# WOAH Collaborative Centre Reports Activities 2022

#### **Activities in 2022**

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## **Centre Information**

Title of WOAH Collaborating Centre	Sandia National Laboratories, Global Chemical and Biological Security
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Name Director of Institute (Responsible Official):	Dr. David Sandison
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Name of the writer:	Dr. Melissa R. Finley

## **TOR1 AND 2: SERVICES PROVIDED**

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

Epidemiology, surveillance, risk assessment		
Title of activity	Scope	
	Support partner country's efforts to carry out a 6–10-month	

Disease surveillance project for priority diseases in South Asia surveillance project targeting two diseases and enable sample analysis. This effort was done to provide guidance on building internal Foot and Mouth Disease Virus sequence analysis with partners capacity to sequence and analyze viral strains to guide in South Asia preventative measures. To develop a One Health Biorisk Management virtual community of practice, that works together on sharing and solving common One Health problems related to the global communities. To provide a One Health BRM knowledge sharing Vietnam One Health Remote Engagement discussion platform for the One Health Vietnamese students to present their knowledge on BRM through a case-based approach and receive input by the experts in the One Health community. Assist the One Health BRM Laboratory Network to conduct a Multi-sector Tabletop Exercise to assess operational collaboration among laboratories and clinics during a One One Health Tabletop Exercise Vietnam Health bio-incident; to be planned in cooperation with GDPM, DAH, MIPM and VOHUN. The exercise may be scoped to address the challenges of addressing the concurrent outbreaks. Conduct Timeliness Metrics Workshop to establish a structured framework to detect, verify, report, and respond to One Health outbreaks faster by providing benchmarks to continually improve upon. In the workshop, participants designed their metrics and milestones to match the work they have already Timeliness Metrics Workshop for Strengthening and done as part of JEE and GHSA implementation. The JEE 2.0 **Evaluating Readiness** focuses on evaluating parameters of Prevent, Detect and Respond. Each of the components within the JEE match the milestones.

Work with community health workers using community based participatory research (CBPR) methodologies from four

Working with Community Health Workers in Africa to use community based participatory research.

countries in Africa: Tanzania, DRC, Somalia, and Kenya to improve detection. The engagement consists of remote didactic sessions on BRM and zoonosis using CBPR methodologies combined with an opportunity for groups from each country to create a community-oriented tool for teach back to their

	communities.		
Training and Capacity Building			
Title of activity	Scope		
Biorisk Management Curriculum Development for Universities in Thailand	To further course content and develop materials for university Biorisk Management Curriculum in Thailand's University One Health Network.		
Training and Ca	apacity Building		
Title of activity	Scope		
BRM Curriculum Development Follow-on Workshop and Trainer Development Program.	Finalize BRM curriculum to be presented for inclusion in university curricula. A Trainer Development Program training will be included.		
Training and Capacity Building			
Title of activity	Scope		
BRM Systems Implementation & Material Control Workshop (Nigeria)	This workshop provided targeted training that guides participants through the process of establishing an institutional biorisk management system and the setup of a material control and accountability program for institutions.		
Training and Capacity Building			
Title of activity Scope			
BSC Certification Training	Train Iraqis to become certifiers of biosafety cabinets.		
Training and Co	apacity Building		
Title of activity	Scope		
Central Africa Biorisk Management Trainers Network Advanced Trainer Workshop	To provide an Advanced Trainers Workshop to members of the Central African BRM Trainers' Network to sustain past biorisk management investment and to create a community of practise in Central African countries.		
Training and Ca	apacity Building		
Title of activity	Scope		

Central Africa Trainers Network Core Training Cohort I

To provide a core training for the Central Africa BRM Trainers Network: This training is the 2nd in a series of trainings for the Central Africa BRM Trainers Network. This training is designed to provide human and animal lab personnel with a core level of training to gain skills related to lab biorisk management and develop a strong group of collaborative trainers.

develop a strong group of collaborative trainers.		
Training and Capacity Building		
Title of activity	Scope	
Central Africa BRM Trainers Network Trainer Development Program	To provide a Trainers Development Program to members of the Central African BRM Trainers Network so they can train their colleagues and other interested laboratory staff.	
Training and Ca	pacity Building	
Title of activity	Scope	
Central Africa Trainers Network Core Biorisk Management Training	To provide an Advanced Trainers Workshop to members of the Central African Biorisk Management Trainers' Network.	
Training and Capacity Building		
Title of activity	Scope	
Curriculum Development Workshop Thailand	A workshop was conducted to finalize the development of a professional curriculum in Biorisk Management for the Thailand One Health University Network.	
Training and Ca	pacity Building	
Title of activity Scope		
GBRMC 2022 BRM Trainers' Forum - Virtual Sessions	This workshop brought together experienced Biorisk Management trainers to investigate the impact of Sandia's Global Biorisk Management Curriculum (GBRMC) library and explore ways it can be improved. This workshop provided a unique opportunity for networking and professional development opportunities for biorisk management trainers from a variety of backgrounds. Trainers learned what is new in the GBRMC Library and had an opportunity to provide feedback on existing courses and offer suggestions for new courses.	
Training and Ca	pacity Building	
Title of activity	Scope	
Gulf Regional Biothreat Reduction Forum - Bahrain - Trainer Development Program	Conduct a Trainer Develop Program for members of Human, Animal, and Environmental Sectors.	

Tallian and Connell Building		
Training and Capacity Building		
Title of activity	Scope	
Gulf Region Biothreat Reduction Forum - Phase 2 Bahrain BRM Workshop	SNL executed a 5-day workshop focused on biorisk management foundational principles (SNL) and One Health strengthening (HJF). This workshop was informed by a One Health assessment report completed in 2021 and addresses gaps observed during that assessment.	
Training and Ca	apacity Building	
Title of activity	Scope	
IATA Train the Shipping Trainer - Iraq	Trained Iraqis that pass the IATA Shipping Training to become IATA Shipping Trainers to improve sample transportation across the country and across boundaries.	
Training and Capacity Building		
Title of activity	Scope	
IATA Shipping Training for Veterinary Professionals in India.	SNL/GCBS trained participants to be Shipping Trainers. Train the Shipping Trainer is a Trainer Development Program to instruct participants how to teach Shipping of Infectious Substances and Biological Specimens. It is a 5-day advanced infectious substance shipping workshop that includes in-depth review of shipping regulations, application of learning and instructional theory and brain friendly techniques.	
Training and Ca	apacity Building	
Title of activity	Scope	
IATA Shipping Training and SOP Development for Malaysia One Health University Network	The goal of this workshop was not only training scientist in infectious substance shipping but also train them on writing SOPs and assist and mentor them as they develop SOPs, policies and program plans related to shipping for their institutes. The 5-day IATA Shipping and SOP Development specifically targeted senior managers responsible for shipping programs, bench scientists and others responsible for package receiving, preparation and shipping; laboratory biosafety/biosecurity officers; trainers and others responsible for shipping programs at their facilities.	
Training and Capacity Building		
Title of activity	Scope	
IATA Train the Shipping Trainer for biomedical professionals in Iraq.	Biomedical professionals from Iraq that pass the IATA Shipping Training to become IATA Shipping Trainers were trained to provide training to their colleagues.	

Training and Capacity Building		
Title of activity	Scope	
IATA Train the Trainer Teach Back	To Allow Iraqi IATA Shipping Trainers to train 32 Jordanian Shipping trainees.	
Training and Ca	apacity Building	
Title of activity	Scope	
IATA Workshop Train the Shipping Trainer India	SNL trained biomedical professionals to be Shipping Trainers.  Train the Shipping Trainer is a Trainer Development Program to instruct participants how to teach Shipping of Infectious Substances and Biological Specimens. It is a 5-day advanced infectious substance shipping workshop that includes in-depth review of shipping regulations, application of learning and instructional theory and brain friendly techniques.	
Training and Capacity Building		
Title of activity	Scope	
IFBA Self-Study Remote Training Program - Africa Regional Cohort	This 12-week facilitated self-study program helped prepare BRM champions from Gabon and Africa Regional BRM Trainer's Networks for certification by the International Federation of Biosafety Associations. SNL proctored a paper version of the exam for students in Gabon following completion of the program.	
Training and Ca	apacity Building	
Title of activity	Scope	
Inventory Management Training for Biomedical Professionals in Iraq	Support effective inventory management by delivering foundational training on biorisk management, risk assessment, biosecurity, SOPs, and inventory control.	
Training and Ca	pacity Building	
Title of activity	Scope	
Iraqi IATA Shipping Training for Biomedical Professionals in Iraq	24 Iraqis were trained to safely and security ship diagnostic specimens in accordance with IATA Shipping Regulations. This will ensure safe and security shipment of samples within Iraq and across borders.	
Training and Ca	apacity Building	
Title of activity	Scope	
	The overall objective of this workshop was for Jordanian	

Jordan Ministry Curriculum Development

stakeholders to develop their own biorisk management training curriculum for sustainable capability for animal and public health.

Training and	I Capacity	y Building
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The workshop provided facilitated discussions and lectures to laboratory directors and managers to introduce concepts related to biosecurity and biosafety (Biorisk) management systems. Participants will learn the basics of in depth both Leadership and Management BRM Training for Malaysia theory of Biorisk management (BRM) systems and how to use the CWA 15793 as a planning tool to identify and prioritize

Malaysia Applied Risk Assessment Training

The workshop provided facilitated discussions, lectures, and visits to working research labs to perform risk assessments intended to introduce concepts related to biosecurity and biosafety risk assessment. The training course will provide participants with the opportunity to learn both theory of Biorisk Management Risk Assessment and develop and design their own biosafety and biosecurity risk assessment forms and methodologies consistent with local needs.

existing gaps in their institutional BRM systems and formulate a plan on how to address priority gaps.

Malaysia Develop a cadre of Malaysia One Health Network BRM Teacher Trainers/BRM Curriculum

This workshop focused on developing a biorisk management curriculum training program for graduate students entering the laboratory workforce upon graduating. The workshop is designed to empower faculty members with the skills, tools, and confidence to establish a sustainable Biorisk management education and will be linked with developing a cadre of BRM trainers.

Title of activity

Malaysia International Federation of Biosafety Association (IFBA) Certification

This workshop targeted candidates who serve as the BRM officers in the Malaysia One Health University Network, public or animal health laboratories to become certified by International Federation of Biosafety Association (IFBA). The program strives to increase the competency of the BRM profession through examination.

Malaysia Management and Leadership Training

SNL hosted a virtual workshop on the various impacts of laboratory biosecurity with some emphasis on the insider threat at institutions who work with biological and chemical materials in Morocco. The virtual sessions will address insider threat types, impacts specific to biological and chemical security, provide an interactive insider threat case study example, and discuss associated threat mitigation strategies.

second engagement for risk assessor development.

	discuss associated threat mitigation strategies.	
Training and Capacity Building		
Title of activity	Scope	
Malaysia One Health University Network Phase II BRM Curriculum Trainer Development Program	Participants pilot tested the BRM Curriculum modules in the form of a trainer development workshop to ensure that instructors had the necessary skills to provide the training.	
Training and Ca	apacity Building	
Title of activity	Scope	
North Africa BRM Trainers Network Cohort 3 Foundational Training	SNL/GCBS will provide foundational training to the third cohort of North African BRM Trainers.	
Training and Capacity Building		
Title of activity	Scope	
North Africa Trainers Network RNAT Event	This event brought trainers from the North African BRM Trainers Network together to discuss lessons learned, develop next training steps and provide an opportunity for continued relationship building between themselves and invited speakers from Africa CDC and the World Organization for Animal Health (WOAH).	
Training and Ca	apacity Building	
Title of activity	Scope	
Malaysia International Federation of Biosafety Association (IFBA) Cert	This workshop targeted candidates who serve as the BRM officers in the Malaysia One Health University Network Universities, public or animal health laboratories to become certified by International Federation of Biosafety Association (IFBA). The program strives to increase the competency of the BRM profession through examination.	
Training and Capacity Building		
Title of activity	Scope	
Risk Assessment Training - Foundational Risk Assessment	Provide foundational Training on Risk Assessment to biomedical professionals from Iraq. This will be followed by a	

Training and Capacity Building			
Title of activity Scope			
Risk Assessment Training for Vietnam Veterinary Institutions	The workshop provided facilitated discussions, lectures, and visits to working research labs to perform risk assessments intended to introduce concepts related to biosecurity and biosafety risk assessment. Participants learned in depth theory of risk assessment and develop and design their own risk assessment forms and methodologies consistent with local needs and priorities.		
Training and Ca	pacity Building		
Title of activity	Scope		
NBMC-KBMC Leadership Meetings	The purpose of this project is to facilitate leadership meetings of the Iraq National Biorisk Management Committee and the associated Kurdistan Biorisk Management Committee.		
Training and Capacity Building			
Title of activity	Scope		
Thailand BRM Curriculum development Phase II	To further course content and develop materials for university BRM Curriculum in Thailand's One Health University Network.		
Training and Ca	pacity Building		
Title of activity Scope			
Nigeria Personnel Reliability Workshop	This workshop provided training for a cohort of laboratory leaders from both human and veterinary sectors on personnel reliability and mitigation of insider threat risks.		
Training and Ca	pacity Building		
Title of activity	Scope		
Uganda - Effective use of BSC training	The training provided remote learning on effective and safe operations of biological safety cabinets in Uganda.		
Training and Ca	pacity Building		
Title of activity	Scope		
Uganda - Remote BSC Operations Training	The training provided remote learning on the operations of biological safety cabinets in Uganda.		

Training and Capacity Building		
Title of activity	Scope	
Vietnam IFBA Certification for Trainers	Create a cadre of IFBA Biorisk Management Officers by providing a comprehensive course on biosafety and biosecurity topics that address multiple regulations, standards, and guidelines. Once participants have gone through the IFBA program they will be trained to become BRM Trainers.	
Training and Ca	pacity Building	
Title of activity	Scope	
Vietnam IFBA Trainer the Trainer	Create a cadre of IFBA Biorisk Management Officers by providing a comprehensive course on biosafety and biosecurity topics that address multiple regulations, standards, and guidelines. Once participants have gone through the IFBA program they will be trained to become BRM Trainers.	
Training and Capacity Building		
Title of activity	Scope	
Enhancing biosecurity capabilities in South Asian Countries	SNL provided biosecurity training to ensure the safety and security of dangerous pathogens and provided select laboratories with LIMS. This was an effort to provide training to use the new inventory and laboratory management system.	
Training and Ca	apacity Building	
Title of activity Scope		
West Africa Trainers Network Advanced Trainer Workshop Anglophone Cohort	SNL delivered an Advanced Trainers Workshop for the Anglophone Cohort of the West Africa Trainers Network.	
Training and Ca	pacity Building	
Title of activity	Scope	
Inventory Management Training for Biomedical Professionals from Iraq	SNL supported effective inventory management by delivering foundational training on BRM, risk assessment, biosecurity, SOPs, and inventory control.	
Training and Ca	pacity Building	
Title of activity	Scope	
ABSA Attendance from South Asian Countries	SNL enabled select stakeholders to attend the 65th conference of the American Biological Safety Association in the USA.	

Training and Capacity Building		
Title of activity	Scope	
Shipping course at NiBSA conference	Attend Nigerian Biosafety Association Conference in Abuja and lead a pre-conference training workshop.	
Training and Ca	apacity Building	
Title of activity	Scope	
Turkey - IFBA PC in BRM Exam	SNL conducted a review session followed by an IFBA Professional Certification in Biorisk Management Exam for participants from the Ministry of Health, Ministry of Agriculture and Forestry, and the University Sector	
Training and Ca	apacity Building	
Title of activity	Scope	
Turkey IFBA Exam Review and Administration	SNL provided a review of IFBA examination topics and subsequently administered the examination.	
Training and Ca	apacity Building	
Title of activity	Scope	
Uganda IFBA Certification BRM Professional Review & Proctored Exam	SNL provided a review of the IFBA examination topics and administered the examination.	
Training and Ca	apacity Building	
Title of activity	Scope	
Uganda Poster Preparation for USDA ARS 7th International Symposium	Sandia mentored Ugandan participants from the animal health sector laboratories to prepare a poster abstract and poster development to the USDA ARS 7th International Biosafety and Biocontainment Symposium held February 6-9, 2023. Poster topics ranged from field biocontainment of anthrax infected wildlife carcasses, challenges in delivering training to a primarily field-based workforce, lessons learned in implementing a Biorisk management system, and lessons learned from an external audit for ISO 17025 and ISO 35001.	
Diagnosis, Biotechno	ology, and Laboratory	
Title of activity	Scope	
	Conducted a multi-stakeholder laboratory design review for the	

AU-PANVAC - Multi-Stakeholder Facility Design Review &
PHYS Security

Pan African Veterinary Vaccine Centre of African Union and to

PHYS Security	progress on design and implementation of Physical security of existing biosecurity assets.		
Diagnosis, Biotechnology, and Laboratory			
Title of activity	Scope		
SNL worked with members of the Uganda Virus Institute (UVRI) to create a comprehensive BRM plar as well as plans for specific units where work with occurs			
Diagnosis, Biotechnology, and Laboratory			
Title of activity	Scope		
South Africa- OVI Lab Design Walkthrough	SNL staff and subcontract architects/engineers visited the Onderstepoort Veterinary Institute for a walkthrough and follow-up on virtual work on a conceptual basis of design for a new biorepository and laboratory facility.		
Diagnosis, Biotechno	logy, and Laboratory		
Title of activity	Scope		
Uganda - Remote BSC Operations Training	To provide remote learning on the operations of biological safety cabinets in Uganda.		

#### TOR3: HARMONISATION OF STANDARDS

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main fucus area for which you were designated

Proposal title	Scope/Content	Applicable area

4. Did your Collaborating Centre maintain a network with other WOAH 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)		Region of networking	
	Location		Purpose

		Centre	
International Federation of Biosafety Associations	Europe	Africa Americas Asia and Pasific Europe MiddleEast	To ensure biorisk management professionals obtain IFBA Certification and are recognized for their contributions in BRM.
American Biological Safety Association		Americas	A SNL staff member is the Past President for ABSA

#### **TOR4 AND 5: NETWORKING AND COLLABORATION**

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

No

#### TOR6: EXPERT CONSULTANTS

6. Did your Collaborating Centre place expert consultants at the disposal of WOAH?

Yes

NAME OF EXPERT	KIND OF CONSULTANCY	SUBJECT
Dr. Lisa Astuto Gribble	SME for revisions of Chapter 1.1.4 in the Terrestrial Manual	Biorisk management
Dr. Melissa Finley	Laboratory assessment team for PVS Pathway to Sustainable Laboratories	Biorisk management
Dr. Ahmad Aziz	Laboratory assessment team for PVS Pathway to Sustainable Laboratories	Biorisk management

#### TOR7: SCIENTIFIC AND TECHNICAL TRAINING

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

Yes

SNL met with Dr. Luis Osvaldo Barcos to discuss implementation of Biorisk Management programs in South America.

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOAH, to personnel

#### from WOAH Members?

Yes

a) Technical visit: 14

b) Seminars:

c) Hands-on training courses: 49

d) Internships (>1 month):

a) internsnips (> 1 month):		COUNTRY OF ORIGIN OF THE		
TYPE OF TECHNICAL	5017517	COUNTRY OF ORIGIN OF THE	NO. PARTICIPANTS FROM THE	
TRAINING PROVIDED (A, B,	CONTENT	EXPERT(S) PROVIDED WITH	CORRESPONDING COUNTRY	
C OR D)		TRAINING		
С	IATA shipping	India	16	
c	BRM Trainers Network biorisk management training	Central African Countries	20	
С	Laboratory Risk Assessment training	Vietnam	25	
С	Biorisk Management Curriculum Development	Thailand	40	
С	Biorisk Management Curriculum Development	Jordan	25	
c	Leadership and Management Training for Biorisk Management	Malaysia	20	
c	IFBA exam certification training	Turkey	25	
С	West Africa Trainers Network BRM Training	West African Countries	20	
C	IATA training	India	42	

С	BRM Leadership Meetings	Iraq	8
C	IFBA exam certification training	Malaysia	25
С	Material Control and Accountability Training	Nigeria	21
a	AU-PANVAC Risk Assessment	Ethiopia	14
С	BRM Curriculum Development	South Africa	14
a	ISO 35001 Gap Analysis	Vietnam	20
С	FMD Analysis and Surveillance	South Asia	6
С	IFBA exam certification training	African Countries	20
a	BRM implementation planning	Uganda	11
a	Laboratory Assessment for Risk Analysis	South Africa	6
C	Biosecurity Training Kenya	Kenya	11
С	Central Africa Trainers Network	Central African Countries	20

	Training		
a	NBMC and KMC (Biorisk Management Associations Iraq) SME meetings	lraq	34
С	Building One Health Laboratory Network		
С	Trainer development for One Health University Network	Malaysia	25
С	Biosecurity Training	Egypt	40
С	IFBA exam certification training	Vietnam	15
С	Curriculum Development Workshop	Thailand	25
С	Biosecurity Workshop	Jordan	12
С	North Africa BRM Trainers Network training	North African Countries	40
C	IFBA exam certification training	Uganda	24
С	IFBA exam certification training	Turkey	18
С	Biosafety Cabinet Training	Uganda	24
		Contra Panarts Activities 2022	

С	GBRMC Trainers Form	Multiple	20
c	IATA Shipping Training	Malaysia	30
С	IATA Shipping Training	Iraq	24
а	Risk Assessment Training	Malaysia	25
С	BRM Advisor Development Program	Turkey	12
a	Workshop to measure emergency Vietnam readiness		25
C	IATA Training	lraq	40
C	Biosecurity Training	Indonesia	18
С	IFBA exam certification training	c IFBA exam certification training Vietnam 20	20
a	AUPANVAC Facility Design	Ethiopia	10
a	Curriculum Development	Malaysia	19
		India	16

С	Curriculum Development		
C	Implementation of biosecurity systems		
a	BRM Implementation Plan	Uganda	11
a	Anthrax surveillance	South Asia	8
С	Risk Assessment Methods	Somalia	10
С	Biosecurity training Morocco		15
C	North Africa BRM Training  North African countries		26
C	Inventory management workshop	Iraq	22
c	Biosafety Cabinet Certification Training	Iraq	14
c	Biosecurity training	Iraq	31
С	Biosecurity training	Nigeria	18
a	Laboratory Operations Recommendations	Uganda	10

a	Biosafety Cabinet Certification Training	Uganda	25
С	Community health and animal health worker training	Tanzania	50
a	Laboratory Assessment	South Africa	20
a	Laboratory manual development	Uganda	13
С	Sample Shipping	Nigeria	30
С	One Health Exercise	Vietnam	50
С	C Laboratory risk assessment training Iraq 24	lraq	24

### **TOR8: SCIENTIFIC MEETINGS**

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOAH?

Yes

NATIONAL/INTERNATIONAL	TITLE OF EVENT	CO-ORGANISER	DATE (MM/YY)	LOCATION	NO. PARTICIPANTS
National	USDA Agriculture Research Service 7th International Biosafety and Biocontainment Hybrid Symposium – Biorisk Management in Modern Agriculture	committee member.	2023-02-07	Baltimore, Maryland, USA	

## TOR9: DATA AND INFORMATION DISSEMINATION

10. Publication and	dissemination of	any information	within the remit o	of the mandate give	n by WOAH that may	y be useful to Members
of WOAH						

- a) Articles published in peer-reviewed journals:
- b) International conferences:
- c) National conferences:

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American Biological Safety Association, USDA Agriculture Research Service 7th International Biosafety and Biocontainment Hybrid Symposium – Biorisk Management in Modern Agriculture

- d) Other (Provide website address or link to appropriate information):
- 11. What have you done in the past year to advance your area of focus, e.g. updated technology?

SNL maintains a tool for the assessment of global biological risks that is updated on an annual basis. SNL also revises training materials yearly and integrates updates to International Standards. The past President of the American Biological Safety Association is on staff at SNL and interfaces with ABSA on emerging topics in biorisk management.

12. Additional comments regarding your report:

We are working to integrate WOAH delegates and representation into existing training courses to coordinate with WOAH, ensure sustainability, and ensure implementation of the standard in countries where we work.