

ASF - WB, current situation and management in Wallonia



Pr. A. Linden, delegate for the Belgian ASF crisis board



Federal Agency for the Safety
of the Food Chain



Service public de Wallonie **agriculture ressources naturelles environnement**



1. Brief history - before / after September 2018



2. Procedures in the field

3. Current situation

4. Control measures

5. Perspectives



1. BRIEF HISTORY - BEFORE SEPTEMBER 2018

Preparedness

- Meeting group of experts « wildlife » federal + regions : a meeting/year
- Communication platform « Plasur » : epidemiologic surveillance
- March 2018 : **National Taskforce ASF** : preventive measures, economic impact, ..
- Surveillance Network of Wildlife Disease - regional network since 2002

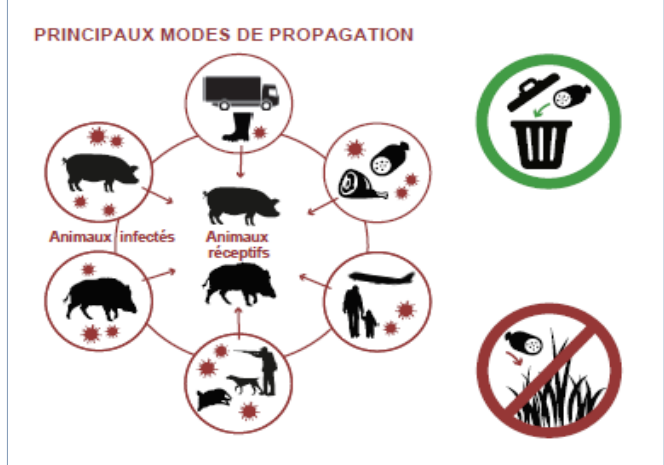
June 2018 : training to collect carcasses with biosecurity measures



BEFORE SEPTEMBER - PEACE TIME



Passive surveillance for early detection



Conferences/brochures/publications



Awareness of the rangers /hunters

2017 : 14 WB necropsied (12 months, 1,1/month)
2018 : 37 WB necropsied (8 months, 4,6/month))



CONTROL OF AFRICAN SWINE FEVER IN THE EU

The key role of forest rangers and hunters

relles environnement



1. BRIEF HISTORY - SEPTEMBER 2018

- 08/09** Huntress notified 3 dead WB close to each other (Buzenol area)
10/09 In the same area, forest rangers detected a dead adult WB + dying juvenile → **Vet Faculty**
11/09 n = 2 : necropsy + sample collection in the Vet Faculty
12/09 samples to the lab (NRL) : 2 viropositive (qPCR)

13/09

Brussels: crisis meeting (federal + region) : **first infected zone**

NRL : diagnostic confirmation (n=2)

Official notification : ADNS, OIE and press

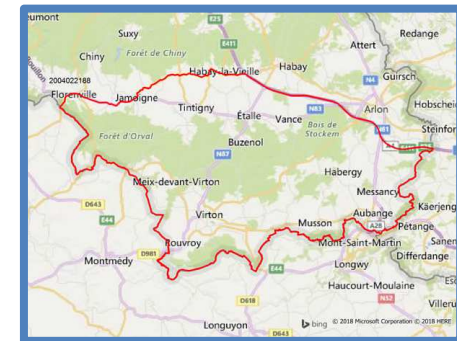
Vet Faculty : stop+closure+disinfection autopsy room

Surv Network: searching in the field for the 3 'first' wild boar

14/09

3 more WB viropositive (total first week n=5)

Arrival of ASF experts sent by the EU (Vittorio Guberti & Klaus Depner)





OUTBREAK ALERTS

Summer 2018: African swine fever virus hits north-western Europe

Annick Linden, Alain Licoppe, Rosario Volpe, Julien Paternostre, Christophe Lesenfants, Dominique Cassart, Mutien Garigliany, Marylène Tignon, Thierry van den Berg, Daniel Desmecht , Ann B. Cay, ... [See fewer authors](#) 

First published: 01 November 2018 | <https://doi.org/10.1111/tbed.13047>

 Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People™

EMERGING INFECTIOUS DISEASES®

[Emerg Infect Dis.](#) 2019 Jan 17;25(1). doi: 10.3201/eid2501.181535. [Epub ahead of print]

Phylogeographic Analysis of African Swine Fever Virus, Western Europe, 2018.

[Garigliany M](#), [Desmecht D](#), [Tignon M](#), [Cassart D](#), [Lesenfant C](#), [Paternostre J](#), [Volpe R](#), [Cay AB](#), [van den Berg T](#), [Linden A](#).



1. BRIEF HISTORY - SEPTEMBER 2018

Origin of the outbreak ?

- *Judicial investigation ongoing*
- Focal introduction of ASFV in WB populations *far away from the infected areas*
- Accidental introduction associated to :
 - live/infected wild boars
 - contaminated meat : trucks, forest workers
 - contaminated items (shoes, cars, etc.) : ...hunters or tourists
- Introduction intentional/malicious ??



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2. PROCEDURES IN THE FIELD



Active research and removal of carcasses





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nnement





© S. Bairin





Collect Center - Virton



environnement



Virton :
unloading at the
collect center and
disinfection of the
trailer and
containers by the
Civil Protection



Virton :
Sampling of spleen
(or targeted
organs) and swabs
by the team of vets
from ULiège





© A. Linden

Surveillance passive - Peste porcine africaine 2019
Sangliers trouvés morts
Zone infectée

Etat de Prélevement: 25/02/19

Numéro de BRACELET: 103 906 Sexe: ♂ Pathogénicité (révisable):
 RÉFÉRENCE URGE: PA-1619 Gestante: O/N Etat 77 de sang / Eau /
 Taille Pratin: X2 Amputés: (Sanglier) /

DATE DE DÉCOUVERTE: 23/02/2019 GENRE: Mâle Femelle Non déterminable

CIRCONSTANCES DE DÉCOUVERTE: (trouvé mort) / Sur Sanglier / AGE ESTIMÉ: Marcassin Bête moussu Bête de compagnie Adulte Non déterminable

SÉRIÉ DE DÉCOUVERTE: CARCASSE: Intacte Démembrée

LOCALITÉ / CHEF-LIEU: Rachecourt ODEUR CARCASSE: Absente Légère Fort

COMMUNE: Rachecourt MEMBRES BAISSÉS: Non Oui Non Applicable

CANTONNEMENT DNF: Méaux TRACES MORSURES (CHANGEMENTS): Oui Non Non Applicable

TRIAGE DNF: 1034160 S. Parvelli ASTICOTES: Absentes Infestation locale Infestation régionale Infestation générale

COORDONNÉES GPS: 49,603028
5,210554

Catégorie: Tout (carcasse en dehors des phases de chargement): Cal 1 Cal 2 Cal 3 Cal 4

NOM DÉCOUVERTEUR: Benoit ANNAIS NOF JORDON

NOM AGENT DNF (si différent):
 NOM "RECOUVERTEUR": idea
 LETYENNAIRE PRÉLÉVATEUR: Christophe

REMARKS: Note typographique

Analysis - NRL



Sciensano Animal Health
M. Tignon, B. Cay, T. van den Berg

REF ULiege
Age category
Sex
Discovery & sampling date
Found in infected (IA) or noninfected (NIA) area
Place of discovery
Village
ZIP
Forest district
X Longitude
Y Latitude
Context of discovery
Postmortem decay
Samples
Contact (DNF)
qPCR beta-actin Result (Sciensano)
qPCR ASFV Result (Sciensano)
REF ScienSano
Date Confirmation
REF Notification

WILD BOAR SAMPLING													
REF ULiege	Tracability	Age category	Sex	Discovery date	Sampling date	Found in infected (IA) or noninfected (NIA) area	Place of discovery	PD	Village	ZIP	Forest district	X Longitude	Y Latitude
A18-2556		BR	F	10/09/2018	11/09/2018	IA	Buzenol (Bois d'Etalle)	Bu	Etalle	6743	Arlon	5,623528	49,63
A18-2557		BC	F	10/09/2018	11/09/2018	IA	Buzenol (Bois de Buzenol)	Bu	Etalle	6743	Arlon	5,609321	49,63
A19-008		BR	nd	13/09/2018	13/09/2018	IA	Buzenol (Bois d'Etalle)	Bu	Etalle	6743	Arlon	5,623323	49,63
A19-009		BR	nd	13/09/2018	13/09/2018	IA	Buzenol (Bois d'Etalle)	Bu	Etalle	6743	Arlon	5,624222	49,63
A19-010		BR	nd	13/09/2018	13/09/2018	IA	Buzenol (Bois d'Etalle)	Bu	Etalle	6743	Arlon	5,621932	49,62
A19-011		BR	nd	16/09/2018	16/09/2018	IA	Buzenol (Bois d'Etalle)	Bu	Etalle	6743	Arlon	5,616684	49,63
A19-012		BR	F	16/09/2018	16/09/2018	IA	Arboretum de Virton (N87)	Ar	Virton	6760	Virton	5,535056	49,59
A19-013		Mar	F	16/09/2018	16/09/2018	IA	Bellefontaine (N879, Bois des Minières)	Be	Tintigny	6730	Virton	5,517781	49,65
A19-014		Mar	F	16/09/2018	16/09/2018	IA	Bellefontaine (N879, Bois des Minières)	Be	Tintigny	6730	Virton	5,518259	49,64



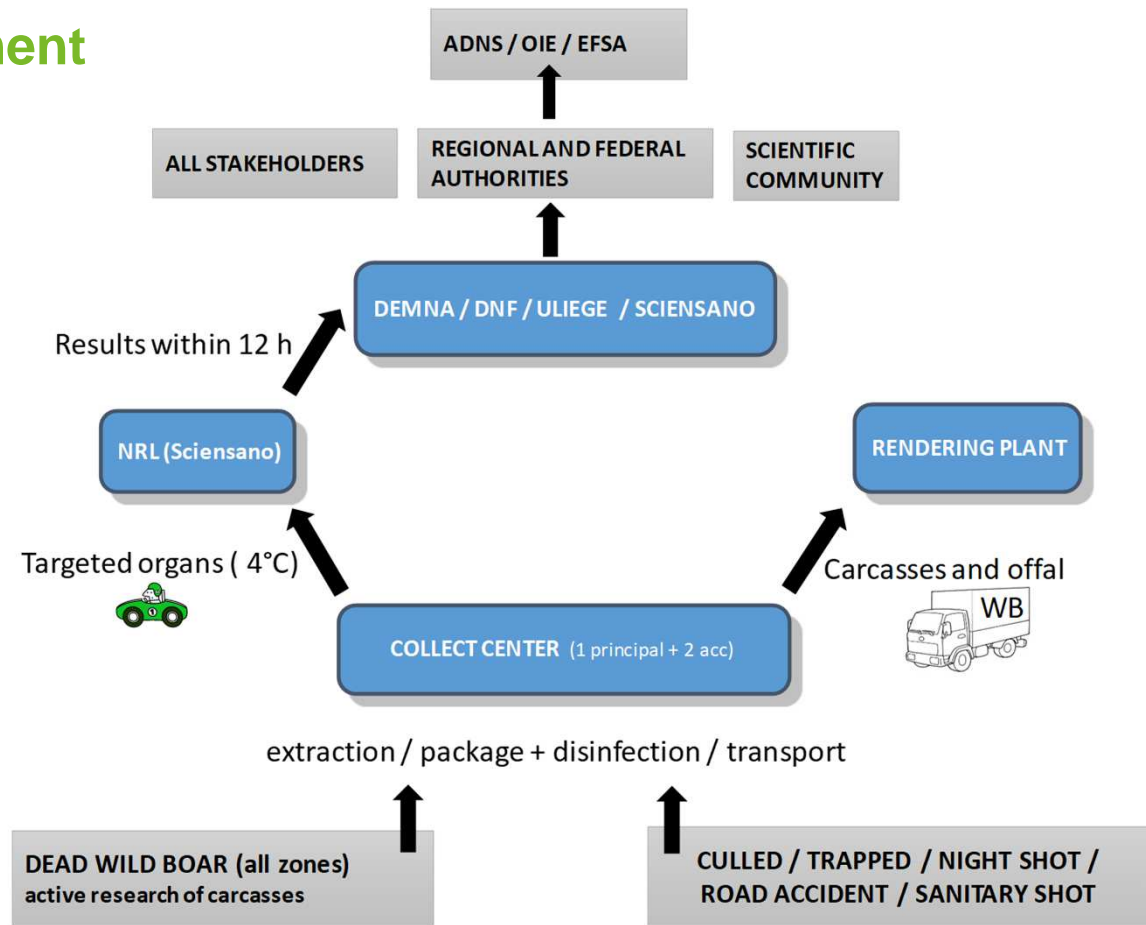
Virton :
collect of carcasses
and offals by a
specific truck of the
rendering plant




© A. Linden



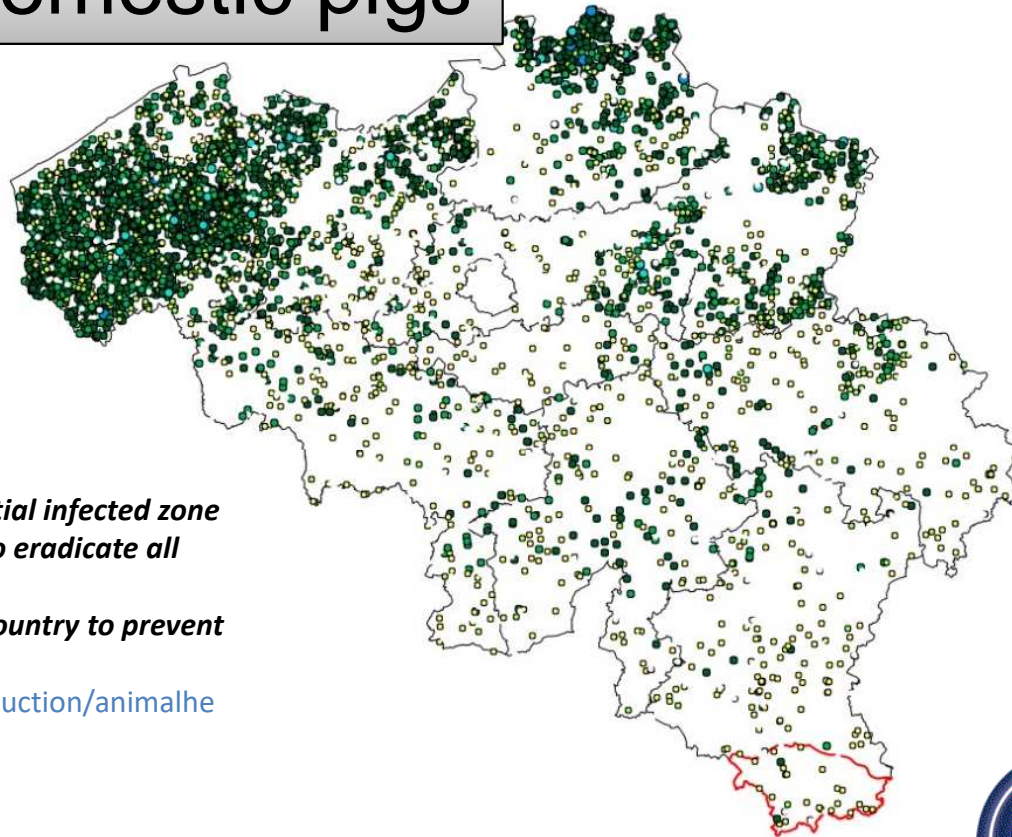
Carcass management and ASF Analysis process



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No outbreaks in domestic pigs



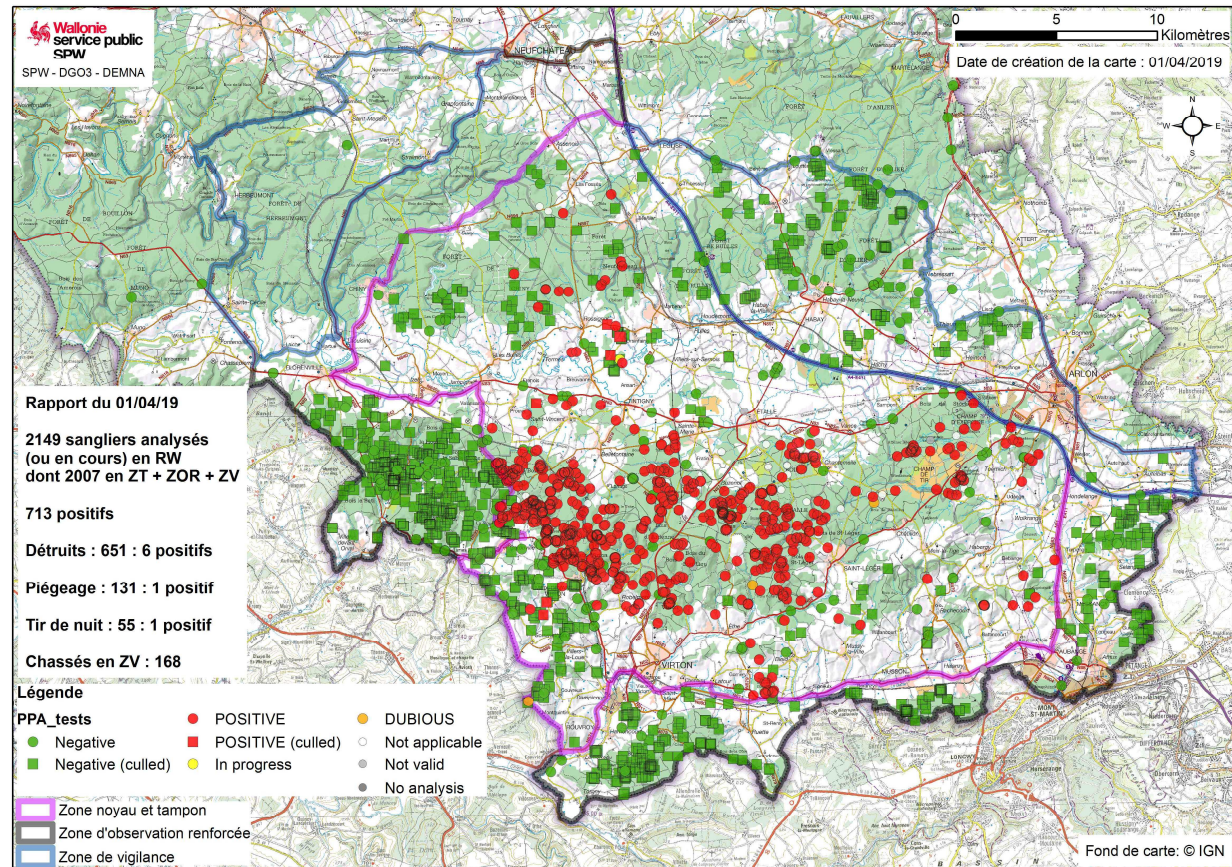
***There are no outbreaks in domestic swine.
No domestic and captive swine remain in the initial infected zone
(decision of the Federal minister of Agriculture to eradicate all
domestic swine by 2 October 2018).
Strict measures have been taken for the whole country to prevent
contamination of domestic swine.***

<http://www.afsca.be/businesssectors/animalproduction/animalhealth/africanswinefever/#news>



3. CURRENT SITUATION

ASF - WB (01/04/2019)



Service public de Wallonie agriculture ressources naturelles environnement



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5. Perspectives



4. CONTROL MEASURES

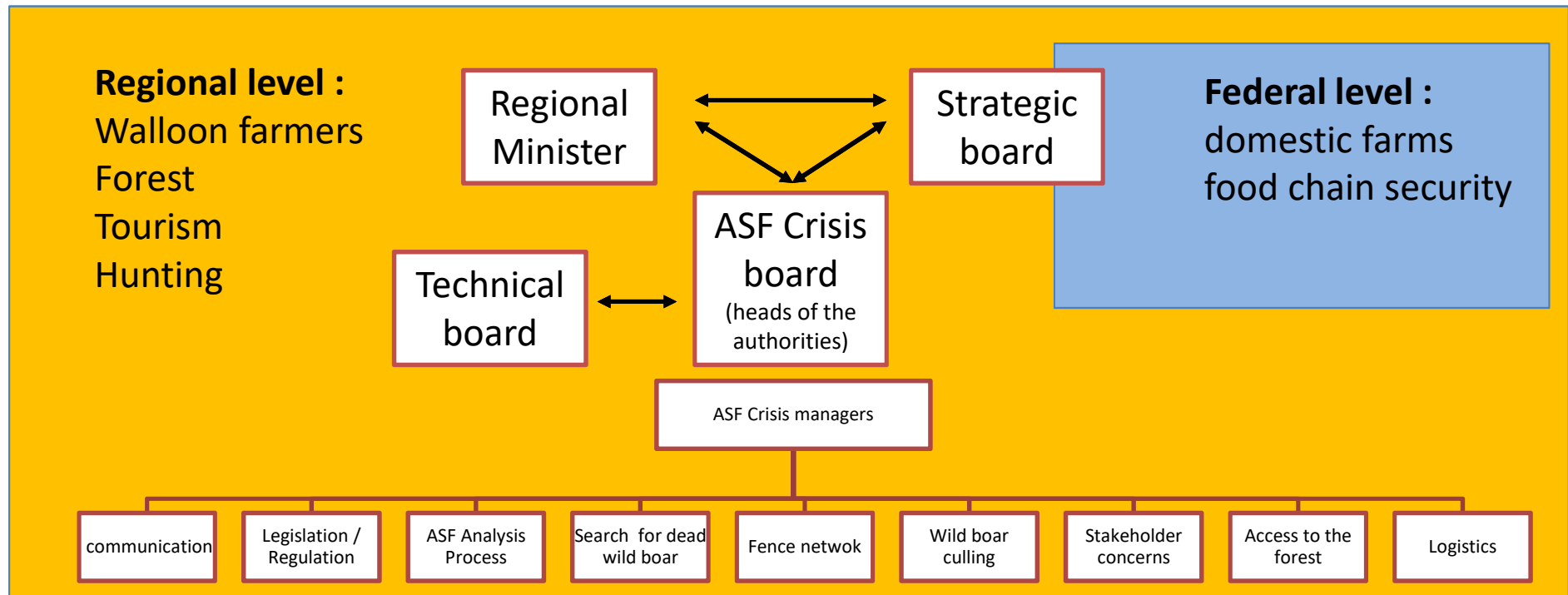
MAIN GOAL → Eradication of the disease

SHORT TERM

- Prevent introduction of the disease into belgian pig farms
- Prevent spread of the disease among wild boars population



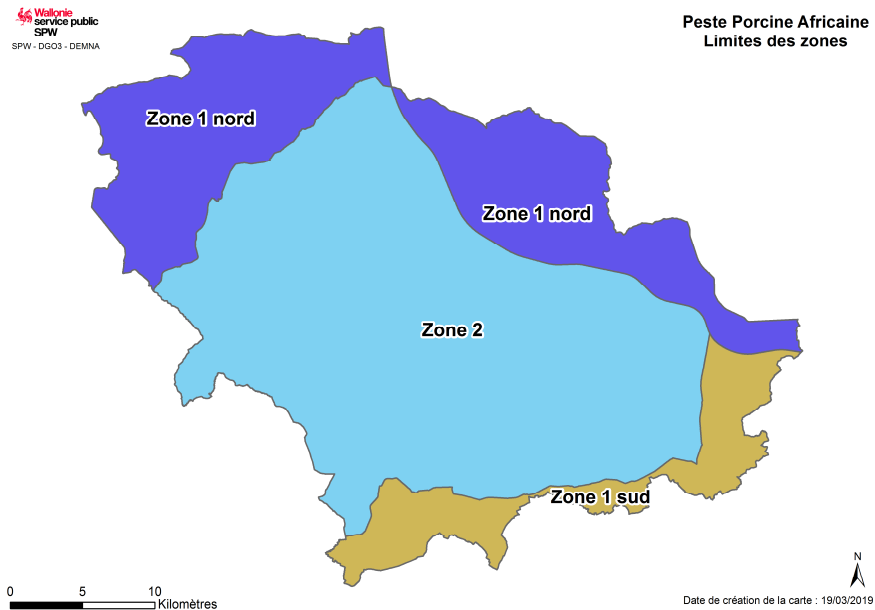
ASF-WB Management organization



EU zones (19/03/2019)

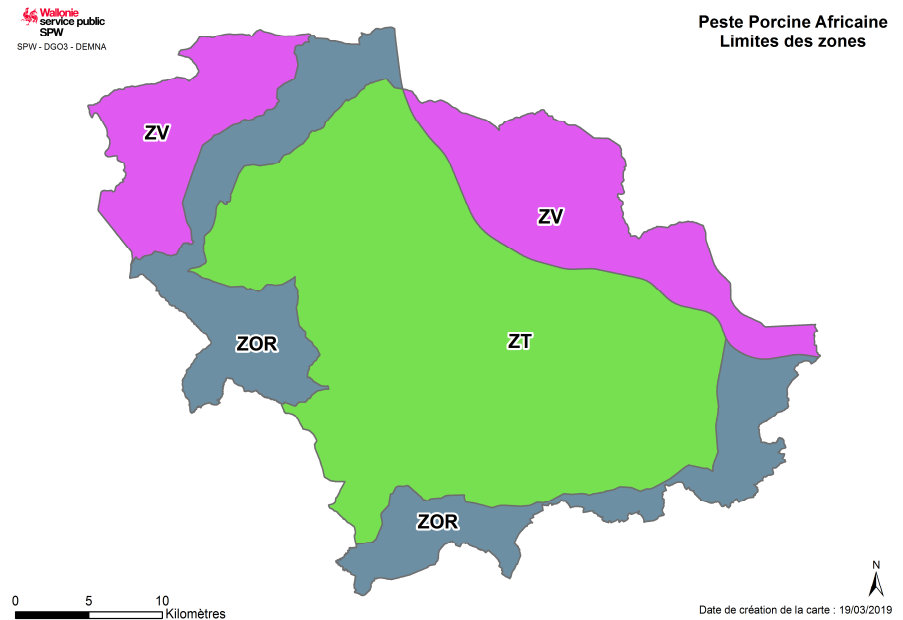


EU zones (19/03/2019)



Zone 2 = 662,90 km²
Zone 1 nord = 335,68 km²
Zone 1 sud = 108,04 km²

national operational zones (19/03/2019)



ZT : kernel + buffer zone
ZOR : reinforced observation zone
ZV : vigilance zone

© C. Malengreaux

4. CONTROL MEASURES

1. active search and removal of the carcasses
2. fence network
3. depopulation



In infected zone, active search and removal of the carcasses is a priority to decrease the viral load in the environment

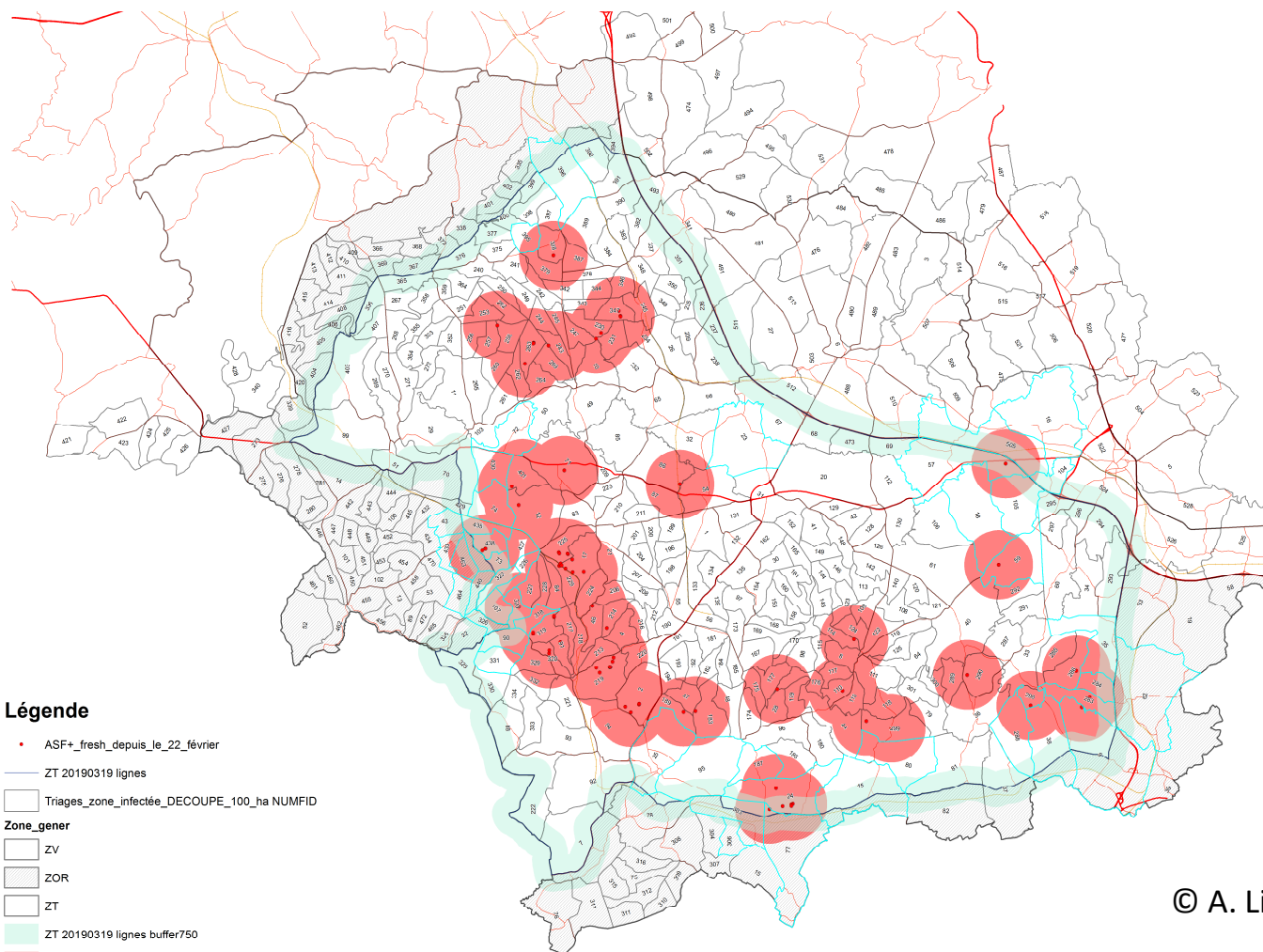


Till Feb 19th 2019
• 20.000 hours of active search
• 2.717 working days
• 124 working days / week

active search and removal of the carcasses

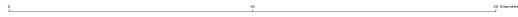
- Prioritization in the selection of the searching areas
 - Delineation of 100 ha forest sectors
 - focusses :
 - on the hot spots (1500 m around recent fresh or putrefied positive carcasses within de last 4 weeks)
 - on the external borders of the infected area (buffer)
 - on the most probable places where WB ASF+ die (Model)
 - takes advantage of the driven hunts in the ZOR or ZV





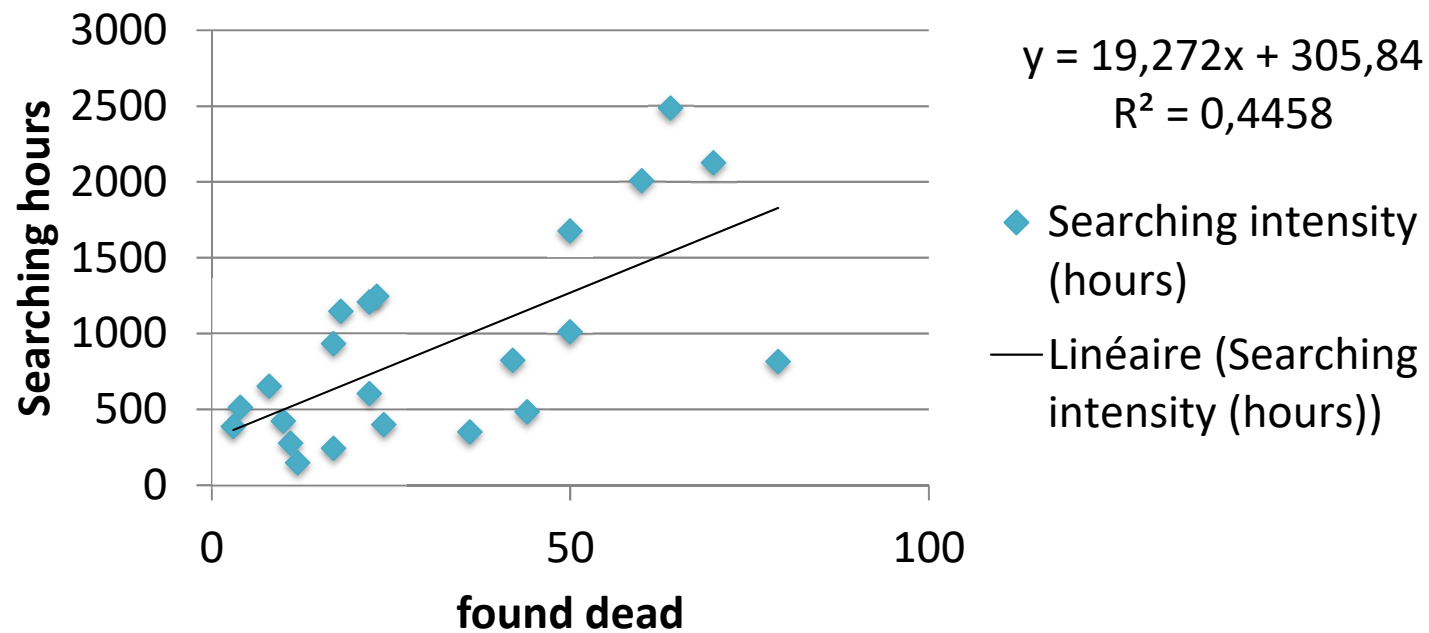
Légende

- ASF+_fresh_depuis_le_22_février
- ZT 20190319 lignes
- ▭ Triages_zone_infectée_DECOUPE_100_ha NUMFID
- Zone_gener**
- ▭ ZV
- ▨ ZOR
- ▭ ZT
- ▭ ZT 20190319 lignes buffer750
- ▭ buffer1500

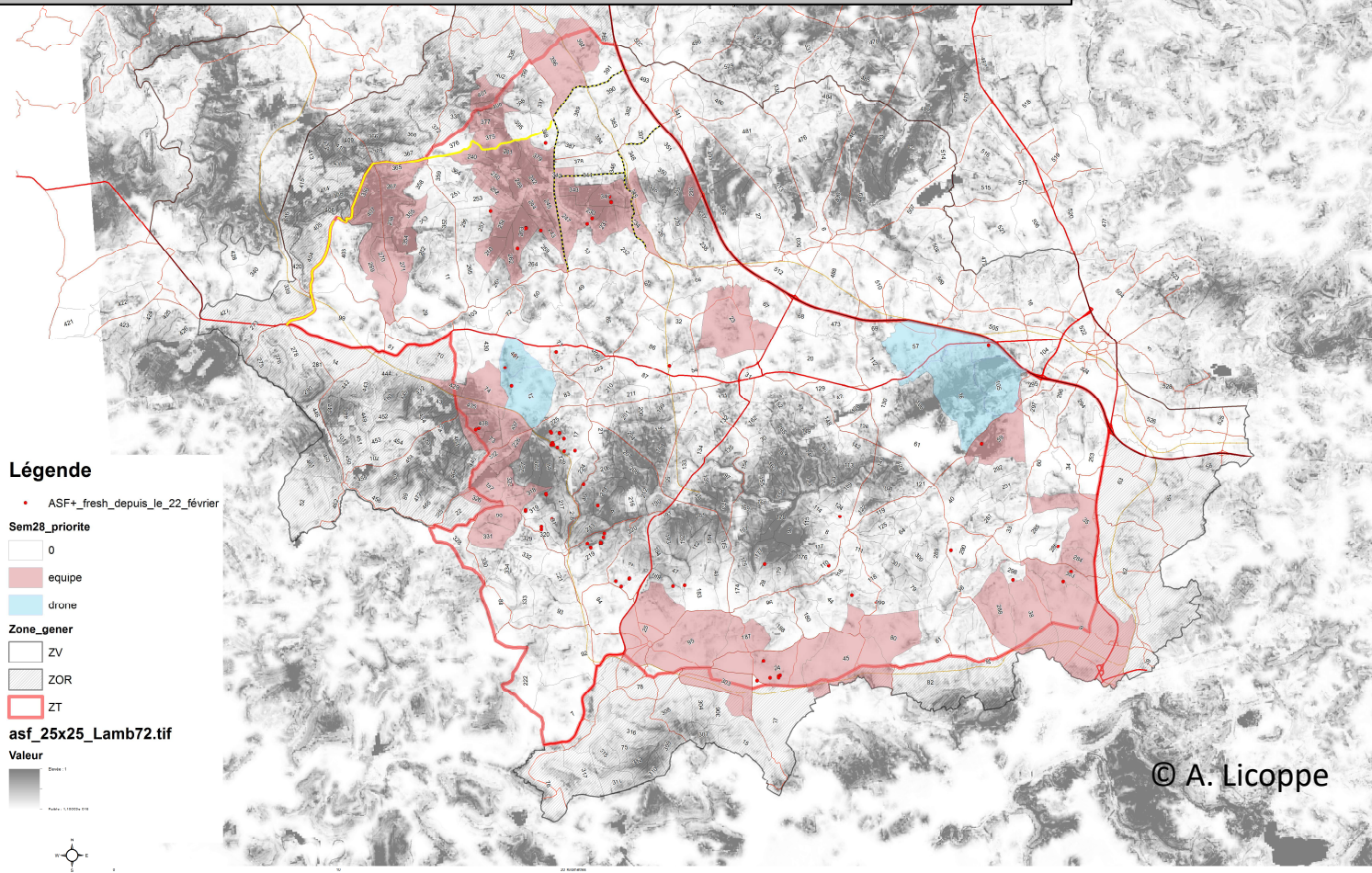


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Relation between searching intensity and found dead wild boar (weeks 1-22)



Contribution of the « carcasses » model - Morelle et al., submitted



4. CONTROL MEASURES

1. active search and removal of the carcasses
2. fence network 
3. depopulation

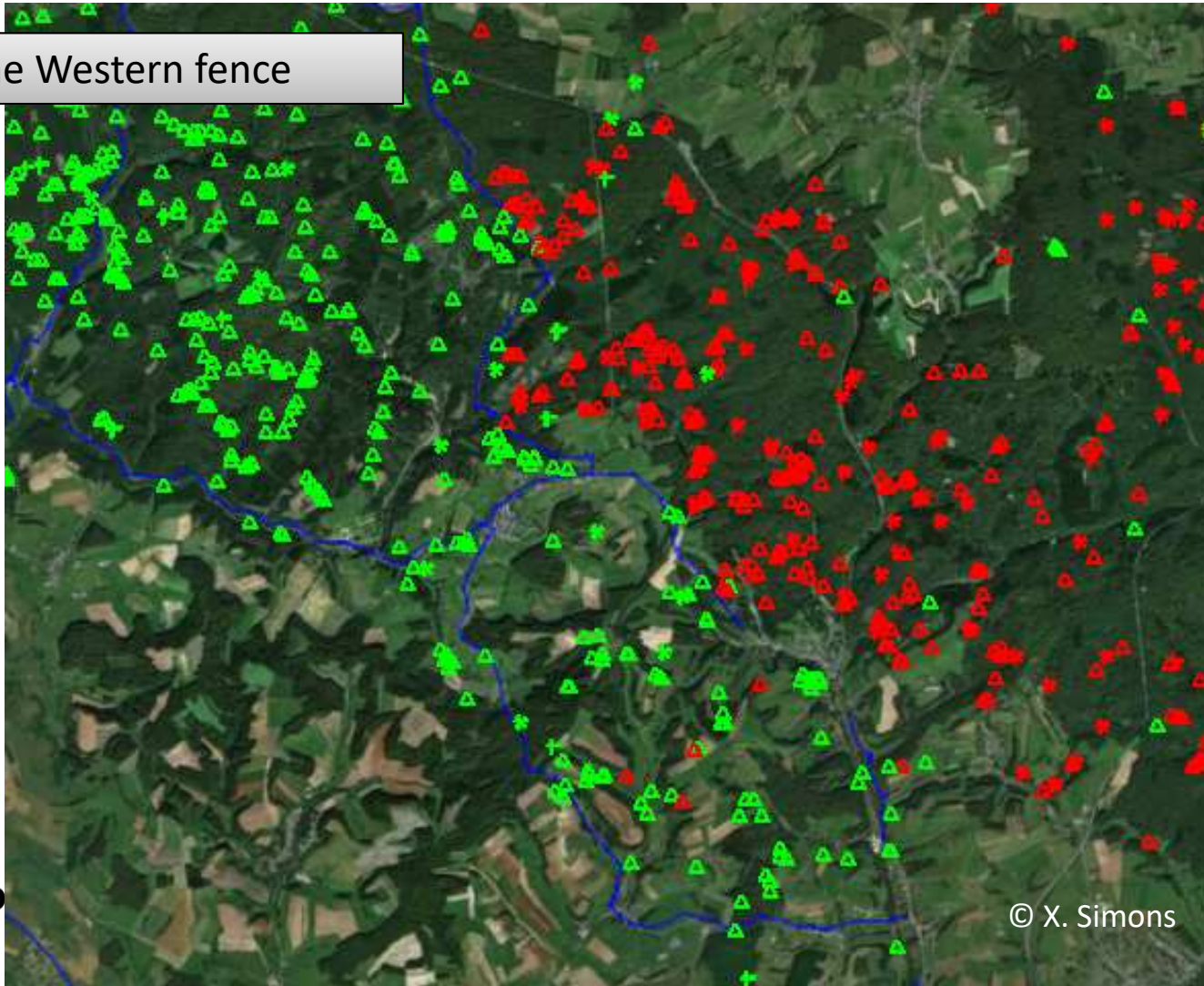




Fences have to be considered as a break, not as a 100% efficient barrier
Daily check and maintenance are strategic

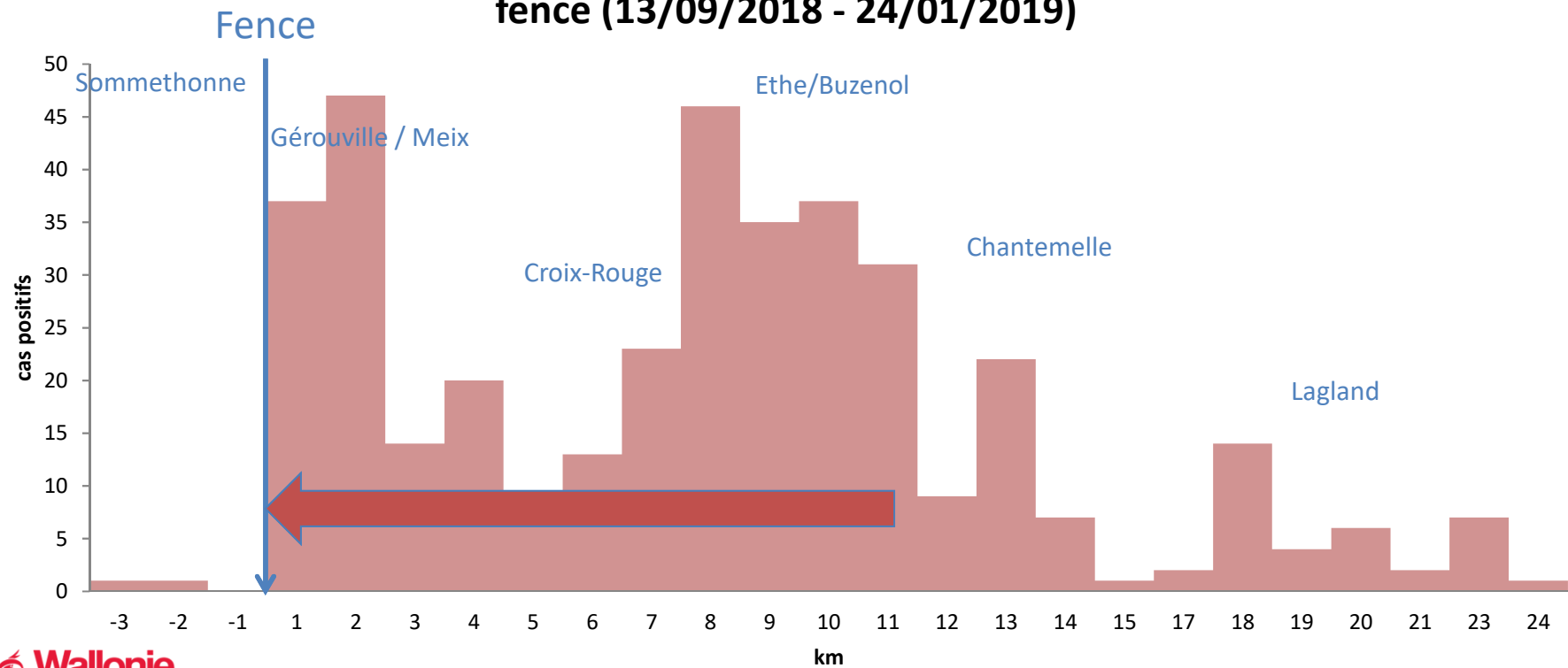


Efficiency of the Western fence



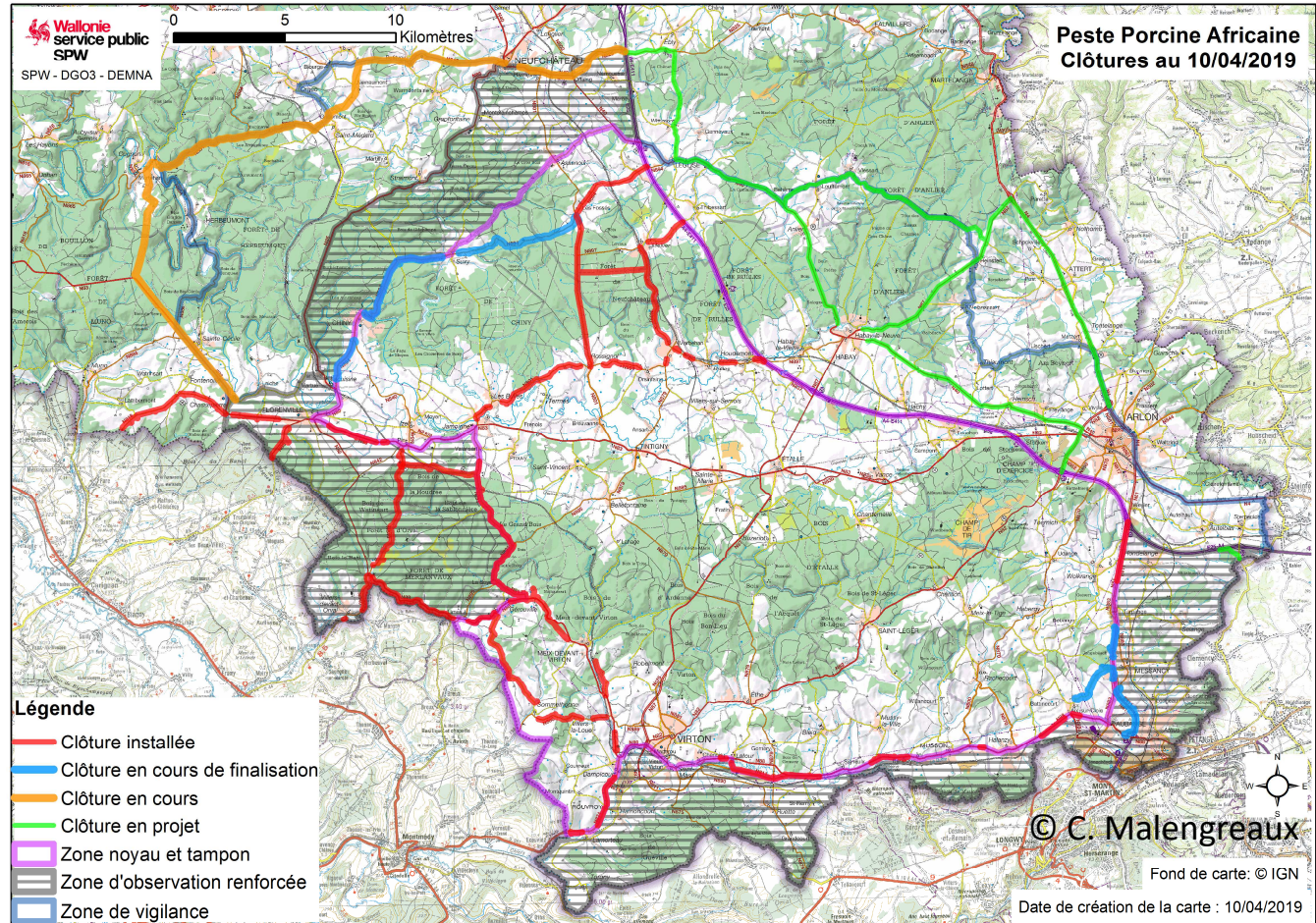
Efficiency of the Western fence

Frequency of ASF+ carcasses according to their distance to the Western fence (13/09/2018 - 24/01/2019)



Fences Network
: existing and
pending

Fences
Belgium ↔ France
↔ GDLux



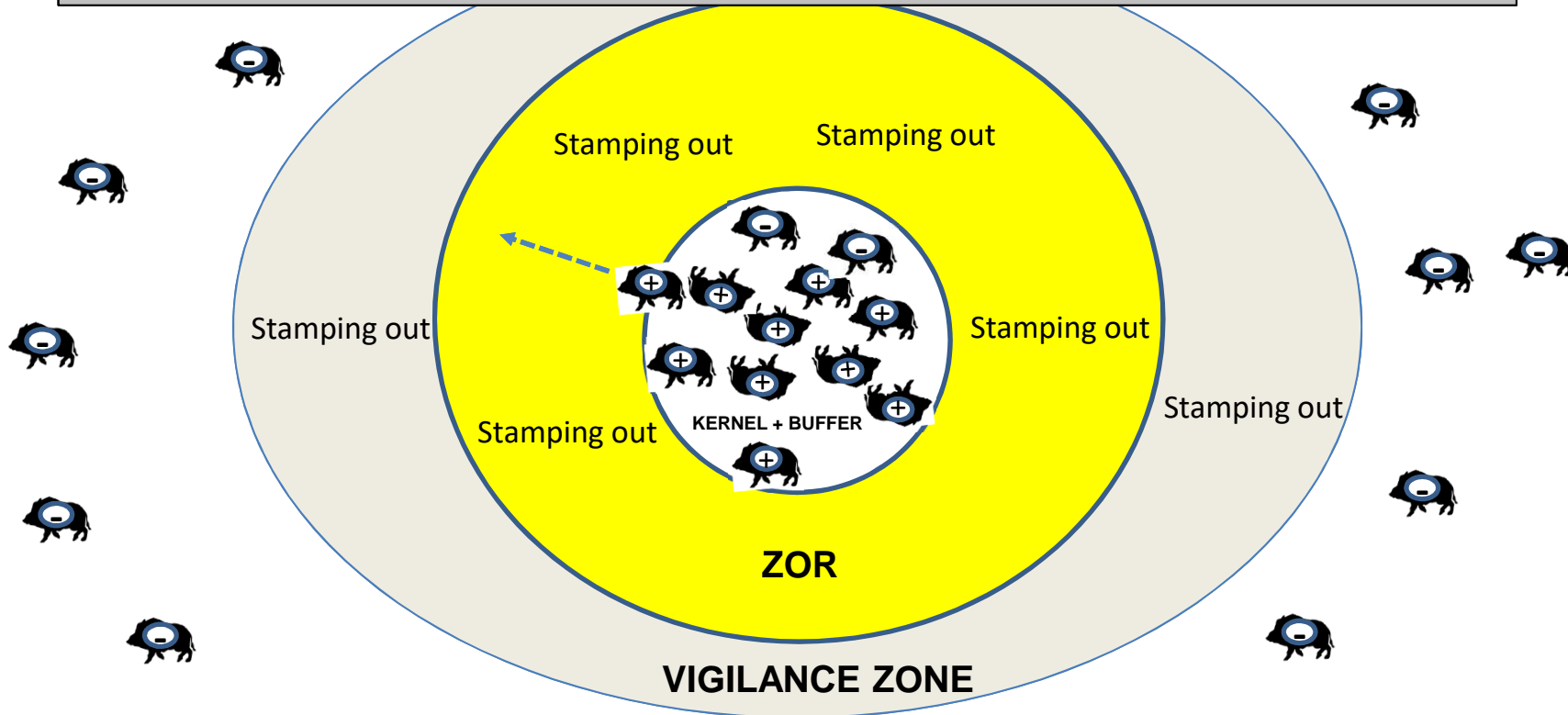
4. CONTROL MEASURES

1. active search and removal of the carcasses
2. fence network
3. Depopulation (culling / traps / night shots) ←

Aim = depopulation on 1106 km² (517 forested km²)



depopulation – to keep one step ahead of the epidemic wave



Biosecurity formations for the hunters (Oct / Jan / Feb / March)
Sensibilisation, formation, communication



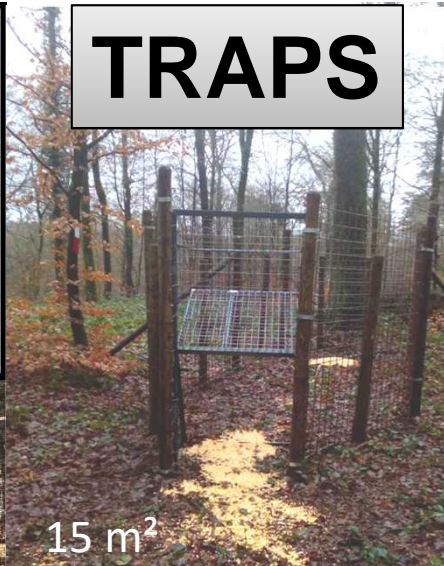
CULLING

- Sept 14th - Ban of hunting and feeding in the former infected area
 - Need to keep WB quiet and to delineate the true infected area by searching for dead animals
- Oct 14th - First definition of the management zones
 - Kernel – Buffer Zone : standstill of any activity
 - Reinforced Observation Zone (ZOR)
 - Depopulation (≠ hunting)
 - Biosecurity training required
 - Culling in collaboration with hunters, effective on Nov 1st
 - No incentive
- Nov 30th : Creation of the Vigilance Zone (intensive hunting)
- Feb 19th : Depopulation also in Vigilance Zone (culling)



TRAPS

88 traps mainly in ZOR



© A. Licoppe



NIGHT SHOTS organized by the administration



© A. Linden

Wild boar culling according to the zone

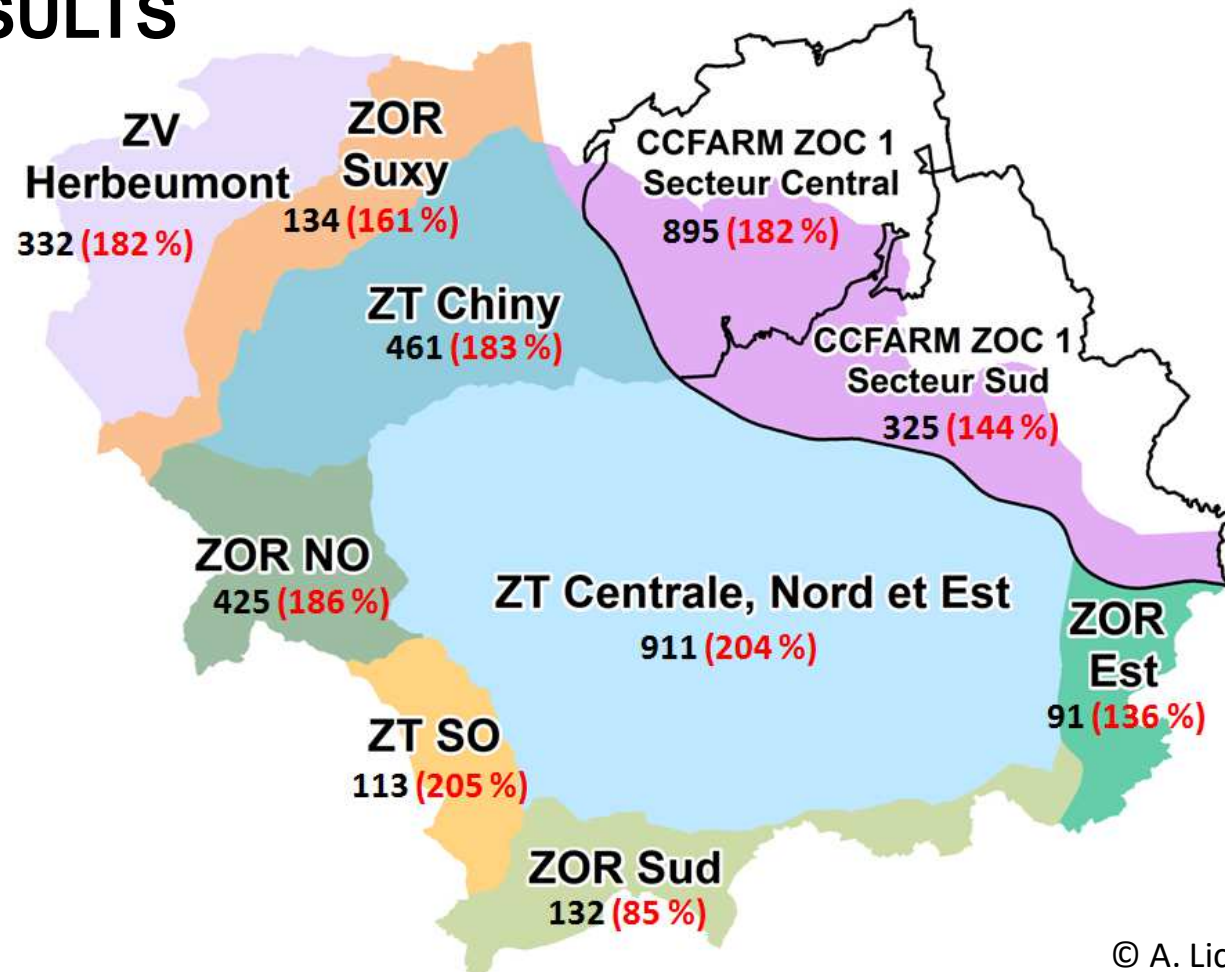
Zone	Biosecurity	Culling by	Dogs	Destruction methods	Subsidies for carcass management and transport
Kernel-buffer	High	Authorities or hunter with mandate	no	Traps, Night shot, High seat + baiting	100 €
<i>Fenced</i> Kernel-buffer	High	Authorities or hunter with mandate	Small ones	Traps, Night shot, High seat + baiting, Driven hunts	100 €
Reinforced Observation	High	Hunters with support of Authorities	no	Traps, Night shot, High seat + baiting, Driven hunts	100 €
<i>Fenced</i> Reinforced Observation	High	Hunters with support of Authorities	Small ones	Traps, Night shot, High seat + baiting, Driven hunts	100 €
Vigilance	Medium	Hunters	yes	Every	50 €



MORTALITY RESULTS

Comparison
mortality 2018-
2019 vs hunting
bag statistics
2017-2018

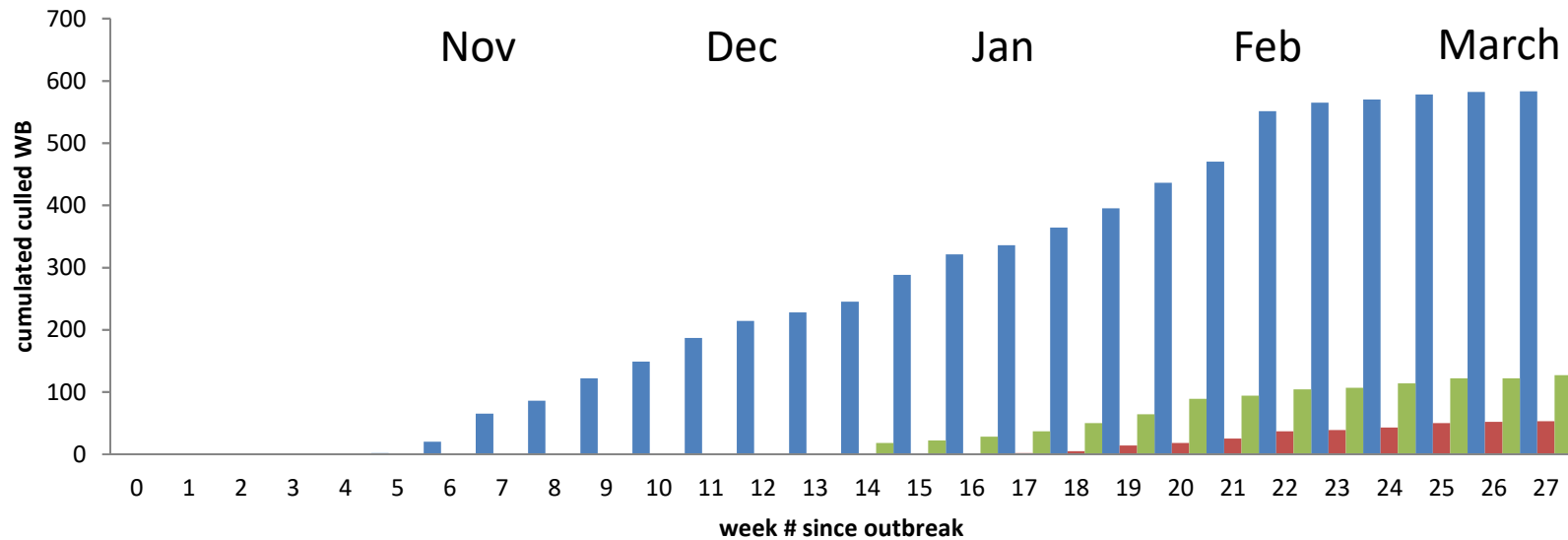
Mortalités au 25/03/19 (% 2017)



Weekly evolution of the culling (former infected zone 630 km²)



Cumulated culled wild boar in the former infected zone (630 km²)



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5. PERSPECTIVES

- Probable new epidemic cycle after the birth peak
- Active search and extraction of carcasses in ZT, ZOR, ZV
- fences and depopulation – to keep one step ahead of the epidemic wave

WB

- April : driven hunts in ZOR, ZV
- April - June : *targeted hunt in ZT*
- April - August : trapping
- To be confirmed :
 - **Sept- Febr : coordinated driven hunts in ZOR, ZV**
 - **Oct - Febr : intensive hunting in neighbouring areas** (the Walloon Region)



“Now this is not the end. It is not even the beginning of the end. But it is, perhaps, the end of the beginning.

Winston Churchill

speech at the Mansion House, London, November 10, 1942

Thank you for your attention

Pr. A. Linden



Service public de Wallonie **agriculture ressources naturelles environnement**

