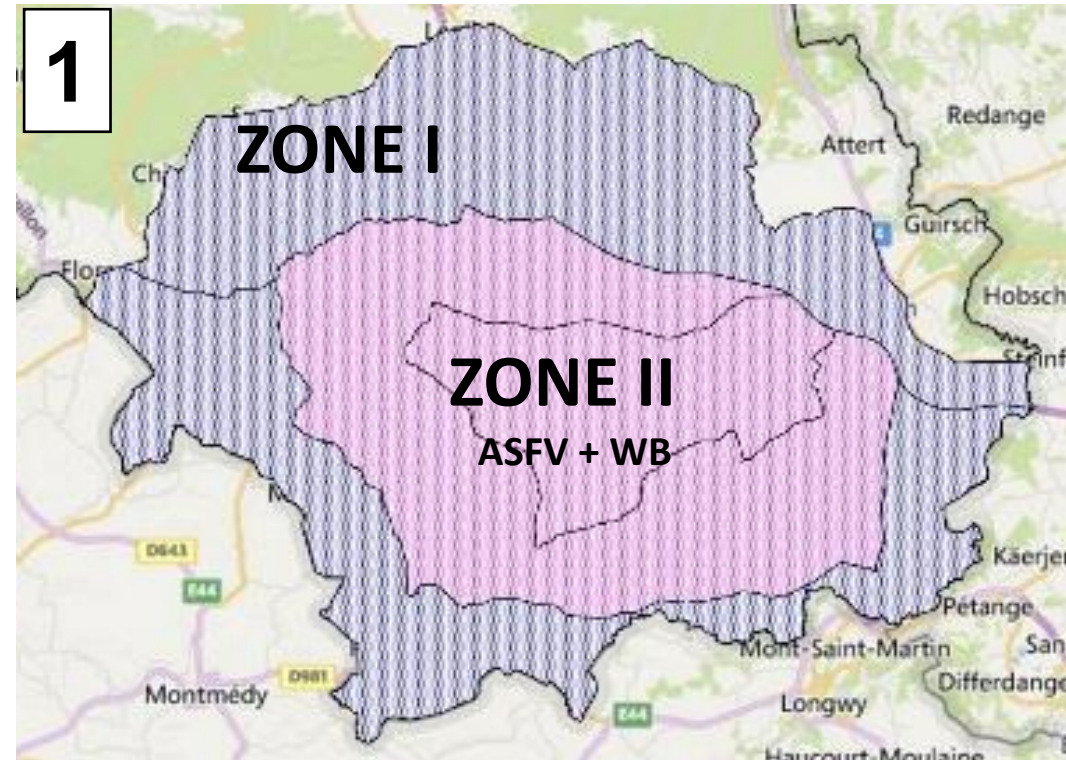
1. Zoning and restrictions
2. Carcass search and removal
3. Fencing
4. Depopulation
5. Analysis process



# 1. Adaptation of EU Zoning



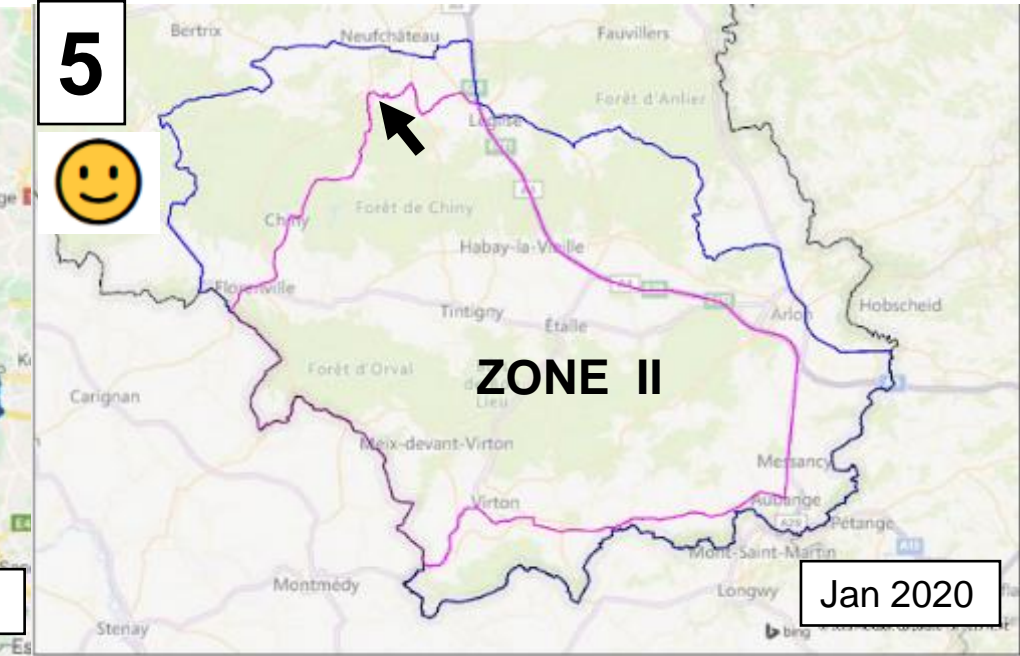
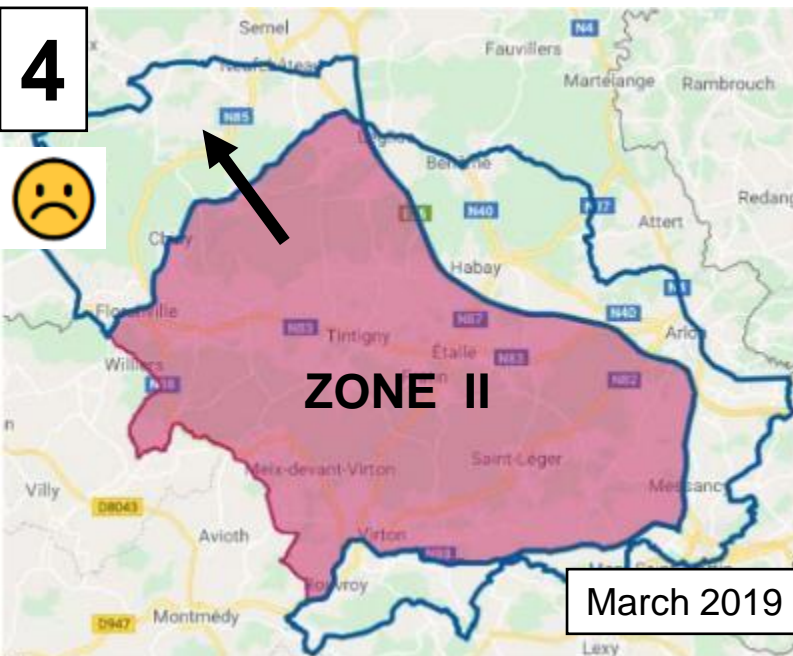
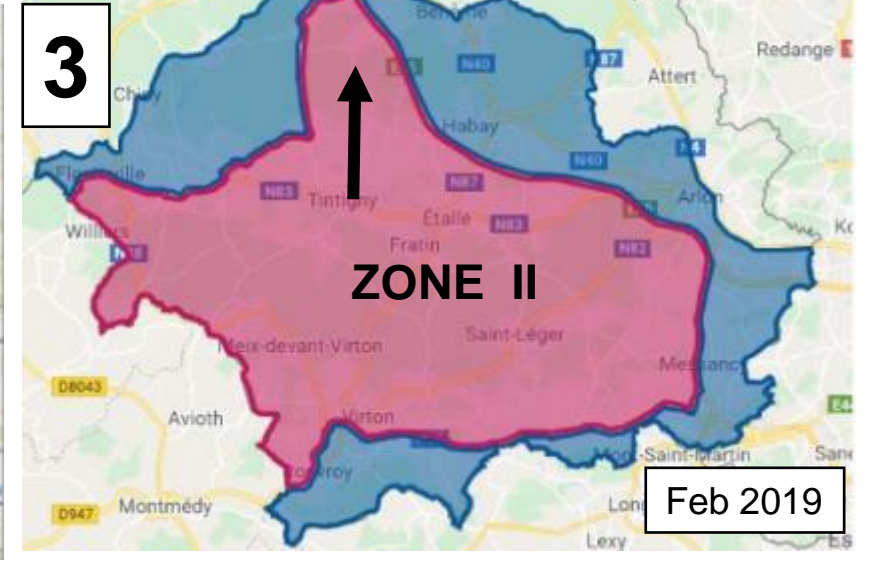
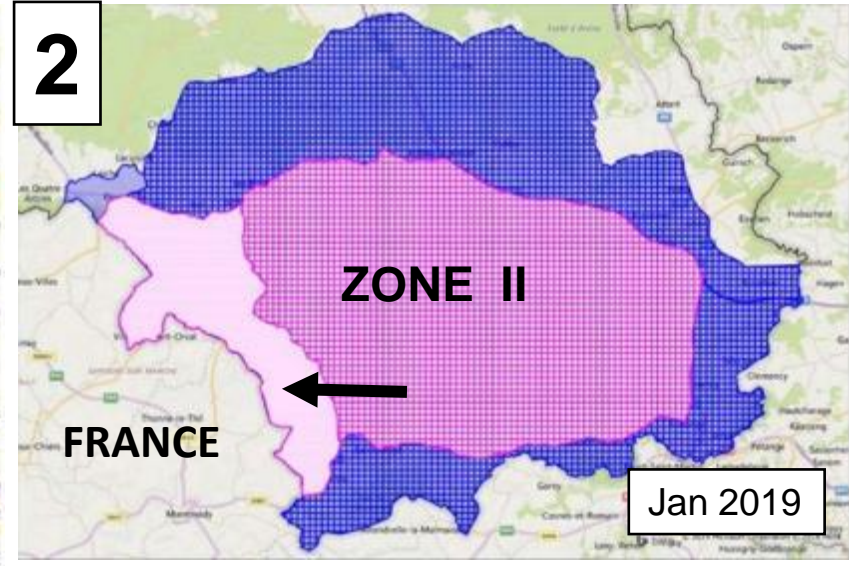
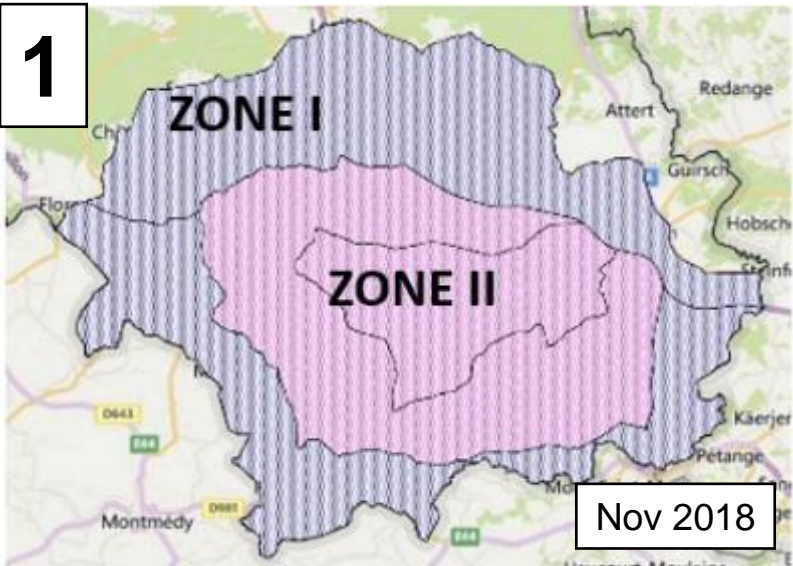
14 Sept 2018 :  
provisional infected zone (630 Km<sup>2</sup>)  
formalised by EU Decision 14/09/2018



23 Nov 2018 :  
European zoning : 2 regulated zones II & I  
Zones **adapted** ↔ new ASFV+ cases



# 1. Adaptation of EU Zoning < detection of new ASFV + cases



Jan 2020 :  
**TOTAL ZONES II + I ~ 1106 km<sup>2</sup>**

- Zone II ~ 662 km<sup>2</sup>
- Zone I nord + Sud ~ 444 km<sup>2</sup>



# 1. Restrictions

Oct 2018

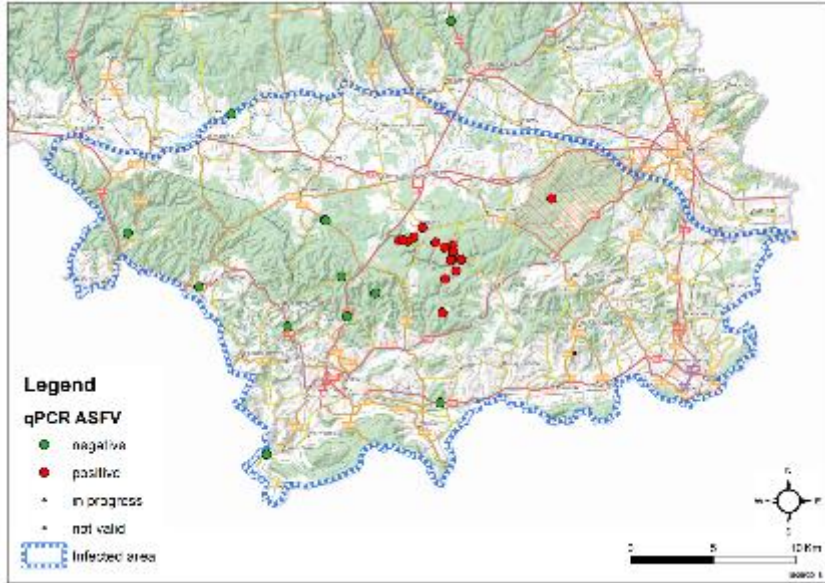
- Restrictions measures to respect **a complete standstill** in the provisional infected zone
- Objective : decrease the risk of spreading ASF virus
  - avoid disturbing wild boar (to let them die in peace)
  - avoid any passive virus dissemination
- Method : regional legislation adapted
  - ban on feeding\* and hunting
  - ban on circulation in the forest (for tourist and forestry activities\*)
- Only active search/removal/analysis of carcasses with biosecurity

April 2019

- Re opening of some safe zones for walkers

Oct 2019

- Total closing of the infected forest to allow complete depopulation



14 Sept 2018 :  
provisional infected zone (630 Km<sup>2</sup>)





## 2. Carcass search / removal : maintained since Sept 2018 and risk-oriented

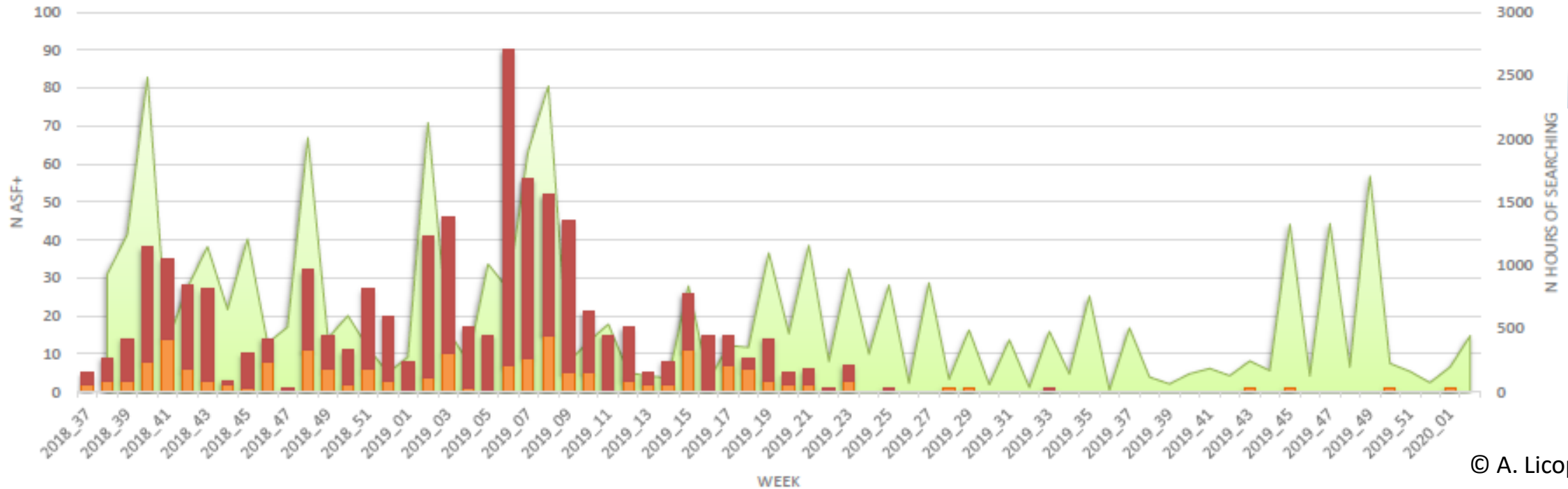


In infected zone, active search, removal and analysis of the carcasses :

- to decrease the viral load in the environment
- to delimit the real infected zone
- to follow the epidemic phase



# Weekly evolution of ASF+ and searching effort

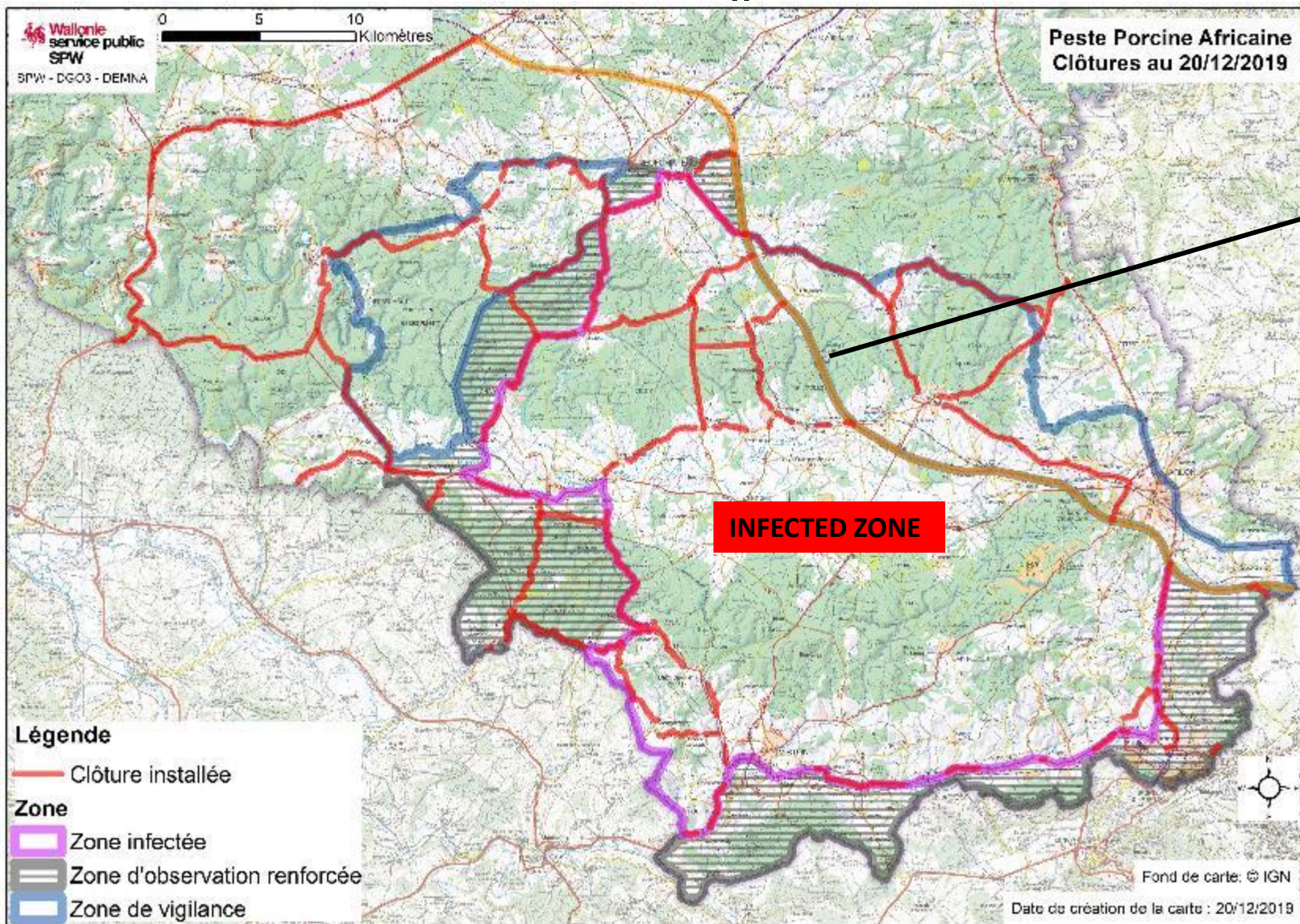


**Active search of carcasses ( ~ 40.000 hours of searching)** by the administration (DEMNA and DNF) + army  
 –Groups of 4 to 8 (10) people (compromise between efficiency and quiet) : in line on a very systematic way  
 –When dead WB discovered : GPS location, beaconing and call for removal (by Civil Protection)  
 –According to the landscape and vegetation : from 20 to 40 ha / day / pers  
 –Biosecurity procedures



### 3. Adaptation of Fencing

~ 300 Km - Network of concentric fences within and around the regulated zones II and I.



Belgian fences connected  
↔ France (120 Km)  
↔ GDLux (40 Km)



### 3. Adaptation of Fencing - Quick and risk-based construction



#### OBJECTIVES

- To slow down the progression of the disease
- To have « a fence-in-advance » on the disease
- To create corridors in which depopulation is facilitated

#### METHODS

- Unburied and hard wire mesh fences, 120 cm high
- use of repellents or barbed wire in some places
- Along national roads if possible
- Interrupted at the level of villages
- Barriers for private and logging roads
- Fences inspected / repaired daily or weekly

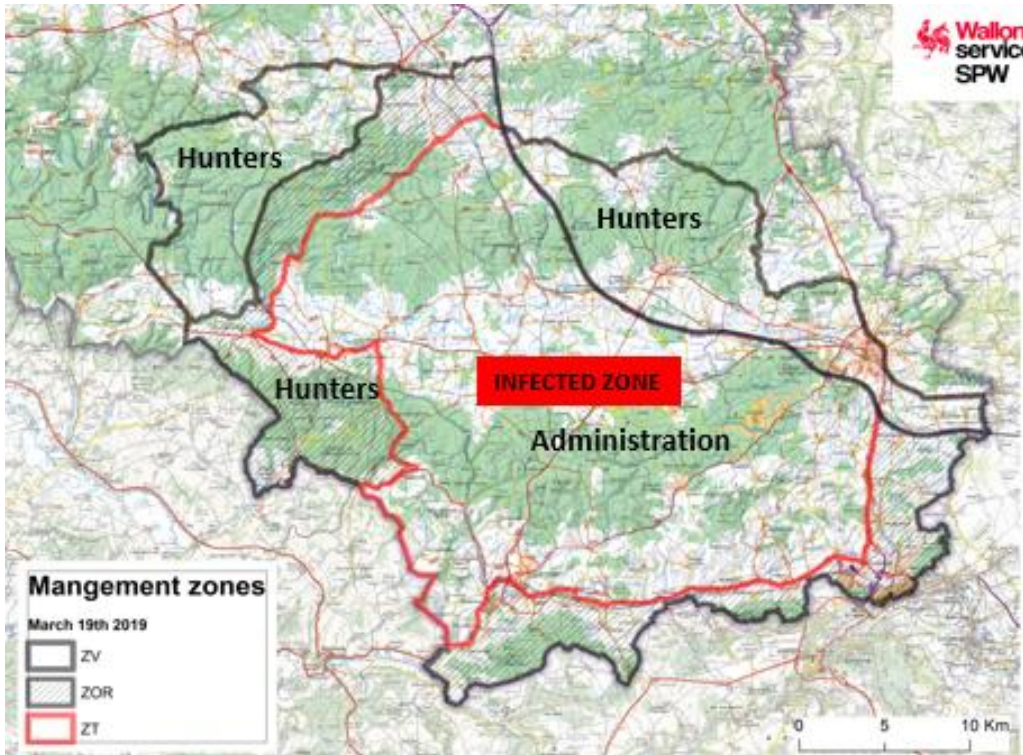
Efficiency of the fences especially in the south-west of the infected zone (see EFSA video).

<https://youtu.be/BcnM3iLur0I>





# 4. Depopulation



## OBJECTIVE

- Depopulation on EU Zones II & I (1106 km<sup>2</sup> including 517 forested km<sup>2</sup>)

## METHODS

- Combination of different tools : culling / trapping / night shooting / single hunting on baiting points / driven hunts with or without dogs
- Specific restrictions according to epidemiological situation and fences

## LEGAL FRAMEWORK

- Sept 2018 : ban on hunting and feeding in IZ
- Oct 2018 : first def of management zones
- Nov 2018 : creation of vigilance zone (culling)
- Feb 2019 : depopulation in vigilance zone (culling)
- June 2019: full depopulation il all zones

## 4. Depopulation - Combination of different tools



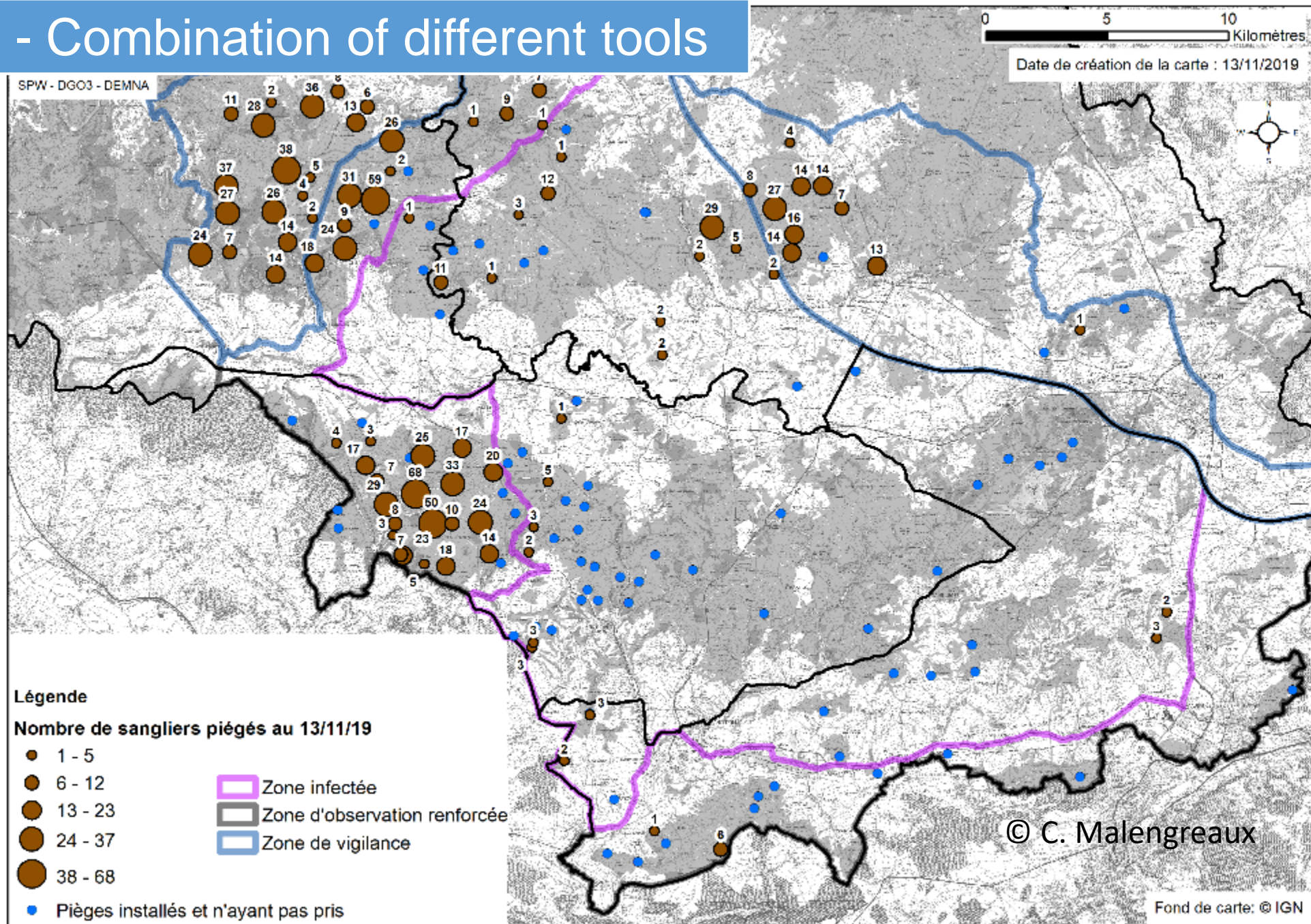
### Night shots

- carried out by the regional authorities
- Up to now > 500 night shots in zones II et I (27/04/2020)
- Strategic tool in post-epidemic phase in infected zone



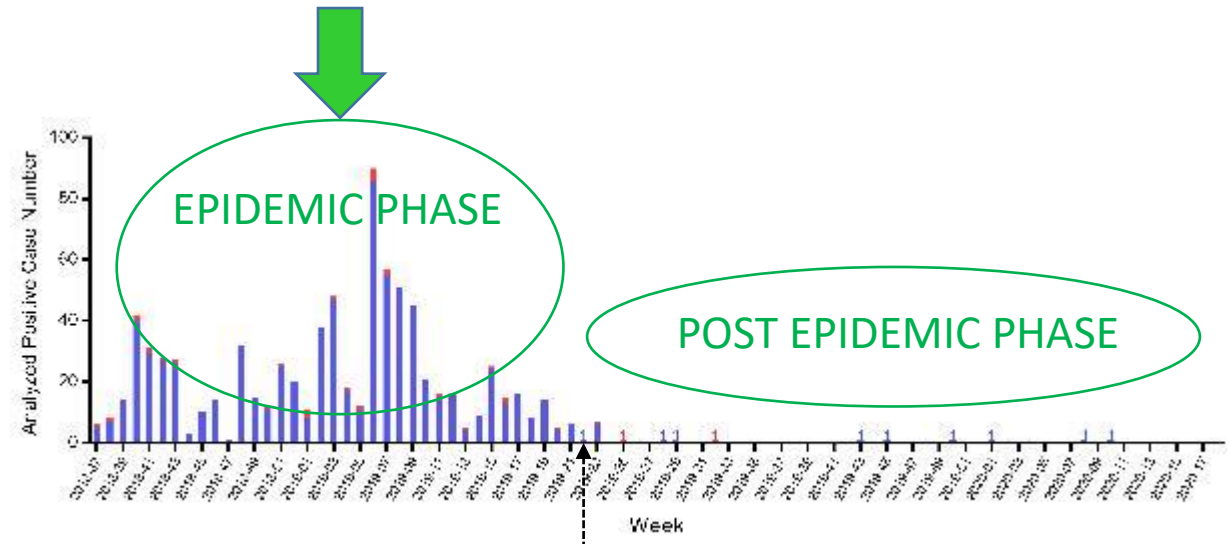
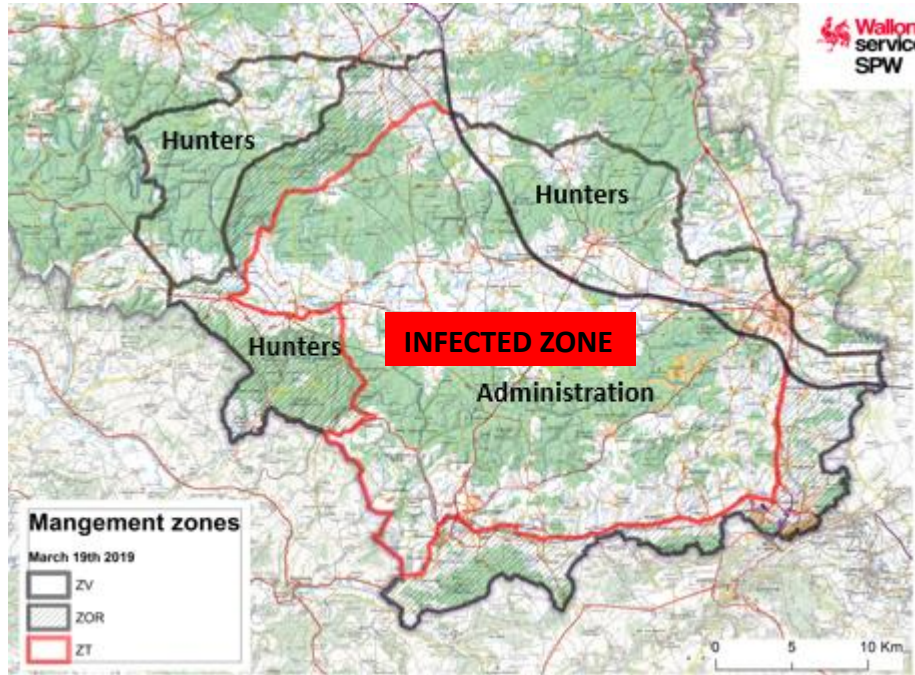
# 4. Depopulation - Combination of different tools

Trap network (160)  
1229 trapped WB  
(27/04/2020)





# 4. Depopulation - strategy adapted to epidemiological situation



## EPIDEMIC PHASE - Sept 2018 → April 2019

### Infected zone (zone II)

Sept → Dec 2018 - **total ban on hunting**

Jan 2019 → - first night shots outside the forest (but inside ASF fences) + trapping

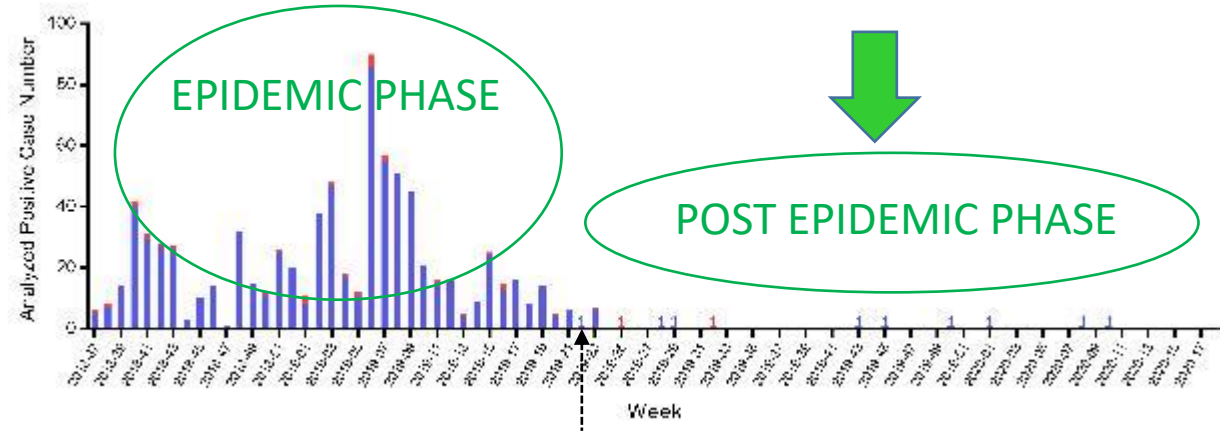
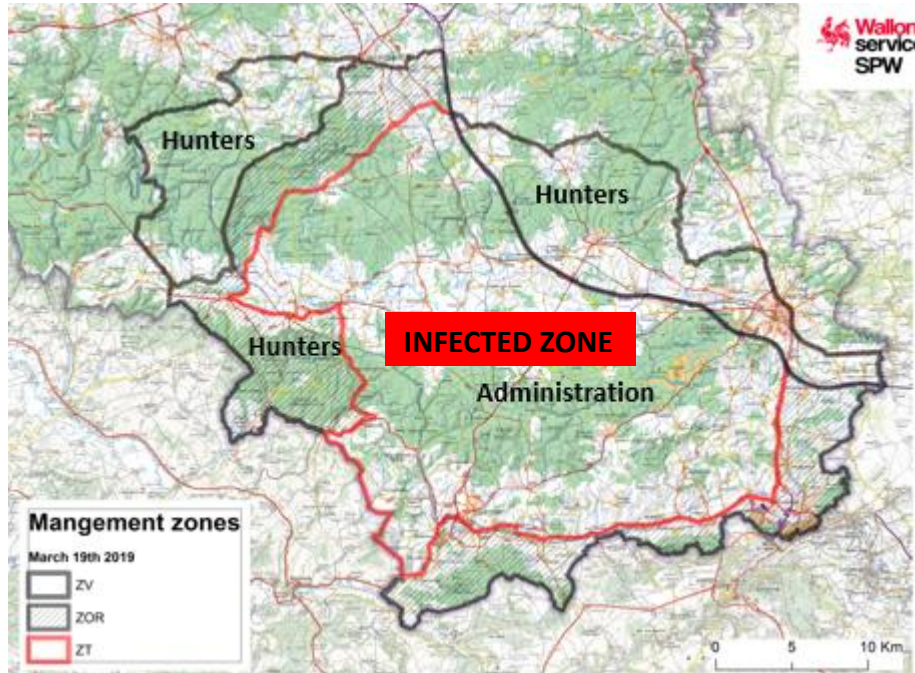
### Non infected zone (zone I)

Nov to Dec 2018 : - driven hunts with/without dogs + first trapping

Jan 2019 → - mandatory driven hunts and trapping



# 4. Depopulation - strategy according to epidemiological situation



## POST EPIDEMIC PHASE - May 2019 → March 2020

### Infected zone (zone II) destruction of the « last » WB

May → Dec 2019 - night shots in all zone II

Jan → March 2020 - night shots stepped up

### Non infected zone (zone I)

May → Sept 2019 - intensive trapping, night shots

Oct → Dec 2019 - driven hunts with dogs

Jan → March 2020 - night shots stepped up and trapping

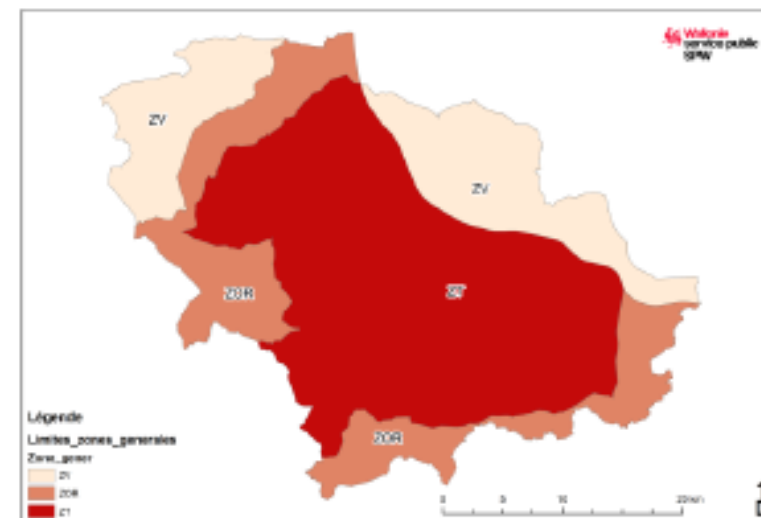
# Depopulation results per Zone

	Before		Outbreak			After birth peak		
	2017-2018		2018-March 31, 2019			April 1, 2019 – Jan 13, 2020		
Zone	Dead WB	Dead/ km <sup>2</sup> forest	Dead WB	Dead/ km <sup>2</sup> forest	2017%	Dead WB	Dead/ km <sup>2</sup> forest	2017%
ZI	754	2,8	1505	5,6	200%	485	1,80	64%
ZOR	535	4,6	850	7,3	159%	940	8,0	176%
ZV	507	3,9	947	7,3	187%	1263	9,7	249%

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## Comparison before/after the outbreak :

- 200 % of increase in the infected zone ← found dead WB
- 159 % and 187 % in ZOR and ZV ← depopulation measures





## 5. Analysis process



**3 collection centres** (1 in Zone II and 2 in Zone I)  
the principal in Zone II (Virton)

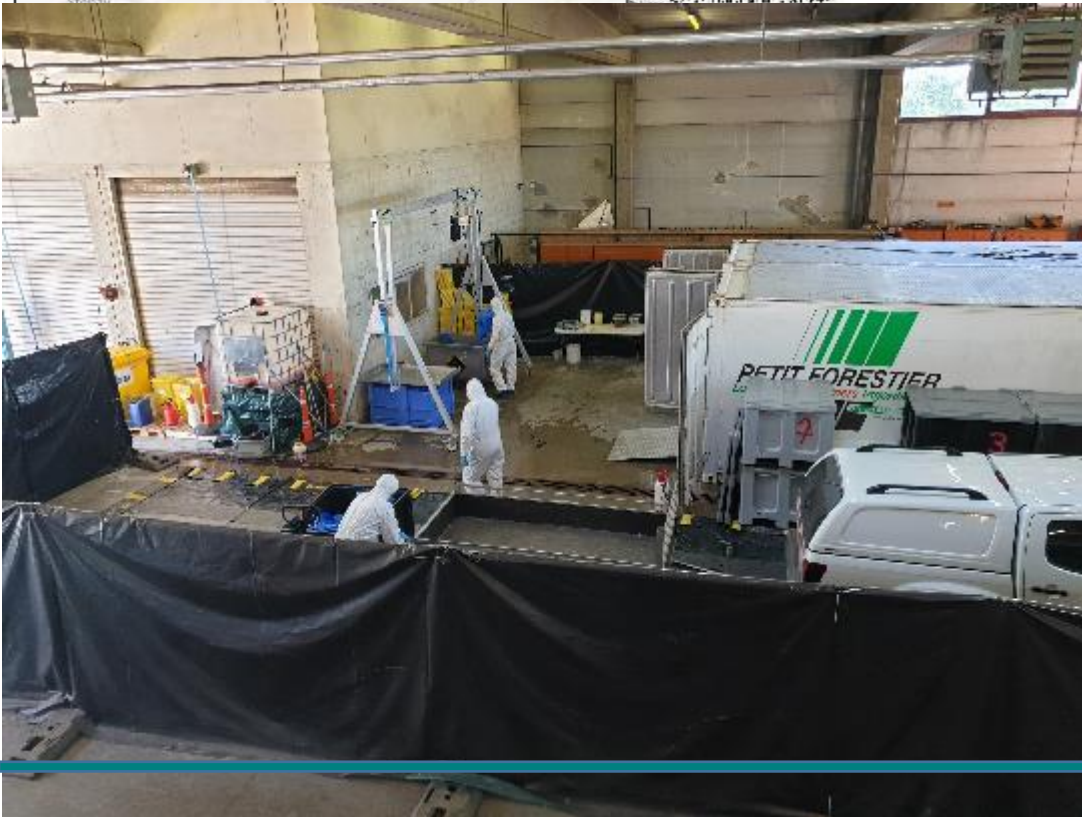
### Zones II & I

Found dead/road killed/killed for sanitary reasons  
Culled/trapped/night shot  
**100 % ASFV tested, 100 % to the rendering plant**

### Zone I

Hunted WB  
20 % ASFV tested, 100 % to the rendering plant

Control strategies and adaptations are based on virological results (qPCR ASFV from NRL)





# BIOSECURITY maintained for all activities with a decreasing gradient from zone II to zone I



### Chasseurs - Règles de biosécurité pour la prise en charge d'un sanglier détruit en zone infectée - Plan de lutte PPA - Responsabilité A. Linden 00 32 478 206590

◆ **Objectif** : diminuer les risques de dissémination du virus PPA si un sanglier détruit est infecté



◆ **Matériel** (fourni par l'Administration et disponible au centre de collecte de Virton, sur RDV)

- brassards\* - carnet - bio
- salopettes\* et gants\* jetables, une paire de bottes
- bâches\* (3 X 4 ou 5 m) et sacs\* (marocains et bâtes rousses), **poissons** et ruban adhésif
- pulvérisateur\* contenant un virucide agréé (VIRKON\*)
- gel hydro-alcoolique\* (éthanol 70%) pour les mains
- bûche\* d'eau savonneuse et brosse dure pour nettoyer les bottes
- sacs poubelle (30 L) avec lien de fermeture pour les déchets de classe B2 (salopettes et gants)

◆ **Procédure** : sanglier emballé obligatoirement entier, tête comprise


**(1) Emballage du sanglier entier sur le lieu de tir et pose du brassard**

- noter dans carnet : date / **coordonnées XY** / lieu-dit / **n°poste/piège** / **n°brassard** / âge / sexe
- **souiller** pour procéder à l'emballage : salopette jetable, bottes, 2 paires de gants
- **déposer** la bâche à côté du sanglier (la long de la ligne du dos)
- **saisir** les pattes et faire basculer l'animal sur la bâche
- **lever** la première paire de gants souillés (le jeter dans la bâche)
- **continuer** l'emballage sans toucher la carcasse puis fermer la bâche (2 **cotures** + ruban adhésif)
- **fixer** le brassard de traçabilité au **poisson** et transporter le colis à côté du véhicule
- **désinfecter** la bâche (pulvériser dos au vent)
- **désinfecter** le colis désinfecté dans le véhicule ou le remorque

**(2) Désinfection sur site**

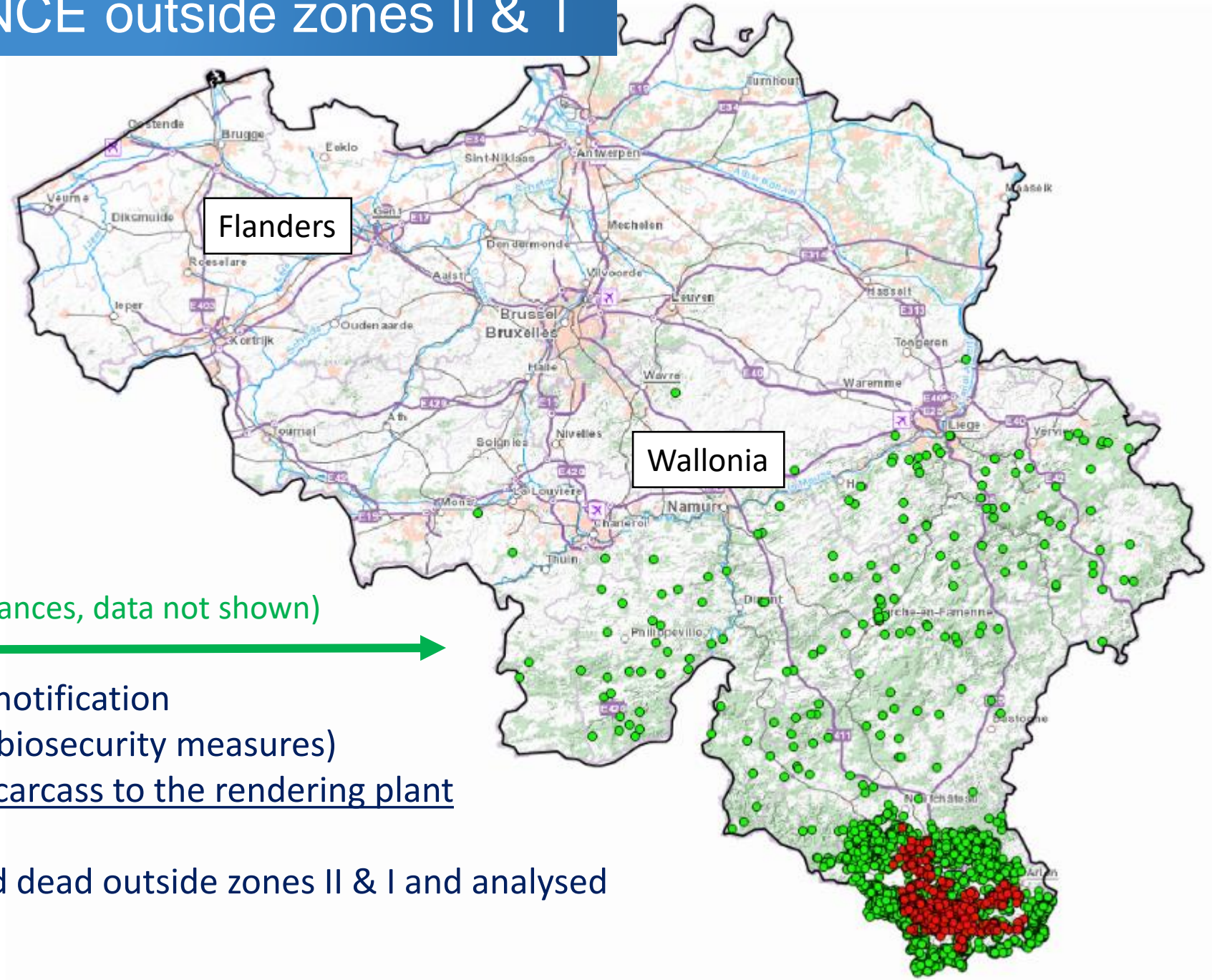
- **désinfecter** l'emplacement de la carcasse (pulvériser dos au vent)
- **élargir** la zone de désinfection (30 cm autour de l'emplacement initial)
- **insister** sur les supports proches (branchages) souillés par du sang/sasus/os

Voir verso

 Incentives (50 or 100 € per WB depending on the zone) for approved hunters who have received specific training on biosecurity procedures If they pack and transport culled WB to the collection centre



# PASSIVE SURVEILLANCE outside zones II & I



## PASSIVE SURVEILLANCE

in Flanders (active and passive surveillances, data not shown)

In Wallonia (passive surveillance)

regional Hot line (1718) for carcass notification

team of 15 vets and forest rangers (biosecurity measures)

Samples to the Ref Lab and packed carcass to the rendering plant

Results→ wildboar database

Up to now (27/04/2020) : 271 found dead outside zones II & I and analysed

all ASFV negative

## ASF-WB : control measures during Covid19 crisis

Control measures are maintained but the rate of field activities has slightly decreased due to the stay-at-home rules and restrictions for grouping. In field conditions, teams are respecting the rules of physical distancing and good hygiene practices

**Active search and removal of carcasses** : activities are maintained in zone II, with respect of classical measures: physical distancing, procedures of biosecurity, no changes in the teams, one agent per car to reach the search zone, no grouping and no physical meeting

**Night shot** : the frequency of patrols has not really decreased, but there is only one forest ranger per vehicle which reduces the efficiency of night detection and shooting. Meanwhile, forest rangers are making greater use of the calls of cameratraps - GSM when they detect the presence of wild boar at baiting stations. Desinfection of the vehicle and equipment is respected.



# KEY POINTS

- **No cases in domestic pigs in Belgium**
- ASF-WB : up to now > 5100 WB ASFV qPCR analysed in Wallonia (27/04/2020)
- **833 ASFV positive cases : all from the infected zone (EU zone II ~ 662 km<sup>2</sup>)**
- Last fresh ASFV positive case (August 2019) and last ASFV positive bones (March 2020)
- Last positive bones discovered : post mortem interval estimated to several months, very low viral load
- Last active viral circulation estimated for September 2019
- Prevention (in pigs) and Control (in WB) strategies have so far proved effective in the medium term :
  - to maintain ASFV in WB and inside the infected zone
  - to prevent the introduction of ASFV into pig farms
- Control strategies in WB are a combination of tools adapted to the epidemiological situation and fences
- Active search/removal of carcasses (zone II) and depopulation (zones II & I) are maintained
- The authorities are keeping up the pressure to eradicate the disease and avoid an endemic situation
- Perspectives of eradication and free status recovery could be planned for autumn 2020

# *Thank you for your attention*

## *Annick Linden, on behalf of the team*

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Dpt of infectious and parasitic Diseases  
Faculty of Veterinary Medicine  
University of Liege, Belgium

*La présentation concernée émane des travaux conduits par les départements DEMNA et DNF du Service Public de Wallonie, le Réseau de Surveillance Sanitaire de la Faune Sauvage en Wallonie de ULiège, l'AFSCA, le Laboratoire national de référence pour la PPA, le Laboratoire d'Epidémiologie spatiale de l'ULB, la Protection Civile, les Ministres compétents et leurs équipes. Les acteurs principaux sont, par ordre alphabétique, S. Bairin, L. Baufay, N. Borboux, J-L. Boudart, B. Cay, V. Clavier, M. Cleda, F. Della Libera, S. Dellicour, D. Desmecht, V. Dewaele, M. Dispas, M. de Tillesse, V. Duran, D. Fraselle, M. Gilbert, G. Gilliaux, L. Gillot, M-J. Goffaux, M. Herman, J-F. Heymans, J. Hooyberghs, P. Houdart, S. Kalpers, C. Lesenfants, P. Leyens, A. Licoppe, J. Lievens, A. Linden, M. Logeot, C. Malengreaux, F. Naisse, J. Paternostre, X. Patigny, B. Quévy, J-P Rongvaux, J-P Scohy, X. Simons, E. Thiry, M. Tignon, A. van Goethem, M. Villers et J. Widar ainsi que les Directeurs, chefs de cantonnements et agents du DNF, les vétérinaires PPA et les équipes de la Protection Civile.*