



Food and Agriculture  
Organization of the  
United Nations



World Organisation  
for Animal Health  
Founded as OIE



**GF-TADs for Africa**  
***African Swine Fever (ASF)***  
***Standing Group of Experts (SGE)***  
**for Africa**  
**Second meeting**  
**21 – 22 September 2022**



**November 2022**





---

## Table of contents

Introduction and background to the meeting.....	5
Objectives and narrative report of the meeting .....	5
Annex 1. Domestic porcine population in Africa (FAOSTAT, 2022).....	20
Annex 2. List of participants .....	21
Annex 3. Resources .....	23

### Recommended Citation

**WOAH and FAO.** 2022. *Second GF-TADs for Africa meeting of the Standing Group of Experts (SGE) for African swine fever. Report of the online event, 21 – 22 September 2022. Nairobi.*

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) or the World Organisation for Animal Health (WOAH) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO or the WOA in preference to others of a similar nature that are not mentioned.

The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO or WOA.

© WOA and FAO, 2022



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode>).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO or WOA endorses any specific organization, products or services. The use of the FAO or WOA logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO) or the World Organisation for Animal Health (WOAH). FAO and the WOA are not responsible for the content or accuracy of this translation. The original English edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization (<http://www.wipo.int/amc/en/mediation/rules>) and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

**Third-party materials.** Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

**Sales, rights and licensing.** FAO information products are available on the FAO website ([www.fao.org/publications](http://www.fao.org/publications)) and can be purchased through [publications-sales@fao.org](mailto:publications-sales@fao.org). Requests for commercial use should be submitted via: [www.fao.org/contact-us/licence-request](http://www.fao.org/contact-us/licence-request). Queries regarding rights and licensing should be submitted to: [copyright@fao.org](mailto:copyright@fao.org).

Publications of the World Organisation for Animal Health are available either on the WOA website ([woah.org](http://woah.org)) or can be purchased through the WOA online bookshop ([woah.org/en/ebookshop/](http://woah.org/en/ebookshop/)).





---

## Introduction and background to the meeting

The situation of *African swine fever* (ASF) has become of increasing concern, not only in Africa where it originated, but globally. Indeed, beyond Africa, despite the best prevention and control efforts, ASF continues to persist in domestic and wild pig populations. Being a transboundary animal disease, ASF poses a serious negative impact on production and productivity, therefore affecting national economies and social structures of the pig producing countries.

This led in 2021 to the establishment of the *Standing Group of Experts* (SGE) for *African swine fever* (ASF), as approved by the 11<sup>th</sup> Africa *Regional Steering Committee* (RSC) of the *Global Framework for the progressive control of Transboundary Animals Diseases* (GF-TADs) in October 2021. The SGE is comprised of the founding member countries (Cameroon, Côte d'Ivoire, Dem. Rep. of Congo, Kenya, Nigeria, South Africa, Togo, Uganda and Zimbabwe) that have reported ASF. Zimbabwe did not respond to the invitation nor attend any of the organised meetings. Cabo Verde was invited to participate in the second SGE meeting but were hosting a conflicting meeting of ECOWAS, hence sent in their apology.

The first meeting of the SGE ASF (held in March 2022) endorsed a workplan of topics that should be addressed by the SGE ASF in the coming months. The present (second) meeting is the first thematic meeting, dedicated to understanding the live pig and pork value chains in Africa.

## Objectives and narrative report of the meeting

The second meeting of the SGE ASF for Africa was organised by the WOAHA Regional Representation for Africa, in its capacity as the Secretariat of the GF-TADs for Africa RSC, with the support of the FAO, AU-IBAR and the GF-TADs ASF Working Group.

The meeting was held via video conference (Zoom platform) on 21 and 22 September 2022.

The meeting was attended by 8 out of 9 founding member countries (Cameroon, Côte d'Ivoire, Dem. Rep. of Congo, Kenya, Nigeria, South Africa, Togo and Uganda) that have reported ASF in the recent past. Also present was the African Union *Interafrican Bureau for Animal Resources*, the *Regional Animal Health Centre for the Economic Community of Central African States* (RAHC for ECCAS), FAO and WOAHA Regional Representations (also in Brussels and Moscow), the *International Livestock Research Institute*, as well as one selected national laboratory : the *National Veterinary Research Institute* (NVRI), Vom, Nigeria. In addition the meeting was attended by Mali as an observer country (interested future member), along with observers from the Europe ASF SGEs (European Commission).



Overall the meeting was attended by 44 participants over the two daily meetings (up to 38 participants per day). Thirty-two percent (32%) of participants was female. The list of participants is presented as **annex 2**.

Based on the agreed workplan, adopted at the first SGE meeting in March 2022, the following agenda




was prepared, fostering as much exchange of information and discussion between participants as possible, following a few (4) technical orientation presentations and discussions (agenda as delivered).

Programme, as delivered (including ~~deletions~~ and additions)

<b>Time</b>	<b>Date &gt;</b>	<b>Wednesday 21st September 2022</b>	<b>Facilitator</b> 
08:30 - 09:00am (GMT)		Check-in online: Zoom room opens, recording starts, interpretation channels (draft agenda, GDPR disclaimer, housekeeping rules)	P. Bastiaensen
09:00 – 09:15am		Opening session : FAO RAF WOAH RRAF <del>AU-IBAR / AU-PANVAG</del>	Moh. Shamsuddin Karim Tounkara <del>Nick Nwankpa</del>
09:15 – 09:20am		Objectives and expected outputs of the meeting	Karim Tounkara
09:20 – 09:40am		What is “value chain analysis”?	Michel Dione (Edward Okoth)
09:40 – 10:00am		Value chains in West and Central Africa	Djassi Edoukou (Fasina Folorunso)
10:00 – 10:20am		Value chains in Eastern Africa	Sharon Tsigadi
10:20 – 10:40am		<del>Value chains in Southern Africa</del>	<del>Fasina Folorunso</del> (Mary-Louise Penrith)
10:40 – 10:50am		Zoom poll	All
10:50 – 12:00		Discussion, led by the chair (FAO)	Mohammed Shamsuddin
Noon		Break until tomorrow (joint writing team reviews action points)	



Time	Date >	Thursday 22nd September 2022	Facilitator 
08:30 - 09:00am (GMT)		Check-in online: Zoom room opens, recording starts, interpretation channels (draft agenda, GDPR disclaimer, housekeeping rules)	P. Bastiaensen
09:00 – 09:15am		<u>Value chains in Southern Africa</u> (pre-recorded)	Mary-Louise Penrith
09:15 – 09:30am		<u>Opening address : AU-IBAR / AU-PANVAC</u>	Nick Nwankpa
<del>09:00 – 09:15am</del>		<del>Recap from webinar day 1, draft action points (writing team)</del>	<del>P. Bastiaensen</del>
09:30 – 11:00am		National pork value chain analysis: strengths, weaknesses, critical control points for live pigs and pork products (10 minutes each): <ul style="list-style-type: none"> <li>• <del>Cabo Verde</del></li> <li>• Cameroon</li> <li>• Côte d'Ivoire</li> <li>• Dem. Republic of Congo</li> <li>• Kenya</li> <li>• <del>Nigeria</del></li> <li>• South Africa</li>   <li>• <del>Togo</del></li> <li>• Uganda</li> <li>• <del>Zimbabwe</del></li> </ul>	Country representatives  Jean Marc Feussom Douyeri Ouattara Honoré N'lemba Sam Kahariri  Leana Janse van Rensburg  Charles Masembe
11:00 – 11:15am		Zoom poll	All
11:15 – 12:00		Discussion and next steps led by the chair (WOAH)	Viola Chemis
Noon		End of the second SGE ASF meeting	



---

Day one (21 September 2022)

### Opening statements and objectives of the meeting

Dr Mohamed Shamsuddin, Senior Animal Health and Production Officer for Africa, of the Food and Agriculture Organisation (FAO) of the United Nations, reminded the audience that poor biosecurity in the small-scale, free-ranging pig production sector remains a known challenge to contain ASF; however, these production systems and value chains are linked to nutritional and food security of millions around the world, especially in Africa, Asia and Latin America. Poverty is linked to these value chains as well; there are households who cannot effort fencing and feeding of their pigs in captivity. Listening to the experts in the meeting, he said, will improve our understanding of pig and pork value chains and thus improve the prevention and control measures against the ASF. Dr Shamsuddin also highlighted the need to address regional and national policies to attract private sector and link them to the small producers through public private partnership and productive partnership modalities where the industry could transfer good practices and technologies to the small scale producer.

Dr Karim Tounkara, Regional Representative for Africa of the World Organisation for Animal Health, on behalf of the Director General, welcomed participants to discuss the first technical topic i.e., value chain analysis. He reiterated the importance of pig production as a source of livelihoods and means of poverty reduction especially among rural communities in the continent, hence the need for the conversation to share good practices and lessons learnt based on respective experiences on value chains in support to the Initiative for the Global control of ASF developed under the GF-TADs.

Dr Nick Nwankpa, ag. Director of the African Union *Inter-african Bureau for Animal Resources* (AU-IBAR) delivered his statement on the second day. He reminded the meeting that ASF was an important Transboundary Animal Disease (TAD) as it is endemic in Africa with many outbreaks having been reported between 2010 and 2019. Small holder pig producers are the main source of pigs and pig products but are faced with challenges which include no responsive national policies, making them unable to meet required biosecurity standards necessary for control of ASF. Dr. Nwankpa said the lack of compensation initiatives was a disincentive to disease reporting making it difficult to contain the disease at source. He mentioned the need for global and regional initiatives to support national programs address core challenges and minimize risk. Spread of ASF in the continent was mostly attributed to movement of infected pigs and pig products. Therefore, the SGE in Africa is a strategic tool to catalyse necessary collaborations and facilitate knowledge and technical expertise required for control of ASF. Dr. Nwankpa assured the meeting of AU-IBAR continued commitment to support the work of the SGE, through its programs and other initiatives to achieve skill, impact and efficiency in control of ASF and for other TADs programs.

Dr Karim Tounkara, in his capacity as Secretary of the GF-TADs for Africa Regional Secretariat highlighted the history, purpose and objectives of the meeting, the latter of which include defining what *value chain analysis* (VCA) is, present and compare *value chains* (VC) in different regions to gain a better understanding of the production features and value chains in Africa, a better understanding of strengths, weaknesses, critical control points for live pigs and pork products in Africa.





---

## What is Value Chain Analysis ? (Michel Dione & Edward Okoth)

 <https://youtu.be/02fLVs0k95Y>

Dr Michel Dione of the *International Livestock Research Institute* (ILRI), based in Senegal, was introduced by his colleague Dr Edward Okoth, who collaborated on the presentation to follow.

Dr Dione started out by recalling that *value chain analysis* (VCA) is done targeting a market. It's a business approach to improve the value chain, targeting consumption. If there is no demand for a product, then there is no value chain assessment needed. It is driven by demand of livestock and also responds to the needs of the communities so as to contribute to the livelihood of, and food security of, 1 billion people around the world, particularly the small holders and the poor people. Because the population is increasing, livestock demand is increasing, hence there is the need to increase the production. Supplying this growing demand can be a pathway of out of poverty, especially for smallholders, provided that these actors are organised, have access to necessary inputs and services, and finance to improve their value addition.

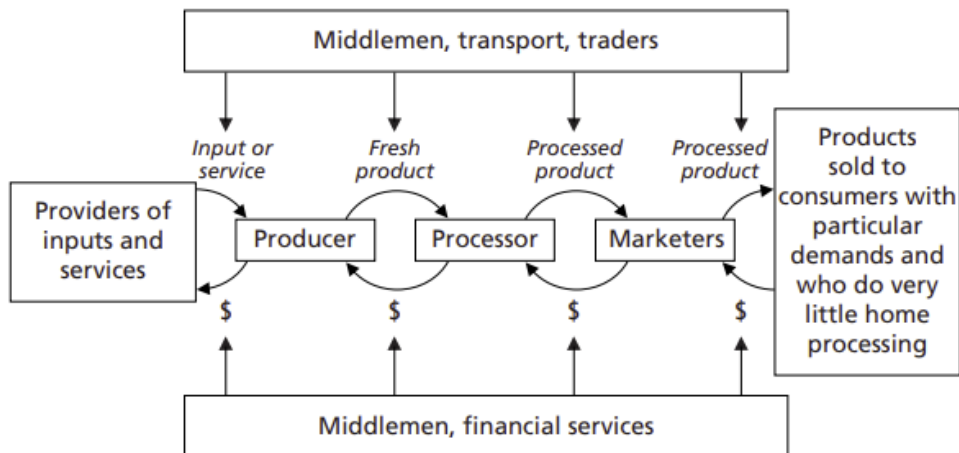
He explained that a *value chain* (VC) is the pathway of processes that a product follows as it moves from the primary producer to the final consumer. The pathway from the process of production to consumption is called a value chain. Assessment of the VC is determined by the market, not the increased processing or the physical transformation of the product. At each step of the node, value is added to the product if there is demand for it. In principle, at least, value is added at each stage of the chain, hence the term “value” chain (*International Fund for Agricultural Development*, IFAD). A thriving livestock VC supports other agricultural VCs, as it “pulls” demand from the small-scale crop producers who grow fodder crops or supply crop residues to livestock producers. VCs are “meso-level” structures in that they fall between the macro-level of the economy and the microlevel of individual livestock producers. Livestock VCs can be short and quite simple or they can be quite long and complex.

A VC “map” is a simplified representation of a complex and dynamic reality. The inputs and services that go into each step of the VC, and the enabling environment that affects the VC, cannot easily be shown on a VC map but are vitally important. The components of a VC include:

- a) actors (producers, collectors/traders, consumers),
- b) inputs and services (feed, veterinary drugs and services, extension advice, market information and finance) and
- c) and enabling environment. The latter considers:
  - the institutional, policy, legal and business environment – access to grazing land, licensing restrictions on para-veterinarians, etc.
  - cultural, social, religious and gender-based systems and practices – control of cash from animal products, etc.
  - rural infrastructure – delineated stock routes, watering holes, etc.



### A schematic value chain



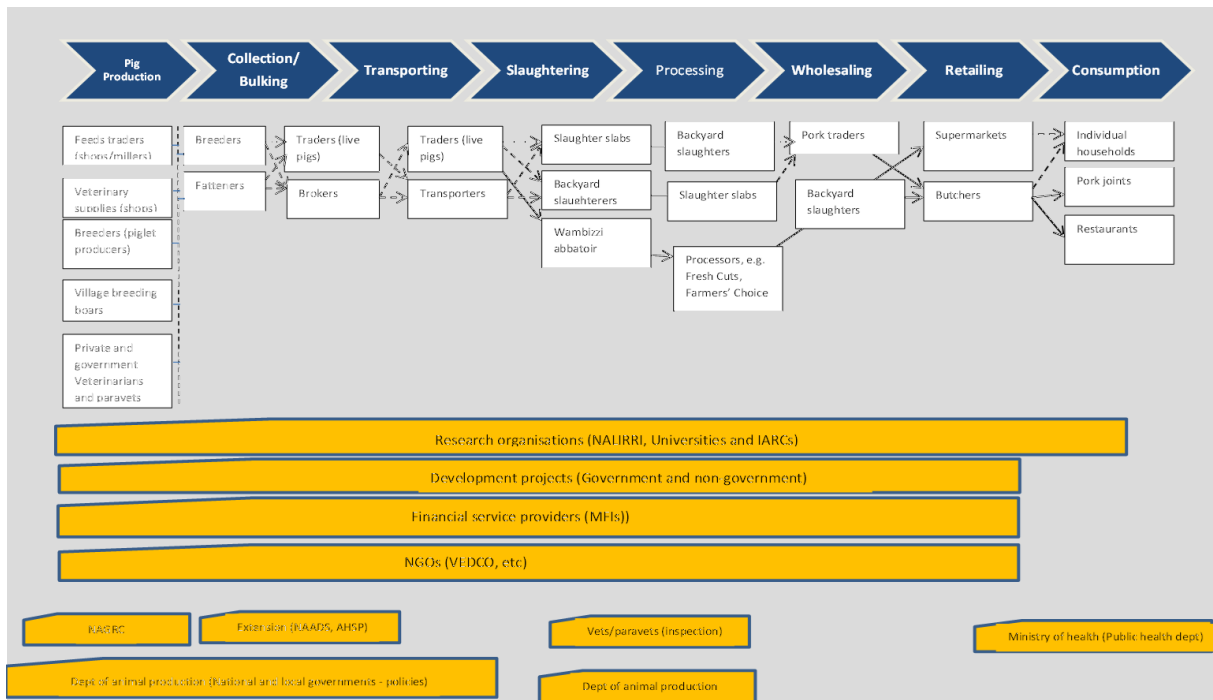
Source: FAO. 2011. *A value chain approach to animal diseases risk management – Technical foundations and practical framework for field application. Animal Production and Health Guidelines. No. 4. Rome.*

It was emphasized that the market is the *pull* of the VCA. A very simplified short value chain can involve minimal processing of a product, like the selling of the live pig. It can also be very long and very complex depending on the product and the targets who could be smallholders, women, youth, or others. Selling through markets, slaughter, processing for sausage production, retail and marketing has a longer value chain. The input and services (feed supply, veterinary drugs and services, extension, market information and finance) that go into each step of the value chain and the enabling environment that affect the value chain cannot easily be shown in the value chain map but are important. In addition, one needs to consider institutions, legal frameworks, the business environment, cultural, social, religious issues, gender and the infrastructure that support the functioning of the value chain.

The objective of a VCA is to identify the gaps and issues to upgrade the VC and improve the efficiency so that each actor in the VC can benefit from the value, in terms of greater resilience to shocks including disease management, higher and more stable income streams. An update of the value chain must therefore respond to the market opportunities, consider the aspirations of the actors and have returns for them. This could include producing new goods and services either upstream or downstream of the VC, producing high quality products, adoption of technology to increase productivity and production, upgrade the coordination and business models affecting the horizontal and or the vertical relationships, etc. VCA considers market requirements in terms of quality, quantity, price, timing the market, gaps in nutrition, core market actors and their roles, etc.

The purpose of combining value chain and risk analysis is to identify risk factors and contribute to disease control planning. Therefore, VCA can be focused specifically on elements that either increase disease risk or that are critical in disease risk management, avoiding the need for complete VCA. This can best be achieved by engaging veterinary epidemiologists and social scientists to work together through the process at all levels.

Below is an example of a detailed VC map that was developed when ILRI started to support analysis of the smallholder pig value chain in Uganda, with the objective to upgrade the value chain and improve income.



The presentation listed target interventions that were identified as an outcome of the value chain analysis, such as, training of slaughterhouse workers on pork handling to improve hygiene that led to some basic renovations at the retail outlets, in turn contributing to increased numbers of customers and higher sales of pork. Other interventions included: development of a training manual to improve the quality of commercial feed, and the development of a policy brief that promoted enhancement of biosecurity along the value chain. The policy brief also communicated the need to improve animal welfare including during transportation, the need for a national feed policy and promoted the hub model to increase value addition to the producers.



---

## Pig Value Chains in West & Central Africa (Djassi Edoukou & Fasina Folorunso)

 <https://youtu.be/0DknjDyQi1A>

Djassi Edoukou, international consultant and ASF expert from Côte d'Ivoire, delivered a presentation that was initially prepared by Dr Fasina Folorunso of the *Food and Agriculture Organisation* (FAO).

In West and Central Africa, pig production is mainly smallholder-based, with scattered commercial activities in some parts. Pig management and rearing is often combined with crop production, other livestock activities or trading/slaughtering and contributes significantly to the empowerment of women and youth in rural and peri-urban areas. Pigs are slaughtered for home consumption, as sources of income/livelihoods, to pay for school fees, medical bills, purchases of fertilisers, debt collection, marriage or dowry, one's sense or perception of wealth, cultural activities, "walking" bank accounts/savings and emergency funds.

Local and regional trade predominate and few, if any, pigs are officially exported from West and Central Africa.

Price standardisation is often difficult, especially when farmers cannot organise themselves into cooperatives. Prices are higher at certain times of the year (Christmas, New Year, after ASF outbreaks) and lower at other times (beginning of the school year, during an ASF epidemic, when supply exceeds demand, beginning of the growing or planting season).

As in most other parts of Africa, the pork value chain includes: input suppliers, middlemen, traders, transporters, butchers, farmers, assemblers and brokers, etc. Refer to the flowchart on page 10. Inputs into the value chain are represented by genetics, nutrition - feeding, housing conditions and animal health services. Shortages of feed, lack of access to veterinary services and lack of market linkages are major constraints, with in addition insufficient investment, inadequate extension training, poor farm management, inadequate credit facilities and subsidies, high piglet mortality and cannibalism. Outputs of the value chain are live pigs (adults), piglets, pork (meat), manure and biofuel.

Several production systems can be typified, starting with the free range (scavenging) or extensive system, characterised by poor genetics, low inputs (feed, housing, veterinary services, etc.), low investments, mainly rural, peri-urban and backyard, high mortality rate due to diseases, slow growth rate due to poor feed conversion, and a low exploitation rate, reproduction rate.

The semi-intensive system sees an improvement of genetics, provision of some inputs (feed, housing, veterinary services, etc.), medium investment, still mainly peri-urban, urban and backyard, lower mortality rate due to diseases, an average growth rate due to better feed conversion, better yield, and an average reproduction rate.

Finally the intensive system is typified by improvement of genetics, provision of additional inputs (feed, housing, veterinary services, etc.), high level of investment, can be vertically integrated, mainly peri-urban and urban, very low to low mortality rates due to disease, rapid growth rate and reaching market weight in time, high fertility parameters, high biosecurity and sophisticated equipment.

Marketing of live pigs occurs through live animal markets (LAM), auctions, slaughterhouses and exchange are common among small producers. Larger producers target more formal markets, supermarkets and businesses.



---

LAM can be primary/collective markets, secondary/aggregate markets or terminal markets. On LAM one's pigs are mixed with pigs from other farmers and may reside there for several days, before being bought or taken to slaughter. LAM are characterised by the dominance of wholesalers/retailers, can vary from formal to informal markets, but mostly largely disorganised, made up of multiple stakeholders, lacking classification or categorisation of animals, lacking price controls, with prices heavily subject to seasonal variations, lack of refrigeration, slaughter hygiene and electrical infrastructure, unstable movements in and out of markets and difficulties related to transport.



In abattoirs, ante-mortem inspection is rarely carried out, except for pigs slaughtered in government-recognised or accredited abattoirs. During slaughter, suspension rails may or may not be available. Pigs are preferably processed on the floor with no hot water containers for knives. Multiple people and visitors are allowed onto the slaughter floor and post mortem inspection may or may not be carried out. Carcasses can be properly packed and sent to different markets, or can be displayed on open sales tables near the slaughterhouse.

In some situations, pig farmers have managed to organise themselves into lobby groups and cooperatives and exercise some form of control over the slaughter, processing and marketing systems. They also promote their own products. The largest such cooperative in Africa is found in the Oke Aro pig farm in Lagos/Ogun, Nigeria.

In West and Central Africa, the following countries have reported ASF to WAHIS : Benin, Burkina Faso, Cabo Verde, Central African Republic, Congo (Dem. Rep.), Congo (Rep.), Côte d'Ivoire, Gambia, Ghana, Guinea-Bissau, Nigeria, Senegal, Sierra Leone and Togo. Mali and São Tomé and Príncipe recovered from an incursion and are today (self-declared) free of ASF. The pattern of regional spread of ASF, while mostly fuelled by the informal sector, is largely identical to the (formal) trans-African highway networks, such as the coastal route linking Dakar to Lagos.

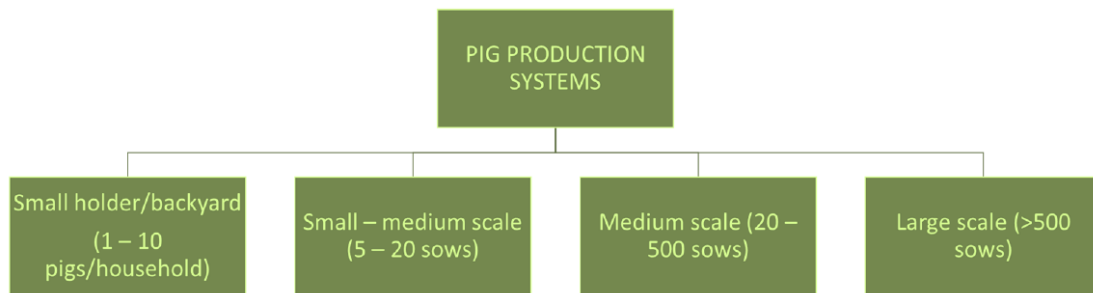
In conclusion, many man-made practices may explain the presence and spread of ASF in West and Central Africa, i.e. the indiscriminate supply of pigs, the indiscriminate supply of feed and interactions in feed mills, the use of untested water - streams, wells, the location of slaughterhouses in the pig rearing areas, sharing of boars within farming communities and the unrestricted entry.



**Pig Value Chains in Eastern Africa (Sharon Tsigadi)**

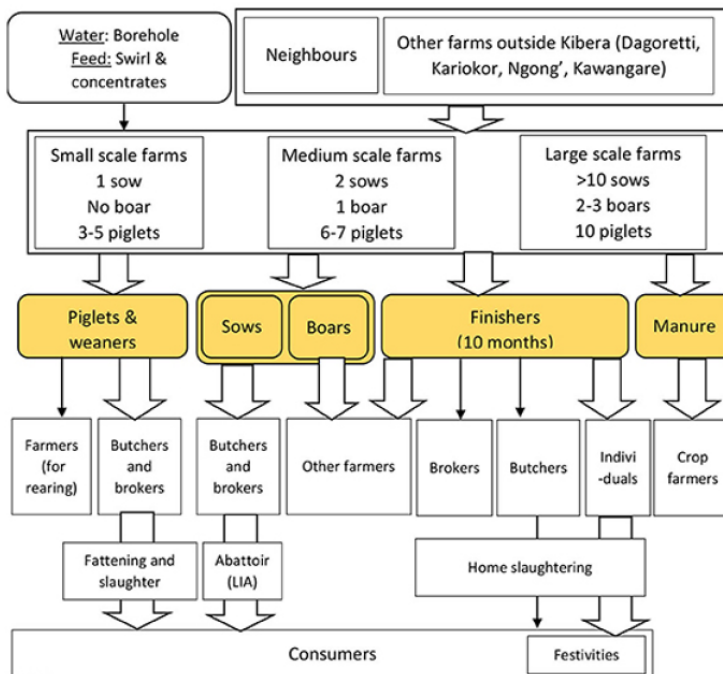
▶ <https://youtu.be/02fLVs0k95Y>

Dr Sharon Tsigadi, General Manager of the pig and pork production company Farmer's Choice Ltd (Kenya) provided an overview of the various value chains encountered in Eastern Africa, covering 6 countries (Burundi, Ethiopia, Kenya, Rwanda, Tanzania and Uganda), in addition to information on the Ugandan value chain, already provided in Dr Dione’s presentation. She elaborated on the total meat production in the region, with pork consumption oscillating between 0.3% of total meat consumption in Ethiopia to 31 % in Uganda. Dr Tsigadi went on to characterise four types of production systems, most of which can be qualified as “small holders” operations :



Each of the production systems and value chains, was thereafter presented in detail, highlighting the various professionals and traders involved, the slaughter facilities, the outlets, the transport, the feed supply chain, the season of highest demand, etc...

Kibera pig farms (Nairobi informal settlements)



In her concluding remarks, Dr Tsigadi reiterated the prospects of increased demand for pork in the region in the coming decades, and hence, the need to invest in the industry, and the whole value chain, mitigating and controlling diseases, and improving coordination at all levels of the value chain.

For private sector investors like Farmers Choice, contracting farmers leads to predictable markets where profit benefits all those involved along the value chain. Growth in the industry must be supported by enabling policies, whilst trying to keep prices competitive in the wake of economic and political setbacks (fuel prices, taxation, etc.).

Sources and movements of pigs, the types of people involved and commodities traded. Courtesy - Murungi et al 2021

*Example of a value chain analysis within the backyard/smallholder sector, focusing on the Kibera slums (informal settlements) in Nairobi, Kenya.*





## Poll:

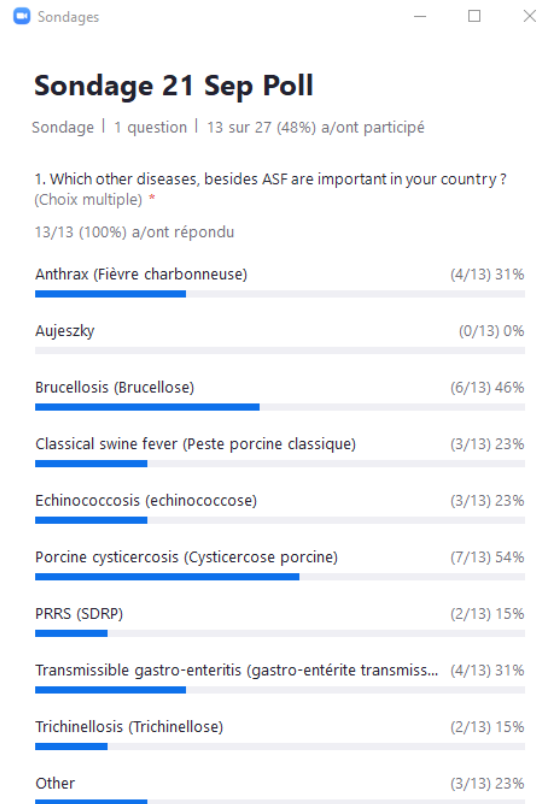
The first three technical presentations were then followed by a simple Zoom poll, enquiring which other diseases, besides ASF, are important in the member countries. The outcomes of the poll were as follows (see right hand side).

Under “other” diseases, several notifiable and non-notifiable diseases were mentioned : foot-and-mouth disease (FMD), porcine circovirus, *Erysipelas*, *Mycoplasma spp.*, *Actinobacillus pneumonia*, mange (scabies), *Salmonella spp.* and *E. coli*.

## Discussion :

In the discussion that ensued, various individuals and organisations took the floor. According to the representative from AU-IBAR, Dr Hiver Boussini, the draft Continental Strategy (commissioned by the AU) provides guidance on the interventions expected of each Member in terms of ASF control, however the document is still to be finalized and adopted. The discussion then digressed from VCA to vaccine development with various questions highlighting the need for safe and reliable vaccines, and the expectations raised from the launch of an ASF vaccine in Vietnam. Others (Côte d’Ivoire) then took the discussion back to the topic of the day, with various suggestions on the need for public-private partnerships.

In his concluding remarks as chair of the day-one session, Dr Mohamed Shamsuddin (FAO) summed it all up : VCAs are market driven, biosecurity along the value chain is key (and “biosecurity” is precisely the topic of the next SGE meeting), that FAO and WOAHA continue to develop standards, manuals and guidelines to support countries implement risk-based control, the feasibility to deliver training on ASF control and other priority pig diseases, with a component of VCA. This provides a better understanding of the risks leading to risk-based control strategies.





Day two (22 September 2022)

**Pig Value Chains in Southern Africa (Mary-Louise Penrith, *pre-recorded presentation*)**

In southern Africa, there is at least some good commercial large-scale farming, not compared with say Asia or America, where there are thousands of sows on one farm. Two hundred to 500 sows is considered fairly big in Africa. At the top end of these farms, there are the compartmentalized pig farms. In South Africa, about 65% of the commercial farms compartmentalize. There are also some compartments in Zimbabwe. These compartments are free from ASF, *classical swine fever* (CSF), *foot-and-mouth disease* (FMD) and these farms also include some breeders and suppliers of genetic material. Most of the production is destined for export of pork through designated abattoirs (99% is exported to the SADC region).



*High biosecurity commercial farm in the Western Cape province of South Africa.*

There are also commercial farms with a high level of biosecurity, which vary in number in most countries in the region. The pigs from these farms generally go into formal value chains. They're slaughtered at registered larger abattoirs with documentation, and the pork is destined for retail outlets and to export markets.

On the other end of the sector, there are a lot of small-scale backyard, traditional, communal and very small commercial pig farms. The pigs are often bought and sold in live markets and auction yards. They





---

may be sold through agents, who are middlemen, that go from farm to farm, buying pigs and therefore a risk for transmission of ASF.

At the bottom end of the scale, there are village pigs. They're often free ranging and come home mostly at night. If they want to be at home during day and maybe even during the night, they can do that as well, provided there is a bit of shelter. Sometimes they are given feed at night so that they will come back to the *kraal* (enclosure) or to the village at night and be enclosed, especially in areas where there are predators, or there is livestock theft. They're often fed scraps from the table, but unfortunately, they may also feed by scavenging on rubbish dumps.

Pigs may be slaughtered in large, medium or small abattoirs, but they also may be slaughtered by a local butcher or on a slaughter slab (often behind the markets) whereafter carcasses are cut up on market sale tables. On the upper end very smart butcheries, which will have HACCP systems in place, are mechanised, and completely hygienic. The pork destination, of course, depends on the abattoir. But there may also be slaughter at home, and either the meat is sold locally, consumed locally and some of it given away because it may be too much for the family. And some places don't have refrigeration, so the meat will somehow be displaced locally.

Transportation of pigs from the farm vary, from wheelbarrows and bicycles to custom build trucks. In general, the slower the transport, the more stops there may be on the way, the higher the chances for the pigs to become infected. Transport depends on the LAM, with various degrees of animal welfare, organisation. Pigs ordered from a specific breeder for high end markets will be delivered to the address under very good conditions.

Movement control is very difficult in this sector and in many countries it's very dynamic. There are many new stakeholders from time to time, no measures to trace animal movement, making it a sector that's prone to risk of ASF. Cross-border value chains for pigs and pork exist, and they may operate continuously, or they may operate in response to price differentials, which in turn can be the result of an ASF outbreak. There are movements due to ceremonies and gifts, and informal movements. They don't take place along the main roads, so a roadblock does no good, they often move through the bush, which is another factor that complicates control.


Most instances of ASF occur due to a general lack of biosecurity, often because the people don't have the resources to put in place the necessary measures. Unfortunately, when ASF outbreaks occur, it may lead to stoppage of slaughter of pigs and slaughter may be undertaken illegally in hideouts like the forests (bush slaughter).



## Pig Value Chains in Member Countries of the SGE-ASF

Founding member countries of the SGE-ASF, present at the meeting, were invited to share their views of the value chain(s) in their countries:

- Cameroon (Jean-Marc Feussom)
- Côte d'Ivoire (Douyeri Thierry Ouattara)
- Dem. Republic of Congo (Honoré Nlemba Mabela)
- Kenya (Sam Kahariri)
- South Africa (Leane Janse van Rensburg)
- Uganda (Charles Masembe)

The six presentations made are available on the YouTube channel  <https://youtu.be/lhh2jOdh4H8>

### Poll:

The country presentations were followed by a simple Zoom poll, enquiring about countries' experiences with conducting or commissioning value chain analyses and the reasons keeping some of these countries from having these studies. The outcomes of the poll were as follows (see right hand side).

Around 38% of country participants claims that value chain analyses have been conducted in this sector, against 62% that did not. Of these, the main reasons for not disposing of such studies were (lack of) funding (77%) and lack of trained staff (46%).

### Sondage 22 Sep Poll

Sondage | 5 questions | 13 sur 34 (38%) a/ont participé

1. Has your country conducted one or more value chain analyses of the pig and pork sector (in the last 5 years)? (Choix unique) \*

13/13 (100%) a/ont répondu

Yes (oui) (5/13) 38%

No (non) (8/13) 62%

2. What are the gaps and/or needs that prevent your country from conducting such exercise? (Choix multiple) \*

13/13 (100%) a/ont répondu

Academic / research institutions that can conduct VCA (institutions de recherche / académiques ca... (3/13) 23%

Funding to pay for the expertise (fonds pour pouvoir payer / remunerer les experts) (10/13) 77%

National value chain analysis experts (experts nationaux en analyse des chaines de valeur) (4/13) 31%

Training of national VS staff on VCA (formation de cadres vétérinaires nationaux en ACV) (6/13) 46%

VCA is not a priority for this sector (ACV n'est pas une priorité pour ce secteur) (1/13) 8%

Other (autre) (0/13) 0%

### Discussion:

Dr. Honoré N'Leмба, the Delegate of Congo (Dem.Rep.) and also President of the WOA Regional Commission for Africa, expressed the need for guiding documentation to support understanding of the value chain and engagement of key stakeholders along the value chain in control of ASF. The sentiments were backed by Dr. Leana Janse Van Rensburg (South Africa) who emphasized the importance of critical control points as the basis for understanding risks. Although there are quite established and formal pig and pork value chains with high biosecurity in the southern Africa region, there is nonetheless still little understanding about smallholder producers. Like South Africa, Uganda too demonstrated detailed understanding of the domestic and wild pig value chain due to support of collaborating partners like FAO and ILRI. Countries such as Kenya and Cameroon too appear to have a detailed and thorough understanding of the value chains in their countries.



---

The meeting proposed that Member countries strive to conduct and update value chain and risk assessments to ensure understanding of challenges, critical control points and deficits along the chain. Considering that animal movement poses a risk, cross border collaboration will be necessary.

### **Conclusions and action points:**

As a way forward, it was suggested that a system be put in place to support countries with guiding tools and documentation for value chain and risk analysis, to encourage a common approach and provide technical assistance. Members' attention could also be drawn to tools available online through the FAO Virtual Learning Centres (VLCs) to support capacity building, among them implementation of the Global Initiative for ASF and capacity to manage other pig diseases of public health importance such as porcine cysticercosis, echinococcosis and trichinellosis. In addition, it was recommended that the formal, technical presentations from the second SGE meeting be shared with SGE Members who were not present at the meeting.

Countries were also encouraged to communicate their capacity needs for consideration of support based on country-specific needs.

To guide the next steps, the collaborating partners will encourage and support capacity building for value chain analysis. The technical support may include sets of training courses delivered to countries, to harmonise and implement the tools.

The next meeting will be held as a face-to-face meeting in 2023. Schedule and venue will be communicated by the organising team (WOAH, FAO, AU-IBAR) in due course. The agenda of the next meeting will be **biosecurity along the value chain**, implying the need for countries to have made progress in understanding their value chains and risks.

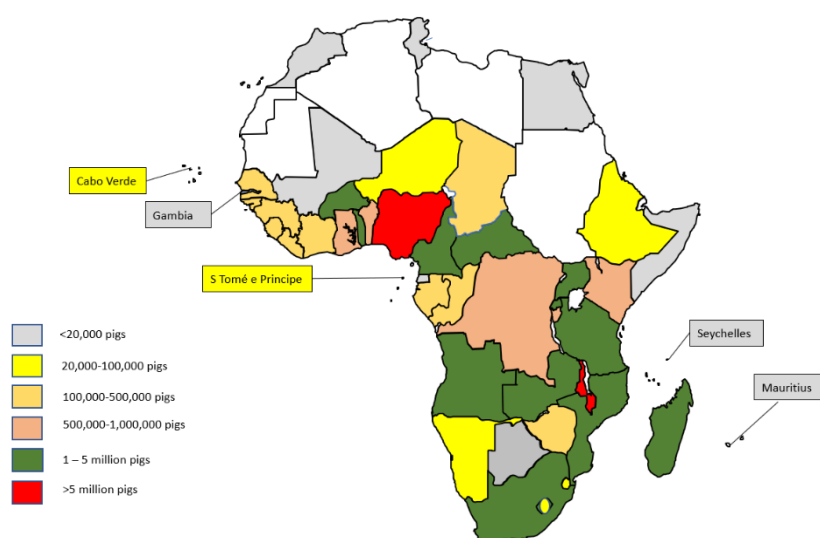
The present report will be added to the dedicated SGE page that has been opened of the GF-TADs for Africa website in order to facilitate the sharing of information amongst members of the SGE (click the link) : [African Swine Fever - Standing Group of Experts \(SGE\) - Africa](#)



## Annex 1. Domestic porcine population in Africa (FAOSTAT, 2022)

Country	Population (2020)	Country	Population (2020)
Algeria	4660	Liberia	362788
Angola	3739563	Madagascar	1768766
Benin	545000	Malawi	7794586
Botswana	2464	Mali	87215
Burkina Faso	2505977	Mauritius	21987
Burundi	846948	Morocco	7949
Cabo Verde	70206	Mozambique	1695167
Cameroon	1952770	Namibia	105395
Central African Rep.	1081626	Niger	43351
Chad	111561	Nigeria	7990514
Congo (Dem. Rep.)	998055	Rwanda	1541367
Congo (Rep.)	106383	Sao Tome, Principe	42985
Côte d'Ivoire	439404	Senegal	478118
Egypt	11000	Seychelles	5126
Equatorial Guinea	7079	Sierra Leone	268746
Eswatini	35758	Somalia	3815
Ethiopia	36416	South Africa	1356892
Gabon	223960	Tanzania	520884
Gambia	13322	Togo	1120815
Ghana	759211	Tunisia	5297
Guinea	159985	Uganda	2638296
Guinea-Bissau	473656	Zambia	1066369
Kenya	649273	Zimbabwe	272206
Lesotho	47157		

Not listed : Comoros, Djibouti, Eritrea, Libya, Mauritania, South Sudan and Sudan ■ Source : <https://www.fao.org/faostat/en/#data/QL>

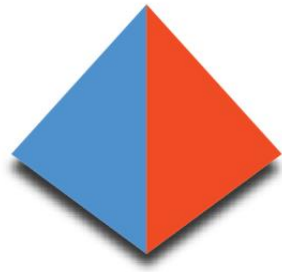


Map. Courtesy of Prof. M-L. Penrith (2021)



---

## Annex 2. List of participants



# GF-TADs

GLOBAL FRAMEWORK FOR THE  
PROGRESSIVE CONTROL OF  
TRANSBOUNDARY ANIMAL DISEASES



Food and Agriculture  
Organization of the  
United Nations



World Organisation  
for Animal Health  
Founded as OIE

## Africa



## Second meeting Standing Group of Experts for African Swine Fever (Africa)

21 - 22 September 2022 (online)  
List of attending participants

**1** Dr Anne Rose **ADEMUN - OKURUT**

*Founding country representative, WOAHA Delegate (she/her)*

Commissioner Animal Health (CAH)  
Directorate Animal Resources (DAR)  
Ministry of Agriculture, Animal Industry and Fisheries

.

P.o. box 513  
. Entebbe  
**Uganda**

E-mail 1	0	
E-mail 2	0	
Telephone 1	256	0
Telephone 2	256	0

**2** Dr Owoningbin **AKAKPO - ISSOLA**

*Founding country representative, epidemiologist (she/her)*

Vétérinaire Inspecteur  
Direction de l'Elevage et de la Pêche  
Ministère de l'Agriculture, de l'Elevage et du Développement Rural  
9, avenue des Nîmes

.

B.P. 4041  
. Lomé  
**Togo**

E-mail 1	0	
E-mail 2	0	
Telephone 1	228	0
Telephone 2	228	0

**3** Ms Carol Cynthia **AKINYI**

*Interpreter 1 (she/her)*

English - French

.

.

.

. .  
. Nairobi  
**Kenya**

E-mail 1	0	
E-mail 2	0	
Telephone 1	254	0
Telephone 2	254	0

**4** Dr Patrick **BASTIAENSEN**

*Facilitator (meeting host)*

Programme Officer  
Sub-Regional Representation for Eastern Africa  
WOAH  
4th floor, Taj Towers, Upper Hill Road  
Upper Hill

P.o. box 19687  
00202 Nairobi  
**Kenya**

E-mail 1	0	
E-mail 2	0	
Telephone 1	254	0
Telephone 2	254	0

**5** Dr Cyprien **BIAOU**

*Observer*

Programme Officer  
ECTAD Central Africa  
FAO

.

.

. .  
. Libreville  
**Gabon**

E-mail 1	0	
E-mail 2	0	
Telephone 1	237	0
Telephone 2	237	0

**6** Dr Aboudou **BOUKAYA**

*Founding country representative, epidemiologist*

Inspecteur Vétérinaire  
Direction Régionale de l'Agriculture, de l'Elevage et du Développement Rural  
Région Maritime

.

.

. .  
. Lomé  
**Togo**

E-mail 1	0	
E-mail 2	0	
Telephone 1	228	0
Telephone 2	228	0

**7** Dr Hiver **BOUSSINI**  
*Observer (AU task force member)*  
 Senior Animal Health Officer  
 Inter-African Bureau for Animal Resources  
 AU-IBAR  
 KENINDIA Business Park  
 Westlands Road, Museum Hill  
 P.o. box 30786  
 00100 Nairobi  
**Kenya**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 254 0  
 Telephone 2 254 0

**8** Dr Patchili **BOUZABO**  
*Regional Animal Health Centre (RAHC) ECCAS*  
 Coordonnateur de la Cellule Technique  
 Regional Animal Health Centre for Central Africa  
 Economic Community of Central African States (ECCAS)  
 Communauté Economique des Etats de l'Afrique Centrale  
 CEEAC  
 . .  
 . N'Djamena  
**Chad**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 235 0  
 Telephone 2 235 0

**9** Dr Viola **CHEMIS**  
*Facilitator*  
 Regional Programmes Coordinator  
 Regional Activities Department  
 WOAHA  
 4th floor, Taj Towers, Upper Hill Road  
 Upper Hill  
 P.o. box 19687  
 00202 Nairobi  
**Kenya**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 254 0  
 Telephone 2 254 0

**10** Dr Charmaine **CHNG**  
*Observer*  
 Scientific Coordinator  
 Science Department  
 WOAHA  
 12, rue de Prony  
 .  
 . .  
 75017 Paris  
**France**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 33 0  
 Telephone 2 33 0

**11** Dr Emmanuel **COUACY-HYMANN**  
*Observer (WOAH Specialist Commission, BSC)*  
 (President of the WOAHA Biological Standards Commission)  
 Head of the Virology Laboratory  
 CNRA  
 .  
 .  
 B.P. 206  
 . Bingerville  
**Cote d'Ivoire**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 225 0  
 Telephone 2 225 0

**12** Dr Laibané Dieudonné **DAHOUROU**  
*Observer*  
 Programme Officer (veterinary workforce development)  
 Regional Representation for Africa (RR/AF)  
 WOAHA  
 Based at the EISMV  
 rue de l'Université  
 B.P. ....  
 . Dakar  
**Senegal**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 221 0  
 Telephone 2 221 0

**13** Dr Kadiatou **DIARRA**  
*Observer (prospective Member Country) WOAHA De. (she/her)*  
 Chef de Section Protection Sanitaire et Bien - Etre Animal  
 Direction Nationale des Services Vétérinaires  
 Ministère de l'Elevage et de la Pêche  
 Avenue de la Nation, Porte 631  
 .  
 .  
 B.P. 220  
 . Bamako  
**Mali**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 223 0  
 Telephone 2 223 0

**14** Dr Michel **DIONE**  
*Subject matter expert (Regional expert ILRI)*  
 Senior Scientist, Animal Health  
 Herd Health Team - Animal and Human Health Programme  
 ILRI  
 .  
 .  
 . .  
 . Dakar  
**Senegal**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 221 0  
 Telephone 2 221 0

**15** Dr Djassi **EDOUKOU**

*Subject matter expert (West and Central Africa)*  
Subject matter expert (West and Central Africa)  
WOAH Regional Expert

Riviera

B.P. 480  
Cedex 3 Abidjan  
**Cote d'Ivoire**

E-mail 1 0  
E-mail 2 0  
Telephone 1 225 0  
Telephone 2 225 0

**16** Dr Jean-Marc **FEUSSOM**

*Founding country representative, epidemiologist*  
RESCAM  
Direction des Services Vétérinaires  
MINEPIA

B.P. 20355  
Yaounde  
**Cameroon**

E-mail 1 0  
E-mail 2 0  
Telephone 1 237 0  
Telephone 2 237 0

**17** Dr Simona **FORCELLA**

*Observer*  
Policy Officer  
DG Santé  
European Commission  
Rue Froissart 101

*(she/her)*

1049 Brussels  
**Belgium**

E-mail 1 0  
E-mail 2 0  
Telephone 1 32 0  
Telephone 2 32 0

**18** Dr Maimuna **HABIB**

*Founding country representative, WOAHO Delegate* *(she/her)*  
Chief Veterinary Officer  
Department of Veterinary and Pest Control Services  
Federal Ministry of Agriculture and Rural Development  
F.C.D.A. New Secretariat  
Area 11, Garki

Abuja (FCT)  
**Nigeria**

E-mail 1 0  
E-mail 2 0  
Telephone 1 234 0  
Telephone 2 234 0

**19** Dr Estelle **HAMELIN**

*Observer*  
Representative  
Sub-Regional Representation in Brussels  
WOAH  
Food Safety Center K05/120210  
Boulevard du Jardin Botanique 55

*(she/her)*

1000 Brussels  
**Belgium**

E-mail 1 0  
E-mail 2 0  
Telephone 1 32 0  
Telephone 2 32 0

**20** Dr Leana **JANSE VAN RENSBUR**

*Observer*  
State Veterinarian  
Veterinary Services  
Western Cape Department of Agriculture  
0  
0

0 0  
0 George  
**South Africa**

E-mail 1 0  
E-mail 2 0  
Telephone 1 27 0  
Telephone 2 27 0

**21** Dr Samuel **KAHARIRI**

*Founding country representative, epidemiologist*  
ASF focal point  
Department of Veterinary Services  
Ministry of Agriculture Livestock Fisheries and Cooperatives  
State Department for Livestock  
Kabete Vet Labs

P/bag Kangemi  
00625 Nairobi  
**Kenya**

E-mail 1 0  
E-mail 2 0  
Telephone 1 254 0  
Telephone 2 254 0

**22** Dr Vessaly **KALLO**

*Founding country representative, WOAHO Delegate*  
Directeur  
Direction des Services Vétérinaires  
Ministère des Ressources Animales et Halieutiques

Abidjan  
**Cote d'Ivoire**

E-mail 1 0  
E-mail 2 0  
Telephone 1 225 0  
Telephone 2 225 0



**23** Dr Akiko **KAMATA**  
*(she/her)*

Observer  
Animal Health Officer  
NSAH  
FAO  
Viale delle Terme di Caracalla  
.

00153 Rome  
**Italy**

E-mail 1 0  
E-mail 2 0  
Telephone 1 39(0) 0  
Telephone 2 39(0) 0

**24** Dr Yaghouba **KANE**  
*Observer*

Regional Epidemiology Training Coordinator  
Regional Office for Africa (RAF)  
FAO  
0  
0

0 0  
0 Accra  
**Ghana**

E-mail 1 0  
E-mail 2 0  
Telephone 1 233 0  
Telephone 2 233 0

**25** Dr Pam **LUKA**

*National reference laboratory*  
Representing the Director, Chief Vet. Research Officer  
National Veterinary Research Institute  
NVRI  
.

PMB 1  
Vom (Plateau State)  
**Nigeria**

E-mail 1 0  
E-mail 2 0  
Telephone 1 234 0  
Telephone 2 234 0

**26** Dr Paul Johnson **LUMU**

*Founding country representative, epidemiologist*  
Lead ASF Control Coordinator, Senior Vet. Officer  
Directorate Animal Resources (DAR)  
Ministry of Agriculture, Animal Industry and Fisheries  
.

P.o. box 513  
Entebbe  
**Uganda**

E-mail 1 0  
E-mail 2 0  
Telephone 1 256 0  
Telephone 2 256 0

**27** Dr Charles **MASEMBE**

*Founding country representative, epidemiologist*  
Lead ASF Research Coordinator  
Associated Professor  
Makerere University  
.

P.o. box .  
Kampala  
**Uganda**

E-mail 1 0  
E-mail 2 0  
Telephone 1 256 0  
Telephone 2 256 0

**28** Dr Michael Botlhe **MODISANE**

*Founding country representative, WOAHA Delegate*  
Chief Director  
Animal Production and Health  
Department of Agriculture, Land Reform and Rural Development (DALRR)  
.

P/bag X250  
0001 Pretoria  
**South Africa**

E-mail 1 0  
E-mail 2 0  
Telephone 1 27 0  
Telephone 2 27 0

**29** Dr Ricarda **MONDRY**  
*(she/her)*

Observer  
Sub-Regional Livestock Officer  
Sub-Regional Office for Eastern Africa (SFE)  
FAO  
CMC road Near ILRI, Kebele  
12/13 Bole Sub City, Gurd Shola  
P.o. box 5536

Addis Ababa  
**Ethiopia**

E-mail 1 0  
E-mail 2 0  
Telephone 1 251 0  
Telephone 2 251 0

**30** Dr Annet Praise **NAMBOOWA**  
*(she/her)*

*Founding country representative*  
Veterinary Inspector  
Directorate Animal Resources (DAR)  
Ministry of Agriculture, Animal Industry and Fisheries  
0  
0

0 0  
0 Entebbe  
**Uganda**

E-mail 1 0  
E-mail 2 0  
Telephone 1 256 0  
Telephone 2 256 0

**31** Dr Marcel Casimir **NDONGO KOUNOU**  
*Observer*  
 ASF Technical Specialist  
 NSAH  
 FAO  
 .  
 .  
 . .  
 . Yaounde  
**Cameroon**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 237 0  
 Telephone 2 237 0

**32** Dr Honoré Robert **N'LEMBA - MABELA**  
*Founding country representative, WOAHA Delegate*  
 Director and HoD  
 Service de la Production et de la Santé Animales  
 Ministère de l'Agriculture, de la Pêche et de l'Elevage  
 Croisement Boulevard du 30 juin /  
 Avenue Batetela  
 . .  
 . Kinshasa  
**Congo (Dem. Rep.)**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 243 0  
 Telephone 2 243 0

**33** Dr Nick **NWANKPA**  
*President of the GF-TADs for Africa RSC*  
 Director  
 Inter-African Bureau for Animal Resources  
 AU-IBAR  
 KENINDIA Business Park  
 Westlands Road, Museum Hill  
 P.o. box 30786  
 00100 Nairobi  
**Kenya**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 254 0  
 Telephone 2 254 0

**34** Dr Edward **OKOTH**  
*Regional expert*  
 Senior Scientist (Principal Investigator)  
 Epidemiology and control of African swine fever (ASF) and Peste des Petits Ruminants (PPR)  
 ILRI  
 Kabete Campus  
 .  
 P.o. box 30709  
 00100 Nairobi  
**Kenya**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 254 0  
 Telephone 2 254 0

**35** Dr Lassina **OUATTARA**  
*Observer*  
 Team Leader  
 ECTAD Cameroon  
 FAO  
 0  
 0  
 0 0  
 0 Yaounde  
**Cameroon**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 237 0  
 Telephone 2 237 0

**36** Dr Douyeri Thierry **OUATTARA**  
*Founding country representative, epidemiologist*  
 Service de la surveillance et de la riposte  
 Direction des Services Vétérinaires  
 Ministère des Ressources Animales et Halieutiques  
 .  
 .  
 . .  
 . Abidjan  
**Cote d'Ivoire**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 225 0  
 Telephone 2 225 0

**37** Dr Jean **PERCHET**  
*Observer*  
 Programme Officer  
 Regional Representation for Europe  
 WOAHA  
 Mamonovsky pereulok, d.4  
 str.1  
 . .  
 123001 Moscow  
**Russia**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 7 0  
 Telephone 2 7 0

**38** Mr. Aziz Omar **RAMNDANI**  
*Interpreter 2*  
 French - English  
 .  
 .  
 .  
 .  
 . .  
 . Nairobi  
**Kenya**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 254 0  
 Telephone 2 254 0

**39** Dr Andriy **ROZSTALNYY**  
*Global Working Group ASF*  
 Animal Health Officer  
 Member ASF Working Group  
 FAO  
 Viale delle Terme di Caracalla  
 .  
 . .  
 00153 Rome  
**Italy**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 39(0) 0  
 Telephone 2 39(0) 0

**40** Dr Mohammed **SHAMSUDDIN**  
*Vice-President of the GF-TADs for Africa RSC*  
 Senior Regional Animal Health and Production Officer  
 Regional Office for Africa (RAF)  
 FAO  
 0  
 0  
 0 0  
 0 Accra  
**Kenya**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 233 0  
 Telephone 2 233 0

**41** Dr Gaolathe **THOBOKWE**  
*Regional Economic Community (SADC)*  
 Programme Officer (Livestock)  
 FANR Directorate  
 SADC Secretariat  
 0  
 0  
 0 0  
 0 Gaborone  
**Botswana**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 267 0  
 Telephone 2 267 0

**42** Dr Karim **TOUNKARA**  
*Secretary of the GF-TADs for Africa RSC*  
 Representative  
 Regional Representation for Africa (RR/AF)  
 WOA  
 Parc de Sotuba  
 off Route de Koulikouro  
 B.P. 2954  
 . Bamako  
**Mali**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 223 0  
 Telephone 2 223 0

**43** Dr Sharon **TSIGADI**  
*Subject matter expert (private sector)*  
 General Manager  
 .  
 Farmer's Choice Ltd KE  
 Kahawa West, Off Kamiti Road  
 .  
 P.o. box 47791  
 00101 Nairobi  
**Kenya**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 254 0  
 Telephone 2 254 0

**44** Dr James **WABACHA**  
*Observer*  
 Senior Programme Officer  
 Inter-African Bureau for Animal Resources  
 AU-IBAR  
 KENINDIA Business Park  
 Westlands Road, Museum Hill  
 P.o. box 30786  
 00100 Nairobi  
**Kenya**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 254 0  
 Telephone 2 254 0

**45** 0 0 0  
 0 0  
 0  
 0  
 0  
 0  
 0  
 0 0  
 0 0  
**0**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 0 0  
 Telephone 2 0 0

**46** 0 0 0  
 0 0  
 0  
 0  
 0  
 0  
 0  
 0 0  
 0 0  
**0**  
 E-mail 1 0  
 E-mail 2 0  
 Telephone 1 0 0  
 Telephone 2 0 0





---

## Annex 3. Resources

### FAO Manuals on Value Chain Analysis

- <https://www.fao.org/3/i2583e/i2583e00.pdf>
- <https://www.fao.org/3/i5275e/i5275e.pdf>
- <https://www.fao.org/3/cb7623en/cb7623en.pdf>

### Other resources:

- <https://www.sciencedirect.com/science/article/abs/pii/S0167587716305189>
- <https://www.thepigsite.com/articles/big-opportunities-for-pig-farmers-in-west-africa>
- <https://www.oie.int/app/uploads/2021/03/report-64-current-situation-of-asf.pdf>
- <https://wahis.oie.int/#/dashboards/country-or-disease-dashboard>
- <https://www.thepigsite.com/articles/the-importance-of-a-good-gut-feeling-in-pig-production>
- <https://www.msmanuals.com/home/infections/parasitic-infections-cestodes-tapeworms/echinococcosis-dog-tapeworm-infection>
- <https://www.frontiersin.org/articles/10.3389/fvets.2021.581376/full>



---

*This event was organised under the auspices of*



# GF-TADs

GLOBAL FRAMEWORK FOR THE  
PROGRESSIVE CONTROL OF  
TRANSBOUNDARY ANIMAL DISEASES



Food and Agriculture  
Organization of the  
United Nations



World Organisation  
for Animal Health  
Founded as OIE