GF-TADs
GLOBAL FRAMEWORK FOR THE PROGRESSIVE CONTROL OF TRANSBOUNDARY ANIMAL DISEASES

## Standing Group of Experts on African swine fever in the Baltic and Eastern Europe region

under the GF-TADs umbrella

**Eight meeting (SGE ASF8) - Chisinau, Moldova, 20-21 September 2017**

# GF-TADs HANDBOOK on Hunting Biosecurity and Wild Boar Carcass Disposal

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# Context

SGE ASF6 Recommendation (Vilnius, Nov 2016)

10. OIE, FAO and the EU should cooperate in preparing a technical practical document with detailed information **hunting biosecurity** and **wild boar carcass disposal**

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12. OIE, FAO and the EU should cooperate in preparing a technical document with detailed information about **procedures and equipment to be used during epidemics where livestock units** are being infected and worst case scenario may be possible.

EC

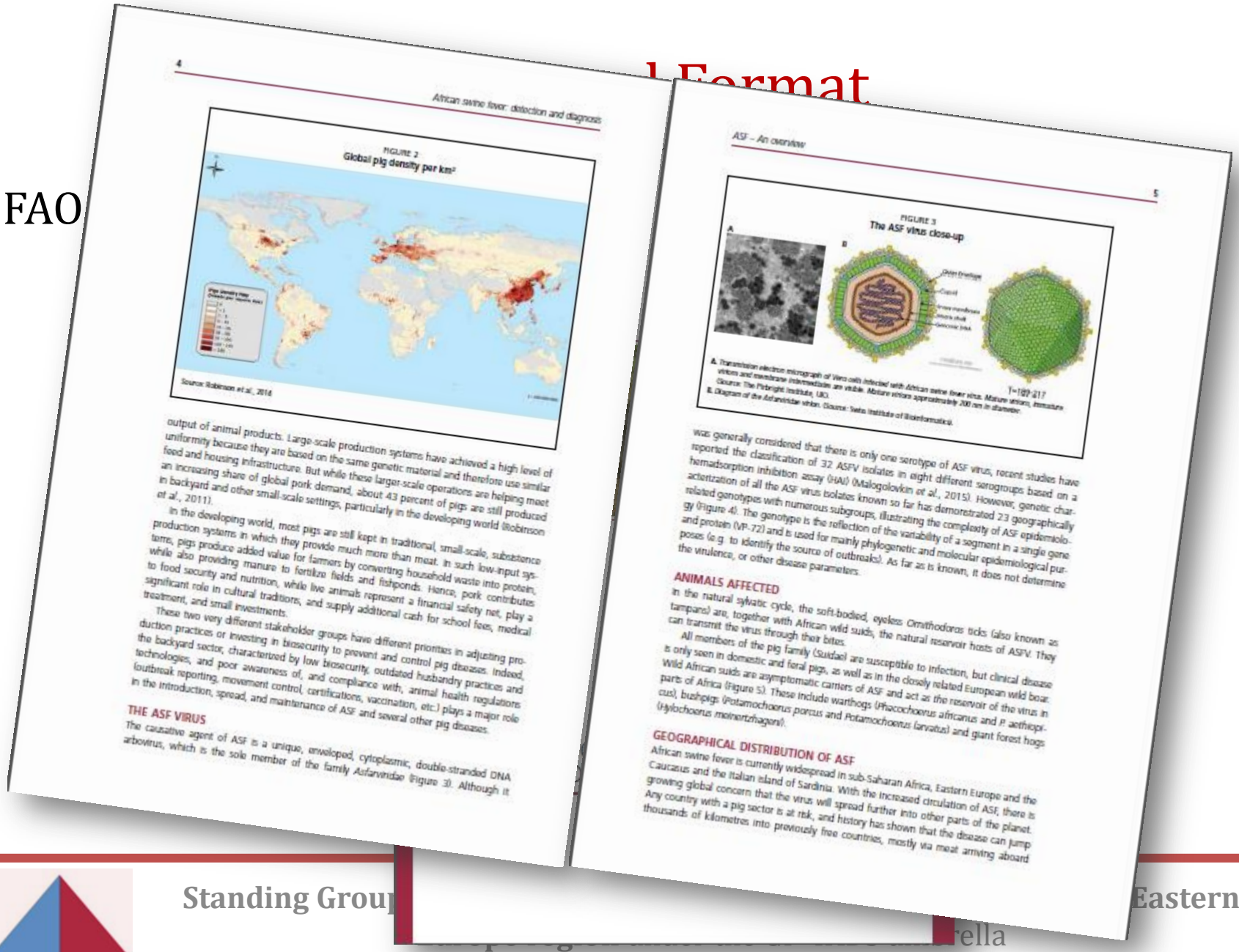
# Process

GF-TADs Handbook (co-financed by FAO and OIE)

Prepared by SGE ASF Experts (under recruitment) – with invited authors (tbc)
First outlines presented during the SGE ASF8 (for discussion)
First draft (Oct-Nov 2017)
Peer-review (Dec 2017) by SGE ASF experts + countries
Final draft (end of Dec 2017)

Editing / Formatting
Translation
Printing (Feb 2018)

FAO



4

African swine fever: detection and diagnosis

FIGURE 2
Global pig density per km²

Source: Robinson et al., 2014

output of animal products. Large-scale production systems have achieved a high level of uniformity because they are based on the same genetic material and therefore use similar feed and housing infrastructure. But while these larger-scale operations are helping meet an increasing share of global pork demand, about 43 percent of pigs are still produced in backyard and other small-scale settings, particularly in the developing world (Robinson et al., 2011).

In the developing world, most pigs are still kept in traditional, small-scale, subsistence production systems in which they provide much more than meat. In such low-input systems, pigs produce added value for farmers by converting household waste into protein, while also providing manure to fertilize fields and fishponds. Hence, pork contributes to food security and nutrition, while live animals represent a financial safety net, play a significant role in cultural traditions, and supply additional cash for school fees, medical treatment, and small investments.

These two very different stakeholder groups have different priorities in adjusting production practices or investing in biosecurity to prevent and control pig diseases. Indeed, the backyard sector, characterized by low biosecurity, outdated husbandry practices and technologies, and poor awareness of, and compliance with, animal health regulations (outbreak reporting, movement control, certifications, vaccination, etc.) plays a major role in the introduction, spread, and maintenance of ASF and several other pig diseases.

## THE ASF VIRUS

The causative agent of ASF is a unique, enveloped, cytoplasmic, double-stranded DNA arbovirus, which is the sole member of the family Asfarviridae (Figure 3). Although it

ASF – An overview

5

FIGURE 3
The ASF virus close-up

A

B

Outer Envelope
Capsid
Inner membrane
Matrix shell
Genomic DNA

T=189-217

A. Transmission electron micrograph of Vero cells infected with African swine fever virus. Mature virions, immature virions and membrane intermediates are visible. Mature virions approximately 200 nm in diameter. Source: The Pirbright Institute, UK).
B. Diagram of the Asfaviridae virion. Source: Swiss Institute of Bioinformatics).

was generally considered that there is only one serotype of ASF virus, recent studies have reported the classification of 32 ASFV isolates in eight different serogroups based on a haemadsorption inhibition assay (HAI) (Malogolovkin et al., 2015). However, genetic characterization of all the ASF virus isolates known so far has demonstrated 23 geographically related genotypes with numerous subgroups, illustrating the complexity of ASF epidemiology (Figure 4). The genotype is the reflection of the variability of a segment in a single gene and protein (VP-72) and is used for mainly phylogenetic and molecular epidemiological purposes (e.g. to identify the source of outbreaks). As far as is known, it does not determine the virulence, or other disease parameters.

## ANIMALS AFFECTED

In the natural sylvatic cycle, the soft-bodied, eyeless Ornithodoros ticks (also known as tampans) are, together with African wild suids, the natural reservoir hosts of ASFV. They can transmit the virus through their bites.

All members of the pig family (Suidae) are susceptible to infection, but clinical disease is only seen in domestic and feral pigs, as well as in the closely related European wild boar. Wild African suids are asymptomatic carriers of ASF and act as the reservoir of the virus in parts of Africa (Figure 5). These include warthogs (Phacochoerus africanus and P. aethiopicus), bushpigs (Potamochoerus porcus and Potamochoerus larvatus) and giant forest hogs (Hylochoerus meinertzhageni).

## GEOGRAPHICAL DISTRIBUTION OF ASF

African swine fever is currently widespread in sub-Saharan Africa, Eastern Europe and the Caucasus and the Italian island of Sardinia. With the increased circulation of ASF, there is growing global concern that the virus will spread further into other parts of the planet. Any country with a pig sector is at risk, and history has shown that the disease can jump thousands of kilometres into previously free countries, mostly via meat arriving aboard

# Proposed outlines (prepared by V. Guberti)

Chapter 1 - **General Epidemiology**

Brief description of the main characteristics of the virus that justify a set of minimal biosecurity measures during hunting

Causative agent
Environmental resistance
ASF in wild boar faeces

Transmission chain in wild boar
Direct contact, transmission through infected carcasses, density dependent and frequency dependent patterns

# Proposed outlines (prepared by V. Guberti)

Chapter 2 -**Wild boar biology and demography**

Wild boar population resilience to hunting (Related to ASF only)
Main resilience mechanisms will be highlighted.
Winter feeding
How it is practiced, how it could interfere with the control of ASF

# Proposed outlines (prepared by V. Guberti)

Chapter 3 - **Wild boar management in ASF infected areas**

Wild boar management strategies are described together with positive and counteractive efficacy in ASF control including

- feasibility and sustainability
- Depopulation, targeted hunting, ban of hunting
- Driven hunts, single hunting,
- Catching, fencing, immune-contraception

# Proposed outlines (prepared by V. Guberti)

## Chapter 4 - **Biosecurity: which aim which role in the framework of ASF in wild boar -** The aim of reducing the environmental contamination of the virus

Indirect ASF contamination when exploiting forest resources
Possible role played by non-hunters (fruit and mushrooms keepers, tourists, forest workers)
Possible role played by hunters during wild boar management practices (census, feeding)

Minimization of indirect contamination in ASF infected forests

Carcasses finding and efficiency of passive surveillance
How to increase the likelihood of detecting wild boar carcasses;
How to evaluate the efficiency of passive surveillance;

Carcasses disposal
Local burial, burning, containers, means of transport;
Precautionary measures

# Proposed outlines (prepared by V. Guberti)

Chapter 5 - **Biosecurity during hunting**

General requirements
Transport from the hunting spot to the dressing area
Dressing facilities
Disposal of offal
Storage of hunted animals
Safe disposal of infected hunted animals
Cleansing and disinfection

# Proposed outlines (prepared by V. Guberti)

Chapter 7 - **Data collection**

Data collected
Standardized age classes;
Fertility and fecundity
Standardized age of carcasses;

# Proposed outlines (prepared by V. Guberti)

Chapter 6 – **Risk communication to Hunters**

Goals to reach
Channels to use
Messages to broadcast

# Your comments are most welcome!

Plenary discussion

Written comments by 30/09 (to n.leboucq@oie.int)