



TOWARDS A STRONGER PARTNERSHIP BETWEEN VETERINARY SERVICES AND LAW ENFORCEMENT:

TACKLING AGRO-CRIME AFFECTING
ANIMAL HEALTH AND WELFARE

July 2020

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Background

Livestock, equids, wildlife, and companion animals across the world are at risk from various biological agents and other biothreats (of agro-terrorism, agro-warfare, or agro-crimes, depending on the intent). The World Organisation for Animal Health (OIE) defines such biothreats as ‘the accidental or deliberate release of a pathogen or toxin into a susceptible population’.

Parts of the world are at risk from agro-terrorism due to their vulnerability (susceptible human and animal populations with weaknesses in the capacity to detect and respond to a disease outbreak); to threats from criminal and terrorist groups and civil unrest; and the potential consequences of the deliberate release of a pathogen into an animal population (impacts on animal health, food security, public health, civil stability, livelihoods and economies). The veterinary and law enforcement communities both have important roles to play in reducing and tackling these threats.

Animals can be the targets or delivery mechanisms of agro-terrorism inspired by ideological, religious or political beliefs: for instance, deliberately releasing viruses, bacteria or other agents to cause illness or death in animals and, through them, to harm people, livelihoods and political systems.

Animals can also be the targets or objects of agro-crime, motivated mainly by the desire for monetary gain or revenge, leading to the deaths, illness or mistreatment of animals, potentially harming the health and livelihoods of their owners and handlers, and, more broadly, undermining public goods such as biodiversity (e.g. through the illegal wildlife trade), the rule of law and national security.

This workshop was part of a project initiated by the OIE, Food and Agriculture Organization of the United Nations (FAO) and International Criminal Police Organization (INTERPOL). The project, ‘Building resilience against agro-crime and agro-terrorism’, supported by the Weapons Threat Reduction Programme of Global Affairs Canada, aims to enhance cooperation and collaboration between the veterinary and law enforcement sectors and to build multisectoral capacities to respond to animal health emergencies caused by the intentional release of animal pathogenic biological agents.

The workshop focused on agro-crime and its effects on the health and welfare of animals, encompassing livestock, equids, wildlife, and companion animals. It was intended to contribute to the development of a roadmap to enhance collaboration and cooperation between the law enforcement and veterinary sectors to tackle agro-crime affecting animal health and welfare. The **specific objectives** for the workshop were to:

1. describe and put into context agro-crime affecting animal health and welfare
2. share experiences of dealing with agro-crime affecting animal health and welfare
3. identify challenges to the veterinary and law enforcement sectors being able to work together effectively and find possible solutions to those challenges
4. outline core elements of the proposed roadmap.

The expected outputs of the workshop included:

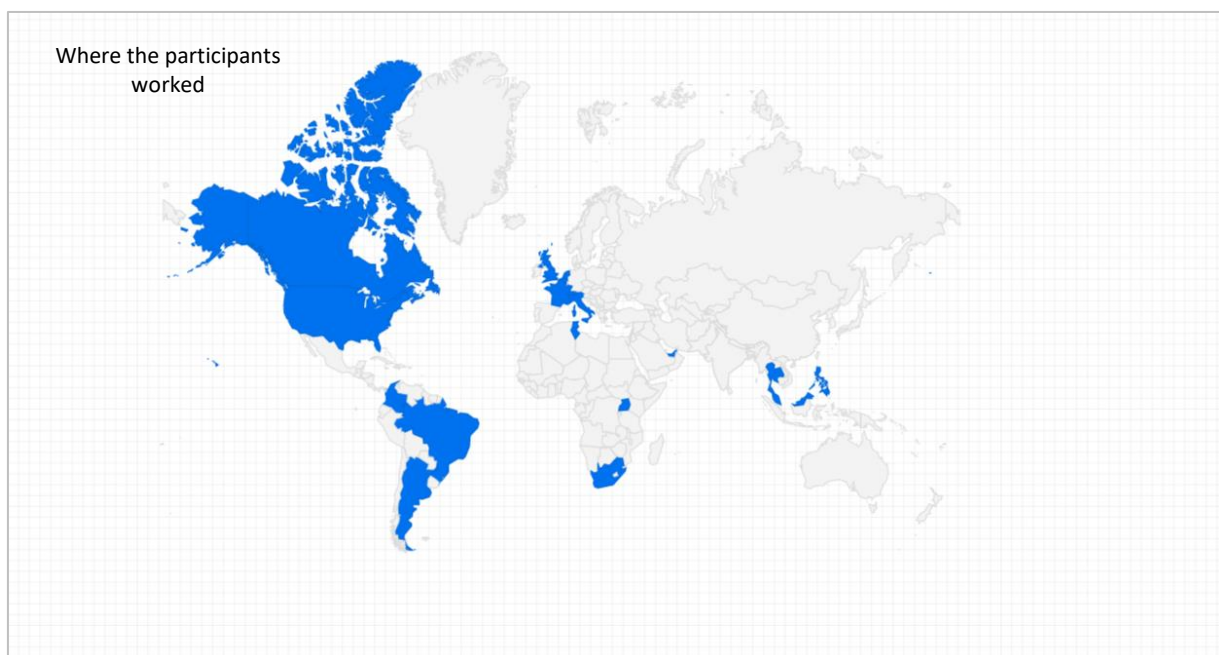
1. better knowledge and understanding of the risks of agro-crime
2. a stronger international network of veterinary and law enforcement experts working on agro-crime
3. a short roadmap outlining opportunities and methods to enhance collaboration in this area between the veterinary and law enforcement sectors.

The outputs of the meeting were also intended to inform the training and exercising phase of the project and will be presented during a future Global Conference on Animal Emergency Management.

The workshop agenda (see Annex 2) was split into two main segments:

1. Sharing experiences and lessons learned about animal agro-crime. After brief introductions, the facilitators explored what was meant by 'animal agro-crime' in the context of the project. Several short presentations and plenary interactions followed by group work gave participants the opportunity to share their insights and experiences, helping to develop a working understanding of the concept of agro-crime, including how and where it happens, how to recognise it, and its impacts. Participants also began to identify the critical 'hotspots' for collaboration between the veterinary and law enforcement communities.
2. Animal agro-crime collaboration for change. Drawing on cases that showed different forms of collaboration among the veterinary and law enforcement communities, participants worked on various goals and 'destinations' for more effective collaboration, formulating some core elements of the collaboration roadmap and setting out critical factors to reach these destinations.

Forty-seven participants from 17 countries attended, representing the animal health, public health and law enforcement communities (see Annex 1). The workshop took place virtually over three days, on 28, 29 and 30 July 2020. It was preceded by a brief exchange of e-mails, aimed at introducing the participants and agenda issues and thus increasing the effectiveness of this virtual time together.



Summary

As part of the OIE–FAO–INTERPOL Project on ‘[Building resilience against agro-crime and agro-terrorism](#)’, this virtual workshop focused on contributing towards the development of a roadmap to enhance collaboration and cooperation between the law enforcement and veterinary sectors, to tackle agro-crime affecting animal health and welfare. Through a mixture of presentations and discussions, it described and put into context such agro-crimes. Participants were able to share their experiences of dealing with agro-crime, identify challenges to the veterinary and law enforcement sectors being able to work effectively together and outline possible solutions to those challenges.

A **working definition** for ‘animal agro-crime’ was proposed from the discussions: *A deliberate or accidental criminal act or omission against, involving or impacting (whether directly or indirectly) animals¹, the inputs² used to raise them, or their products*. When deliberate, such crimes are motivated by financial or personal gain. They can harm or disrupt human, environmental, or animal health and welfare, food safety, food authenticity, economic and social activity, or national security and, when financially motivated, they often boost the activities of organised crime. Bio-crime is the threat or use of biological agents or toxins to harm humans, animals or plants motivated by personal reasons such as revenge, jealousy, or financial gain)³.

The key difference between an animal agro-crime and an animal agro-terrorist act is the motivation: crimes are driven by financial or personal gain, terrorist acts by ideology. Agro-terrorism which focuses on disrupting or destroying the agricultural sector is a subset of bioterrorism which refers to the *intentional release of biological agents or toxins for the purpose of harming or killing humans, animals, or plants with the intent to intimidate or coerce a government or civilian population to further political or social objectives*.

Participants identified a wide range of **types of animal agro-crime**, from small scale and local to widespread and driven by organised crime, whether accidental or deliberate. These have been initially categorised as follows:

- falsified veterinary and animal products
- animal welfare
- agro-terrorism
- food fraud
- non-compliance
- illicit wildlife use
- smuggling
- theft and poaching.

Participants also identified some overarching areas in which the **impacts of animal agro-crimes** are felt, as categorised below:

- human health
- livelihoods
- economies
- animal health
- animal welfare
- biodiversity
- reputation.

¹ By ‘animal’, the organisers include livestock, wildlife, exotic animals, equids, companion animals, and aquatic animals.

² Including veterinary products (such as pharmaceuticals, vaccines, and diagnostic kits for veterinary use), biocidal products or other products used in feed production

³ Adapted from <https://www.sciencedirect.com/science/article/pii/S0379073820302280?via%3Dihub>. Accessed 12/11/2020.

Participants identified some **motivations for more and better collaboration** among Veterinary Services and law enforcement. If the world is to be made safer and healthier:

- collaboration is more effective in countering animal agro-crimes
- combining expertise will better address the root causes of the criminal behaviour and not just the symptoms
- the two communities can reach further together
- combining forces ensures that epidemiological and enforcement investigations do not conflict with each other, but that the two communities can benefit from the complementarities between forensic and epidemiological investigations.

Constraints to this collaboration on animal agro-crime include:

- the competing aims and priorities of the two communities including available resources
- the lack of a shared understanding
- an absence of collaborative frameworks.

Drawing from the cases and discussions during the workshop, participants identified **nine areas in which collaboration** on agro-crime among law enforcement and Veterinary Services could be enhanced, as listed below:

1. advocacy
2. collaborative training and capacity development
3. collaboration mechanisms
4. communication and awareness
5. information and intelligence sharing
6. joint teams and operations
7. mutual understanding
8. relationship building
9. risk management.

Beginning with these discussions on the nature of animal agro-crime, and looking for opportunities for more effective collaboration between law enforcement and Veterinary Services to tackle it, participants sketched out some **promising directions** that could be part of a future roadmap:

1. better methods of collecting and exploiting evidence to tackle animal agro-crimes
2. sharing intelligence and enhancing intelligence assessment to counter animal agro-crimes
3. reducing the trade in falsified animal and veterinary products.
4. coordinating and harmonising efforts to tackle cross-border animal agro-crimes
5. increased attention by law enforcement and Veterinary Services to wildlife/environmental crimes affecting or involving animals
6. making animal welfare crimes a focus for collaboration between law enforcement and Veterinary Services.

Lastly there were several discussion points that did not feature in the workshop discussions but will be incorporated into the proposed roadmap. These include, and are not limited to, acknowledgement of extortion (including blackmail), deliberate release of a biological agent, and commercial sabotage. In addition, the synergy between agro-crime and other types of crime, for example trafficking of wildlife and their products, may be part of an organised operation that may also include weapons and drugs. Further elements of agro-crime will be identified and incorporated into the roadmap through the course of the project and in consultation with respective stakeholders of the OIE, FAO and INTERPOL.

Introductory session

Participants were welcomed by Dr Jean-Philippe Dop, Deputy Director General (Institutional Affairs and Regional Activities) of the OIE, and Adrien Sivignon, Coordinator of the Bioterrorism Prevention Unit of INTERPOL. Dr Dop and M. Sivignon each introduced the interests and expertise of their respective organisations in animal health and agro-crime and expressed their strong commitment to advancing the key points and ideas shared by the participants.

Also, at hand were Dr Fanny Ewann, specialised officer of the Bioterrorism Prevention Unit, INTERPOL, and Dr Daniel Donachie, OIE Project Officer for emergency and disaster preparedness.

Dr Ewann and Dr Donachie introduced 'Building resilience against agro-crime and agro-terrorism', the three-year project between the OIE, FAO and INTERPOL that aims to:

- build and strengthen multisectoral capacity to respond to agro-terrorism and agro-crime whilst aiming to build resilience against all animal health emergencies
- strengthen regional and international cooperation
- foster engagement of the veterinary and law enforcement sectors.

They presented the different phases of the project and some of the progress to date. A workshop was held at OIE HQ to share models, tools, and approaches to support the sustainable management of animal health emergencies⁴. This also included a dedicated session on the investigation and response to agro-crime which generated a lot of interest amongst experts at the workshop. In addition, a global vulnerability assessment on agro-terrorism and agro-crime was undertaken by the Institute for Infectious Animal Diseases, Texas A&M University, and a cost benefit analysis of investing in emergency preparedness was completed by the University of Liverpool. Both research studies will be published in a journal with the aim to advocate for sustainable investment in emergency preparedness and to inform fit-for-purpose capacity building activities for emergency management.

The project is now in the preparation phase which comprises this workshop; the refinement of some capacity-building tools to address emergency management and the creation of a relevant toolbox; OIE Performance of Veterinary Services (PVS) evaluation missions with a focus on emergency management; and cooperation between Veterinary Services and law enforcement; as well as FAO Surveillance Evaluation Tool (SET) and Laboratory Mapping Tool (LMT) missions that would include a biothreat module.

Participant introductions were made by e-mail correspondence immediately before the workshop. In addition, the opening session of the workshop included two short visual exercises for people to introduce themselves very briefly. The 'word cloud' image below illustrates the expertise that participants brought to the meeting.

⁴ https://www.oie.int/fileadmin/Home/MM/DD_Exploring_Innovative_Approaches_to_Improving_Sustainable_Management_of_Animal_Health_Emergencies.pdf

A working definition of agro-crime for the project

As part of the project's aim to clarify understanding of the crimes associated with animals, participants reviewed and improved a working definition that can be used to set goals and boundaries for the proposed collaboration roadmap.

During the meeting itself, the following **definition of agro-crime** was proposed by the organisers, and benefited from the immediate contributions of the participants:

An unlawful act or omission concerning animals or animal products that violates legislation, and has negative consequences on animal health, animal welfare, public health, food safety, food authenticity or national security

Further feedback showed that participants generally supported this definition, although they also suggested some changes and improvements.

To give a flavour of the discussion, below are some of the definitions provided by participants. An agro-crime is:

- an act which disrupts the security or economic capacity of a country or person
- any illegal activity affecting the agricultural sector or community – as defined by the applicable laws
- a crime affecting animals and human relations ... against livestock or humans in livestock production ... impacting agriculture
- a criminal attempt to profit from an animal welfare issue
- a crime related to animal health or welfare with the purpose of gaining money or any human benefit
- any agent, physical or chemical, that affects animal health, human health, and security
- an illegal activity against an animal which is detrimental to its health and welfare or that of people/owners ... that impacts human or animal health and welfare and the economy.

A key notion raised was **intent**, with several participants arguing that a definition should describe intentional acts leading to societal harm and impacting on animal health and welfare or food safety and plants. It is one that is 'carried out deliberately to the detriment of animal and human health'.

Intent and motivation are also important factors when attempting to 'fully understand the difference between deliberate harm (crime) and neglect (ignorance)'. Not all agro-crimes are deliberate and 'often only an investigation can determine whether it is accidental, deliberate or natural'.

A further element discussed was the difference between **terrorist** acts (100% deliberate) versus criminal acts (0–100% intended). The key difference is that: crime is driven by money or other personal motivation, terrorism is driven by ideology. Or, in other words, the motivation behind agro-terrorism is DISRUPTION: the motivation behind agro-crime is GAIN.

Differentiating between these is challenging. Participants thought that:

- while agro-terrorism would have a different intent, the activities of it would be similar to agro-crime
- the crimes can be the same, but the goal is different and is usually motivated by ideological, political reasons rather than for personal gain. Terrorist acts are usually looking at wider impacts on society or other targets and are dealt with by specific units and entail harder sentencing.

It was recommended that the definition must be scalable from minor welfare infringements through to potential pandemics.

In the discussion, it was suggested that the phrase ‘animals or animal products’ was too narrow and ‘veterinary products’ (meaning pharmaceuticals, diagnostic kits, vaccines) should also be included. Since it should be noted that ‘agro-crime’ involves a much wider scope than animals, for the purposes of this project, the term ‘animal agro-crime’ might help to provide clarity and focus.

Proposed definition

Taking all these comments into account, the following definitions are suggested for the project.

- Agro-crime: A deliberate or accidentally unlawful act or omission involving or impacting agricultural activities and products that violates applicable legislation. When deliberate, such crimes are motivated by financial or personal gain.
- Agro-terrorism: A deliberately harmful and unlawful act or omission involving or impacting agricultural activities and products that is motivated by ideological, political, or other societal or religious reasons.
- **Animal agro-crime: A deliberate or accidental criminal act or omission against, involving or impacting (whether directly or indirectly) animals⁵, the inputs⁶ used to raise them, or their products.** When deliberate, such crimes are motivated by financial or personal gain. They can harm or disrupt human, environmental, or animal health and welfare, food safety, food authenticity, economic and social activity or national security and, when financially motivated, they often boost the activities of organised crime.
- Animal agro-terrorism: A deliberately harmful and unlawful act or omission against, involving or impacting animals and their products, or any veterinary products used in their production, that violates applicable legislation and is motivated by ideological, political, or other societal or religious reasons. Such acts aim to disrupt economic and social activity or national security.

⁵ By ‘animal’, the writers include livestock, wildlife, exotic animals, equids, companion animals, and aquatic animals.

⁶ Including veterinary products (such as pharmaceuticals, vaccines, and diagnostic kits for veterinary use), biocidal products or other products used in feed production.

Understanding animal agro-crime and its effects

The first part of the workshop explored and aimed to better understand what ‘agro-crime’ means as it affects animal health and welfare. Several exercises, three presentations and a panel discussion (‘talk show’ exercise) were designed to accomplish this.

Animal agro-crime: illustrative cases

Laura Skippen (the Brooke: Action for Working Horses and Donkeys) explained how the donkey skin trade in Africa is driven by growing demand in China for ‘ejiao’, a gelatin produced from donkey skin and used in traditional Chinese medicine and cosmetic products. The legal trade is far exceeded by the illegal trade – which is associated not just with enormous declines in donkey numbers, but with cross-border smuggling, illegal and inhumane slaughter, trade in wildlife products and live animals, animal theft, disease spread through unregulated animal movement, and negative impacts on the livelihoods of donkey keepers. Actions are being taken to tackle the demand in China and to address the theft, welfare, and disease elements. Collaboration with law enforcement agencies is necessary to tackle the criminal aspects.

Francesco de Angelis (INTERPOL) introduced the work of Operation OPSON, which tackles illicit markets and the threat of potentially dangerous counterfeit and substandard food and drinks. He focused on organised crime activities motivated by economic gain that intentionally involve counterfeiting, falsified products and food fraud, and frequently spread pathogens (from smuggled animals) or foodborne diseases, thus posing public health, welfare, and economic threats. The two main goals of INTERPOL’s ‘Illicit Goods and Global Health Programme’ are to protect public health and fight organised crime – through awareness raising, capacity development and operations. Ways forward with the animal health community include enhanced joint investigative tools, increased attention to animal and foodborne disease threats (through animal smuggling, adulteration, and counterfeit products) and following the One Health approach.

Wansane Toanan (Department of National Parks, Wildlife and Plant Conservation, Thailand) illustrated how wild animal imports (zebra) can introduce a transboundary animal disease into a country. He explained how Thailand recently had an outbreak of African horse sickness, most likely due to zebra imported from South Africa. It is the first major outbreak of the disease outside Africa in 30 years. While no crime was committed, the case shows the unintended consequences of wildlife imports on horses and the need for greater inter-agency cooperation and harmonised import standards.

What are animal agro-crimes?

Participants identified a wide range of animal agro-crimes. Some may be small scale and local; others widespread and driven by organised crime; some are deliberate while others might be accidental; their legality differs across countries; and their perceived importance also varies. The various suggestions have been grouped into eight categories:

- Falsified products⁷: Medicinal, veterinary, or other products used in animal production, feeding or health that deliberately or fraudulently misrepresent their identity, composition, or source can pose significant risks to animal, public or environmental health.
- Animal cruelty and abuse: While not recognised as illegal everywhere, welfare issues can be criminal, they can be associated with human abuse, and they may be due to ignorance or tradition or can be deliberate.

⁷ These are not the same as ‘substandard’ veterinary products, which may simply fail to meet quality standards or specifications, or ‘unregistered or unlicensed’ veterinary products, which are marketed without proper evaluation or approval by regulatory authorities. ‘Counterfeit’ products may undermine intellectual property rights but not pose any particular animal health risks.

- **Agro-terrorism:** The deliberate release of animal diseases or poisoning animals or their feed/water may be done for private gain or revenge; however, such actions are more likely to be part of a campaign driven by an ideology. A variation of this is a hoax intended to disrupt economic or other activity, such as a threatened foot and mouth disease (FMD) infection in New Zealand that was a hoax.
- **Food fraud:** Many crimes are associated with selling falsified animal products and food products, including those that are contaminated, unsafe, carry diseases or otherwise pose risks to human health. A further important dimension is the risk to the reputation and business of legitimate producers whose products are undermined by these actions.
- **Non-compliance:** Many crimes are the result of deliberate or accidental non-compliance, such as contaminating the environment, breaching biosecurity, importing unsafe products, unsafe disposal of carcasses, not following disease control or animal movement restrictions, or failing to report diseases.
- **Illicit wildlife use:** Beyond the wider smuggling and illicit trade in wild animals and their products, some activities, like bushmeat consumption or captive breeding of wild species, may be crimes, depending on the jurisdiction.
- **Smuggling:** There are many criminal examples of the illegal trade and trafficking in animals and wildlife and their products, including for use in traditional medicine (ivory, bushmeat, donkey skin, lizard skin, etc.), illegal imports of animals that bypass sanitary inspections and may carry diseases, illegal exports of animals, falsified documents, etc.
- **Theft, poaching and other illegal activities:** Animals, including pets, are often the target of economically driven crimes, in which they are stolen, illegally hunted, damaged, or used in racing and fighting (gambling). The criminal status varies by jurisdiction.

What impacts do animal agro-crimes have?

While specific crimes each have their own risks and impacts, participants did identify some overarching impacts of animal agro-crimes that warrant attention. The various suggestions have been grouped into six categories, below. When asked to say which impacts were most important to them, the categories most often mentioned by the participants were human health, economic cost, livelihoods and animal health.

- **Human health:** Such crimes can increase the risks to public health from unsafe or substandard food and other animal products.
- **Economics:** Such crimes are costly to tackle and provide undesirable income for criminals. Mostly, though, they can have significant adverse economic consequences and effects on farmers, local communities, value chains and markets, consumers, jobs, investment, etc. When such a crime leads to or accelerates, for example, the spread of a disease, the consequences for countries and communities can be severe in terms of trade bans, restricting people's movements, mass slaughter or culling of animals, etc.
- **Livelihoods:** Such crimes may undermine the stability and sustainability of people's livelihoods, taking away productive assets and jobs and reducing opportunities.
- **Animal health:** Such crimes can harm the health status of an animal or herd, leading to mortality or loss of productivity, with potentially significant follow-on effects for the people and value chains that depend on those animals or, in the case of a country that may lose a disease-free status, export markets may be closed.

- **Animal welfare:** Such crimes can cause unnecessary suffering to animals, so that they experience stress and pain – which we humans consider inhumane – but this abuse or absence of care may also lead to a less productive animal or substandard animal product and damage to consumer confidence, reputation and more (emotional impacts, for example).
- **Biodiversity:** Such crimes, especially those involving wildlife, can seriously harm biodiversity, deplete animal resources, destroy animal habitats, reduce animal genetic resources and potentially introduce undesirable invasive species. Reducing biodiversity has a negative impact on natural environments. It can also harm economies and livelihoods that rely on biodiversity, such as wildlife tourism.
- **Reputation:** These criminal acts can often damage the reputation of an operator, company, agricultural sector and even a government.

Animal agro-crime: the big issues

Alongside the case presentations, a short panel discussion or ‘talk show’ was held, in which three participants explored their views on the priority issues around animal agro-crime and on the need for collaboration between law enforcement and Veterinary Services.

Jim McColm (World Customs Organization) explained that Customs Services focus on revenue avoidance/smuggling issues, as well as protecting society at the national and international level; for example, by combating biothreats. Agro-threats are often a low priority and so responses are often *ad hoc* and driven by emergencies. Tackling animal agro-crime requires that more attention is paid to understanding and mitigating risks in the whole supply chain, so that targeting, and surveillance of consignments is informed by risk assessments. Since Customs agencies do not normally fully understand the biological risks of illicit trafficking involving animals and their products, these assessments and the indicators that are used must be developed in liaison with Veterinary Services and public health agencies.

Steve Goldsmith (FBI) set out the different priorities for state and federal agencies in the United States of America (USA); e.g. the FBI is not involved in animal welfare as this would be something for the United States Department of Agriculture (USDA) or state Veterinary Services at the local level. He highlighted the threats (and hoaxes) that use biological agents and disinformation associated with disease outbreaks to undermine governments or to coerce companies/governments (for financial or ideological gain). He emphasised agro-terrorism threats, often by radicalised individuals, that aim to create fear and distrust and discredit government agencies. He also emphasised that such agro-terrorist threats are ideologically driven – as opposed to agro-crimes, which are more about financial gain. Other threats that he has encountered include illegal smuggling of horses and other animals. The ‘double whammy’ or twin blow is that these animals often carry infectious diseases that can cause enormous economic damage if they spread. He noted that such smuggling is often associated with trafficking weapons and humans, so an animal agro-crime is often part of a lethal cocktail of threats.

Gary Flory (Virginia Department of Environmental Quality) outlined three main elements essential to tackling animal agro-crime. First, there must be strong relationships between the law enforcement and animal health communities. Relationship building underpins everything. Second, both communities must develop a mutual understanding of each other, their roles, responsibilities, priorities, and mandates across prevention, preparedness, and response. The work of the two sectors is very different so joint awareness, education and training are essential. Third, the two communities must together consider the various range of sectors affected and/or involved in the response to agro-crime in an integrated way to understand the impacts of agro-crime and where to focus their efforts. While ‘no one size fits all’, the law enforcement and Veterinary Services communities should start with relationships and work backwards across different sectors.

Goals for animal agro-crime collaboration among Veterinary Services and law enforcement

Drawing on earlier discussions about the nature of animal agro-crime and opportunities to tackle it more effectively through collaboration between law enforcement and Veterinary Services, workshop participants sketched out some promising directions that could be part of a future roadmap. The six priority areas identified were:

1. Better collection and exploitation of evidence to tackle animal agro-crimes

This priority area encompasses the roles and responsibilities of Veterinary Services and law enforcement when collecting, analysing, sharing, and using evidence for prosecution, as well as their particular strengths and needs in this field. The changes that participants want to see are:

- raised awareness about requirements of forensic investigation including chain of custody;
- formalised cooperation between law enforcement and Veterinary Services within the framework of agro-crime investigations – for example, cooperating in the drafting of appropriate legislation, making offences simple to prove, having appropriate penalties, etc.

2. Enhance intelligence assessment and sharing to counter animal agro-crimes

This involves gathering and analysing information through joint risk assessments for animal agro-crime prevention and response. The change that participants want to see is:

- the use of new technologies and innovation to jointly analyse big data and to produce joint assessments of information.

3. Reduce the trade in falsified products linked to animals

Falsified veterinary products can impact human health and animal health and welfare. The changes that participants want to see are to:

- define the situation before proposing changes (including current activities, defining problems, and identifying current resources). It is useful to understand whether there is legislation that already exists or not;
- identify opportunities for collaboration on a national and international level (including attacking the root causes of the trade and prevention, in addition to enforcement and prosecution).

4. Coordinate and harmonise efforts to tackle cross-border animal agro-crimes

Crimes often take place at or across international borders. The changes that participants want to see are:

- enhancing the exchange of information, e.g. through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) or the International Consortium on Combating Wildlife Crime (ICWC), INTERPOL and the World Customs Organization;
- efficient (not cumbersome or time-consuming) global mutual assistance;
- coordinated actions, legislation, and sanctions among neighbouring governments.

5. Increase attention by law enforcement and Veterinary Services to wildlife/environmental crimes affecting or involving animals

This area encompasses crimes against wildlife and crimes within or against the environment that can affect animals. Collaboration is needed, using a 'One Health' approach. The changes that participants want to see are to:

- break down the silos. Those who deal with wildlife cannot ignore the demand which causes crimes such as trafficking or smuggling, and do not necessarily always see the associated crime, whereas those in law enforcement do not measure the impact of these crimes on wider animal health and welfare, or human health;
- secure the political will and increase the level of awareness of the wider impact of animal agro-crimes on the community, which is not currently a law enforcement priority.

6. Make animal welfare crimes a focus for law enforcement and Veterinary Services collaboration

Animal welfare investigations should become a focus for law enforcement and Veterinary Services cooperation. The changes that participants want to see are to:

- better understand the problem from both Veterinary Services' and law enforcement perspectives;
- ensure that these crimes are covered by legislation.

Enhancing collaboration between law enforcement and Veterinary Services to tackle animal agro-crime

The second part of the workshop drew on the earlier discussions about the nature and impacts of animal agro-crime to explore and identify drivers and potential opportunities and methods to enhance collaboration between the law enforcement and Veterinary Services communities. Again, several exercises and four presentations were designed to facilitate this.

Reasons to collaborate

While it may seem obvious that collaboration is a good thing, as discussions indicated, it does not happen by itself and identifying the key drivers and motivations for more and better collaboration is an essential first step, one that is normally part of the process of building mutual understanding and developing shared agendas. The motivations and justifications for collaboration advanced by the participants are summarised below.

Why collaborate?

Participants felt that collaboration was vital ‘for a safer and healthier world’ – almost a motto, which captures what the two communities bring to the public good.

Participants also suggested that collaboration was important to collectively better understand the existing risks and threats, to share multiple points of view, and to exploit complementary resources, intelligence and expertise while learning from each other.

The following were proposed as important elements of the value of collaboration:

1. that collaboration is more effective in countering animal agro-crimes
2. that combining expertise will better address the root causes of this criminal behaviour and not just the symptoms
3. that the two communities can reach further together (veterinary work is often transboundary, while police are more territorial; the powers of veterinarians are more limited than those of the police)
4. combining forces ensures that epidemiological and enforcement investigations do not conflict.

Collaboration between institutions and actions to tackle animal disease threats in Colombia

As a bridge between the two thematic sessions, a case from Colombia illustrated enhanced collaboration among Veterinary Services and law enforcement agencies to prevent the spread of FMD through the illegal importation of animals.

Recognising the economic threat to Colombian livestock exports if the country’s herds were found to have FMD, the national Veterinary Services and law enforcement agencies formed a strategic alliance comprising the Instituto Colombiano Agropecuario (Colombian Agricultural and Livestock Institute), Dirección de Gestión de Policía Fiscal y Aduanera de Colombia (Fiscal and Customs Police), Instituto Nacional de Vigilancia de Medicamentos y Alimentos (Colombia National Food and Drug Surveillance Institute), and the Dirección de Impuestos y Aduanas Nacionales (National Directorate of Taxes and Customs).

The alliance set up joint actions, communication mechanisms and combined police/veterinary checkpoints in border zones. It aimed to build on the complementary roles



of the agencies, not only using the powers of the ICA to seize the imported animals but also using police powers to tackle the criminal groups that drive this smuggling.

Some key elements highlighted by the speakers included:

- setting up agreements between institutional bodies to prevent and control smuggling
- establishing a joint procedure for direct seizure, apprehension, and forfeiture of the smuggled animals
- controlling animal movements
- developing and communicating technical and procedural advice for effective control
- using drones for surveillance
- criminalising illicit activities such as clandestine slaughterhouses
- focusing on the border regions of the country.

The case stimulated rich discussion and reflection among the workshop participants, who identified lessons for broader application.

- **Motivation drives collaboration:** Shared high-priority objectives facilitate joint action. In this case, a strong economic factor (animal exports and trade) meant that an animal health issue became important to law enforcement and everyone worked together.
- **Potential risk versus criminal value:** Recognising the potentially enormous risk that FMD spread posed to the Colombian economy drove collaboration and action. The actual monetary value of the smuggled animals would not normally be sufficient to trigger such effort. When determining punishment for such crimes, the potential impacts of risky behaviour must be considered, as well as the value of individual animals or herds that may be affected by the agro-crime under scrutiny.
- **Complementary expertise:** This integrated operation made effective use of the complementary powers and technical expertise of law enforcement agencies and Veterinary Services, as well as shared resources. Mutual and inter-agency training facilitates exploitation of this expertise.
- **Relationships matter:** Pre-existing relationships between law enforcement and Veterinary Services are key. Such relationships cannot be developed overnight and thus investments must be made into the initiation and maintenance of these relationships before crises occur.
- **Establish understanding and agreements:** It is important to develop agreements or memoranda of understanding (MoUs) to define each agency's roles, responsibilities, capabilities, and procedures for reporting suspicious or unusual incidents, as well as any key indicators or triggers that should lead to action.
- **Public messaging and awareness:** The public need to be educated on the consequences of animal smuggling (including its effects on animal and public health, the environment, the criminality behind it, etc.) and their role in preventing such crimes.
- **Awareness raising:** Educating judges, prosecutors, and the wider justice system on the risks of agro-crime helps them to understand the significance of these issues.
- **Regional dimensions:** Regional trade in animal products (across national borders) is an important focus for tackling agro-crime, although national law enforcement organisations often lack the resources and awareness to address these issues. International collaboration is especially important when dealing with transboundary animal diseases.
- **New technologies:** Innovative technologies, such as surveillance drones, are useful tools at border checkpoints.

Collaboration between Veterinary Services and law enforcement: examples

Henri Fournel (INTERPOL) described how the environmental security programme of INTERPOL works with partners to tackle wildlife-related crime. It works at the national level to bring relevant agencies together through National Environmental Security Task Forces (NESTs); at the international level, it tackles the full supply chain, from source, during transit and to destination countries, disrupting the transnational networks involved in environmental crime. Joint operations are at the core of these efforts, requiring information sharing, will, capacity and awareness.

Appropriate inter-agency mechanisms have important roles. The NESTs, for example, gather relevant stakeholders, share information, prioritise criminal wildlife cases, assign responsibilities and ensure appropriate follow-up and liaison. Joint operations, such as those between Customs and police agencies, for example, aim to detect and disrupt illegal trade in wildlife, identify gaps in intelligence that can be filled through information sharing and targeted operational activity, and create public awareness around such illegal trade.

Freda Scott-Park (of the Links Group, which raises awareness of the link between the abuse of people and animals) and **Mike Taggart** (of the North Wales Police, United Kingdom) explained the 'One Welfare' concept and the correlations between animal and (human) domestic violence, abuse and cruelty. They highlighted the importance of veterinarians who see signs of animal abuse to also look out for potential domestic abuse; and for law enforcement agencies investigating domestic abuse to look out for animal abuse. As the American Humane Association states: *When animals are abused, people are at risk; when people are abused, animals are at risk*. They showed how multi-agency support, training and work are important mechanisms to help the various actors get better and more confident at recognising abuse – which is often very challenging on both the emotional and intellectual level – and knowing where to find support to tackle it.

Paolo Zucca (Friuli Venezia Giulia Autonomous Region, Italy) and **Giulio Meddi** (International Police Cooperation Centre of Thörl-Maglern, Italy) showed how a 'bio-crime model' of cross-border cooperation among veterinary public health, justice, law enforcement and Customs authorities can tackle the illegal animal trade and bioterrorism and prevent the spread of zoonotic diseases. The model comprises a strong cooperative network among public bodies, together with a One Health programme in schools; training for law-enforcement staff; a bio-crime alert system for law enforcement, Veterinary Services, justice and Customs agencies; and a bio-crime centre to provide veterinary medical intelligence.

Critical issues in ensuring the effectiveness of this inter-agency and cross-border collaboration include the following:

1. communication needs to be fast, and both vertical (within agencies) and horizontal (across agencies)
2. attitudes and perceptions are crucial, since the severe health and economic consequences of these crimes are often underestimated
3. training is essential to manage the specific biological risks related to the illegal animal trade.

Constraints to collaboration on animal agro-crime

While recognising the strong case for better collaboration, participants also identified some of the (interlinked) constraints that hold collaboration back.

- **Aims and priorities:** The two communities may have very different visions, agendas and understandings of the threat and the need to act together. On the surface, why would animal health and welfare be a high priority for Customs or police; and why would organised crime, food fraud or illicit goods be a priority for veterinarians? Other priorities are likely to take up more attention and effort. Without policy commitment, the necessary resources will not be provided.
- **Shared understanding:** The two communities have very different skill sets (collecting evidence versus disease control; forensics versus epidemiology, etc.), they use different terminology, they operate under different legal frameworks with different sanctions and they may not be aware of each other's roles and responsibilities. They tend to have incomplete pictures of the issues and their impact. In any number of situations, veterinarians may not recognise a crime scene and law enforcement may not perceive a health threat.
- **Collaborative framework:** Unless there has been some prior operation or emergency, there may be no channels or platforms to work together, no protocols or guidance setting out mandates and roles, no formal agreements or relationships, no shared understanding about information and intelligence sharing. Moreover, concerns about 'overstepping authority' may hold these communities back from working together.

Promising ways to collaborate on animal agro-crime

Drawing on the previous cases and discussions, participants identified nine areas in which collaboration between law enforcement and Veterinary Services could be enhanced. Subject to further assessment, these will be candidates for inclusion in the proposed roadmap to better collaboration. The individual areas overlap and complement each other.

1. **Advocacy:** Little progress can be expected unless the case for enhanced collaboration on agro-crimes is made and communicated to policymakers and the public. It is important to increase the understanding of these target groups of the impacts that agro-crimes can have – and why prevention and control are needed. This includes demonstrating their importance for economic, social and health reasons to achieve 'buy-in' from policy-makers and the public; impact studies; capacity development on the importance of healthy and well-cared-for animals; communication materials with targeted messages; simulation exercises; awareness raising; sharing successes and experiences; and sensitising key groups so that they understand the risks of not coordinating activities between law enforcement and veterinary authorities.
2. **Collaborative training and capacity development:** Joint capacity building, preparedness and training are needed at all levels and in key locations (at borders, near biodiversity hotspots, etc.) for law enforcement and Veterinary Services staff. This training and development should cover such areas as risk assessment, forensic skills, legislation, threat recognition and supported joint interactive and 'hands-on' practical training, common educational and learning resources, and common operating procedures. Perhaps key critical competencies can be defined at the national level for agro-crime prevention and control.
3. **Collaboration mechanisms:** Multi-sector/multi-disciplinary, joint inter-agency working groups or other mechanisms and platforms at the local, national, regional and international level can reinforce and facilitate interaction and the sharing of expertise among all the various agencies. Also vital are hosting tools for rapid notification and information and intelligence sharing, regular meetings and mechanisms for triggering joint operations.

4. Communication and awareness: As well as advocacy to wider audiences, and mechanisms to enable collaborative work, there is also a widespread need for more general communication and awareness raising. This can facilitate engagement and information exchange between law enforcement and Veterinary Services. It also helps to inform the wider public and foster good connections and understanding, it can disseminate success stories and it reinforces cooperation among countries.
5. Information and intelligence sharing: Targeted and rapid gathering, analysis and sharing of data, evidence, information, and intelligence between the two communities is essential. These activities are based on good communication, mutual understanding, and collaboration, and reinforce joint operations and teamwork. Information and intelligence sharing may include shared databases, enhanced data sharing, joint analysis, alerts, notifications, and a focus on timely and sensitive information, using big data and other digital applications.
6. Joint teams and operations: Alongside enhanced collaboration, learning and information exchange, veterinarians and law enforcement agencies should find ways to work together, from those in the field to those at top levels. This can be done through inter-agency working groups, joint operations, joint crime-scene and outbreak investigations, joint root-cause analysis, by having police help to enforce animal movement controls recommended by the veterinary sector, through liaison staff, etc.
7. Mutual understanding: Underpinning all other actions, it is vital that the different groups understand one another, as well as their different needs (for evidence, for example), and find ways to formalise common elements. Developing agreed policy and standard operating procedures, lists of triggers or indicators to notify one another, MOUs, data-sharing agreements, guidelines, common terminology, shared and harmonised procedures; arranging regular meetings and designated times for interaction at all levels; mapping the various types of agro-crime (and their impacts); and tackling legislative differences across borders are potential activities.
8. Relationship building: Constructive and productive relationships through engagement, conversations and pilot joint ventures will maximise opportunities for effective and timely collaboration, information exchange and mutually agreed actions.
9. Risk management: Conducting joint risk assessment is a central activity that runs through all these areas. It provides the basis for joint operations and priority setting; it can be used in advocacy; it calls for multiple perspectives; and it requires agreed criteria and real-time, robust information and data; as well as trained staff, and agreements on sharing and using the results.

These crimes are also expanding online and gaps in collaborative investigation and surveillance need to be overcome by developing stronger digital capabilities and associated evidence-based investigations.

Starting points for collaboration

Alongside the discussions of collaboration methods and approaches, participants shared their ideas and experiences on 'where to start', to get collaboration under way.

Is legislation the starting point and enabler for law enforcement and Veterinary Services collaboration? Without such policy and legislation at a national level, how can this collaboration be initiated or facilitated?

Responses suggested that a high-level political decision to collaborate is needed. 'The government must decide to start to work in a coordinated way.' Then, after meetings and interactions, the legal framework may be established. Necessary MOUs between agencies could also be agreed. Top-level agreement is essential for accountability.

Second, at a more practical level, who should lead the investigation in the case of agro-crime – the veterinarian, an epidemiologist, the police, a special task force?

Responses suggested that law enforcement should lead any criminal investigation that may lead to prosecution, with veterinarians focusing on animal disease and welfare aspects. Animal health expertise must be called upon in cases where the law enforcement sector is not familiar with animals. It is also important that veterinarians recognise the signs of agro-crime and know how and when to contact law enforcement.

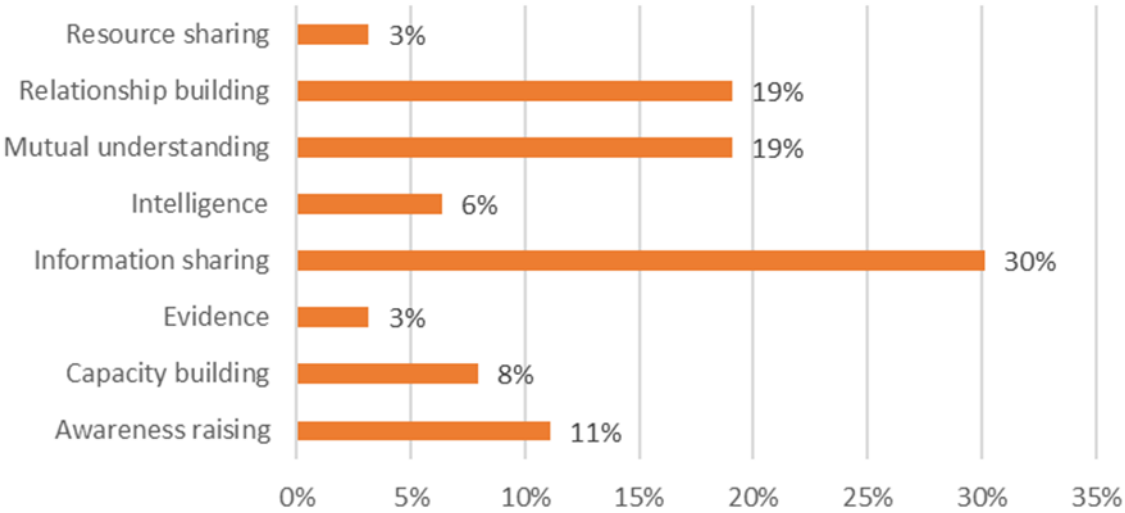
The diversity of actors involved was highlighted by examples from Tunisia and France. In Tunisia, the system relies on collaboration among Customs, the military sector, epidemiologists, and Veterinary Services. So, the law enforcement aspects are mainly implemented by the military, together with the Ministry of Agriculture. In France, such legal procedures are supervised by a prosecutor or sometimes a judge. The prosecutor and/or judge decides which law enforcement agency will investigate a case (because it will have the necessary judicial powers). They will often ask the veterinary investigation unit, or local Veterinary Services, to help by asking the right questions and to seize the right products or animals.

These examples suggest that the actors involved and the steps to build effective collaboration will need to be adapted for different countries and judicial systems.

Collaboration elements for a roadmap

Using some of the ideas that emerged in the discussions, participants voted in a poll for the potential roadmap elements they considered most crucial. Discussion suggested that these results are not robust; however, they do reflect the main topics that emerged over the three days.

Most critical elements of successful collaboration to prioritise in the roadmap:



Next steps and closing

The organisers thanked participants for their keen participation. The immediate next steps are to:

- finalise a short workshop report
- draft a roadmap towards enhanced collaboration on animal agro-crime
- facilitate brief e-mail conversations on project activities that should be followed up.

The meeting was closed with brief words of appreciation by Kabir Bhatia (Global Affairs Canada), Jean-Philippe Dop (OIE) and Adrien Sivignon (INTERPOL).

Three short reflection exercises collected some final feedback from the participants

Which is your first action to improve veterinary–law enforcement collaboration on animal agro-crime?	One piece of advice for the project team going forwards ...
<ul style="list-style-type: none"> • Increase understanding of the larger impacts of agro-crime • Training on the importance of animal health • Joint training workshops • Joint training at the local level • Develop and share common educational resources with purpose and action • Greater communication and working together in the field, not just at the top levels • International collaboration, especially with neighbouring countries • Share success stories • Awareness training for both veterinarians and law enforcement personnel • Build a strategy of communication • Improve communication and sharing of information and data • Develop inter-agency joint working groups at the local, national and state levels. Define roles and authorities. • Hold a high-level meeting to sign up to MOUs and concrete measures for cooperation • Let public officials and law enforcement personnel meet on a regular basis, including officers working in the field, not only top management • Keep talking • Start building the relationship and facilitating discussions and translate that to the national level • Connect with relevant agencies 	<ul style="list-style-type: none"> • Add agro-terrorism concepts • Write a good report and follow it up with more workshops • Future vision in a fast-changing environment • Sustain engagement • Prioritise areas that have the highest risk for and the biggest impact on reducing animal agro-crime • Follow-up consultations • Identify concrete actions to move forwards with initiatives to respond more effectively to agro-crime • Find good partners • Create clear roles, responsibilities and advice for law enforcement and Veterinary Services • Follow up with more workshops/groups on different aspects of agro-crime • Share success stories • Organise a practical session • Collaborative training and education • Focus on the legal frameworks • Implement this concept at the national level throughout the world • Keep working together! More field training • Simulation exercises • Policy-making

Reflection: how will you describe this workshop to your colleagues?



Annex 1: Participants

- Department of Livestock Development, Thailand
- Department of Veterinary Services, Malaysia
- Department of National Parks, Wildlife and Plant Conservation, Thailand
- Bureau of Animal Industry, Philippines
- Uganda Police Force, Uganda
- Onderstepoort Veterinary Institute, South Africa
- Ministère de la Défense, Tunisia
- Directorate of Veterinary Services, Tunisia
- Virginia Department of Environmental Quality, USA
- Michigan State University, USA
- Amity University, United Arab Emirates
- United States Department of Justice Federal Bureau of Investigation (FBI), USA
- Federal Police, Brazil
- Instituto Colombiano Agropecuario, Colombia
- National Police of Colombia, Colombia
- United Nations Office on Drugs and Crime (UNODC)
- Safe Supply of Affordable Food Everywhere
- North Wales Police, United Kingdom
- Links Group, United Kingdom
- National Veterinary and Phytosanitary Investigation Unit, France
- Central Directorate for Health, Social Policies and Disabilities, Italy
- Belgium Federal Police, Belgium
- Wildlife Forensics Academy, Netherlands
- The European Commission for the Control of Foot-and-Mouth Disease
- Brooke
- World Customs Organization
- WHO
- OIE
- INTERPOL
- FAO
- Global Affairs Canada

Annex 2: Agenda

DAY 1- TUESDAY 28 JULY		
13:45	Optional – Zoom platform introduction	Facilitation team
14:00	Technical check-in and guidelines	Facilitation team
14:05	Welcome remarks	Jean-Philippe Dop (OIE) and Adrien Sivignon (INTERPOL)
14:15	Objectives, agenda, process, icebreaker/introductions	Facilitation team
14:30	Building resilience against agro-crime and agro-terrorism - Project Overview	Introduction to the project by Daniel Donachie (OIE) and Fanny Ewann (INTERPOL)
14:45	Agro-crime and animal health: what are we talking about, and why does it matter for animal health?	Group exercise
15:00	Agro-crime and animal health: Illustrations 1. Agro-crime and livestock health – an NGO perspective: Laura Skippen (the Brooke) 2. Illicit Markets Operation Pangea - Francesco de Angelis (INTERPOL) 3. Animal imports and animal disease control in Thailand - Wansane Toanan (Department of National Parks, Wildlife and Plant Conservation, Thailand)	3 short framing presentations
15:35	Agro-crime and animal health: How and where it happens, how to recognise it, and its impacts	Group exercise
16:00	Short break	
16:10	Agro-crime and animal health round-up	Short plenary check-in
16:15	Agro-crime and animal health: the big issues to resolve/tackle [through collaboration] Talk show participants: Steve Goldsmith; Gary Flory; James McColm; Philippe Cano	Talk show
16:35	Agro-crime and animal health: collaboration ‘hotspots’	Group exercise
16:50	Check-in; prepare for day 2	Facilitation team
17:00	Close	

DAY 2- WEDNESDAY 29 JULY		
14:00	Check-in and process/agenda update	Facilitation team
14:10	Veterinary services-law enforcement collaboration: Case from Colombia	Short framing presentation
14:20	Lessons and insights from the Colombia case	Group exercise
14:50	Short plenary check in	Facilitation team

DAY 3- THURSDAY 30 JULY		
14:00	Check-in and process/agenda update	Facilitation team
14:15	Reducing and controlling agro-crime in animal health	Group exercise
14:50	Introduction: A collaboration 'roadmap' to reduce and control agro-crime and animal health	Facilitation team and organizers
15:00	<p>Collaboration between Veterinary Services and law enforcement: Illustrations</p> <ol style="list-style-type: none"> 1. Wildlife related crime: Henri Fournel (INTERPOL) 2. The Links Group: Freda Scott-Park (Links Group) and Mike Taggart (North Wales Police, UK) 3. Biocrime Project: Paolo Zucca (Friuli Venezia Giulia Autonomous Region, Italy) and Giulio Meddi (International Police Cooperation Centre of Thörl-Maglern, Italy) 	3 short framing presentations
15:35	Collaboration between Veterinary Services and law enforcement: challenges and solutions	Group exercise
16:00	Short break	
16:10	Collaboration between Veterinary Services and law enforcement: round-up	Short plenary check-in
16:15	Key elements of a collaboration 'roadmap' to reduce and control agro-crime and animal health	Facilitation team and organizers
16:45	<p>Wrap up and next steps</p> <p>Closing remarks</p>	<p>Facilitation team and organizers</p> <p>Kabir Bhatia (Global Affairs Canada), Adrien Sivignon (INTERPOL) and Jean-Philippe Dop (OIE)</p>
17:00	CLOSE	