

**Meeting of the States Parties to the Convention  
on the Prohibition of the Development,  
Production and Stockpiling of Bacteriological  
(Biological) and Toxin Weapons and on Their  
Destruction**

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**2019 Meeting**

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**Meeting of Experts on Assistance, Response, and Preparedness****Geneva, 6-7 August 2019**

Item 9 of the provisional agenda

**Exploration of means to prepare for, respond to and render  
assistance in case of the possible hostile use of biological agents  
and toxins against agriculture, livestock as well as the natural environment**

**An integrated approach to preparedness, detection, and  
response to agricultural threats: The experience of the United  
States**

**Submitted by the United States of America**

*Summary*

Agriculture, livestock, and the natural environment are constantly threatened by naturally occurring biological agents, toxins, and pests, yet not all biological threats to this sector are natural. Deliberate use of a biological agent, toxin, or pest against agriculture, livestock, or the natural environment could severely affect health, national economies, and global markets. The United States has worked diligently to put into place measures and practices that allow our nation to be prepared for, and ready to respond to, a biological event; whether from a natural process or a deliberate attack. These measures include a system of surveillance and laboratory networks, modes of communication and collaboration, and training for investigations. The United States has also provided assistance to the international community directly to partner nations and through international organizations for capacity building, prevention, preparedness and response to biological events.



## I. Introduction

1. The United States places great importance on the protection of our agriculture, livestock, and natural environment from naturally occurring and intentional threats, including the possible hostile use of a biological agent. Agriculture, including livestock, is not only a critical economic sector, but provides for a basic human need: food. Disease outbreaks and invasive pests in agriculture can have impacts including food shortages, food insecurity, economic losses for farmers, increased commodity prices, and market crashes. The primary threats to agriculture, whether plants or animals, are natural rather than deliberate in origin. However, the threat of deliberate attack must also be considered: such attacks might be intended to cause economic damage to a target, or even serve as a means of delivering a biological agent to individuals. Historically, several state-level biological weapons programs included work on anti-crop or anti-animal agents, including the development of means for delivery.

2. Measures used to defend against a naturally occurring outbreak can, to a significant extent, also be used to defend against a deliberate threat. The United States uses a system of surveillance, diagnostics, and forensics to enhance our ability to correctly determine, diagnose, and attribute an event to its initial source, in order to prevent further spread and hold perpetrators accountable. The United States routinely monitors and addresses naturally-occurring threats, as well as assesses the risk of deliberate ones, working across agencies to share intelligence and threat information in order to forecast intentional and deliberate acts and understand potentially threatening actors' capabilities. Efforts to prepare for, respond to, and render assistance in the case of a possible hostile use of biological agents and toxins against agriculture or livestock should build upon, and be closely integrated with, prevention, response, and assistance capacities for natural events. This paper provides a brief summary of some key programs and activities that the United States has established over time to address this threat.

## II. The Importance of Agriculture

3. The United States is dependent on agriculture. Agriculture and related industries provide over 21.6 million full- and part-time jobs in the United States, which is over 11 per cent of total U.S. employment. As of 2017, agriculture, food, and related industries contribute \$1.053 trillion U.S. dollars (USD) to the Gross Domestic Product (GDP), which equates to a 5.4 percent share. Farms alone contribute around 1 percent to the U.S. GDP. The United States has 2.05 million farms, 88.8 percent of which are considered small (gross cash farm income less than \$350,000 USD). In 2017, the United States processed nine billion chickens, 32.2 million cattle and calves, 241.7 million turkeys, 2.2 million sheep and lambs, and 121 million hogs. The United States has almost 400 million acres of cropland, over 16 percent of the U.S. landmass.<sup>1</sup> These farms, animals, and plants are necessary for both the health and economic survival of the United States, which demonstrates the need to protect them from biological threats.

4. Not only are the health of the people and the economy of the United States dependent on our agricultural sector, but the United States is the largest exporter of food in the world, exporting around 25 percent of our production to destinations on every populated continent. Annual food exports in the United States are valued at around \$140 billion USD. The second ranking country exports around 35 percent less<sup>2</sup>.

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<sup>1</sup> United States Department of Agriculture Economic Research Service  
<https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy.aspx>  
<https://www.ers.usda.gov/data-products/major-land-uses/major-land-uses/#Summary%20tables>  
<https://www.ers.usda.gov/data-products/livestock-meat-domestic-data/>

<sup>2</sup> <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/agricultural-trade/>

5. Recognizing the vulnerabilities in the food and agriculture sector, the United States has adopted multiple policies at the national level. President George W. Bush released Homeland Security Presidential Directive (HSPD) 7, which recognized food and agriculture as critical U.S. infrastructure<sup>3</sup>, and HSPD 9, “Defense of United States Agriculture and Food,” which provided national-level directives for an all hazards approach<sup>4</sup>. President Barack Obama issued Presidential Policy Directive (PPD) 21, which further recognized the food and agriculture sector as critical U.S. infrastructure<sup>5</sup>. Finally, President Donald J. Trump released National Security Presidential Memorandum (NSPM) 14, which codifies the National Biodefense Strategy, a multi-sectoral strategy that further defines the U.S. goal of protecting food and agriculture from biological threats<sup>6</sup>.

## A. Preparedness

6. The United States recognizes the major health and economic implications that would follow the use of a biological agent, pest, or toxin against agriculture, livestock, or the natural environment. Because the deliberate use of a biological agent or toxin may mimic a natural occurrence, the United States has increased communication and coordination between our intelligence community (IC) and operational and regulatory agencies. This effort helps government stakeholders prepare for outbreaks and determine if an event is naturally occurring or a deliberate act. Furthermore, the United States has developed interagency courses and regularly exercises a whole of government response to increase preparedness in the event of a biological attack.

### 1. Surveillance

7. Three key aspects to being prepared for a biological attack are to recognize the epidemiology baseline, define outbreak trends, and have an early warning system in place to detect potential threats. For purposes of such preparation, the United States has built and enhanced surveillance systems for agriculture, livestock, and the natural environment. The United States understands that a one-health multisectoral approach is needed to ensure a well-functioning and healthy biological system. Furthermore, by establishing and conducting surveillance on plants, agricultural animals, and wildlife, the United States can recognize and predict potential incoming natural threats and discern anomalies that may be deliberately caused, rather than natural.

8. The Animal and Plant Health Inspection Service (APHIS), an agency of United States Department of Agriculture (USDA), operates and maintains three biological threat surveillance systems. The first part of the approach is the National Animal Health Surveillance System (NAHSS), a network of partners working together to protect the health of our nation’s livestock, poultry, and wildlife populations through surveillance. The goal of the NAHSS is to systematically collect, collate, and analyze animal health data and promptly disseminate animal health information, specifically to those partners obligated to respond. For the purpose of the NAHSS, animal health surveillance is defined as the ongoing systematic collection, collation, analysis, and interpretation of data and dissemination of information to those who need to know so that action can be taken. The purposes of surveillance are rapid detection of introduced diseases and emerging issues, monitoring and providing actionable information for endemic diseases, and measuring regional prevalence of trade-significant diseases. The NAHSS provides greater protection from endemic, emerging, and Foreign Animal Diseases (FADs) that could affect U.S. livestock, poultry, and wildlife populations by: (1) facilitating information exchange between groups, (2) enhancing current programs, and (3) establishing and maintaining necessary infrastructure for effective and comprehensive surveillance. The NAHSS establishes and maintains a surveillance system capable of detecting and surveying foreign and emerging diseases rapidly. The system

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<sup>3</sup> Homeland Security Presidential Directive 7 (2003)

<sup>4</sup> Homeland Security Presidential Directive 9 (2004)

<sup>5</sup> Presidential Policy Directive 21 (2013)

<sup>6</sup> National Security Presidential Memorandum 14 (2018)

also evaluates and enhances surveillance for current disease eradication and control programs. Finally, it monitors disease trends and threats in the United States and other countries and provides timely and accurate animal health information<sup>7</sup>. In addition to the NAHSS, the USDA initiated the National Animal Health Monitoring System (NAHMS) in 1983 to collect, analyze, and disseminate data on animal health, management, and productivity across the United States. The NAHMS team conducts national studies on the health and health management of U.S. domestic livestock populations. These studies are designed to meet the information needs of the industries associated with these commodities, as identified by people within those industries<sup>8</sup>.

9. The second, and related, part of the approach is founded on the assumption that our agricultural system is not separate from our natural environment, including wildlife. The National Wildlife Disease Program (NWDP) promotes safe agricultural trade by protecting the health of humans, animals, plants, and ecosystems to reduce the losses to agricultural and natural resources. The NWDP participates in wildlife disease monitoring and surveillance in all regions of the United States. The program's wildlife disease biologists act as first responders through NWDP's Surveillance and Emergency Response System. Additionally, NWDP collaborates with non-governmental organizations and officials from other countries to promote and assist in the development of wildlife disease monitoring programs worldwide. This surveillance system regularly monitors wildlife populations for significant diseases, many of which are related to the pathogens on the U.S. biological select agent and toxins list, including feral swine diseases, bovine tuberculosis, avian diseases, plague, and tularemia<sup>9</sup>.

10. The last of the three parts of the U.S. surveillance system for agriculture, livestock and the natural environment operated by USDA is APHIS' Plant Protection and Quarantine (PPQ) program. PPQ safeguards U.S. agriculture and natural resources from the introduction, establishment, and spread of plant pests and noxious weeds. PPQ works closely with a network of state, federal, and university partners to manage and implement activities along a continuum of safeguards. This begins with strong information gathering on pests of concern outside the United States through early warning systems, implementing preclearance programs for imported plants, instituting mitigation practices to ensure safe trade, and risk-based port inspections to prevent the introduction of harmful pests. PPQ works with a network of partners to conduct extensive domestic surveillance through the Cooperative Agricultural Pest Survey (CAPS) to detect new introductions of harmful plant pests and diseases as soon as possible, before they have a chance to cause significant damage. When new pests are detected, PPQ follows the National Emergency Management Framework to coordinate a network of partners to quickly and effectively respond to the pest incursion to ensure America's agricultural and natural resources remain healthy and productive<sup>10</sup>.

## 2. Cooperation and Coordination with Intelligence Agencies

11. In 2018, the United States created the Defense Against Agroterrorism Working Group (DAAWG). This group set out to increase engagement between the IC and the agricultural sector. The DAAWG's mission is to improve the efficiency and effectiveness of U.S. Government efforts to protect from, defend against, and respond to agroterrorism<sup>11</sup> threats through enhanced communication and collaboration. The DAAWG is a partnership among federal agency representatives to develop a clear understanding of threats, avoid duplication of efforts, and increase information sharing.

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<sup>7</sup> [https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/monitoring-and-surveillance/sa\\_nahss/ct\\_nahss](https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/monitoring-and-surveillance/sa_nahss/ct_nahss)

<sup>8</sup> <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/monitoring-and-surveillance/nahms/about>

<sup>9</sup> [https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/programs/nwrc/sa\\_nwdp](https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/programs/nwrc/sa_nwdp)

<sup>10</sup> <https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs>

<sup>11</sup> Agroterrorism is defined as any deliberate act, or any threat to commit a deliberate act, to food, agriculture, wildlife, or any part of the agricultural system (inclusive of the entire farm to fork continuum), that appears to be intended: (i) to intimidate, coerce, or affect health; (ii) to influence a policy of, or undermine confidence in, a government; or (iii) to affect the conduct of a government by generating fear, precipitating economic losses, and undermining the stability of the food and/or the agriculture system.

12. The DAAWG identifies and evaluates existing and emerging threats, identifies potential targets, analyzes capabilities and vulnerabilities within the Food and Agriculture sector, and develops interagency tools and protocols to evaluate and share threat intelligence and critical incident information of recognized triggers or indicators of terrorism, criminal actions, and espionage.

13. The DAAWG's membership includes over 35 offices and agencies from over 11 departments and executive offices. In order to foster collaboration, the group has three co-chairs: USDA — a permanent co-chair — joined by rotating co-chairs from both the IC and a non-IC agency. The DAAWG IC members present threat briefings while non-IC members present updates on scientific advances, agronomics, and concerns. Together, the DAAWG fosters an environment of preparation for the potential introduction of a biological agent into food, agriculture, livestock, and/or the environment. The DAAWG has increased interagency collaboration, including for research and development. Through the DAAWG, the IC now has an increased repository of subject matter experts to assist in analysis of an actor's potential capabilities and accesses.

## **B. Response**

14. The United States understands that we cannot be fully prepared for every threat to agriculture, livestock, and the natural environment. In order to ensure that we are as prepared as possible for a response, the United States has made every effort to increase our interagency cooperation and coordination as well as increase our scientific capabilities for diagnostics, forensics, and countermeasures. To enhance our coordination and cooperation, USDA and the Federal Bureau of Investigation (FBI) established an interagency Memorandum of Understanding (MOU) for animal and plant joint criminal-epidemiological (Crim-Epi) investigations. To enhance our diagnostic and forensic capabilities, the United States has created a consortium of laboratory networks. Finally, to enhance capabilities, the United States has developed a national stockpile of veterinary countermeasures.

### **1. Interagency MOU for Crim-Epi Investigations**

15. Evidence of agroterrorism is inherently difficult to recognize and detect; this creates a limited window of opportunity to identify and report threats, initiate investigations, and prevent and disrupt ongoing terrorist operations. Establishment of a joint USDA and FBI capability for early recognition and rapid reporting of key indicators, triggers, or intelligence of suspected or confirmed acts of agroterrorism was essential for an effective coordinated investigation and response. Signed in 2017, the interagency MOU for joint crim-epi investigations defines the relationship between USDA and the FBI and formalizes the protocol for notification, information sharing, and joint epidemiological and law enforcement investigations of suspected or confirmed acts of agroterrorism. It further establishes the protocols to communicate and share sensitive information to optimize the ability to prevent, prepare for, respond to, and recover from the introduction of invasive pests and diseases that could potentially cause harm to U.S. agriculture and natural resources. The MOU includes a list of triggers, or incident indicators, that can be used to prompt information sharing and serves to facilitate interagency communication and collaboration during an investigation of a potential biological threat.

16. To best prepare for a response to an event, a two-day Animal-Plant Health Joint Criminal-Epidemiological Investigations Course teaches the concepts of joint law enforcement and animal-plant health epidemiological investigations of acts of agricultural terrorism, the intentional use of biological materials, economic espionage, and the deliberate introduction of high consequence animal and plant diseases. The training course was developed by FBI, USDA, and Oklahoma State University and is based on the public health Joint Criminal-Epidemiological Investigations Course developed by the FBI and the United States Centers for Disease Control and Prevention (CDC).

17. The MOU is the first coordinated effort to establish a formalized process and procedure in the event of a biological attack on agriculture. The procedure has been tested during real events in the United States. Following the process laid out in the MOU, during

the 2018 virulent Newcastle disease outbreak<sup>12</sup>, after triggers were met, USDA APHIS worked together with the FBI on the Crim-Epi investigation. The process worked, and the lessons learned have been used to update the MOU training course for future response preparedness. The United States understands that this problem is not ours alone. For this reason, the FBI and USDA have taught this course in other countries, gearing the information to their specific needs and questions, and provided a model MOU template adaptable to the varying regulatory and infrastructure requirements of partner countries. While the coordination and communication lessons learned from United States experiences are helpful, each country can determine the coordination mechanism that works best for its own purposes and use the MOU as a guide or template<sup>13</sup>.

## 2. Integrated Consortium of Laboratory Networks

18. To best respond to a biological event in a multi-sectoral environment, an integrated approach to diagnostics and forensics is essential. The Integrated Consortium of Laboratory Networks (ICLN) was established in 2005. Senior officials from 10 federal departments and independent agencies with primary responsibility for current and nascent laboratory response networks, as well as those with strong supporting roles, joined together to endorse the laboratory network organizational framework. The mission of the ICLN is to coordinate federally sponsored analytical laboratory services for chemical, biological, radiological, and nuclear (CBRN) incidents. The ICLN does this through planning, identifying resources, providing laboratory surge capacity support, and defining key process steps for information exchange and data sharing during an incident. During CBRN incidents, the ICLN provides timely, credible, and interpretable data in support of surveillance, early detection, and effective consequence management. There are seven laboratory networks within the ICLN, and three of the seven — described below — are dedicated to agriculture, livestock, and the natural environment<sup>14</sup>.

19. The National Plant Diagnostic Network (NPDN) is managed by USDA National Institute of Food and Agriculture (NIFA) and APHIS. The NPDN was established by the USDA Homeland Security Office to develop a link among academic plant disease diagnostic laboratories across the country. The mission of NPDN is to enhance national agricultural security through rapid detection, diagnosis, and early communication of outbreaks of potentially damaging pests of food, feed, fiber, fuel crops, and forest trees. NPDN is designed to quickly detect and identify high consequence pests and pathogens introduced — deliberately or accidentally — into commercial and natural ecosystems and to report them to appropriate responders and decision makers. To implement its mission, the network collaborates with county and State Extension Service agents<sup>15</sup>, State departments of agriculture, and the USDA APHIS PPQ during outbreaks<sup>16</sup>.

20. The National Animal Health Laboratory Network (NAHLN) was established by the USDA Homeland Security Office to coordinate the testing capacities of the Federal veterinary diagnostic laboratories with those of the State and university veterinary diagnostic laboratories, which have extensive facilities, professional expertise, and support. The NAHLN is a partnership of USDA's APHIS and NIFA, as well as the American Association of Veterinary Laboratory Diagnosticians (AAVLD). The network's purpose is to enhance

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<sup>12</sup> <https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian/virulent-newcastle/vnd>

<sup>13</sup> <https://www.k-state.edu/comply/aphis-course-17.html>,  
[http://www.oaba.net/aws/OABA/pt/sd/news\\_article/219442/PARENT/layout\\_details/false](http://www.oaba.net/aws/OABA/pt/sd/news_article/219442/PARENT/layout_details/false),  
<https://www.biodefensestudy.org/defense-of-animal-agriculture>,  
[http://www.oaba.net/aws/OABA/asset\\_manager/get\\_file/305020?ver=120](http://www.oaba.net/aws/OABA/asset_manager/get_file/305020?ver=120),  
[https://www.usaha.org/upload/Committee/2016Reports/FED\\_Report\\_FINAL2016.pdf](https://www.usaha.org/upload/Committee/2016Reports/FED_Report_FINAL2016.pdf)

<sup>14</sup> <https://www.icln.org/>

<sup>15</sup> Each U.S. state and territory has a state office at its land-grant university and a network of local or regional offices. These offices are staffed by one or more experts who provide useful, practical, and research-based information to agricultural producers, small business owners, youth, consumers, and others in rural areas and communities of all sizes.

<sup>16</sup> <https://www.npdn.org/>

early detection of, response to, and recovery from animal health emergencies, including bioterrorism incidents, newly emerging diseases, and FAD agents that threaten the food supply and public health of the United States. In the coming years, the NAHLN will add in its newest and largest member, the National Bio and Agro-defense Facility (NBAF), which will be the foremost U.S. animal disease research facility<sup>17</sup>.

21. The Environmental Response Laboratory Network (ERLN) is managed by the U.S. Environmental Protection Agency (EPA). The ERLN consists of 130 Federal, State, and commercial laboratories that focus on responding quickly to an environmental chemical, biological, or radiological terrorist attack, as well as natural disasters affecting human health and the environment. The ERLN works in conjunction with the CDC, USDA, the Food and Drug Administration (FDA), the Department of Defense (DOD), and FBI during an incident. The ERLN provides analytical support for characterizing the extent and degree of contamination in environmental media during response and remediation activities<sup>18</sup>.

### 3. Countermeasures

22. HSPD 9 established the National Veterinary Stockpile (NVS) in 2004 to protect the U.S. food supply by maintaining sufficient amounts of countermeasures capable of rapid deployment against the most damaging animal diseases. The directive reflected the national concern that terrorists and other threat actors could simultaneously release animal diseases of catastrophic proportions that would quickly deplete available resources within a State, Tribe, or Territory and overwhelm the private sector's ability to support the response to such a disaster. The NVS' goal is to be able to deploy, within 24 hours of approval, countermeasures against the most damaging animal diseases, including highly pathogenic avian influenza, foot-and-mouth disease, virulent and/or exotic Newcastle disease, and classical and African swine fever. In addition, the NVS assists States, Tribes, and Territories in the planning, training, and exercise for the rapid request, receipt, processing, and distribution of NVS countermeasures during an event<sup>19</sup>.

23. In addition to the NVS, APHIS PPQ works cooperatively with national and international plant protection organizations, Federal, State, Tribal, and Local agencies, universities, industries, and private entities in developing and implementing a science-based framework to provide optimum protection against invasive pests and diseases.<sup>20</sup> In addition, the United States understands that not all biological threats of concern fall neatly under the definition of agents and toxins. Specifically, the United States is also concerned with the natural or deliberate introduction of plant pests. APHIS International Services (IS) helps fulfill APHIS' mission to prevent the spread of pests harmful to U.S. agriculture. IS focuses, for example, on the New World Screwworm fly (*Cochliomyia hominivorax*), which can injure and kill humans, pets, wildlife, and livestock, and the Mediterranean fruit fly (*Ceratitidis capitata*) and Mexican fruit fly (*Anastrepha ludens*), which interfere with and harm fruit and agriculture production. Additionally, IS co-sponsors fly pest reduction programs in partnership with Mexico, Panama, and Guatemala. These programs have successfully reduced the populations of all three pests, stabilizing agricultural trade and lowering their threat to these countries and the United States.<sup>21</sup>

### 4. Examples of International Assistance

24. The United States finds it prudent to work with and assist other countries and international organizations, in order to defend agriculture, livestock, and the natural environment around the world. The United States, partners with international organizations like the Food and Agriculture Organization of the United Nations (FAO). The FAO has a

<sup>17</sup> <https://www.nahln.org/>

<sup>18</sup> <https://www.epa.gov/emergency-response/environmental-response-laboratory-network>

<sup>19</sup> [https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/emergency-management/nvs!/ut/p/z1/04\\_iUIDg4tKPAFJABpSA0fpReYllmemJJZn5eYk5-hH6kVFm8X6Gzu4GFiaGPu6uLoYGjh6Wnt4e5mYGBh5m-l76UfgVFGQHKgIAHq7ZJA!!/](https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/emergency-management/nvs!/ut/p/z1/04_iUIDg4tKPAFJABpSA0fpReYllmemJJZn5eYk5-hH6kVFm8X6Gzu4GFiaGPu6uLoYGjh6Wnt4e5mYGBh5m-l76UfgVFGQHKgIAHq7ZJA!!/)

<sup>20</sup> [https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/sa\\_crop\\_biosecurity/ct\\_crop\\_biosecurity\\_emergency\\_management](https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/sa_crop_biosecurity/ct_crop_biosecurity_emergency_management)

<sup>21</sup> [https://www.aphis.usda.gov/aphis/ourfocus/internationalservices/Sterile\\_Fly\\_Release\\_Programs](https://www.aphis.usda.gov/aphis/ourfocus/internationalservices/Sterile_Fly_Release_Programs)

long history of collaboration with the United States in FAO's work on emergencies and emerging threats. Among international organizations, FAO's relatively broad technical expertise, multilateral status, and robust field presence in developing countries offer FAO a comparative advantage to both coordinate and implement international responses to agricultural emergencies and emerging threats. Overall, FAO is well positioned to bridge its emergency work with its normal capacity building and training work, especially FAO's pre-emergency work for prevention and preparedness and post-emergency work for recovery.

25. In 2007, the United States collaborated with the FAO, and its partners, to establish and operate the FAO Emergency Management Center — Animal Health (EMC-AH), as FAO's mechanism for coordinating and delivering animal health emergency preparedness, assessment and response missions. Since the EMC-AH was launched, U.S. Department of Agriculture (USDA) has provided "in-kind" veterinary epidemiologists and animal health emergency managers to FAO, on successional term-limited appointments, to help staff the EMC-AH core team and some EMC-AH field missions. The EMC-AH structure and operation integrate Incident Command System (ICS) concepts, including interagency and international coordination on communication and resources. Building from USDA's contribution of experts over the years, FAO made similar arrangements with another United States agency (CDC) and other FAO Members (France, Germany, Japan, Netherlands) to provide their experts to the EMC-AH, as needed. In this light, the EMC-AH is an invaluable biosecurity mechanism for promoting ICS concepts, emergency preparedness and overall good emergency management practices in the livestock sector and, as appropriate, promoting coordination with other relevant sectors, like public health, environmental health, and security.

### **III. Conclusion and Recommendation**

26. The United States government and the agricultural sector recognize that agriculture, livestock, and the natural environment could be the target of criminal, espionage, biowarfare, or terrorist activities by domestic, international, state, or non-state actors. These are significant threats with severe potential consequences for the United States economy, international export markets, international balance of trade, food security, and the national security of the United States in general. The intentional introduction of disease, or another type of attack against agricultural targets, could be difficult to distinguish from an accidentally or naturally caused introduction. For these reasons, the United States has created a strong set of national surveillance systems, laboratory networks, MOUs, and interagency groups focused on increasing cooperation and coordination to prepare for and respond to any biological event. Efforts towards determining the attribution of an event, whether deliberate or natural, will occur concurrently with a response to the event. The United States must be prepared for any event, no matter the cause, and be ready to respond promptly and efficiently to limit its consequences.

27. The BWC intersessional process provides an important forum for States Parties to share experiences with preparation and response in the agricultural as well as human health sector. We hope that States Parties will take advantage of the Meeting of Experts to discuss any best practices or lessons learned that they have discovered in developing their own preparation and response capabilities. The following language could be included as a recommendation in the report of the 2019 Meeting of States Parties, or in the Final Document of the 2021 Review Conference:

*States Parties recognized the importance of taking into account threats to agriculture, livestock, and the environment in their efforts to implement the BWC, including in capacity-building and other measures adopted at the national level, and in assistance provided to other States Parties. They endorsed the value of increased cooperation and coordination, including enhanced information-sharing, at the local, national, and international levels in order to prepare for and respond to naturally occurring and intentional threats to agriculture, livestock, or the environment and agreed to further consider practical steps to facilitate such cooperation and coordination.*