OIE Collaborating Centres Reports Activities

Activities in 2021

This report has been submitted : 2022-01-19 19:52:45

Title of collaborating centre:	Biological Threat Reduction
Address of Collaborating Centre:	A Member of the Texas A&M University System 578 John Kimbrough Boulevard College Station, Texas 77843-2129 UNITED STATES OF AMERICA
Tel.:	+1-979 862.3202
Fax:	
E-mail address:	hlsimmons@ag.tamu.edu
Website:	iiad.tamu.edu/
Name of Director of Institute (Responsible Official):	Heather Simmons
Name (including Title and Position) of Head of the Collaborating Centre (formally OIE Contact Point):	Heather Simmons
Name of writer:	Jessica Cargill

ToR: To provide services to the OIE, in particular within the region, in the designated specialty, in support of the implementation of OIE policies and, where required, seek for collaboration with OIE Reference Laboratories

ToR: To identify and maintain existing expertise, in particular within its region

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by the OIE

Disease control	
Title of activity	**Scope**
EmVetNet	One of the main objectives of EmVetNet is to support OIE Member Countries' preparedness for and response to animal health emergencies. Among other tasks, the network aims at promoting the exchange and sharing of knowledge on best practices (including models and case studies e.g. model legislation, contingency/emergency plans, communication) and to provide technical assistance to Veterinary Services during events with catastrophic or widespread impact to animal health. A global survey was submitted by EmVetNet at the end of 2021. The survey was part of an OIE strategy promoted by the OIE Collaborating Centre Network on Veterinary Emergencies tp gather information to create a list of experts for facilitating exchange of good practices on Veterinary Emergency Management and risk reduction in relation to animal health and welfare, food security and Veterinary Public Health in the framework of the mandate assigned to EmVetNet by the OIE. The survey included 509 responses from experts representing all 5 OIE regions.
Epidemiology, surveillance, risk assessment, modelling	
Title of activity	**Scope**

Frontline In-Service Epidemiology Training (ISAVET)	During December 2021, the Institute for Infectious Animal Diseases (IIAD) and the College of Veterinary Medicine and Biomedical Sciences, Texas A&M University, conducted a virtual needs and readiness assessment to plan and prepare for the Frontline In-Service Applied Veterinary Epidemiology (ISAVET) implementation in collaboration with the Botswana Department of Veterinary Services (DVS). The needs and readiness assessment tool is a self-assessment, based on 151 indicators including: 1) skills gap analysis; 2) core institutional factors; 3) training; 4) outbreak investigation; 5) human resources; 6) surveillance data flow; 7) readiness; and 8) supportive documentation. A report will be provided to the Botswana Department of Veterinary Services to ensure that the Frontline ISAVET training curriculum is fit for purpose and to support strategic planning for epidemiology capacity development in Botswana. The self-assessment was conducted in partnership with USDA, the Onderstepoort Veterinary Institute (OVI), and the World Organisation for Animal Health (OIE) with funding from the U.S. Defense Reduction Threat Agency (DTRA). Frontline ISAVET is an applied veterinary epidemiology training program jointly developed in 2019 by IIAD and the Food and Agriculture Organisation of the United Nations (FAO) in 14 African countries to strengthen country capacity to address zoonotic diseases and animal-specific diseases under a One Health approach.
ISAVET Risk Analysis	The overall objective of this project is to initiate a Livestock Disease Risk Analysis Training Curriculum in South Africa that supports the AfCFTA Agreement (2018) through the partnership among USDA, OVI, and IIAD. Specifically, the project will focus on the following activities: 1) assessing the existing needs and readiness of South Africa to conduct risk analysis training (individual level) through an evidence-based approach; and 2) supporting the development and implementation of a user-driven, curriculum and a long-term Trainer-of-Trainer (ToT) sustainable programme (institutional level).
Rinderpest	IIAD and the Royal Veterinary College (RVC), both OIE Collaborating Centres are acting as Service Providers for the OIE on “Risk Assessment Reintroduction of Rinderpest Post-Eradication”. A progress review was conducted pertaining to the sequestration and destruction of Rinderpest Virus Containing Materials (RCVM) by OIE Members from FAO-OIE designated rinderpest holding facilities and non-designated facilities 2021. The second portion of this project is to conduct a risk assessment for rinderpest from the laboratories will occur in 2022. The project is also collaborating with partners from the Animal and Plant Health Agency (APHA) and City University of Hong Kong.
Dynamic Preparedness Metric (DPM) Working group	The Dynamic Preparedness Metric (DPM) Working group is attempting to identify more accurate and time-sensitive indicators of disease (pandemic) preparedness, given the sometimes wide variance in systemic preparedness demonstrated during the COVID-19 pandemic. The working group began discussion of inputs/answers offered by working group members in response to a wide variety of factors that may influence societal preparedness for epidemic disease.The working group is being divided into several subgroups to work on metric development in 2022.
Diagnosis, biotechnology and laboratory	
Title of activity	**Scope**

Multi-Laboratory International Collaboration Environment (MICE) and High Containment Laboratory Workflow	In 2021, IIAD completed two laboratory efforts aimed at supporting the unique needs of high-containment diagnostic laboratories. The MICE effort, used technology solutions to support communication between geographically disparate laboratories and across containment barriers, assessed further advantages and disadvantages of additional device integration and delivered a final system design report. The High Containment Laboratory Workflow effort was completed with the delivery of three case studies: end-to-end genomics sequencing pipeline, conceptualization of high-containment laboratories as a network, and the application of blockchain technology to the high-containment laboratory mission and environment. Publication was also accepted for the High Containment Workflow effort.
Economic Expertise on Investing in Sustainable Laboratory Biosafety and Biosecurity	Part of a larger body of work by the OIE which aims to enhance the biosecurity of laboratories by promoting global laboratory sustainability, the Economic Expertise on Laboratory Sustainability project seeks to contribute to significant enhancements of the PVS Laboratory Tool and Mission methodologies which is grounded in sound economic theory and focused on countries' needs and context. The project will 1) assess the current fitness for purpose of the current suite of OIE laboratory mission tools, 2) define the benefit streams of laboratories as relevant to donors, government, and private sector clients, 3) identify additional economic tools and key performance indicators, and 4) draft an advocacy paper on investment needs for sustainable laboratories.
Rinderpest	See description in previous section.
Other (Name the category)	
Title of activity	**Scope**
South Africa Frontline In-Service Applied Epidemiology Training (ISAVET)	See description in previous section.
South Africa Risk Analysis	See description in previous section.

ToR : To propose or develop methods and procedures that facilitate harmonisation of international standards and guidelines applicable to the designated specialty

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the surveillance and control of animal diseases, food safety or animal welfare

Proposal title	Scope/Content	Applicable area
Building Resilience against Agro-crime and Agro-terrorism International Simulation Exercise 'Phoenix'	The European Commission for the Control of Foot-and-Mouth Disease (EuFMD) and IIAD will collaborate to deliver a multi-regional global simulation exercise ('Phoenix') focused on coordination between animal health and law enforcement sectors in response to animal health crises. The Phoenix Exercise will deliver a globally relevant, international exercise occurring simultaneously in multiple regions of the world, specifically North Africa, the Middle East, and Southeast Asia. This exercise will allow representatives from OIE Member States to confer and interact in real-time to coordinate response actions.	☒Surveillance and control of animal diseases ☐Food safety ☐Animal welfare

Economic Expertise on Investing in Sustainable Laboratory Biosafety and Biosecurity	Part of a larger body of work by the OIE which aims to enhance the biosecurity of laboratories by promoting global laboratory sustainability, the Economic Expertise on Laboratory Sustainability project seeks to contribute to significant enhancements of the PVS Laboratory Tool and Mission methodologies which is grounded in sound economic theory and focused on countries' needs and context. The project will 1) assess the current fitness for purpose of the current suite of OIE laboratory mission tools, 2) define the benefit streams of laboratories as relevant to donors, government, and private sector clients, 3) identify additional economic tools and key performance indicators, and 4) draft an advocacy paper on investment needs for sustainable laboratories.	☒Surveillance and control of animal diseases ☐Food safety ☐Animal welfare
EmVetNet	One of the main objectives of EmVetNet is to support OIE Member Countries' preparedness for and response to animal health emergencies. Among other tasks, the network aims at promoting the exchange and sharing of knowledge on best practices (including models and case studies e.g. model legislation, contingency/emergency plans, communication) and to provide technical assistance to Veterinary Services during events with catastrophic or widespread impact to animal health.	☒Surveillance and control of animal diseases ☐Food safety ☐Animal welfare
USDA/FAS Cochran Program	IIAD will train diagnosticians in the Caribbean related to Executive Laboratory Management. OIE will be providing training on their laboratory sustainability initiative. The project was put on hold in 2021 due to COVID-19.	☒Surveillance and control of animal diseases ☐Food safety ☐Animal welfare

ToR: To establish and maintain a network with other OIE Collaborating Centres designated for the same specialty, and should the need arise, with Collaborating Centres in other disciplines

ToR: To carry out and/or coordinate scientific and technical studies in collaboration with other centres, laboratories or organisations

3. Did your Collaborating Centre maintain a network with other OIE Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale	Italy	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East	Consortium with IIAD for EmVetNet

Centro Nacional de Sanidad Agropecuaria	Cuba	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East	Consortium with IIAD for EmVetNet

4. Did your Collaborating Centre maintain a network with other OIE Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Centro Nacional de Sanidad Agropecuaria (CENSA)	Cuba	☐Africa ☒Americas ☐Asia and Pacific ☒Europe ☐Middle East	Consortium with IIAD for EmVetNet
Instituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale (IZSAM	Italy	☐Africa ☐Americas ☐Asia and Pacific ☐Europe ☐Middle East	Consortium with IIAD for EmVetNet
European Commission for the Control of Foot-and-Mouth Disease (EuFMD)	39 countries in Europe	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East	EuFMD is the lead organization and IIAD is the technical partner in the Building Resilience against Agro- crime and Agro-terrorism International Simulation Exercise 'Phoenix'
Onderstepoort Veterinary Institute	Onderstepoort, South Africa	☒Africa ☐Americas ☐Asia and Pacific ☐Europe ☐Middle East	ARC Onderstepoort Veterinary Research is a partner for the Frontline ISAVET programme
Royal Veterinary College	United Kingdom	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East	Royal Veterinary College is a partner for the Rinderpest project.

Animal and Plant Health Agency	United Kingdom	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East	Animal and Plant Health Agency is a partner for the Rinderpest project.
Sandia National Laboratories	United States	☐Africa ☒Americas ☐Asia and Pacific ☐Europe ☐Middle East	Sandia National labs is the lead organization for which IIAD is on an External Advisory Board for Food and Ag Veterinary Defense,
University of Liverpool	United Kingdom	☐Africa ☐Americas ☐Asia and Pacific ☒Europe ☐Middle East	University of Liverpool is a partner on the economic sustainability project.

ToR: To place expert consultants at the disposal of the OIE.

5. Did your Collaborating Centre place expert consultants at the disposal of the OIE?

Yes

Name of expert	Kind of consultancy	Subject
Ms. Jessica Cargill and Dr. Jimmy Tickel	OIE Technical Working Group Member	Deliver International Simulation Exercise for the Building Resilience Against Agro-terrorism and Agro-crime Project
Dr. Heather Simmons	OIE Technical Working Group Member on Veterinary Paraprofessionals	Veterinary Paraprofessionals Expert Pool
Ms. Jessica Cargill and Mr. Miguel Gonzalez	OIE ad hoc Group Member: Sustainable Laboratories	Sustainable Laboratories
Dr. Heather Simmons	FAO Animal Health Emergency Operations Center Technical Working Group (representing OIE)	The goal of the group is the development of operational guidelines intended to assist national, regional, and local governments or organizations in their participation in and management of responses of animal health disasters.
Dr. Heather Simmons and Dr. Jimmy Tickel	OIE Collaborating Centre Network Members	OIE Collaborating Centre Network for Veterinary Emergencies (EmVetNet)
Dr. Heather Simmons and Dr. David Castellan	Veterinary Capacity Development	Tripartite One Health Field Epidemiology Guidelines

Dr. Matthew Cochran	WHO Working Group	Dynamic Preparedness Metric (DPM) Working group

ToR: To provide, within the designated specialty, scientific and technical training to personnel from OIE Member Countries

6. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by the OIE, to personnel from OIE Member Countries?

Yes
a) Technical visits: 0
b) Seminars: 0
c) Hands-on training courses: 2
d) Internships (>1 month): 0

Type of technical training provided (a, b, c or d)	Content	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
C	Risk Analysis	Botswana	8
C	In Service Applied Veterinary Epidemiology Training programme	Botswana	4

ToR: To organise and participate in scientific meetings and other activities on behalf of the OIE

7. Did your Collaborating Centre organise or participate in the organisation of scientific meetings on behalf of the OIE?

Yes

National/International	Title of event	Co-organiser	Date (mm/yy)	Location	No. Participants
International	OIE Ad Hoc Group on Laboratory Sustainability	OIE	06/21	Virtual	20
International	Tripartite One Health Field Epidemiology Guidelines Competency Matrix	WHO, FAO, OIE	11/21	Virtual	60

International	Tripartite One Health Field Epidemiology Guidelines Competency Matrix Prioritization Exercise	WHO, FAO, OIE	12/21	Virtual	60

ToR: To collect, process, analyse, publish and disseminate data and information relevant to the designated specialty

8. Publication and dissemination of any information within the remit of the mandate given by the OIE that may be useful to Member Countries of the OIE

a) Articles published in peer-reviewed journals: 19

• Adamson D, Gilbert W, Hamilton K, Donachie D, Rushton J. (2020). - Preparing for animal health emergencies: considerations for economic evaluation. In Disaster prevention and preparedness (G.A. Vroegindewey, ed.). Rev. Sci. Tech. Off. Int. Epiz., 39(2), in press. doi:10.20506/rst.39.2.3112.

• Adamson D, Gilbert W, Rothman-Ostrow, P, Rushton J (2020). The pros and cons of animal health and harmonisation. In Ensuring safe trade in animals and animal products (Ed. C. Wolff & A. Hamilton) Rev. Sci. Tech. Off. Int. Epiz. 39(1):173-181

• Arenas-Gamboa AM, Simmons HL, Krecek RC, Logan LL, Ellis D, Ptaschinski M, Cargill JS, Were SR, Mulumba M, Heath L. AgSecure Africa ProgrammeTM: A Blended Training Approach for Africa. Journal of Veterinary Medical Education 2021 48:6, 710-719

• Arenas-Gamboa AM, Simmons HL, Werre SR, Krecek RC. Bench to Shop™: An Interdisciplinary Training Program for Transitioning of Transboundary Animal Disease Research to Commercialization. Journal of Veterinary Medical Education 2021 48:3, 301-309

• Dung NTT., Truong BD, Cuong NV, Van NTB, Phu DH, Kiet BT, Rueanghiran C, Hien VB, Thwaites G, Rushton J, Carrique Mas J. (2020) A survey of retail prices of antimicrobial products used in small-scale chicken farms in the Mekong Delta of Vietnam. Global Health 16, 8 (2020). https://doi.org/10.1186/s12992-019-0539-x

• Gilbert W, Thomas LF, Coyne L, Rushton J. (2020) Review: Mitigating the risks posed by intensification in livestock production: the examples of antimicrobial resistance and zoonoses. Animal https://doi.org/10.1016/j.animal.2020.100123

• Haider N, Rothman-Ostrow P, Osman AY, Arruda LB, Macfarlane-Berry L, Elton L, Thomason MJ, Yeboah-Manu D, Ansumana R, Kapata N, Mboera L, Rushton J, McHugh TD, Heymann DL, Zumla A and Kock RA (2020) COVID-19—Zoonosis or Emerging Infectious Disease? Front. Public Health 8:596944. doi: 10.3389/fpubh.2020.596944

• Hassell JM, Zimmerman D, Fèvre EM, Zinsstag J, Bukachi S, Barry M, Muturi M, Bett B, Jensen N, Ali S, Maples S, Rushton J, Tschopp R, Madaine YO, Abtidon RA, Wild H. (2020). Africa's nomadic pastoralists and their animals are an invisible frontier in pandemic surveillance.American Journal of Tropical Medicine and Hygiene. https://doi.org/10.4269/ajtmh.20-1004

• Hunt CL, Yu L, Cochran M, Liu J-C, McCarl B, Johnson CD, Brun M & Berquist M. (2021). – A case study approach to high-containment laboratory workflows promoting sustainability, networking and innovation. Rev. Sci. Tech. Off. Int. Epiz., 39 (3) (in press). Available at: www.oie.int/app/uploads/2021/08/26082021-00183-en-hunt-ang.pdf (accessed on 27 August 2021).

• Coyne L, Benigno C, Giang VN, Huong LQ, Kalpravidh W, Padungtod P, Patrick I, Ngoc PT, Rushton J. (2020) Exploring the Socioeconomic Importance of Antimicrobial Use in the Small-Scale Pig Sector in Vietnam. Antibiotics 2020, 9(6), 299; https://doi.org/10.3390/antibiotics9060299

• Coyne L, Patrick I, Arief R, Benigno C, Kalpravidh W, McGrane J, Schoonman L, Sukarno AH, Rushton J. (2020) The Costs, Benefits and Human Behaviours for Antimicrobial Use in Small Commercial Broiler Chicken Systems in Indonesia. Antibiotics. https://doi.org/10.3390/antibiotics9040154

• Lekagul A, Tangcharoensathien V, Mills A, Rushton, J., Yeung, S. (2020) How antibiotics are used in pig farming: a mixed- methods study of pig farmers, feed mills and veterinarians in Thailand. BMJ Global Health 2020;5:e001918. doi:10.1136/ bmjgh-2019-001918

• Limon G, Ulziibat G, Sandag B, Dorj S, Purevtseren D, Khishgee B, Basan G, Bandi T, Ruuragch S, Bruce M, Rushton J, Beard PM, Lyons NA. (2020) Socio-economic impact of Foot-and-Mouth Disease outbreaks and control measures: An analysis of Mongolian outbreaks in 2017. Transboundary and Emerging Diseases DOI: 10.1111/tbed.13547

• McIntyre K, Clough H, Patterson G, Harris J, & Rushton J. (2020). Coronavirus: patterns of illness and death

mainly mirror what was already happening before the pandemic. The Conversation
• Patterson GT, Thomas LF, Coyne LA, Rushton J. (2020) Moving health to the heart of agri-food policies; mitigating risk from our food systems. Global Food Security 26 (2020) 100424 https://doi.org/10.1016/j.gfs.2020.100424
• Perry BD, Rich KM, Rojas H, Romero J, Adamson D, Bervejillo JE, Fernandez F, Pereira A, Pérez L, Reich F, Sarno R, Vitale E, Stanham F, Rushton J. (2020) Integrating the Technical, Risk Management and Economic Implications of Animal Disease Control to Advise Policy Change: The Example of Foot-and-Mouth Disease Control in Uruguay Ecohealth 17, 381–387, 2020 https://doi.org/10.1007/s10393-020-01489-6
• Perry BD, Rich KM, Rojas H, Romero J, Adamson D, Bervejillo JE, Fernandez F, Pereira A, Pérez L, Reich F, Sarno R, Vitale E, Stanham F, Rushton J. (2020) Integrating the Technical, Risk Management and Economic Implications of Animal Disease Control to Advise Policy Change: The Example of Foot-and-Mouth Disease Control in Uruguay. Ecohealth https://doi.org/10.1007/s10393-020-01489-6
• Thomas LF, Patterson GT, Coyne LA, Rushton J. (2020) Countering the double-whammy of zoonotic diseases. Rural 21 The International Journal for Rural Development Vol 54:4 pages 8-11 ISSN 1866-8011D 20506 F
• Villa PD, Simmons H, Alfonso P. The OIE Collaborating Centre Network on Veterinary Emergencies (EmVetNet). Panorama 2020-22.

b) International conferences: 0

c) National conferences: 0

d) Other
(Provide website address or link to appropriate information): 5
• FAO. 2021. Frontline In-Service Veterinary Epidemiology Training Program (ISAVET) Training Manual: Instructor Version. Rome.
• FAO. 2021. Frontline In-Service Veterinary Epidemiology Training Program (ISAVET) Training Manual: Participant Version. Rome.
• Ligon J, Castellan D, Ellis, Ong K, Simmons HL. EPI-102 Principles of Animal & Plant Epidemiology Trainee Resource Guide. TRAEN Code: G2233001-13. Joint Publication with CBTS and CBP. Published by: Agriculture Programs and Trade Liaison, U.S. Customs and Border Protection, Department of Homeland Security (DHS). 2021.
• Ligon J, Castellan D, Ellis D, Ong K, Simmons HL. EPI 101: What Do You Need to Know About Biological Threats? Trainer Manual Instructors Guide. TRAEN Code: G2230001-13. Joint Publication with CBTS and CBP. Published by: Agriculture Programs and Trade Liaison, U.S. Customs and Border Protection, Department of Homeland Security (DHS). 2021.
• Ligon J, Castellan D, Ellis D, Ong K, Simmons HL.EPI-102 Principles of Animal & Plant Epidemiology Trainer Manual. TRAEN Code: G2233001-13. Joint Publication with CBTS and CBP. Published by: Agriculture Programs and Trade Liaison, U.S. Customs and Border Protection, Department of Homeland Security (DHS). 2021.

9. Additional comments regarding your report:

The Covid-19 pandemic continued to limit travel and organizational capacity in 2021. Many activities were moved to virtual formats, where possible. Activities requiring travel have been delayed until restrictions are eased.