

**Ninth Review Conference 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**

6 December 2022

English only

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Geneva, 28 November-16 December 2022

Item 11 of the provisional agenda

**Consideration of issues identified in the review of the operation of the Convention  
as provided for in its Article XII and any possible consensus follow-up action**

**International Activities of Global Partnership Member  
Countries related to Article X of the Biological and Toxin  
Weapons Convention (2017-2022)**

**Submitted by: Canada, Co-Sponsored by: Belgium, Denmark, the  
European Union, Finland, France, Germany, Ireland, Italy, Japan,  
Jordan, Mexico, the Netherlands, Norway, Portugal, Spain, Sweden  
Switzerland, the United Kingdom of Great Britain and Northern  
Ireland, and the United States**

1. The member countries of the *Global Partnership Against the Spread of Weapons and Materials of Mass Destruction*<sup>1</sup> are committed to implementing concrete projects around the world to combat WMD-related terrorism and proliferation. Global Partnership (GP) members have identified strengthening biological security as a key priority for their collective programming efforts, and pursue activities that aim to:

- Secure and account for materials that represent biological proliferation risks;
- Develop and maintain appropriate and effective measures to prevent, prepare for, detect and disrupt the deliberate misuse of biological agents;
- Strengthen national and international capabilities to rapidly identify, confirm/assess and respond to biological attacks;
- Reinforce and strengthen the BTWC and other biological disarmament and non-proliferation obligations, principles, practices and instruments; and
- Reduce biological proliferation risks through the advancement and promotion of safe and responsible conduct.

2. In developing and delivering biological programming with partner countries, GP members place great importance on cooperation and assistance under Article X of the Biological and Toxin Weapons Convention (BTWC), which commits states “to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the use of biological agents and toxins for peaceful purposes” and to “avoid hampering the economic or technological development of States Parties to the Convention or international cooperation in the field of peaceful bacteriological (biological) activities”. GP members assess that Article X-relevant international cooperation and collaboration delivered through the Global Partnership

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<sup>1</sup> Australia, Belgium, Canada, Chile, Czech Republic, Denmark, the European Union, Finland, France, Georgia, Germany, Hungary, Ireland, Italy, Japan, Jordan, Kazakhstan, Republic of Korea, Mexico, the Netherlands, New Zealand, Norway, the Philippines, Poland, Portugal, Spain, Sweden, Switzerland, Ukraine, the UK, and the US.



contributes significantly to mitigation of global biological threats, whether they be naturally occurring, the result of accidental releases (including from laboratories) or a deliberate bioweapons attack.

3. In accordance with the Final Document of the Eighth Review Conference, in which States Parties were encouraged to submit detailed information on their implementation of Article X, the Global Partnership has prepared the following compendium of Article X-relevant projects implemented and/or funded by GP members since the last Review Conference (i.e. 2017-2022). The working paper includes a total of 311 projects implemented or funded by 20 GP partners. These Projects are valued at more than US\$1.6 billion (or €1.54 billion) and were implemented in dozens of countries in every region of the world.

## I. Africa

<i>Project Title</i>	<i>Enhancing Research for Africa Network (ERFAN)</i>
Partner Country/Region	Algeria, Angola, Botswana, Libya, Mauritania, Morocco, Mozambique, Namibia, South Africa, Tanzania, Tunisia, Zambia, Zimbabwe
Implementing Country	Italy
Collaborating Institution(s)/Partner(s)	Italian Ministry of Health, Direzione Generale della Sanità Animale e dei Farmaci Veterinari; Istituto Zooprofilattico Sperimentale del Mezzogiorno (IZSM), Portici; Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Val D'Aosta (IZSPLVD), Torino; Istituto Zooprofilattico Sperimentale della Puglia e Basilicata (IZSPB), Foggia; Istituto Zooprofilattico Sperimentale della Sicilia (IZSSI), Palermo
Project Value	€1,451,000 (estimated budget) through the World Organisation for Animal Health (WOAH)
Duration	2018-2022
Description	<p>The ERFAN project has the following specific objectives:</p> <ul style="list-style-type: none"> <li>• to identify priorities in veterinary public health and to discuss needs in the veterinary field that should lead to joint research opportunities, technological innovations, training and scientific publications. The goal is to establish stronger collaborations between countries and to implement new reliable pictures of the animal health status, diagnostic capacity through an evaluated innovative support of the above solutions to existing problems. Possible funding sources will be identified in order to submit project proposals produced by ERFAN;</li> <li>• to set up a network of scientific veterinary institutions as Veterinary Schools and National Laboratories that can assist and support the new Poles of Excellence, resulting from WOAHP Twinning Projects, in SADC and Arab Maghreb Union (UMA) Regions;</li> <li>• to strengthen, in both regions, the capacity and expertise of the Poles of Excellence, and to permit the Parent labs to understand exotic disease and the origin of food borne diseases through innovative information systems;</li> <li>• to improve the monitoring and controlling of zoonosis, transboundary animal diseases, animal welfare and food-borne diseases, in accordance with WOAHP standards;</li> <li>• to create an African community which will benefit from stronger global disease surveillance networks;</li> </ul>

<i>Project Title</i>	<i>Enhancing Research for Africa Network (ERFAN)</i>
	<ul style="list-style-type: none"> <li>• to build a network and the opportunity for all ERFAN members to share information and ideas and to meet on a regular basis for a better cooperation at the regional level.</li> </ul>
<i>Project Title</i>	<i>LABPLUS AFRICA: Strengthening Laboratory Capacities in Africa against CoVID-19 and other epidemics: from set up in Senegal to scale up in Africa</i>
Partner Country/Region	Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Côte d'Ivoire, Democratic Republic of Congo, Ethiopia, Gabon, Gambia, Ghana, Guinea Bissau, Kenya. Liberia, Mali, Morocco, Niger, Nigeria, Togo, Tunisia, Uganda, Zambia
Implementing Country	European Union
Collaborating Institution(s)/Partner(s)	ISTC Praesens Foundation Fondation Institut Pasteur de Dakar (IPD)
Project Value	€10.000.000
Duration	36 months
Description	This project proposes the development of a strategic framework to reinforce preparedness and response to pandemics in Africa reinforcing the role of Institut Pasteur de Dakar (IPD) as a regional training center as well as implementing an innovative approach to address unmet needs of diagnostics and health services through mobile platforms delivering laboratory
<i>Project Title</i>	<i>Biosafety and Biosecurity Capacity Building at the Africa Centres for Disease Control and Prevention</i>
Partner Country/Region	Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	Africa Centres for Disease Control and Prevention (Africa CDC) African Society for Laboratory Medicine (ASLM)
Project Value	C\$5,800,000
Duration	2019-2025
Description	This project is bolstering biosafety and biosecurity capabilities in Africa through support for the Africa CDC Secretariat, as well as Regional Collaborating Centres, National Public Health Institutes, and National Reference Laboratories across Africa. Project activities include: support for regional workshops and meetings; the development of guidelines and training materials for surveillance of high consequence pathogens; and the development and implementation of Africa's CDC's five-year Strategic Plan for Biosafety and Biosecurity. This project supports the GP's Signature Initiative to Mitigate Biological Threats in Africa.

<i>Project Title</i>	<i>Biosafety and Biosecurity Capacity Building at the Africa Centres for Disease Control and Prevention</i>
Gender Equality	This project does not contain a gender equality component. However, Africa CDC as an institution promotes gender equality.
<i>Project Title</i>	<i>Building Capacity for Advanced Warning and Surveillance of Infectious Disease Outbreaks in Africa</i>
Partner Country/Region	Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	Public Health Agency of Canada’s National Microbiology Laboratory (PHAC NML)
Project Value	C\$1,337,000
Duration	2018-2024
Description	This project supports the development and implementation of an in-country advanced early warning system for Ebola and other viral haemorrhagic fevers, including through training and quality assurance to ensure the accuracy and sharing of test results. This system utilises an already existing point-of-care diagnostic test that can be easily and reliably performed by partners.
<i>Project Title</i>	<i>Engaging Public Representatives in Biosecurity and Pandemic Preparedness</i>
Partner Country/Region	Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada United Kingdom of Great Britain and Northern Ireland
Collaborating Institution	Wilton Park Executive Agency
Project Value	£73,000
Duration	2021
Description	In support of the GP Signature Initiative to Mitigate Biological Threats in Africa, this project supported the organization and implementation of a virtual conference on Strengthening Biosecurity and Pandemic Preparedness in South Africa, which was held 08-12 November, 2021.  This conference convened parliamentarians and key decision makers across Africa, with an emphasis placed on South Africa as a continental leader in the field of health- security and biosecurity. Discussions included: the need for comprehensive legislation, adequate and sustained system financing, and strategic communications in order to build the necessary political will for domestic advancement.  Throughout the week-long conference there was sustained emphasis on the need for coordinated action. In this regard, a set of Six Principles for Strengthening Biological Security in Africa were issued, to guide Signature Initiative efforts to build impactful and sustainable

<i>Project Title</i>	<i>Engaging Public Representatives in Biosecurity and Pandemic Preparedness</i>
	biosecurity, biosafety and biological risk management capabilities in and for Africa.  Details are available at <a href="https://www.gpwmd.com/africa-signature-initiative">https://www.gpwmd.com/africa-signature-initiative</a> .
<i>Project Title</i>	<i>Operationalizing the signature initiative to mitigate deliberate biological threats in Africa and strengthening the Africa CDC's regional health-security capabilities</i>
Partner Country/Region	Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada United Kingdom of Great Britain and Northern Ireland
Project Value	£113,000 – split equally between United Kingdom and Canada (Canada provided £56,634 and UK provided £56,634)
Duration	2022-2023
Description	This project supported the organization and implementation of a conference entitled “Operationalizing the Signature Initiative to Mitigate Deliberate Biological Threats in Africa and Strengthening the Africa CDC’s Regional Health-Security Capabilities” to advance the objectives of the Global Partnership’s Signature Initiative to Mitigate Biological Threats in Africa. This event also aimed to further facilitate the delivery of financially sustainable programmes in biosecurity, early warning systems and surveillance in the region. This event was held in Cape Town, South Africa on 3-5 November 2022.
Gender Equality	Wilton Park is a not-for-profit executive agency of the Foreign Commonwealth and Development Office (FCDO). Wilton Park is committed to promoting diversity and inclusion and aim to create an environment in which all participants, visitors and colleagues will feel included, have a voice, and can be their authentic selves. Wilton Park’s policies can be viewed here: <a href="http://www.wiltonpark.org.uk/about-us/transparency-information/policies/">http://www.wiltonpark.org.uk/about-us/transparency-information/policies/</a> . It includes: <ul style="list-style-type: none"> <li>• 50% male and female participation at each event</li> <li>• To host gender balanced discussion panels</li> </ul> A Canadian-led initiative to develop a “Women’s Network for the Global Partnership” was launched at this Wilton Park event.
<i>Project Title</i>	<i>Universalization and Effective Implementation of the Biological and Toxin Weapons Convention in Africa</i>
Partner Country/Region	Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	United Nations Office for Disarmament Affairs (UNODA)
Project Value	C\$3,000,000

<i>Project Title</i>	<i>Universalization and Effective Implementation of the Biological and Toxin Weapons Convention in Africa</i>
Duration	2022-2026
Description	Through targeted outreach activities at the policymaker level (i.e. public representatives, parliamentarians, and decision makers in Africa), this project will encourage and assist the eight African states currently outside the Convention to ratify or accede to the BTWC. To promote effective implementation of the Convention, the Recipient will provide assistance for the development of BTWC implementing legislation; support the preparation and submission of Confidence-Building Measures; and facilitate the establishment or designation of National Contact Points.
<i>Project Title</i>	<i>UK representation of the GP Africa Signature Initiative as co-Chair of SWGI (Biosecurity and Biosafety), to include coordinating and driving UK priorities during 2022 and up to end Mar 2023.</i>
Partner Country/Region	Africa
Implementing Country	United Kingdom Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution	Africa Centres for Disease Control
Project Value	£25,000
Duration	12 months
Description	Aligning with UK counter proliferation objectives, under our Presidency the GPWMD launched the Africa Signature Initiative to Mitigate Biological Threats in Africa (SI). Its aim is to build sustainable African health security capacities to prevent, reduce, detect and respond to bio-threats both human and animal, through the aligned activities of GP and African countries. As the UK expert leading the GPWMD sub-working group on Biosecurity, Professor Harper led UK engagement with African partners. Professor Harper now co-chairs the Biosafety and Biosecurity sub-working group under the SI.
Gender Equality	Professor Harper has a small consultancy company – Harper Public Health Consulting Limited. His previous career experience includes acting as a Director General in the UK Civil Service, and he is very mindful of the importance of gender equality and will be supporting UK presidency advocacy for strengthening gender equality in GP programming activities.
<i>Project Title</i>	<i>National Focal Point Training – regional seminars for laboratories in Africa</i>
Partner Country/Region	Africa Members of WOA
Implementing Country	United Kingdom
Collaborating Institution(s)/Partner(s)	World Organisation for Animal Health (WOAH)
Project Value	€102,803

<i>Project Title</i>	<i>National Focal Point Training – regional seminars for laboratories in Africa</i>
Duration	Workshop delayed due to COVID travel restrictions; now expected to take place in 2023
Description	<p>WOAH regional training seminars are held biannually in all five continents, including in Africa. They play an essential role in promoting the international standards of WOA and their implementation. Regular training of WOA Delegates and Focal Points is strongly advocated, considering the frequent turnover of persons occupying these positions and the important channels of communication provided by WOA.</p> <p>National Focal Points assist the Delegate in fulfilling his/her responsibilities to WOA to ensure a standard-setting and implementation process that is transparent and inclusive.</p> <p>To leverage investments in developing key performance indicators for laboratory sustainability this round of seminars will focus on testing the indicators with WOA members to assess fitness for purpose and data availability. A series of virtual webinars (composing the regional training seminar for the Anglophone Africa countries) is under development. Any adjustments needed to the indicators or tools will be made and then the seminar will be extended to remaining members of WOA's Africa Region. This activity will complement related modules of the Global Laboratory Leadership Programme (GLLP) curriculum.</p>
Gender Equality	<p>WOAH activities encourage and support gender equity. Details of WOA's Gender Equity Plan can be accessed at:</p> <p><a href="https://www.woa.org/en/document/gender-equity-plan/">https://www.woa.org/en/document/gender-equity-plan/</a></p> <p>WOAH training seminars are available to suitably qualified laboratory managers of both genders, and therefore providing equality of opportunity.</p> <p>WOAH programmes are aligned with and support the advancement of the Sustainable Development Goals, particularly SDG 3: <i>Ensure healthy lives and promote well-being for all at all ages</i>, and SDG 5: <i>Achieve gender equality and empower all women and girls</i>.</p>
<i>Project Title</i>	<i>CARTA/APHRC</i>
Partner Country/Region	African Population and Health Research Center (APHRC), Nairobi, Kenya.
Implementing Country	Sweden through the Swedish International Development Cooperation Agency
Project Value	SEK 10,000,000/€ 1,027,169
Duration	2017-2021
Description	The major goal of the Consortium for Advanced Research Training in Africa (CARTA) is to build a vibrant African academy that is able to lead world-class multidisciplinary research that makes a positive impact on public and population health. The initiative aims to foster vibrant and viable multidisciplinary research hubs at African universities; create networks of locally-trained internationally-recognized scholars; and enhance the capacity of African

<i>Project Title</i>	<i>CARTA/APHRC</i>
	universities to lead globally-competitive research and training programs.
<i>Project Title</i>	<i>Innovative Approaches for Sustainable Biosecurity and Biosafety Capacity in Africa</i>
Partner Country/Region	Africa, Kenya
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	The International Federation of Biosafety Associations (IFBA) Masinde Muliro University of Science and Technology (MMUST), Kenya
Project Value	C\$671,358
Duration	2022-2024
Description	In support of the Signature Initiative to Mitigate Biological Threats in Africa, this project will strengthen biosafety and biosecurity in Africa through a series of four complementary activities that aim to build and sustain a diverse, inclusive, competent and multi-sectoral cadre of experts in the African region. These activities include: (1) strengthening diversity, equity and inclusion (DEI) in biosafety and biosecurity across Africa; (2) cultivating the biosafety and biosecurity profession in Africa, (3) developing a risk assessment and risk-based decision-making tool; and (4) strengthening multi-sectoral collaboration in and for Africa.
Gender Equality	IFBA will develop and disseminate diversity and inclusion progress indicators that will extend beyond simple representation quotas, and will establish a common understanding of gender and diversity.
<i>Project Title</i>	<i>Improved Regional Management, Preparedness and Response to Outbreaks Crises in the CBRN Centres of Excellence partner countries of the African Atlantic Façade (Project CBRN 48)</i>
Partner Country/Region	Benin, Cameroon, Cote d'Ivoire, Gabon, Guinea, Liberia, Mauritania, Morocco, Senegal, Sierra Leone, Togo
Implementing Country	France – Expertise France
Collaborating Institution(s)/Partner(s)	International and Ibero-American Foundation for Administration and Public Policies (FIIAPP, Spain)
Project Value	€3,500,000
Duration	2016-2019
Description	Project funded by the EU Instrument contributing to Stability and Peace.  The project aims at building and/or reinforcing regional capacity to deal with large scale outbreaks in the AAF Region. The objective is to identify gaps, prepare for coordinated regional solutions and teams, and provide appropriate trainings of local staff and set-up the necessary capacity for a sustainable preparedness against future major biological outbreaks in the AAF region.



<i>Project Title</i>	<i>Agreement between FAO &amp; IZSAM aimed at enhancing diagnostic capacity of veterinary laboratories in African countries</i>
Partner Country/Region	Botswana, Cameroon, Cote d'Ivoire, Ethiopia, Kenya, Senegal, Tanzania, Uganda
Implementing Country	Italy through Istituto Zooprofilattico Sperimentale Abruzzo Molise
Collaborating Institution(s) or Partner(s)	FAO
Project Value	€626,880.96 funded by FAO
Duration	2016-2019
Description	<p>Considering the need to minimize the risk of potential pandemic threats, animal health laboratory networks and diagnostic capacities should be strengthened, and the rapid and accurate diagnosis and reporting of routinely occurring diseases be supported as a sustainable approach. Efforts that strengthen diagnostic capacity are directly tied to the ability of the laboratory to rapidly report results. Laboratory information management systems (LIMS) enable laboratories to track samples from submission to reporting and can facilitate the linkage between diagnostic results and response in the field. In the framework of this project, IZSAM is implementing a LIMS in the Central Veterinary Laboratory of some African Countries, called SILAB for Africa, developed by IZSAM. Currently SILAB for Africa, in different versions, is the official LIMS used in 8 National Veterinary Laboratory: Namibia's CVL, Botswana's NVL, Zimbabwe's CVL, Zambia's CVRI, Tanzanian's TVLA, Uganda's NADDEC, Kenya CVL &amp; KALRO and Ethiopia NAHDIC. In order to strengthening biological security, a new SILABFA module for sample banking has been developed mainly focused to samples received under the EPT2 project in Kenya and Tanzania. (e.g. Marburg, MERS CoV, Rabies, Anthrax, Brucellosis, Highly Pathogenic Avian Influenza). Using this module, the users in the lab can manage the samples storage location, the type and the quantity of biological material stored, etc. SILABFA stores all data relating to the stored samples. When samples are received, the user can decide to proceed with analysis of the sample or to simply store the sample until further analysis at a later point in time. The samples stored are identified with the submission numbers and all metadata (owner, sampling date, place, etc.) is recorded in the system.</p> <p>This module has been installed and staff has been trained on this module. Samples received under the EPT2 project have been already collected and registered in the SILABFA-Sample Bank in Kenya and Tanzania. The Sample Bank module can be used alone (Mini_SILAB) and is adapted for interoperability with any external system.</p>
<i>Project Title</i>	<i>Enhancing Diagnostic Capacity of Veterinary Laboratories in African Countries</i>
Partner Country/Region	Botswana, Cameroon, Cote d'Ivoire, Ethiopia, Kenya, Senegal, Tanzania, Uganda
Implementing Country	Italy – Istituto Zooprofilattico Sperimentale Abruzzo Molise
Collaborating Institution(s)/Partner(s)	Food and Agriculture Organization (FAO)

<i>Project Title</i>	<i>Enhancing Diagnostic Capacity of Veterinary Laboratories in African Countries</i>
Project Value	€626,881
Duration	2016-2019
Description	<p>Considering the need to minimize the risk of potential pandemic threats, animal health laboratory networks and diagnostic capacities should be strengthened, and the rapid and accurate diagnosis and reporting of routinely occurring diseases be supported as a sustainable approach. Efforts that strengthen diagnostic capacity are directly tied to the ability of the laboratory to rapidly report results. Laboratory information management systems (LIMS) enable laboratories to track samples from submission to reporting and can facilitate the linkage between diagnostic results and response in the field. In the framework of this project, IZSAM is implementing a LIMS in the Central Veterinary Laboratory of some African Countries, called SILAB for Africa, developed by IZSAM. Currently SILAB for Africa, in different versions, is the official LIMS used in 8 National Veterinary Laboratory: Namibia's CVL, Botswana's NVL, Zimbabwe's CVL, Zambia's CVRI, Tanzanian's TVLA, Uganda's NADDEC, Kenya CVL &amp; KALRO and Ethiopia NAHDIC. In order to strengthening biological security, a new SILABFA module for sample banking has been developed mainly focused to samples received under the EPT2 project in Kenya and Tanzania. (e.g. Marburg, MERS CoV, Rabies, Anthrax, Brucellosis, Highly Pathogenic Avian Influenza). Using this module, the users in the lab can manage the samples storage location, the type and the quantity of biological material stored, etc. SILABFA stores all data relating to the stored samples. When samples are received, the user can decide to proceed with analysis of the sample or to simply store the sample until further analysis at a later point in time. The samples stored are identified with the submission numbers and all metadata (owner, sampling date, place, etc.) is recorded in the system. This</p> <p>module has been installed and staff has been trained on this module. Samples received under the EPT2 project have been already collected and registered in the SILABFA-Sample Bank in Kenya and Tanzania. The Sample Bank module can be used alone (Mini_SILAB) and is adapted for interoperability with any external system.</p>

<i>Project Title</i>	<i>Development Research</i>
Partner Country/Region	Botswana, Egypt, Ethiopia, Guinea-Bissau, Kenya, Ghana, Malawi, Tanzania, Uganda, Zambia, East Africa, Africa
Implementing Country	Sweden, through the Swedish Research Council
Collaborating Institution(s) or Partner(s)	N/A
Project Value	SEK 21,921,000/€2,251,656
Duration	2014-2020
Description	Research project grants and research network grants focusing on: prevention, diagnosis and treatment of infectious diseases; improving food security; mitigating spread of resistance to drugs and antibiotics; and improvement of vector control.

<i>Project Title</i>	<i>Fight against malaria in Burkina Faso through education and research</i>
Partner Country/Region	Burkina Faso
Implementing Country	Italy, through University La Sapienza of Rome
Project Value	€3,820,000
Duration	2015 - 2017
Description	<p>The project, lasting 36 months, is co-funded by the Italian Government (for 52.4% - € 2,000,000.00) and by 17 Italian and burkinabé institutions.</p> <p>The project is being coordinated by the parasitology Section of the Department of public health and infectious diseases at the University of Rome la Sapienza, which oversees the infrastructure and vocational training components. Scientific institutions of Niger, Burkina Faso and Guinea involved in the National Programmes against Malaria are beneficiaries of the project. The partner institution and coordinator of program activities in Burkina Faso, Guinea and Niger is the “Centre National de Recherche et de Formation sur le Paludisme l’Afrique” (CNRFP) of the Ministry of health of Burkina Faso, which formulated the detailed project together with Sapienza University.</p>
<i>Project Title</i>	<i>Enable &amp; Enhance Initiative – Mali/G5 Sahel</i>
Partner Country/Region	Burkina Faso, Chad, Mali, Mauritania, Niger (G5 Sahel)
Implementing Country	Germany
Collaborating Institution(s)/Partner(s)	Bundeswehr Institute of Microbiology and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Project Value	2016-2020: €7.260.000 2021-2023: €3.111.000
Duration	2016-2023
Description	<p>The project aims at establishing and institutionalising a regional biosecurity network to efficiently respond to biological threats. A multinational Rapid Response Team receives training to support the cross-border deployment of a mobile laboratory that was handed over to the G5 Sahel biosecurity network in 2018 and is aimed at supporting quick and reliable diagnostics in case of outbreaks in the region. The diagnostic trainings follow a train-the-trainer approach.</p> <p>In 2021, the capacities developed also supported the regional COVID-19 response.</p>
Gender Equality	The projects have been designed considering their potential contribution to UN Res. 1325. Attempts to contribute to gender equality include inter alia gender-sensitive monitoring of participants, encouragement of women (especially regarding participation in events and activities, the support of female leadership and female young scientists) as well as approaches to gender-sensitive activity- and event-planning.

<i>Project Title</i>	<i>Strengthening African Capabilities to Prevent and Respond to Infectious Disease Outbreaks</i>
Partner Country/Region	Cameroon, Ivory Coast, Gabon, Guinea-Bissau, Mauritania, Senegal, Democratic Republic of Congo
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	Global Urgent and Advanced Research and Development (GUARD)
Project Value	C\$965,000
In-Kind Contribution	Project value not inclusive of funding provided by Canada’s International Development Research Centre.
Duration	2019-2022
Description	This project supported the implementation of a data-driven training program on the surveillance and control of emerging infectious diseases (including viral haemorrhagic fevers) in Central and West Africa. The project included the provision of equipment, training to relevant personnel, and research, all of which lead to a more integrated network of collaborating laboratories across the region to perform surveillance and diagnostics of infectious disease threats in a safe and secure manner.
<i>Project Title</i>	<i>German Biosecurity Programme - Project on minimizing risks on public health and dangers arising from biological threats through Crimean-Congo-haemorrhagic fever and rift valley fever in Mauretania, Cameroon, and Sierra Leone</i>
Partner Country/Region	Cameroon, Mauritania, Sierra Leone
Implementing Country	Germany
Collaborating Institution(s)/Partner(s)	Friedrich-Loeffler-Institute
Project Value	2013-2019: €1,560,000 2020-2022: €708,144
Duration	2013-2022
Description	This project aims to strengthen prevention and response capabilities to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and non-proliferation principles, practices, and instruments; enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”

<i>Project Title</i>	<i>Improvement of National Institute for Research and Biomedical</i>
Partner Country/Region	Democratic Republic of Congo
Implementing Country	Japan
Project Value	¥2,325,000,000
Duration	2017-2019
Description	The objective of the Project is to strengthen the diagnostic capacity of pathogens of tropical infectious diseases and parasitic diseases as well as capacity of basic research and to promote the training of medical personnel and researchers through the development of infrastructure and the provision of equipment to National Institute for Research and Biomedical (INRB), thus contributing to the capacity development in the fight against infectious diseases in Democratic Republic of the Congo and countries of West-Central Africa.
<i>Project Title</i>	<i>Building In-Country Capacity in Africa for Advanced Warning and Surveillance of Infectious Disease Outbreaks</i>
Partner Country/Region	Democratic Republic of Congo, Guinea, Liberia, Nigeria, Republic of Congo, Sierra Leone
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	Public Health Agency of Canada National Microbiology Laboratory (NML)
Project Value	C\$800,367
Duration	2017-2021
Description	Canada's NML is implementing a simple, robust and accurate early warning system at the country level capable of identifying Ebola virus positive individuals, which will enable rapid intervention and will strengthen biosecurity and biosafety.
<i>Project Title</i>	<i>Biosecurity Partnership Programme in East Africa</i>
Partner Country/Region	East Africa and Kenya
Implementing Country	Denmark
Collaborating Institution(s) or Partner(s)	Government of Kenya, incl. Ministry of Education, Science and Technology; National Commission for Science, Technology and Innovation; Ministry of Health
Project Value	US\$2,300,000
Duration	2014-2016/2016-2019
Description	The purpose of the programme is to contribute to the development of national biosecurity and bio-preparedness systems to reduce the risk and consequences of biological events. Results include but are not limited to:  - A comprehensive biosecurity gap survey, incl. appr. 100 labs.

<i>Project Title</i>	<i>Biosecurity Partnership Programme in East Africa</i>
	<ul style="list-style-type: none"> <li>- Development of the book “An efficient and practical approach to Biosecurity”.</li> <li>- Support to biosecurity legislation, incl. several drafting workshops</li> <li>- Support to biosecurity capacity building, incl. training of appr. 300 university students and academic staff.</li> <li>- Support to bio-preparedness capacity building and coordination</li> </ul>
<i>Project Title</i>	<i>Development Research</i>
Partner Country/Region	Egypt, Ethiopia, Ghana, Guinea-Bissau, Kenya, Malawi, Senegal, Sierra Leone, Tanzania, Uganda, Zambia, Zanzibar
Implementing Country	Sweden – Swedish Research Council
Project Value	SEK 24,135,000/€2,322,427 (2018)
Duration	2016-2021
Description	Research project grants and research network grants focusing on: prevention, diagnosis and treatment of infectious diseases; improving food security; mitigating spread of resistance to drugs and antibiotics; and improvement of vector control.
<i>Project Title</i>	<i>Armauer Hansen Research Institute (AHRI)</i>
Partner Country/Region	Ethiopia
Implementing Country	Sweden through the Swedish International Development Cooperation Agency
Collaborating Institution(s) or Partner(s)	N/A
Project Value	SEK 288,000/€29,582
Duration	2016-2021
Description	AHRI receiving core-funding from Sweden and Norway in addition to Ethiopian Government contribution, which it uses to support among other things students' research within the scope of the European & Developing Countries Clinical Trials Partnership (EDCTP) programme. These include epidemiological and social studies for characterisation of poverty-related and neglected diseases.
<i>Project Title</i>	<i>Community Health Education, Capacity &amp; Knowledge Building (CHECK) Project- AID 10991</i>
Partner Country/Region	Ethiopia; City of Awassa, Areas of South Omo, Sidama, Wolayita, Gamo Gofa, Gedio, Kembata Tembaro, Bench Maji, Gurage e Hadya
Implementing Country	Italy, through UNAIDS
Project Value	€500,000
Duration	2016-2017

<i>Project Title</i>	<i>Community Health Education, Capacity &amp; Knowledge Building (CHECK) Project- AID 10991</i>
Description	The objective of the project is to reduce Communicable Diseases (CDs), including HIV and STIs in the above mentioned areas of Ethiopia, through several mutually reinforcing interventions focused on disease prevention, health promotion and peer support groups strengthening, with special focus on Women and Young People towards ensuring healthy lives and well-being (SDG3) and ending epidemics of AIDS , TB, Malaria & Neglected Tropical Diseases (NTDs) as public health threats by 2030 (SDG3 Target 3:3).
<i>Project Title</i>	<i>Strengthening Sustainable Biosafety &amp; Biosecurity in East Africa</i>
Partner Country/Region	Ethiopia, Kenya, Rwanda, Tanzania, Uganda, South Sudan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	International Federation of Biosafety Associations (IFBA)
Project Value	C\$245,000
Duration	2017-2018
Description	This project is focusing on the development of sustainable biosafety and biosecurity in East Africa, enhancing multi-sectoral collaboration and fostering partnerships between the Biorisk Management Association of Kenya, the Biosafety & Biosecurity Association of Uganda, the African Union, relevant government ministries and international partners (including IFBA and Global Partnership members) in the development and implementation of comprehensive and sustainable biosafety and biosecurity strategies and capacity in East Africa.
<i>Project Title</i>	<i>Biosecurity in East Africa</i>
Partner Country/Region	Ethiopia, Kenya, Tanzania
Implementing Country	The Netherlands
Collaborating Institution(s)/Partner(s)	The Ministries of Health of Ethiopia, Kenya, Tanzania
Project Value	€495,000
Duration	2017-2019
Description	The East African Region is at an ecological junction, and many dangerous pathogens are present and (re)emerge infrequently. As the world is more globalized, infectious diseases can spread more rapidly within and across country borders. Additionally, the existing risks of a catastrophic biological event will continue to be magnified by rapid advances in technology that may facilitate the creation or modification of pathogens with pandemic potential. Through the Ministry of Foreign Affairs and in the context of the Global Partnership, the RIVM embarked on a Biosecurity Project in East Africa in 2017. This project aims to strengthen biosafety and biosecurity capacities in East Africa, and to develop suitable training

<i>Project Title</i>	<i>Biosecurity in East Africa</i>
	<p>programs for local partners with specific needs in the direction of health security.</p> <p>The Dutch National Institute for Public Health and the Environment (RIVM) has ample experience with biosafety and biosecurity, both on a national level (e.g. national preparedness, research on rapid diagnostics) and on an international level (project coordination of CBRN projects in Asia, Europe and Africa). Previously, the RIVM has also worked on biosafety and biosecurity in Uganda, of which these activities led to recognition of the Joint External Evaluation for Uganda in 2016. In continuation of aforementioned project, the RIVM aims to build on their previous Africa activities in Kenya, Tanzania and Ethiopia. In 2017 and 2018, the project activities have included supporting a harmonized national bio risk management curriculum development in Kenya, the initiation processes of a National Inventory of Dangerous Pathogens in Kenya and Tanzania, actual lab trainings at the National Veterinary Institute of Kenya, and the provision of a secretarial and chair role for the Action Package Prevent 3 'Biosafety and Biosecurity' within the GHSA.</p>
<i>Project Title</i>	<i>Establishment of Laboratory Surveillance System for Viral Diseases of Public Health Concern</i>
Partner Country/Region	Gabon
Implementing Country	Japan
Project Value	¥300,000,000
Duration	2016-2021
Description	The research and development capacity of the Gabonese research center is enhanced through the collaborative research with a Japanese research institute regarding identification of pathogens of known and unidentified infectious diseases as well as development of rapid diagnostic methods for viral diseases of public health concern. Particular attention is paid to viral hemorrhagic fevers.
<i>Project Title</i>	<i>Pan-African Network for Rapid Research, Response, Relief and Preparedness for Infectious Diseases Epidemics (PANDORA-ID)</i>
Partner Country/Region	Gabon, Ghana, Nigeria, Republic of Congo, Sierra Leone, Sudan, Tanzania, Uganda, Zambia
Implementing Country	United Kingdom – University College London Italy – National Institute for Infectious Diseases Lazzaro Spallanzani Project funded by the EDCTP EU programme
Collaborating Institution(s)/Partner(s)	University College London (UCL); Foundation Congolese pour la Recherche Medicale (FCRM); HerpeZ Limited by Guarantee; Bernhard-Nocht-Institut für Tropenmedizin (BNITM); Southern African Centre for Infectious Diseases (SACIDS); Royal Veterinary College (RVC); Irrua Specialist Teaching Hospital (ISTH); Mercy Hospital Research Laboratory- Njala University, Freetown, Sierra Leone; Public Health England (PHE); Uganda Virus Research Institute (UVRI); Institut für Virologie-Charité-Universitätsmedizin Berlin; National Institute for Medical Research-Tanzania (NIMR);



<i>Project Title</i>	<i>Pan-African Network for Rapid Research, Response, Relief and Preparedness for Infectious Diseases Epidemics (PANDORA-ID)</i>
Project Value	€9,997,501.25
Duration	2018-2022
Description	<p>Eberhard Karls Universitaet Tuebingen (EKUT) Institute of Endemic Diseases (IEND); Ifakara Health Institute Trust (IHI); East, Central and Southern African Health Community (ECSA-HC); Chatham House Centre on Global Health; Noguchi Memorial Institute for Medical Research (NMIMR); Emergency Life Support for Civilian War Victims ONG ONLUS (EMERGENCY ONG ONLUS); Kwame Nkrumah University of Science and Technology (KNUST); Institut de Recherche pour le Development (IRD); University of Ghana (UG); Centre de Recherches Médicales de Lambaréné (CERMEL); Africa Center for Diseases Control and Prevention (AFRICA CDC); Nigeria Center for Disease Control (NCDC)</p> <p>The overall objective is to strengthen regional and pan-African capacities and systems for enabling rapid and effective response to emerging and re-emerging infectious diseases threats arising from within Africa, or those imported from overseas. We will build on our existing collaborations, and ongoing work with the EDCTP West, Central, East and Southern African networks of excellence to:</p> <p>develop and setup robust ‘ready to go within 48-72 hours’ PANDORA-ID-NET outbreak rapid response teams, at each of the four African regions (West, Central, East and Southern Africa) to assist when an outbreak occurs. These will be linked to other regional and global networks on emerging infections.</p> <p>develop capacities for conduct of research (multidisciplinary operational, anthropological, social science, basic science, translational clinical, clinical trials, implementation research) in two situations:</p> <p>In the emergency outbreak or epidemic situation.</p> <p>In the inter-epidemic period.</p> <p>train, develop and empower (through high quality training and mentorship) younger generation scientists, healthcare workers, laboratory personnel, clinicians, ethicists and social scientists to take leadership of emerging infections and the One HEALTH portfolio in all African regions</p>

<i>Project Title</i>	<i>An African Health-Security Partnership to Strengthen Disease Surveillance and Epidemic Intelligence</i>
Partner Country/Region	Gambia, Mali, Namibia, South Africa, Sudan, and Tunisia
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	World Health Organization
Project Value	C\$5,000,000
Duration	2022-2024

<i>Project Title</i>	<i>An African Health-Security Partnership to Strengthen Disease Surveillance and Epidemic Intelligence</i>
Description	This project aims to reduce biological threats in Africa by strengthening health security capacities for disease surveillance and response, specifically focusing on integrated disease surveillance, event-based surveillance, genomic surveillance, and epidemic intelligence.
<i>Project Title</i>	<i>Biological Threat Reduction Capacity Building in Ghana</i>
Partner Country/Region	Ghana
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	Canadian Food Inspection Agency
Project Value	C\$2,145,000
In-Kind Contribution	This project also includes in-kind expertise and support from the Canadian Food Inspection Agency
Duration	2018-2023
Description	This project aims to mitigate a range of serious biological threats posed by pathogens of bioterrorism concern (e.g. anthrax, African Swine Fever, Foot-and-Mouth-Disease) through the provision of hands-on, specialized training to Ghana's Veterinary Services Directorate in the use of biological containment facilities and in the detection, handling and proper storage of high consequence pathogens. The impact of this project is addressed in an article on <a href="#">How Canada paved the road for COVID-19 testing in Ghana</a> .
<i>Project Title</i>	<i>Strengthening Biosafety and Biosecurity at Ghana's Veterinary Services Directorate</i>
Partner Country/Region	Ghana
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Project Value	C\$527,000
Duration	2018-2021
Description	This project addresses technical and mechanical issues at Canadian funded veterinary laboratories in Ghana. The maintenance work includes a hands-on mentorship and training for locally-hired maintenance personnel to ensure that the facilities can be sustainably maintained going forward. This project supports the GP's Signature Initiative to Mitigate Biological Threats in Africa.
<i>Project Title</i>	<i>Biosafety &amp; Biosecurity Solutions for Low-Resource Environments</i>
Partner Country/Region	Ghana and Nigeria

<i>Project Title</i>	<i>Biosafety &amp; Biosecurity Solutions for Low-Resource Environments</i>
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution or Partner(s)	Royal Institute of International Affairs (Chatham House)
Project Value	£181,164
Duration	2017-2018
Description	This Project aims to identify tangible ways and means to “operationalise” low-resource biosafety and biosecurity, initially engaging with existing West African laboratory facilities in Ghana and Nigeria to identify and evaluate a range of technical challenges faced by operating in low-resource settings.
<i>Project Title</i>	<i>Sustainable Laboratories for High-Consequence Pathogens in Low Resource Environments</i>
Partner Country/Region	Ghana, Nigeria
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	Royal Institute of International Affairs (Chatham House)
Project Value	£692,529
Duration	2017-2020
Description	This project focuses the attention and efforts of leading experts on identifying tangible design and operational adjustments for biological containment facilities in low-resource environments. Although being implemented in West Africa, lessons learned and outcomes will be applied globally. Based on the outcomes of Phase I (2017-2018), Phase II of the project will create an assessment tool to be used when looking at establishing a new laboratory; develop core specifications for sustainable laboratories; and investigate the feasibility of establishing a regional skills training hub.
<i>Project Title</i>	<i>Strengthening Urban Preparedness and Resilience against Biological Threats</i>
Partner Country/Region	Ghana, Nigeria, South Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Royal Institute of International Affairs (Chatham House)
Project Value	£100,183
Duration	2018-2019
Description	This project focuses on capacity building activities required to strengthen urban resilience to biological threats in several large African cities. Building on foundational needs assessments

<i>Project Title</i>	<i>Strengthening Urban Preparedness and Resilience against Biological Threats</i>
	undertaken for Accra (Ghana), Lagos (Nigeria) and Cape Town (South Africa) during Phase I of this initiative, Chatham House will further engage with local and national officials, international stakeholders, and subject-matter experts specializing in biological resilience in order to fill identified gaps.
<i>Project Title</i>	<i>Biosecurity Partnership Programme in East Africa</i>
Partner Country/Region	Kenya
Implementing Country	Denmark
Collaborating Institution(s)/Partner(s)	Ministry of Health and Ministry of Education, Science and Technology, including National Commission for Science, Technology and Innovation
Project Value	US\$2,300,000
Duration	2014-2019
Description	<p>The purpose of the programme is to contribute to the development of national biosecurity and bio-preparedness systems. Areas of support include legislation, awareness raising and capacity building. Results include:</p> <p>A comprehensive biosecurity gap survey covering 86 labs.</p> <p>Development of the book <i>An efficient and practical approach to Biosecurity</i>.</p> <p>8 university training workshops on responsible science reaching approx. 500 students and staff.</p> <p>1 2-day train-the-trainers workshop on responsible science for university biosecurity focal points.</p> <p>1 Biosecurity High-Level Meeting with senior representatives from the government and legislative branch and other stakeholders.</p> <p>Support to biosecurity legislation, incl. assistance to draft control list, several drafting workshops and high-level meetings with senior government officials.</p> <p>Initial steps towards bio-preparedness capacity building.</p>
<i>Project Title</i>	<i>Improving Biosecurity and Biosafety in Kenya as part of the Global Partnership</i>
Partner Country/Region	Kenya
Implementing Country	Netherlands
Project Value	€495,000
Duration	1 January 2017 – 31 December 2019
Description	The Dutch National Institute for Public Health and the Environment (RIVM) is conducting the project in order to improve biosafety in Kenya. The RIVM organises trainings in order to raise awareness and instill a sense of responsibility with regard to biosecurity. The institute is also in the process of establishing biosafety guidelines in

<i>Project Title</i>	<i>Improving Biosecurity and Biosafety in Kenya as part of the Global Partnership</i>
	Kenya. Furthermore, the RIVM plans to compile a National Inventory of Select Agents. The aim of the project is to not only improve biosafety in Kenya but to also enhance biosafety in the region, by including regional partners such as Ethiopia and Tanzania.
<i>Project Title</i>	<i>Swedish Research Collaboration with Kenya</i>
Partner Country/Region	Kenya
Implementing Country	Sweden – Swedish International Development Cooperation Agency
Collaborating Partner(s)	International Centre of Insect Physiology and Ecology (Icipe)
Project Value	SEK 14,211,263/€1,367,404 (2018)
Duration	2016-2020
Description	<p>Icipe's mission is to help alleviate poverty, ensure food security and improve the overall health status of peoples of the tropics by developing and extending management tools and strategies for harmful and useful arthropods, while preserving the natural resource base through research and capacity building. Icipe's research portfolio cuts across traditional disciplines within insect science and covers four thematic areas: human health, animal health, plant health, and environmental health.</p> <p>Some insects are disease vectors and are responsible for the transmission of dilapidating human and livestock diseases. Such diseases include malaria (transmitted by mosquitoes), human and animal trypanosomosis (commonly known as sleeping sickness and nagana, respectively) which are transmitted by tsetse. Other vector-borne diseases include dengue, kala-azar, Rift Valley fever and yellow fever.</p>
<i>Project Title</i>	<i>One Health Surveillance Network for Transboundary Outbreaks between Somalia and Kenya</i>
Partner Country/Region	Kenya , Somalia
Implementing Country	United States – Department of State's Biosecurity Engagement Program
Collaborating Partner(s)	Global Implementation Solutions
Project Value	US\$240,000
Duration	2018
Description	The United States implemented a project to join the Somalia One Health Technical Working Group (SOH-TWG) with representatives from the Kenya Zoonotic Disease Unit (Kenya-ZDU). Under the guidance of subject matter experts from GIS, SOH-TWG and Kenya-ZDU officials developed operational plans for transboundary Rift Valley Fever and Brucellosis outbreaks during a January 2018 meeting. The operational plans will be exercised during a second meeting to be held in December 2018, where SOH-TWG and Kenya-ZDU officials will run a field-based workshop. This project has resulted in increased biosecurity coordination and cooperation

<i>Project Title</i>	<i>One Health Surveillance Network for Transboundary Outbreaks between Somalia and Kenya</i>
	between Somalia and Kenya, which will improve transboundary One Health surveillance.
<i>Project Title</i>	<i>Strengthening Sustainable Biosafety &amp; Biosecurity in East Africa</i>
Partner Country/Region	Kenya and Uganda
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution or Partner(s)	International Federation of Biosafety Associations (IFBA)
Project Value	C\$245,000
Duration	2017-2018
Description	This Project is focusing on the development of sustainable biosafety and biosecurity in East Africa, enhancing multi-sectoral collaboration and fostering partnerships between the Biorisk Management Association of Kenya, the Biosafety & Biosecurity Association of Uganda, the African Union, relevant government ministries and international partners (including IFBA and Global Partnership members) in the development and implementation of comprehensive and sustainable biosafety and biosecurity strategies and capacity in East Africa.
<i>Project Title</i>	<i>Security Upgrade of Facilities in Libya</i>
Partner Country /Region	Libya
Implementing Country	United Kingdom – Home Office United States – Department of State
Project Value	£140,000
Duration	2018-2019
Description	This project will provide biosafety and biosecurity enhancements to two facilities in Libya. Based on a US security assessment, two establishments were selected for upgrade using UK funding. Project is planned to commence in late 2018.
<i>Project Title</i>	<i>Development of a National Biosafety and Biosecurity System in Mali</i>
Partner Country/Region	Mali
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	International Federation of Biosafety Associations (IFBA)
Project Value	C\$236,000
Duration	2016-2018

<i>Project Title</i>	<i>Development of a National Biosafety and Biosecurity System in Mali</i>
Description	This project supported the Government of Mali to mitigate threats posed by infectious diseases in West Africa through the development of a comprehensive national biosafety and biosecurity system.
<i>Project Title</i>	<i>Enable and Enhance Initiative</i>
Partner Country/Region	Mauritania, Mali, Burkina Faso, Niger, Chad
Implementing Country	Germany
Collaborating Institution(s)/Partner(s)	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH  Bundeswehr Institute of Microbiology (IMB) (implementing institution)  (implementing institution)
Project Value	2016-2020: €7,260,000  2021-2023: €3,111,000 (€1,191,421 in 2022)
Duration	2021–23
Description	This project aims to strengthen African prevention and response capabilities to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and non-proliferation principles, practices, and instruments; enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”
<i>Project Title</i>	<i>German Biosecurity Programme</i>
Partner Country/Region	Morocco, Sudan, Tunisia
Implementing Country	Germany
Collaborating Institution(s)/Partner(s)	Robert Koch Institute (RKI) (implementing institution)
Project Value	€1,633,080 in 2022 (€4,613,041 for 2020–22)
Duration	2020–22
Description	This project aims to strengthen prevention and response capabilities of beneficiaries to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and

<i>Project Title</i>	<i>German Biosecurity Programme</i>
	non-proliferation principles, practices, and instruments; enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”
<i>Project Title</i>	<i>German Biosecurity Programme – Focal Partnerships</i>
Partner Country/Region	Morocco, Sudan, and Tunisia
Implementing Country	Germany
Collaborating Institution(s)/Partner(s)	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH and Robert Koch Institute
Project Value	2013-2019: €28,443,000 2020-2022: €4,988,122
Duration	2013-2022
Description	<p>The German Biosecurity Programme was launched 2013 by the Federal Foreign Office within the framework of its engagement in the Global Partnership. It is part of the Federal Government’s preventive security policy. The goal is to raise awareness for and minimise the risks associated with biological substances and pathogens. A further aim is to strengthen public health and promote a responsible approach to research and research findings in partner countries. The programme is implemented by leading German research institutions and in its current phase 2020- 2022, it is operating on a total budget of 16.5 million Euros.</p> <p>In the focal countries Tunisia, Morocco and Sudan the programme cooperates with the respective Health Ministries as well as subordinate central laboratories and institutions. Activities are implemented within the whole thematic range of the programme and according to specific needs.</p> <p>Examples are:</p> <p>Awareness raising: Implementation of national risk communication systems for biological threats, including policy advising, media and communication trainings etc.; Biosafety and biosecurity: Bio risk management courses and good laboratory practice courses; lab organization support; provision of adequate lab equipment and consumables;</p> <p>Surveillance: Implementation of SOPs and fail-proof surveillance data exchange systems;</p> <p>Detection and diagnostics: Training in safe and reliable diagnostics; guidance and support (experts, equipment, consumable) for ongoing diagnostic challenges; Networking: Establishing laboratory networks (e.g. area specific, issue specific, national- and country-level); fostering scientific exchange on biological security; strengthening of regional and inter-sectoral cooperation amongst biosafety and biosecurity stakeholders;</p>



<i>Project Title</i>	<i>German Biosecurity Programme – Focal Partnerships</i>
	<p>Capacity development – Prevention and Response: Consultation and support of the development and evaluation of biosafety and biosecurity policies as well as their implementation; establishment and training of national preparedness plans for biological threats; support for the institutionalization of training and exchange formats.</p> <p>In 2021, past measures also contributed to the partner countries' pandemic response; additionally, the partner countries were supported with laboratory equipment as well as activities to further support them during the pandemic,</p> <p>e.g. through the support of an intra action review on the pandemic response in Tunisia.</p>
Gender Equality	All projects in the framework of the German Biosecurity Programme have been designed considering their potential contribution to UN Res. 1325. Attempts to contribute to gender equality include <i>inter alia</i> gender-sensitive monitoring of participants, encouragement of women (especially regarding participation in events and activities, the support of female leadership and female young scientists) as well as approaches to gender-sensitive activity- and event- planning.
<i>Project Title</i>	<i>Strengthening PMTCT And Paediatric HIV Treatment Services In Mozambique</i>
Partner Country/Region	Mozambique; Provinces of Gaza, Maputo and Sofala
Implementing Country	Italy, through UNICEF and Comunità di Sant'Egidio
Project Value	€1,345,500.00
Duration	2016-2017 (2 years)
Description	Mozambique has of the highest child mortality rates in the world and also has the third largest burden of HIV-positive pregnant women in sub Saharan Africa. HIV/AIDS contributes a total of 25.4 per cent of the mortality rates for children and women. The objective of the project is to increase coverage and retention in PMTCT and HIV Treatment services by Pregnant Women, Children and Adolescents in selected locations in Gaza, Sofala and Maputo Province by end of 2018, in support of MoH HIV Test & Treat Inception Phase (2016-2018). Most importantly, this proposal will contribute to Provincial and National government targets set forth in the IV National Strategic Plan for the HIV Response 2015-2019; the HIV Programme Acceleration Plan; and, the National Plan for Elimination of Vertical Transmission of HIV; National and Provincial PESS; and, the objectives set forth in the Test & Treat Strategy adopted in 2016.
<i>Project Title</i>	<i>Biosafety and Biosecurity Training in Support of a Biological Laboratory and Biobank</i>
Partner Country/Region	Lagos State, Nigeria
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada

<i>Project Title</i>	<i>Biosafety and Biosecurity Training in Support of a Biological Laboratory and Biobank</i>
Collaborating Institution(s)/Partner(s)	UK Ministry of Defence (MoD) Public Health England (PHE) UK Health Security Agency (HSA)
Project Value	C\$1,700,000
Duration	2019-2022
Description	With support from the United Kingdom's Ministry of Defence and Public Health England (PHE), this project provides training, hands-on support and mentorship to experts at the Canada-funded Biological Laboratory and Biobank in Lagos State on a range of critical laboratory operations, including safe and proper use of biosafety cabinets and documented safe practices for sample reception, sample processing and results reporting. This project also includes a two-year maintenance, service and warranty contract.
<i>Project Title</i>	<i>Biosecurity in Lagos State: Provision of a BioBank and Laboratory</i>
Partner Country/Region	Nigeria
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	Lagos State Ministry of Health
Project Value	C\$3,729,503.60
Duration	2017-2019
Description	Canada has provided a biosafety laboratory and associated Biobank to be operated by the Lagos State Ministry of Health with the aim to strengthen capabilities to prevent, detect and respond to outbreaks of infectious diseases (e.g. Ebola or Lassa Fever).
<i>Project Title</i>	<i>Capacity building for National and Regional Foot-and-Mouth-Disease (FMD) Control</i>
Partner Country/Region	Nigeria
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	Canadian Food Inspection Agency
Project Value	C\$416,000
In-Kind Contribution	This project also includes in-kind expertise and support from the Canadian Food Inspection Agency
Duration	2018-2022
Description	This project is supporting Nigeria's National Veterinary Research Institute (NVRI) to produce FMD-specific reagents and/or

<i>Project Title</i>	<i>Capacity building for National and Regional Foot-and-Mouth-Disease (FMD) Control</i>
	diagnostic kits for antigen detection, detection of antibodies to structural and non-structural proteins, reverse transcription polymerase chain reaction and pen-side tests.
<i>Project Title</i>	<i>Strengthening Biosafety and Biosecurity at Nigeria's National Veterinary Research Institute</i>
Partner Country/Region	Nigeria
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Project Value	C\$442,613
Duration	2018-2021
Description	This maintenance initiative provides technical and mechanical support for the biological containment laboratory at Nigeria's National Veterinary Research Institute. The work includes hands-on mentorship and training for locally-hired personnel to ensure that the facility can be sustainably operated and maintained going forward.
<i>Project Title</i>	<i>Enable &amp; Enhance Initiative - Nigeria</i>
Partner Country/Region	Nigeria
Implementing Country	Germany
Collaborating Partner(s)	Bernhard Nocht Institute for Tropical Medicine
Project Value	2016-2020: €907,000 2021-2022: €656,400 2022-2023: €385,253
Duration	2016-2023
Description	This project aims to strengthen Nigeria's prevention and response capabilities to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and non-proliferation principles, practices, and instruments; enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on "Women, disarmament, non-proliferation and arms control."

<i>Project Title</i>	<i>Establishment of Laboratory Equipment National Equipment Calibration Centre (NaLECC) for Laboratory Equipment Calibration/Biosafety Equipment Certification and Training/Capacity Building of Health Workers in Nigeria.</i>
Partner Country/Region	Nigeria
Implementing Country	United States Department of Health and Human Services
Collaborating Partner(s)	<p>Project 1 (\$20,000): Centres for Disease Control and Prevention (CDC), International Laboratory Branch (CDC/ILB), Atlanta, GA; CDC Nigeria office, Abuja; Federal Ministry of Nigeria through the Medical Laboratory Science Council of Nigeria (MLSCN), Institute of Human Virology, Nigeria (IHVN) and Biologic Calibration Solutions Limited, Kenya.</p> <p>Project 2 (\$600,630): CDC Nigeria and APIN</p> <p>Project 3 (\$56,000): CDC Nigeria and ASM</p>
Project Value	US\$676,630
Duration	2022 - 2023
Description	<p>Project 1 (\$20,000): The National Laboratory Equipment Calibration Center (NaLECC) was established to support calibration of ancillary equipment. This project supported human resource capacity building by undertaking the capacity building of 4 NaLECC staff on equipment calibration through 10 days international training on metrology as well as support trip by Biotech Engineers for Biosafety cabinet certification. While it supported implementation plan to ensure the calibration tools for all scopes are re-calibrated at a Metrology accredited centre. It also set out to support NaLECC to achieve ISO 17025 accreditation and maintain the accreditation there after. This Government of Nigeria (GoN)-MLSCN owned National Laboratory Equipment Calibration Centre (MLSCN) currently ensure that a day-to-day technical mentorship by a registered Engineer who is an ISO 17025 certified auditor and trained metrologist who works with other trained Bioengineers to calibrate ancillary laboratory instruments like Pipets, timers, weighing Balance etc. The project aims to maintain work balance in service delivery and equipment optimization while assuring the safety of Laboratory/other HCWs using the various equipment for optimal service delivery.</p> <p>Project 2 (\$600, 630): Through a CDC APIN Cooperative award mechanism, this project sets out to develop linkage of supported laboratories to the CDC funded centralized laboratory waste management system for the segregation, collection, treatment, and disposal of infectious laboratory liquid and solid waste across all PEPFAR supported Laboratories. It serves to estimate volume of wastes generated across PRC Supported Laboratories and the costs associated with the proper disposal of the generated wastes using High temperature incineration mitigation strategies. This project was undertaken to ensure the safety of the Laboratory Personnel, the environment and public health is adequately and properly protected from untoward outcomes of poor waste management practices.</p> <p>Project 3 (\$56,000): Supported the End-Users Training on Biosafety Cabinet Maintenance for all Bio-Engineers supporting Biosafety Cabinet Maintenance and servicing across PEPFAR</p>

<i>Project Title</i>	<i>Establishment of Laboratory Equipment National Equipment Calibration Centre (NaLECC) for Laboratory Equipment Calibration/Biosafety Equipment Certification and Training/Capacity Building of Health Workers in Nigeria.</i>
Gender Equality	Supported Laboratories in Nigeria. The trainings were completed in two batches. This project aims to protect Laboratory Personnel who use the Biosafety Cabinets in their routine operations from infectious agents that may accidentally be contracted for poorly maintained and sub-optimal Biosafety Cabinets when put in Use. It also protects the test products from unwanted contaminations.  The training was open to all individuals with the proper background and knowledge base.
<i>Project Title</i>	<i>West Africa Lassa Fever Project</i>
Partner Country /Region	Nigeria
Implementing Country	United Kingdom – Ministry of Defence
Collaborating Institution(s)/Partner(s)	Liverpool School of Tropical Medicine Public Health England
Project Value	£230,000
Duration	2018-2020
Description	The project is comprised of two separate but complementary elements, which span both Public Health and Defence Medical Health aspects, with the aim of increasing capability to rapidly deal with infected individuals and minimise the potential of spread of the virus. The project aims to build in country capability for both point of care diagnostics (to aid with early triage of patients, thus reducing the potential for further spread of virus), and training to increase in-country capability with respect to laboratory diagnostics and confirmatory testing at the Federal Teaching Hospital Abakaliki (FETHA). Lassa Fever poses a high risk to national security and public health because it is easily transmitted from person to person and has a high mortality rate. The virus is also of security concern because of its potential for misuse. The project will improve biosecurity by reducing the need for transport and culture of samples. Overall, the project will improve Nigerian capability to respond to LF outbreaks, whether caused deliberately or naturally, as well as to other disease outbreaks involving pathogens of security concern. Work is planned to commence in late 2018.
<i>Project Title</i>	<i>International Cooperation with Ministry of Health from Equatorial Guinea</i>
Partner Country/Region	Republic of Equatorial Guinea
Implementing Country	Spain – Agency of International Cooperation and Development (AECID)
Collaborating Institution(s)/Partner(s)	Instituto de Salud Carlos III (Spain), Ministerio de Sanidad y Bienestar Social de la República de Guinea Ecuatorial
Project Value	€285,000
Duration	2017-2019

<i>Project Title</i>	<i>International Cooperation with Ministry of Health from Equatorial Guinea</i>
Description	Technical Assistance to National Programmes for Endemic Diseases Control of Ministry of Health, Equatorial Guinea:  - Programmes for Malaria, Neglected Tropical Diseases, HIV/AIDS & TB.
<i>Project Title</i>	<i>Strengthening Biological Security in Sierra Leone</i>
Partner Country/Region	Sierra Leone
Implementing Country	Canada – Weapons Threat Reduction Program  Global Affairs Canada
Project Value	C\$5,550,000
Duration	2017-2022
Description	To mitigate serious proliferation threats stemming from the 2014-15 Ebola Virus Disease outbreak in West Africa, Canada provided a modular biological containment laboratory and associated biobank to the Government of Sierra Leone. This Facility will serve as the single, secure facility for work on and storage of Ebola and other especially dangerous pathogens and will strengthen capacity in Sierra Leone to prevent, detect and respond to all manner of future disease outbreaks. While construction of this joint facility was completed in February 2020, the commissioning and final handover were delayed as a result of the COVID-19 pandemic. Given the delay, Canada supported a further two-year maintenance, service and warranty contract for the facility.
<i>Project Title</i>	<i>Bilateral Emergency Program in Sierra Leone implemented by Italian NGOs to establish first aid posts for identification and treatment of Ebola patients</i>
Partner Country/Region	Sierra Leone
Implementing Country	Italy, through NGOs
Project Value	€3,000,000
Duration	June 2016 – June 2017
Description	Bilateral Emergency Program in Sierra Leone carried out by Italian NGOs (EMERGENCY, CUAMM, ENGIM, COOPI, DOKITA, AVSI and Associazione Giovanni XXIII) in Freetown (Goderich Hospital run by Emergency), and 3 other areas in the districts of Pujehun, Port Loko, and Bombali.
<i>Project Title</i>	<i>Establishment of a Regional Centre of Excellence for Biosafety and Biosecurity in Southern Africa</i>
Partner Country/Region	South Africa
Implementing Country	Canada – Weapons Threat Reduction Program  Global Affairs Canada

<i>Project Title</i>	<i>Establishment of a Regional Centre of Excellence for Biosafety and Biosecurity in Southern Africa</i>
Collaborating Partner(s)	National Institute for Communicable Diseases of South Africa (NICD)
Project Value	C\$4,000,000
Duration	2022-2025
Description	In support of the Signature Initiative to Mitigate Biological Threats in Africa, this project is establishing a pilot Regional Centre of Excellence for Biosafety and Biosecurity for the southern Africa region.
Gender Equality	This project does not contain a specific gender equality component. However, considerations will be taken to ensure that items such as training materials and delivery is reviewed through a gender lens to ensure inclusivity.
<i>Project Title</i>	<i>Strengthening Biosecurity and Biosafety at South Africa's National Institute for Communicable Diseases (NICD)</i>
Partner Country/Region	South Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	National Institute for Communicable Diseases (NICD)
Project Value	C\$1,950,000
Duration	2016-2018
Description	Through this project, Canada and South Africa are collaborating to strengthen biological safety and biological security at NICD.
<i>Project Title</i>	<i>European and Developing Countries Clinical Trials Partnership (EDCTP)</i>
Partner Country/Region	Sub-Saharan Africa
Implementing Country	Sweden – Swedish International Development Cooperation Agency
Project Value	SEK 37,500,000/€3,608,666 (2018)
Duration	2015-2019
Description	The European & Developing Countries Clinical Trials Partnership (EDCTP) aims to accelerate the development of new or improved drugs, vaccines, microbicides and diagnostics against HIV/AIDS, tuberculosis and malaria as well as other poverty-related infectious diseases in sub-Saharan Africa, with a focus on phase II and III clinical trials.
<i>Project Title</i>	<i>Package of 5 scoping projects in Sub-Saharan Africa to improve biosecurity and biosafety</i>
Partner Country/Region	Sub-Saharan Africa

<i>Project Title</i>	<i>Package of 5 scoping projects in Sub-Saharan Africa to improve biosecurity and biosafety</i>
Implementing Country	United Kingdom - UK Animal & Plant Health Agency (APHA)
Project Value	£223,804
Duration	1 year scoping phase, with 5 year implementing phase: Implementing phase approval expected in Q1 2023.
Description	<p>The primary objectives of these projects are to strengthen disease surveillance, detection systems and the capacity to respond to biological events across Africa, especially in regions where the presence of violent extremist organisations (VEOs), sub-optimal health infrastructure and endemic pathogens combine to increase security concerns. These projects directly link to the Global Partnership Africa Signature Initiative</p> <p><b>Project 1 – Avian influenza Virus (AIV) and Newcastle Disease Virus (DIV) diagnostics and surveillance capacity building in West Africa</b></p> <p>This project will work with potential partner countries in West Africa to review existing capabilities, and to assess regional developmental needs and gaps and determine capacity building requirements, laboratory systems and training requirements. A targeted regional training programme will be established, initially focussed on surveillance and frontline diagnostics for Avian Influenza Virus and Newcastle Disease Virus, with the aim of strengthening regional disease control and reporting.</p> <p><b>Project 2 – Surveillance and control vector borne disease: capacity building in West Africa: ecology of disease vectors and their control</b></p> <p>A training programme will be developed, focused on the control of high consequence pathogens transmitted by arthropod vectors (e.g. mosquitoes, ticks). The aim of the programme will be to inform, educate and encourage collaboration between public and veterinary health professionals working on vector-borne diseases in West Africa, and to strengthen regional disease surveillance and control of vector borne diseases of potential security concern.</p> <p><b>Project 3 – Brucella diagnostics and surveillance capacity building in East Africa: supporting the safe and effective control of Brucellosis in Africa</b></p> <p>Existing links with Rwanda, and the APHA International Brucella Reference Laboratory's (IRL) experience of working with East African partners, will be used to develop a network of East African countries to control brucellosis by strengthening national diagnostics and surveillance capabilities. A pathway will be developed for national brucellosis surveillance and control and brucella test kits will be provided to the Rwandan Ministry of Agriculture laboratory. APHA will provide confirmatory testing of Rwandan samples at their IRL, as well as training in diagnostic methods.</p> <p><b>Project 4 – Assessment of existing animal health surveillance systems in Africa</b></p> <p>There is a need to map and evaluate surveillance systems in Low and Middle-Income Countries (LMICs) in order to define their capability and sensitivity to detect pathogens and health hazards. APHA will assess existing animal health disease surveillance systems in Africa, identify capability gaps and recommend remedial action.</p> <p><b>Project 5 – Reduction of risks, hazards and threats of dual-use research of concern (DURC – i.e. research that has the potential to be misapplied to the extent of posing a security threat)</b></p>



<i>Project Title</i>	<i>Package of 5 scoping projects in Sub-Saharan Africa to improve biosecurity and biosafety</i>
	This project will assess the potential for establishing a network of animal health laboratories to promote an understanding of: the risks associated with the misuse of biological agents; research with dual-use potential; the obligation to comply with accepted international standards and norms. In addition, the network will be used to encourage laboratories in Low and Middle Income Countries (LMICs) to operate safely, securely and transparently.
Gender Equality	Details of APHA's equality and diversity policies can be accessed here: <a href="https://www.gov.uk/government/organisations/animal-and-plant-health-agency/about/equality-and-diversity">https://www.gov.uk/government/organisations/animal-and-plant-health-agency/about/equality-and-diversity</a>
<i>Project Title</i>	<i>Strengthening biosafety and biosecurity in Tanzania</i>
Partner Country/Region	Tanzania
Implementing Country	Finland, Funded by the Ministry for Foreign Affairs
Project Value	€830,000
Duration	A five year project
Description	<p>This project aims at preventing unintentional and intentional spread of infectious diseases by supporting biosecurity projects in Tanzania. The existence and outbreaks of diseases that are dangerous to life place great strains to the national healthcare system. Efforts to identify microbes that cause infectious diseases are vital to any nation's public healthcare system. The goal of the programme is to train Tanzanians of the know-how of making diagnosis of infectious diseases. The goal is also to train Tanzanians to operate related equipment which enables rapid diagnosis of infectious diseases. Local expertise, detection abilities and developing of biosecurity know-how reduces potential bio-threat.</p> <p>A Midterm Evaluation by EcoHealth Alliance was conducted in April 2017 showing excellent results of the Project thus far.</p> <p>This project is conducted in bilateral collaboration between The Finnish Center for Biothreat Preparedness (BUOS) /Centre for Military Medicine (SOTLK) and Tanzania Veterinary Laboratory Agency (TVLA), Ministry of Livestock and Fisheries Development, United Republic of Tanzania.</p>
<i>Project Title</i>	<i>Strengthening Health and Biosecurity in Tanzania by Bio-detection Capacity Building</i>
Partner Country/Region	Tanzania
Implementing Country	Finland Ministry for Foreign Affairs (financing), Finland's Centre for Biothreat Preparedness (implementing agency)
Collaborating Partner(s)	Tanzania Veterinary Laboratory Authority
Project Value	€750 000
Duration	2019-2023

<i>Project Title</i>	<i>Strengthening Health and Biosecurity in Tanzania by Bio-detection Capacity Building</i>
Description	<p>The project aims at preventing unintentional and intentional spread of infectious diseases by supporting biosecurity projects in Tanzania. Efforts to identify microbes that cause infectious diseases are vital to any nation's public health system. The Finnish Centre for Biothreat Preparedness (BUOS)/Centre for Military Medicine administer and implement biosecurity project that strengthens the know-how of making diagnosis of infectious diseases in Tanzania. The project is a 5-year extension for a project begun in 2014 and will terminate in the end of 2023. The project totals 750 000 Euros. The main objectives of the project are: Build local capacity on detection of bio-threat pathogens and diagnosis of infectious diseases, develop a diagnostic system based on local needs, suitable for field use, train and collaborate with experts and authorities, and raise local knowledge and awareness in biosecurity and biosafety. The Tanzania Veterinary Laboratory Agency, belonging to public health sector, continues as the main collaborator.</p>
Gender Equality	Project has gender equality targets, which were met in 2020. The target is that over 30% of trainees are women.
<i>Project Title</i>	<i>Support to the Decentralization of MDR-TB Management in Dodoma Region (DETER-TB)</i>
Partner Country/Region	Tanzania
Implementing Country	Italy – Ministry of Foreign Affairs and International Cooperation
Collaborating Partner(s)	National Institute for Infective Diseases Lazzaro Spallanzani (INMI)
Project Value	€298,503.60
Duration	2018-2020
Description	<p>Through the strengthening of the DRRH Clinical Microbiology and TB Laboratory and the MDR TB clinical services, the project supports the decentralization strategy through a targeted intervention on hospital management of MDR-TB cases. The intervention involves the implementation of an integrated model that can guarantee the management of MDR-TB cases from diagnosis to the conclusion of the "intensive phase".</p> <p>This model will be implemented through interventions focused on the different components of the management of complicated MDR-TB patients, specifically: 1. Laboratory diagnosis and microbiological follow-up; 2. Clinical and follow-up activities of patients; 3. Infection prevention and control of transmission in a hospital environment.</p>
<i>Project Title</i>	<i>Swedish research collaboration with Tanzania</i>
Partner Country/Region	Tanzania
Implementing Country	Sweden through the Swedish International Development Cooperation Agency

<i>Project Title</i>	<i>Swedish research collaboration with Tanzania</i>
Collaborating Institution(s) or Partner(s)	University of Dar es Salaam (UDSM), Muhimbili University of Health and Allied Sciences (MUHAS), Ardhi University (ARU), Tanzania Commission of Science and Technology (COSTECH)
Project Value	SEK 12,217,800/€1,254,974
Duration	2015-2020
Description	The contribution aims at supporting research and innovation in Tanzania. In total, 122 PhD, 55 MSc and 31 post docs will be trained through the research collaboration. Support is also given to research infrastructure, research administration and research grants. The development of capacity is achieved through collaborations between Tanzanian and Swedish universities and institutes
<i>Project Title</i>	<i>A Sustainable Biosafety Cabinet (BSC) Certifier Training School in Tanzania</i>
Partner Country/Region	Tanzania (TZ) and regional (Eastern Africa)
Implementing Country	United States
Collaborating Partner(s)	Centers for Disease Control and Prevention (CDC), International Laboratory Branch (CDC/ILB), Atlanta, GA; CDC Tanzania office, Dar es Salaam, TZ; Tanzania Ministry of Health (TZ MOH); Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Salaam, TZ; Association of Public Health Laboratories (APHL); Georgia State University (GSU), Atlanta, GA; Thermo Fisher Scientific; Tanzania Ministry of Education (TZ MOE); NSF International
Project Value	US\$215,000
Duration	2020 - 2023
Description	A Biological Safety Cabinet training facility located in Dar es Salaam, Tanzania provisioned by the TZ MoH, and administrated by MUHAS, will be used to train BSC certification candidates under the MUHAS biomedical engineering program. An NSF BSC Basic Accreditation Course will be offered annually by MUHAS as a steppingstone for individuals seeking to support BSCs. This course would be open to applicants in Tanzania and regionally (and eventually throughout Africa) and include an on-line BSC familiarization component to be completed ahead of time. This will allow the training at the facility to focus on practical skills and testing. The curriculum has been nationally accredited through the TZ MoE. Course offerings have been modified to support current distance learning protocols. Due to ongoing COVID-19 travel issues, the online familiarization training was conducted in Aug 2021 for the prospective course faculty cohort (10 biomedical engineers or technicians) enrolled in MUHAS's Biomedical Engineering program. Completion of hands-on training and teach back is expected to occur in February of 2022, with first cohort of TZ and regional tuition paying students 3rd/4th QTR FY2022. NSF accreditation of the training facility is anticipated by 4th QTR 2022. Future efforts will be directed towards developing the facility for Advanced BSC repair and certification, decontamination and HVAC systems as well as an accredited, co-located Equipment Calibration Centre (ECC). The end product is anticipated to be a sustainable and

<i>Project Title</i>	<i>A Sustainable Biosafety Cabinet (BSC) Certifier Training School in Tanzania</i>
	functional Biosafety Cabinet training school in Africa -- operated by Africans for Africans.
Gender Equality	The training will be open to all individuals with the proper background and knowledge base.
<i>Project Title</i>	<i>Enable and Enhance Initiative – Tunisia</i>
Partner Country/Region	Tunisia
Implementing Country	Germany
Collaborating Institution(s)/Partner(s)	Bundeswehr Institute of Microbiology (IMB), Robert Koch Institute (RKI) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Project Value	2016-2020: €4,284,000 2021-2023: €2.469.000 (€1,339,371 in 2022)
Duration	2016-2023
Description	This project aims to strengthen Tunisia’s prevention and response capabilities to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and non-proliferation principles, practices, and instruments; enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”
<i>Non-Monetary Contribution</i>	
Activity Title	Implementation of a national inventory system for dangerous pathogens in Burkina Faso
Nature of activity or contribution	National level
Partner Country/Region; International Organization/Initiative	Burkina Faso, National Public Health Institute
Implementing Country	United States Department of Health and Human Services
Collaborating Institution(s)/Partner(s)	CDC, Burkina Faso's National Public Health Institute/Central Reference Laboratory
Duration	2020-2022
Description	To reduce the risks related to the handling and/or holding of pathogens in the major national reference laboratories; CDC supported the implementation of an inventory system of

*Non-Monetary Contribution*

dangerous pathogens. An electronic pathogen register in the form of an application was developed by the National Public Health Institute's Central Reference Laboratory (LCR). A guide of the use of this registry is available to 10 laboratories dealing with dangerous pathogens for a better harmonization, 20 users were trained on the electronic application for the registration of dangerous pathogens. The 10 laboratories dealing with dangerous pathogens are the 9 National reference laboratories (meningitis, viral hemorrhagic fever, antimicrobial resistance, measles, mycobacteria, rotavirus, papillomavirus, influenza, HIV) and the National Laboratory for animal health.

*Non-Monetary Contribution*

Activity Title	Infectious diseases : Clinical and laboratory diagnosis
Partner Country/Region; International Organization/Initiative	Burundi, Eritrea, Kenya, Malawi, Mozambique, Sudan and South Sudan, Tanzania, and Uganda
Implementing Country	Japan
Collaborating Institution(s)/Partner(s)	Suez Canal University
Duration	June 2015 - March 2018
Description	To provide know-how of detection, diagnosis and comprehensive quality management skill in the laboratory that is necessary to improve infectious disease operations and reduction mortality rate among medical officers in African region.

*Non-Monetary Contribution*

Activity Title	Advanced Training Program for Fostering Global Leaders on Infectious Disease Control to Build Resilience against Public Health Emergencies
Nature of activity or contribution	Training
Partner Country/Region	Democratic Republic of Congo, Ghana, Kenya, Nigeria, Zambia
Implementing Country	Japan
Collaborating Institution(s)/Partner(s)	Hokkaido University, Research Center for Zoonosis Control and Nagasaki University
Duration	2017-2022
Narrative Description	To strengthen preparedness and response against infectious diseases, this program aims to develop capacities of experts and policymakers engaged in infectious disease control as well as to establish good network amongst countries to enable effective response and cooperation during emergency, through provision of leading long-term training programs on infectious disease control (degree program (PhD, Master) and global zoonosis control expert training program (post-doctoral shuttle program)).

*Non-Monetary Contribution*

Activity Title	Strengthening Biosafety and Biosecurity in Ghana
Nature of activity or contribution	Development of a National Biosafety and Biosecurity Guide for Laboratories
Partner Country/Region	Ghana
Implementing Country	United States Department of Health and Human Services
Collaborating Institution(s)/Partner(s)	IQLS
Duration	End of December 2022
Narrative Description	National Biosafety and Biosecurity Guide for Laboratories provide guidance on actions and methods to better evaluate bio-risks posed by biological diagnosis, research or advances in technology and how to ensure safe transfer and secure biological agents and toxins. The guide is also to provide the appropriate physical security measures and technologies to effectively manage biosafety and security threats within Ghana and enhance compliance with international standards for Biosafety and Biosecurity as well as create an inventory of dangerous biological agents.

*Non-Monetary Contribution*

Activity Title	Strengthening Public Health Emergency Preparedness in Ghana
Nature of activity or contribution	Development of a Public Health Emergency Center in the Volta Region of Ghana
Partner Country/Region	Ghana
Implementing Country	United States Department of Health and Human Services
Collaborating Institution(s)/Partner(s)	NMIMR/SPH
Duration	October 2022
Narrative Description	<p>As part of efforts to control the COVID – 19 pandemic in Ghana, United States Centers for Disease Control and Prevention (US CDC) awarded Noguchi Memorial Institute for Medical Research (NMIMR) funding to support the response and improve the public health infrastructure in Ghana under the project title “Enhanced strategies to protect and improve health security in Ghana. Through this support, three Regional Public Health Emergency Operation Centers (PHEOCs) have been established in the Ashanti, Northern and Western regions of the country.</p> <p>Currently, a fourth Regional Public Health Emergency Operation Center in the Volta region of Ghana the PHEOC was commissioned on 13th October 2022.</p> <p>Currently, all Four EOCs established with support from the US CDC and KOICA are functioning and are being used in various regions for their purposes in response to the ongoing COVID-19 and any outbreak of diseases.</p>

*Non-Monetary Contribution*

The major uses have been tracking public health events. The Public Health Events being tracked by the EOCs commissioned so far include:

1. Tracking the ongoing COVID-19 response and other epidemic-prone diseases such as Meningitis, and monkeypox.
2. Real-time monitoring of COVID-19 activities such as Vaccination deployment in the region
3. Conducting media scans to track rumours going on in the regions.

*Non-Monetary Contribution*

Activity Title	Determine the Nation's Capacity to conduct clinic-based diagnostic testing, laboratory surveillance, performance environmental testing, to support emergency response and sample and referral networks. "Laboratory Network Enhancement"
Partner Country/Region	Kenya
Implementing Country	United States – Department of Defense, Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s)/Partner(s)	Kenya Ministry of Health, Kenya Ministry of Agriculture, Livestock, Fisheries and Irrigation, CDC, CDC Kenya, American Public Health Laboratories, Sandia National Laboratories
Duration	2017-2018
Narrative Description	This project seeks to analyze and optimize the Kenyan Laboratory system for especially dangerous pathogen (EDP) for sample referral management and EDP bio-surveillance capacity.

*Non-Monetary Contribution*

Activity Title	Enhancing Biosafety, Biosecurity and Bio Preparedness of National Public Health and County Laboratories in the Kenya Ministry of Health.
Nature of activity or contribution	Biosafety/security/risk management Curriculum Integration
Partner Country/Region	Kenya
Implementing Country	United States – Department of Defense, Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s)/Partner(s)	Kenya Ministry of Health, CDC Kenya, Sandia National Laboratories, Food and Agriculture Organization, National Institute for Public Health and the Environment (Netherlands), University of Maryland
Duration	2017-2018
Narrative Description	The national curriculum project seeks to integrate and harmonize existing bio risk and biosafety/biosecurity curricula into a

*Non-Monetary Contribution*

nationally applicable and sustainable modular curriculum for pre and in-service training.

*Non-Monetary Contribution*

Activity Title	Strengthening biosafety and biosecurity in Senegal
Nature of activity or contribution	National level, technical assistance, trainings
Partner Country/Region	Senegal
Implementing Country	United States Department of Health and Human Services
Collaborating Institution(s)/Partner(s)	CDC, IRRESEF (Institut de Recherche en Santé de Surveillance Epidémiologique et de Formation)
Duration	2020-2022
Description	After an assessment of biosafety and biosecurity performance of regional laboratory hospital in all 14 regions, IRRESEF supported all sites with the development and implementation of their road map to strengthen biosafety and biosecurity. Agents from all regions have been trained in biosafety biosecurity. The coaching and in-site supervision are continuing.

*Non-Monetary Contribution*

Activity Title	Sustainable Biosafety Cabinet Certifier (BSC) Training School in Tanzania
Nature of activity or contribution	Providing sustainable, tuition based, university administered BSC Certifier training school program to strengthen capacity in Tanzania, regionally, and across the continent for BSC certification; supports continent wide laboratory accreditation efforts, and biosafety capacity.
Partner Country/Region	Tanzania
Implementing Country	United States Department of Health and Human Services
Collaborating Institution(s)/Partner(s)	APHL, Muhimbili University (MUHAS), ThermoFisher, Georgia State University (GSU), NPHL Tanzania
Duration	10 days; June 2022
Description	Newly equipped and NSF-accredited training facility in Dar used for hands on training. Offered first level course: Introduction to Biosafety Cabinets  Part 2 of Instructor Training: Held in Feb-2022 (Initial training held Aug2021). Introductory course launched May2022, with ToT training at Dar training facility. 10 BSC professionals from across Africa -- Ethiopia (3), Kenya (2), Nigeria (1), Rwanda (2), & Uganda (2) -- attended.  NSF-accreditation testing conducted Jun2022. Of those attendees seated for NSF testing: 1 of 1 passed for retesting; of BSC course Instructors: 2 of 4 passed; and of BSC course participants: 6 of 7 passed



*Non-Monetary Contribution*


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Developed a Trifold program marketing brochure for distribution internationally.

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*Non-Monetary Contribution*


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Activity Title	Basic laboratory training for detection and analysis of pathogens
Nature of activity or contribution	Training
Partner Country/Region; International Organization/Initiative	Zambia
Implementing Country	Japan
Collaborating Institution(s)/Partner(s)	Hokkaido University Research Center for Zoonosis Control
Duration	October-December 2016
Description	To enhance capacity of basic virus detection skill, analysis skill of detected results in detail and acquire knowledge of necessary technology related to transfer of microbiology research and infectious disease diagnosis.

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**II. Americas***Project Title*                      *Anthrax Domestic Prevention and Preparedness*


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Partner Country/Region	Americas
Implementing Country	United States – Department of Health and Human Services (HHS)/ Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s)/Partner(s)	CDC Center for Preparedness and Response State and Local Governments
Project Value	US\$900,000
Duration	2018-2022
Description	<p>The CDC Bacterial Special Pathogens Branch monitors trend, responds to outbreaks and spillover events, provides diagnostics support, and improves preparedness for accidental or intentional anthrax exposure. The BSPB coordinates with state and local partners to improve rapid information sharing regarding key results from epidemiologic investigations, medical countermeasure use, laboratory based surveillance and data from the healthcare system.</p> <p>Provide financial and technical support to develop domestic workforce skills for safely diagnosing anthrax from clinical specimens.</p> <p>Develop a standardized, consistent, and computable post-exposure prophylaxis, triage and treatment guidance tool and disseminate to health care systems for use during a wide-area aerosol release of <i>B. anthracis</i> spores in the United States.</p>

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<i>Project Title</i>	<i>Anthrax Domestic Prevention and Preparedness</i>
	<p>Continue expanding the <i>B. anthracis</i> whole genome sequence database and disseminate information on diversity of U.S. and international isolates.</p> <p>Support the U.S. Laboratory Response Network through strain verification of isolates for proficiency testing/controls and improving diagnostic techniques.</p> <p>Update the Council of State and Territorial Epidemiologists case definition of anthrax to account for emergence of <i>B. cereus</i> biovar <i>anthracis</i>, new clinical evidence, and changes in diagnostic techniques.</p>
<i>Project Title</i>	<i>Health Security Strengthening and Surveillance in the Caribbean Community</i>
Partner Country/Region	Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, BES Islands: Bonaire, St. Eustatius, Saba, British Virgin Islands, Cayman Islands, Curacao, Dominica, Grenada, Haiti, Guyana, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, St Maarten, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Turks and Caicos Islands
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	The Caribbean Public Health Agency (CARPHA)
Project Value	US\$70,000
Duration	2019-2022
Description	This project aimed to strengthen sustainable biosafety and biosecurity in the Caribbean by supporting the implementation of CARPHA’s integrated regional laboratory strategy, which was endorsed by the CARPHA Executive Board in September 2019. This project supported stakeholder consultations with CARPHA Member States in 2022 to ensure consensus on the health security capacity priorities proposed and on the role and long-term resources for CARPHA laboratories.
<i>Project Title</i>	<i>ViroRed</i>
Partner Country/Region	Argentina, Bolivia, Brazil, Ecuador, Colombia, Costa Rica, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Portugal, Uruguay, Venezuela
Implementing Country	Spain – CYTED
Collaborating Institution(s)/Partner(s)	Universidad Nacional de Quilmes, Instituto de Virología Dr. José María Vanella, Universidad de Córdoba, Instituto Nacional de Enfermedades Infecciosas Dr.G. Malbrán (Argentina); Instituto Nacional de Laboratorios de Salud de Bolivia; Instituto Oswaldo Cruz, FIOCRUZ (Brazil); Instituto Nacional de Salud (Colombia); Instituto Costarricense de Investigación y Enseñanza en Nutrición y Salud; Instituto Nacional de Investigación en Salud Pública (Ecuador); Instituto de Salud Carlos III (Spain); Laboratorio Nacional de Salud Guatemala; Instituto de Diagnóstico y

<i>Project Title</i>	<i>ViroRed</i>
	Referencia Epidemiológicos (Mexico); Consejo Nicaragüense de Ciencia y Tecnología, Universidad Nacional Autónoma de Nicaragua; Instituto Conmemorativo Gorgas de Estudios de la Salud (Panama); Centro para el Desarrollo de la Investigación Científica, Instituto de Investigaciones en Ciencias de la Salud - Universidad Nacional de Asunción, Laboratorio Central de Salud Pública (Paraguay); Instituto Nacional de Salud (Peru); Instituto Nacional de Saúde (Portugal); Ministerio de Salud Pública - Departamento de Laboratorios de Salud, Universidad de la República - Facultad de Ciencias (Uruguay); Instituto Investigaciones Biomédicas - Universidad de Carabobo Venezuela)
Project Value	€30,000/year
Duration	2010-2018
Description	<p>The increase of travels and the speed of communications make respiratory and arthropod-borne viruses common problems for the entire world.</p> <p>ViroRed is a laboratory network involving many countries from Latin America, Spain and Portugal. The activities of ViroRed are mainly focused in implementing and improving diagnostic capacities of these viruses, by means of educational and technological approaches.</p>
<i>Project Title</i>	<i>Capacity Building: Developing Sustainable International Collaborations on Animal, Public, and Environmental Health in Ibero-America.</i>
Partner Country/Region	Argentina, Brazil, Chile, Peru, Spain
Implementing Country	United States
Collaborating Institution(s)/Partner(s)	University of Minnesota (UMM) (United States); Instituto Nacional de Tecnología Agropecuaria (INTA) (Spain); Fundação Oswaldo Cruz (Brazil); Universidad Andrés Bello (Chile); Universidad Nacional Mayor de San Marcos (Argentina); Universidad Complutense (UCM) (Spain)
Project Value	€266,641
Duration	2017-2018
Description	This Project will create a network for strategic research partnership in Ibero-America, including those in one of the OPR-identified priority regions.
<i>Project Title</i>	<i>Iberoamerican Network for Combating Antimicrobial Resistance (INCAR)</i>
Partner Country/Region	Argentina, Brazil, Mexico, Spain
Implementing Country	Spain
Collaborating Institution(s)/Partner(s)	Universidad de Sao Paulo (USP), la Universidad de Barcelona (UB), la Universidad de Buenos Aires (UAB), la Universidad Autónoma de México y la Universidad Complutense de Madrid (UCM)
Project Value	€58,400
Duration	2017-2018

<i>Project Title</i>	<i>Iberoamerican Network for Combating Antimicrobial Resistance (INCAR)</i>
Description	<p>According to the 2016 UN General Assembly, “Antimicrobial resistance (AMR) has become one of the biggest threats to global health and endangers other major priorities, such as human development” making antimicrobial resistance one of the most relevant problems for humankind.</p> <p>Antimicrobial resistance has experienced a vertiginous evolution due to injudicious use of antimicrobial agents in humans and in the agro-industrial complex, coupled to human migratory patterns as well as global trade and has led to the emergence and dissemination of previously ignored markers and genetic platforms that pose a significant risk for multi-, extremely- or pan-resistant microorganism infections.</p> <p>Their rapid detection, characterization and understanding of their flux are critical for reducing their dissemination at the hospital, community, and the environmental level.</p> <p>We propose a network able to enhance:</p> <ol style="list-style-type: none"> <li>1- Adoption of susceptibility testing and epidemiological analysis recommendations</li> <li>2- Human capacity building on a multidisciplinary basis</li> <li>3- Bi and multilateral grant opportunities exploration</li> <li>4- Strong diffusion efforts</li> <li>5- Promote technology transfer to areas as such as animal husbandry and food production.</li> <li>6- Grant access to a well-defined collection of historical and current resistant microorganisms.</li> </ol>
<i>Project Title</i>	<i>WOAH Veterinary Legislation Support Programme in Americas</i>
Partner Country/Region	Belize, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama (Latin America)
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	World Organisation for Animal Health (WOAH)
Project Value	C\$250,000
Duration	2016-2018
Description	Canada is supporting WOA’s efforts to integrate considerations pertaining to biological threat reduction into Veterinary Legislation Support Programme (VLSP) veterinary legislation identification missions, and to raise awareness and facilitate expanded communication between relevant agencies in the Regional International Organization for Plant Protection and Animal Health (OIRSA) countries relative to biological threat reduction. The expected result of this project is to strengthen regional health security and improve the preparedness of nations for biological threat reduction by enhancing the veterinary legislative basis in countries of the Americas.

<i>Project Title</i>	<i>Swedish research collaboration with Bolivia</i>
Partner Country/Region	Bolivia
Collaborating Institution(s) or Partner(s)	Universidad Mayor de San Andrés, La Paz, and Universidad Mayor de San Simon, Cochabamba, Bolivia
Implementing Country	Sweden through the Swedish International Development Cooperation Agency
Project Value	SEK 2,112,000/€216,938
Duration	2013-2018
Description	Contribution for the development of research capacity in Bolivia, including supporting the development of research systems and specific research programmes.
<i>Project Title</i>	<i>Development Research</i>
Partner Country/Region	Bolivia, Nicaragua, South America
Implementing Country	Sweden – Swedish Research Council
Project Value	SEK 3,030,000/€291,563 (2018)
Duration	2015-2020
Description	Research project grants and research network grants focusing on: prevention, diagnosis and treatment of infectious diseases; improving food security; mitigating spread of resistance to drugs and antibiotics; and improvement of vector control.
<i>Project Title</i>	<i>Health Security Strengthening and Surveillance in the Caribbean Community</i>
Partner Country/Region	Caribbean: Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, BES Islands: Bonaire, St. Eustatius, Saba, British Virgin Islands, Cayman Islands, Curacao, Dominica, Grenada, Haiti, Guyana, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, St Maarten, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Islands.
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	The Caribbean Public Health Agency (CARPHA)
Project Value	US\$70,000
Duration	2019-2022
Description	This project aims to strengthen sustainable biosafety and biosecurity in the Caribbean by supporting the implementation of CARPHA’s integrated regional laboratory strategy, which was endorsed by the CARPHA Executive Board in September 2019. This project, which has been delayed by the COVID-19 pandemic, will support stakeholder consultations with CARPHA Member States to ensure consensus on the health security capacity priorities

<i>Project Title</i>	<i>Health Security Strengthening and Surveillance in the Caribbean Community</i>
	proposed and on the role and long-term resources for CARPHA laboratories.
<i>Project Title</i>	<i>WOAH Veterinary Legislation Support Programme in Americas</i>
Partner Country/Region	Latin America: Belize, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Mexico, Nicaragua and Panama
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution or Partner(s)	World Organisation for Animal Health (WOAH)
Project Value	C\$250,000
Duration	2016-2018
Description	Canada is supporting WOA's efforts to integrate considerations pertaining to biological threat reduction into Veterinary Legislation Support Programme (VLSP) veterinary legislation identification missions, and to raise awareness and facilitate expanded communication between relevant agencies in the Regional International Organization for Plant Protection and Animal Health (OIRSA) countries relative to biological threat reduction. The expected result of this project is to strengthen regional health security and improve the preparedness of nations for biological threat reduction by enhancing the veterinary legislative basis in countries of the Americas.
<i>Project Title</i>	<i>Support for Strengthening Biosafety and Biosecurity in Latin America</i>
Partner Country/Region	Latin America
Implementing Country	The European Union
Collaborating Institution(s)/Partner(s)	OAS/CICTE
Project Value	€2.7 million
Duration	2019-2024
Description	The EU provides support to an OAS project to strengthen regulations on biosafety and biosecurity; ensure harmonization of such regulations with international standards; promote and enhance regional cooperation and to organise awareness raising, education and training on biosafety and biosecurity.
Gender Equality	Gender equality aspect is by default included in EU support
<i>Project Title</i>	<i>Legislative Implementation of UNSCR 1540 in LAC – Phase II</i>
Partner Country/Region	Latin America and the Caribbean (LAC)
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada

<i>Project Title</i>	<i>Legislative Implementation of UNSCR 1540 in LAC – Phase II</i>
Collaborating Institution or Partner(s)	Verification, Research, Training and Information Centre (VERTIC)
Project Value	US\$275,000
Duration	2017-2018
Description	As part of an ongoing initiative, VERTIC delivered Phase II of legislative assistance, analysis and outreach to support legislative, regulatory and related assistance in LAC countries' national legal frameworks, through CBRN legislation strengthening export control and border security measures in the implementation of UNSCR 1540.
<i>Project Title</i>	<i>Strengthening Export Controls and Border Security in the Americas and the Caribbean</i>
Partner Country/Region	Latin America and Caribbean
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	United Nations Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean (UNLIREC) Organisation of American States (OAS) UNSCR 1540 Committee BTWC Implementation Support Unit VERTIC (the Verification Research, Training and Information Centre) Wilton Park
Project Value	C\$5,900,000
Duration	2015-2017
	Canada is supporting the enhancement of export controls and border security measures to prevent the proliferation and trafficking of weapons of mass destruction (WMDs), their means of delivery and related materials, including enhanced implementation of strategic trade domestic controls of chemical, biological, radiological and nuclear (CBRN) materials. In the global fight against WMD proliferation, full and effective national implementation of all obligations under multilateral arms control agreements (including the adoption and application of effective export controls and border security measures) plays a critical role.  To address these vulnerabilities, this Project is assisting partner states to establish or enhance domestic controls, adopt effective laws and implement comprehensive measures to prevent the proliferation of CBRN weapons and their means of delivery. Tailored activities include national needs assessments, development of legislative application plans and the provision of requisite equipment, training and related technical assistance to strengthen national and regional capacity to prevent, detect and respond to CBRN incidents.

<i>Project Title</i>	<i>Strengthening Export Controls and Border Security in the Americas and the Caribbean</i>
	The Project is also supporting the development and/or enhancement of cargo targeting systems at select, high-volume Latin American and/or Caribbean ports of entry to strengthen capabilities to identify and track shipments of CBRN and other illicit goods and trade flows in and through the region. It also directly support States Parties to the BTWC to fulfill their national obligations, including by facilitating participation at BTWC Meetings (e.g. Meetings of Experts and States Parties) and convening BTWC workshops and events.
<i>Project Title</i>	<i>International Cooperation with Ministry of Health from Equatorial Guinea</i>
Partner Country/Region	Republic of Equatorial Guinea
Implementing Country	Spanish Agency of International Cooperation and Development (AECID)
Project Value	€200,000
Duration	2015 - 2018
Description	Technical Assistance to National Programmes for Endemic Diseases Control of Ministry of Health, Equatorial Guinea:  -Strategic Programmes of Malaria, Neglected Tropical Diseases, HIV/AIDS and TB
<i>Project Title</i>	<i>Federal Select Agent Program</i>
Partner Country/Region	United States
Implementing Country	United States
Collaborating Institution(s)/Partner(s)	Department of Health and Human Services (HHS)/Centers for Disease Control and Prevention (CDC), USDA/APHIS, and Department of Justice (DOJ)/Federal Bureau of Investigation and in-country partners
Project Value	US\$18.6 million (includes funding for both FSAP and IPP programs)
Duration	Ongoing
Description	The Federal Select Agent Program is jointly comprised of the Centers for Disease Control and Prevention/Division of Select Agents and Toxins and the Animal and Plant Health Inspection Service/Agriculture Select Agent Services. The Federal Select Agent Program oversees the possession, use and transfer of biological select agents and toxins, which have the potential to pose a severe threat to public, animal or plant health or to animal or plant products. The Program greatly enhances the nation's oversight of the safety and security of select agents.
Gender Equality	Gender Equal



<i>Project Title</i>	<i>Improving domestic surveillance and response capacity for Brucella species</i>
Partner Country/Region	United States
Implementing Country	United States – Department of Health and Human Services (HHS)/ Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s)/Partner(s)	Center for Preparedness and Response; Division of Preparedness and Emerging Infections; National Institute of Occupational Safety and Health; United States Department of Labor, Occupational Safety and Health Administration; United States Department of Agriculture, National Veterinary Services Laboratory; State and Local Governments
Project Value	US\$500,000
Duration	2018-2022
Description	The Federal Select Agent Program identifies several <i>Brucella</i> species as having the potential to pose a severe threat to both human and animal health. Brucellosis is an acute febrile illness that if treated appropriately is curable. However, if not treated or inadequately treated, it can become a chronic infection causing recurrent fevers, arthritis, or endocarditis. Brucellosis occurs rarely in the United States, but the <i>Brucella</i> genus has expanded in recent years with new species (bats, rodents, foxes, frogs, etc.). BSPB activities focus on: Continuing to sequence human <i>B. suis</i> isolates from the United States in partnership with USDA/National Veterinary Services Laboratory; Developing, optimizing and validating a real-time PCR method to determine <i>Brucella</i> species and provide the technology to Laboratory Response Network sites to strength diagnostic capacity at reference laboratories in a safe and secure manner; Providing support to state and local laboratories through laboratory confirmation and testing environmental samples and food matrices for <i>Brucella</i> spp; epidemiologic support to state and local health departments to identify source of brucellosis cases; collaboration with USDA to reduce risk of brucellosis related to the <i>Brucella abortus</i> RB51 vaccine strain; collaboration with NIOSH, USDA, and OSHA to develop guidelines for prevention on <i>Brucella</i> spp. transmission to slaughterhouse inspectors and workers; and expanding capacity to detect <i>Brucella</i> in clinical specimens by implementing an automated blood culture system for differing specimen types.

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*Non-Monetary Contribution*

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Activity Title	(CPA/SENASICA): Operativo Vector InDRE- CPA/SENASICA
Nature of activity or contribution	National Security Operative for Transport of Biological Substances Category B, UN 3373 from InDRE to the High Security Laboratory level 3 of Mexico-United States Commission for Prevention of Foot-and-Mouth Disease and  other Animal Exotic Diseases in Mexico City

*Non-Monetary Contribution*

Partner Country/Region; International Organization/Initiative	Latin America
Implementing Country	Mexico
Collaborating Institution(s)/Partner(s)	Institute of Epidemiological Diagnosis and Reference "Dr. Manuel Martinez Baez" (InDRE)/Ministry of Health, Mexico.  High Level Specialized Committee on Disarmament, Terrorism and International Security (CANDESTI)/Ministry of the Interior
Duration	Vector I March 11 <sup>th</sup> , 2021 (February 25 to March 12, including planning)  Vector II Jun 23 <sup>rd</sup> , 2021 (Jun 14-24, including planning) Vector III, will be schedule for 2022 (return of Biological Substances to InDRE).
Support to Non-proliferation Instruments And Multilateral Treaties	Supports biosecurity of biological materials during transportation on public roads
Narrative Description	Collaboration of national security agencies for the protection of biological materials, with potential for bioterrorist use, during the transfer between facilities.  Objectives for transferring to other facility:  Protocol for Plaque Reduction by Neutralization technique for SARS-CoV-2 as a serological reference technique in epidemiological surveillance of human health  Protocol of SARS-CoV-2 isolation

*Non-Monetary Contribution*

Activity Title	Epidemic and Health Intelligence Unit
Nature of activity or contribution	Alert and early detection of public health events.
Partner Country/Region;	Latin America
Implementing Country	Mexico
Collaborating Institution(s)/Partner(s)	The General Directorate of Epidemiology (DGE), is part of the Ministry of Health, direction of epidemiological surveillance. Project supports Epidemiological surveillance units in the 32 states.
Duration	Ongoing as part of the National Epidemiological Surveillance System.
Support to Non-proliferation Instruments And Multilateral Treaties	The Convention on the Prohibition of the Development, Production and Storage of Bacteriological and Toxin Weapons and on their Destruction
Narrative Description	The Epidemic and Sanitary Intelligence Unit is in charge of carrying out Event-Based Surveillance and early warning of events of epidemiological interest. Its federal counterpart will be responsible for receiving, validating, concentrating, and evaluating the information sent by the Federal entities.

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*Non-Monetary Contribution*

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	<p>It operates permanently and the event's monitoring is carried out daily, with the accessibility of 24 hours a day, 365 days a year.</p> <p>A permanent monitoring of various sources of information is carried out to detect threats and risks to public health. This includes the permanent surveillance of CBRN, including the intended release of biological, chemical, and radiologic agents.</p>
Gender Equality	The Federal Government, through the Ministry of Public Function, conducts courses for all public officials to strengthen gender parity and avoid discrimination based on gender, whilst promoting gender equality.

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*Non-Monetary Contribution*

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Activity Title	Establishing a global culture of biosafety, biosecurity, and responsible conduct in the life sciences
Nature of activity or contribution	A virtual platform to share information and lessons learned and work collaboratively to support and promote, globally, a culture of biosafety, biosecurity, and responsible conduct in the life sciences, promote effective oversight of dual-use research, and encourages engagement among the health, scientific, biotechnology, enthusiast, and security communities.
Partner Country/Region; International Organization/Initiative	United States
Implementing Country	United States
Collaborating Institution(s)/Partner(s)	United States Department of Health and Human Services, United States Department of Agriculture, other US Government Departments/Agencies and representatives of other governments, academia, industry, international organizations, non-governmental organizations, professional organizations, DIY Bio community laboratories, and other members of the voluntary International Working Group on Strengthening the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences
Duration	Ongoing
Support to Non-proliferation Instruments And Multilateral Treaties	BWC and UNSCR 1540.  This activity also supports GP Biological Security Deliverable 5 ( <i>Reduce biological proliferation risks through the advancement and promotion of safe and responsible conduct</i> ).
Description	Federal and contract support staff at the United States Department of Health and Human Services – Administration for Preparedness and Response (HHS/ASPR) collaborated with personnel from Mali’s National Institute of Public Health on a research project to examine organizational culture among laboratory workers in Mali. The team used the beliefs, opinions, and attitudes survey from the (Self) Assessment Framework for their study. This framework was designed by the International Working Group on Strengthening the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences, a voluntary group co-lead by HHS/ASPR and the United States Department of

*Non-Monetary Contribution*

Agriculture's Animal and Plant Health Inspection Service that also developed in 2021 A Guide to Training and Information Resources on the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences.

The survey was distributed by members of the team based in Mali to public health, medical, and veterinary laboratory workers across five Malian regions. The survey results were shared with HHS/ASPR personnel and together the team members from the two nations analyzed the data collected. The results offered insights into perceptions held by Malian laboratory workers about the importance of implementing biosafety and biosecurity measures and the state of biosafety and biosecurity across their respective laboratories. The study also helped identify potential opportunities to build a greater culture of responsibility among laboratory workers through promotion of safe and secure laboratory best practices and increasing training to identify and prevent misuse of biotechnologies. The HHS/ASPR and Mali team co-authored an article detailing the study and its results, titled Building a Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences: A View from Mali.

HHS/ASPR and USDA/APHIS coordinate jointly the activities of The International Working Group on Strengthening the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences, which meets periodically to share information and lessons learned. In 2022, the following organizations/individuals led briefings to this group: Drs. Tatyana Novossiolova, Malcolm Dando and Lijun Shang (UK), on "Biological Security Education, Awareness, and Outreach as Essential Elements of Strengthening the Review of Science and Technology under the BTWC"; Professor Nariyoshi Shinomiya, the President of Japan's National Defense Medical College, on "Cutting Edge Life Science and Dual Use Research of Concern - Our Attempts at Biosecurity Education"; Dr. Daniel Greene from Stanford University, on "Inspiring a Culture of Responsibility in the Life Sciences: Lessons from Social Psychology"; Dr. Holden Thorp, Editor-in-Chief, Science Journals, on "Safe Science: Safety Culture Research Applied to Laboratory Safety"; Dr. Filippa Lentzos (King's College London, UK) on "Countering Russian disinformation against public health labs"; Dr. Susan Cropp from FBI/Weapons of Mass Destruction Directorate on "Bio-smuggling at US Ports of Entry"; and Dr. Emmanuelle Tuerlings from WHO, on the recently published WHO Global guidance framework for the responsible use of the life sciences: mitigating biorisks and governing dual-use research.

## Gender Equality

The International Working Group on Strengthening the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences promotes initiatives and shares resources related to women empowerment and gender equality.

### III. Asia

<i>Project Title</i>	<i>Strengthening the National Legal Framework and Provision of Specialized Training on Biosafety and Biosecurity in Central Asian Countries (P53)</i>
Partner Country/Region	Afghanistan, Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Mongolia, Montenegro, North Macedonia, Serbia, Tajikistan, Ukraine, Uzbekistan (Central Asia)
Implementing Country	European Union through International Science and Technology Center (ISTC)
Collaborating Institution(s)/Partner(s)	ISTC-STCU Public Health England (PHE), The Verification Research, Training and Information Centre (VERTIC) National Institute for Public Health and the Environment, The Netherlands (RIVM),
Project Value	€8.521.540
Duration	78 months
Description	<p>The overall objective is to enhance biosafety and biosecurity capacities within the Central Asia region by:</p> <ul style="list-style-type: none"> <li>- raising awareness &amp; promote collaboration on biosafety, biosecurity, emergency response and incident management issues among national stakeholders and reducing proliferation risks through the advancement and promotion of safe and responsible conduct in the field of biological sciences;</li> <li>- providing support for strengthening of the national legal systems addressing biosafety &amp; biosecurity and reinforcing biological non-proliferation principles, practices and instruments;</li> <li>- building an inventory/ catalogue of available resources in participating countries to assess existing means and training needs, to provide such training and map facilities and to improve quality management and sustainability</li> <li>- develop and implement a regional self-sustainable training system for biosafety and biosecurity; improving curricula and methodologies of teaching, performing " Training of trainers" activities using activity base learning and introducing e-learning tools.</li> </ul>
<i>Project Title</i>	<i>Strengthening the National Legal Framework and Provision of Specialised Training on Biosafety and Biosecurity in Central Asian Countries (P53)</i>
Partner Country/Region	Afghanistan, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Uzbekistan (Central Asia )
Implementing Country	European Union through International Science and Technology Center (ISTC)
Collaborating Institution(s)/Partner(s)	Sustainable Criminal Justice Solutions (SCJS) Public Health England (PHE) The Verification Research, Training and Information Centre (VERTIC) National Institute for Public Health and the Environment, The Netherlands (RIVM), EU CBRN Centres of Excellence Regional Secretariat, UNICRI regional secretariat

<i>Project Title</i>	<i>Strengthening the National Legal Framework and Provision of Specialised Training on Biosafety and Biosecurity in Central Asian Countries (P53)</i>
Project Value	€5,000,000
Duration	2016-2020
Description	<p>The spread of emergent diseases and invasive species has increased dramatically in recent years. In parallel, numerous developments - such as the rapidly increasing transboundary movements, trade liberalisation, increasing concerns about food safety and the environment - have heightened the need for international cooperation in controlling and managing transboundary pests and diseases. At the same time, biosafety and biosecurity systems require being up-to-date with international standards and staff needs proper training and knowledge. Therefore, new biosafety and biosecurity initiatives are critical for both public health and to prevent epidemics and pandemics.</p> <p>The overall objective is to enhance biosafety and biosecurity capacities within the Central Asia region by:</p> <ul style="list-style-type: none"> <li>- raising awareness and promote collaboration regarding biosafety, biosecurity, emergency response and incident management issues among national stakeholders and reducing proliferation risks through the advancement and promotion of safe and responsible conduct in the field of biological sciences;</li> <li>- providing support for strengthening of the national legal systems addressing biosafety and biosecurity and reinforcing biological non-proliferation principles, practices and instruments;</li> <li>- building an inventory/ catalogue of available resources in participating countries to assess the existing means to better assess training needs, to provide training and to map facilities in view of optimizing collaboration during the project and improve quality management as well as sustainability after its conclusion;</li> <li>- developing and implementing a regional self-sustainable training system for biosafety and biosecurity and improving curricula and methodologies of teaching, performing " Training of trainers" activities using activity base learning and introducing e-learning tools.</li> </ul>
<i>Project Title</i>	<i>ASEAN Emergency Operations Centre Network Capacity Building</i>
Partner Country/Region	Association of Southeast Asian Nations (ASEAN) Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	Justice Institute of British Columbia (JIBC)
Project Value	C\$316,000
Duration	2021-2024
Description	This project delivers harmonized training, response models, and practices to enhance the ASEAN Emergency Operations Centre (EOC) Network's ability to respond to major emergencies and disasters. This project represents the first of a multi-phase approach

<i>Project Title</i>	<i>ASEAN Emergency Operations Centre Network Capacity Building</i>
	to build sustainable training capacity, as endorsed by the ASEAN Secretariat.
Project Title	Enhancing Regional Capacity in Big Data Analytics and Visualization
Partner Country/Region	Association of Southeast Asian Nations (ASEAN) Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	BlueDot Inc.
Project Value	C\$4,538,600
Duration	2018-2023
Description	This project assists ASEAN Member States to develop and implement a regional platform for early and rapid detection of high consequence biological threats through real-time surveillance. The initiative supports the generation of rapid risk assessments using big data analytics, and the conduct of effective evaluations of interventions, as well as strengthening timely risk communication and response capabilities, both prior to and during, infectious disease emergencies. This initiative has proven highly impactful during the COVID-19 pandemic, and regular risk analyses produced for the ASEAN region are posted on the ASEAN Portal for Public Health Emergencies.
Gender Equality	The BioDiaspora tool incorporates demographic variables, including sex, for all ASEAN member states. Furthermore, it clearly outlines the different populations at risk for each infectious disease outbreak, also outlining how individuals can protect themselves against infectious disease threats.
<i>Project Title</i>	<i>LINK: Improved coordination and investigation of deliberate biological events</i>
Partner Country/Region	Association of Southeast Asian Nations (ASEAN) Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	Flinders University, Australia
Project Value	C\$882,643
Duration	2018-2021
Description	This project aims to improve health-security coordination and collaboration and develop new and more effective tools for prevention, detection and response to deliberate biological incidents. Specifically, this project includes the development of a CBRN

<i>Project Title</i>	<i>LINK: Improved coordination and investigation of deliberate biological events</i>
	Global Database and Knowledge Management System; creation of a smartphone app for the provision of resources and guidance for in-field investigation of deliberate outbreaks; and a comprehensive analysis of ASEAN agencies to assess and strengthen coordination across and within the health and security interface. The SuspectedED Smartphone App, which was launched in 2020, allows in-field responders and/or investigators in both the human and animal sectors to identify triggers and indicators of emerging and deliberate biological events.
<i>Project Title</i>	<i>Supporting ASEAN Member States to Mitigate Biological Threats</i>
Partner Country/Region	Association of Southeast Asian Nations (ASEAN) Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Project Value	C\$425,454
Duration	2019-2022
Description	This project supports ASEAN stakeholders through the provision of scientific and technical guidance to facilitate the implementation and integration of Canadian-funded initiatives to mitigate biological threats in the ASEAN region. Activities focus on long-term sustainability and include: support for the development and adoption of sustainability plans on regional initiatives; and an assessment of progress made towards regional biosecurity capacity building.
<i>Project Title</i>	<i>Swedish research collaboration with Bangladesh</i>
Partner Country/Region	Bangladesh
Implementing Country	Sweden – Swedish International Development Cooperation Agency
Collaborating Institution(s) / Partner(s)	International Center of Diarrhoeal Disease Research, Bangladesh (icddr,b)
Project Value	SEK 4,567,906/€439,565 (2018)
Duration	2016-2020
Description	The International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b) is an international health research institution located in Dhaka. The contribution intends to develop skills and competencies of scientific and other staff; especially local junior researchers at mid-level, through a capacity training program. The participants are selected in competition and will go through a career development program including running research projects. In addition, the contribution intends to finalise the establishment of a



<i>Project Title</i>	<i>Swedish research collaboration with Bangladesh</i>
	genomics facility at icddr,b, in order to provide technical support, services, and collaborative functions for molecular bioscience research. The objectives of the programme include control of enteric- and respiratory infection as well as detecting and preventing new and recurring infectious disease.
<i>Project Title</i>	<i>Development Research</i>
Partner Country/Region	Bangladesh, Cambodia, India, Indonesia, Laos, Pakistan, Sri Lanka, Vanuatu, Vietnam
Implementing Country	Sweden – Swedish Research Council
Project Value	SEK 8,590,000/€826,621 (contribution in 2018)
Duration	2015-2020
Description	Research project grants and research network grants focusing on: prevention, diagnosis and treatment of infectious diseases; improving food security; mitigating spread of resistance to drugs and antibiotics; and improvement of vector control.
Project Title	Strengthening biosafety and biosecurity status of Bangladesh
Partner Country/Region	Bangladesh / South East Asia
Implementing Country	United States – Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC)
Collaborating Institutions	International Center for Diarrheal Disease Research, Bangladesh
Project Value	US\$177,465,000 (FY 2017-2019)
Duration	Ongoing project since 2013
Description	Bangladesh is a country under threat of several emerging and re-emerging infectious diseases identified to cause severe morbidity and mortality. Additionally, concerns have been raised about several endemic infectious agents such as anthrax as being potential agents of bioterrorism. Handling of many of these pathogens requires containment laboratory safety and security principles and practices for diagnostic or research activities, as well as storage. Bangladesh's present life science infrastructure is inadequate to face these current biological threats, as it has no high containment facilities and only an incipient culture of biosafety and biosecurity. Thus it requires overall strengthening of biosafety and biosecurity practices in the country. Specific project activities for year 2018-2019 are: biosafety cabinet certifications at national level MoH, MoAg and armed forces laboratories; trainings on the use and maintenance of biosafety cabinets; and enhancements to biosafety and biosecurity practices at 10 national and regional level veterinary laboratories.

<i>Project title</i>	<i>Enhancement of CBRN capacities of South East Asia in addressing CBRN risk mitigation concerning CBRN first response, biosafety and biosecurity, awareness raising and legal framework</i>
Partner country/region	Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam
Implementing country	European Union; Spain (FIIAPP) Italy (FORMIT Foundation – ( Luigi Sacco University Hospital )
Project value	€3,000,000
Duration	36 months (2015-2018)
Description	<p>Project funded by the EU Instrument contributing to Stability and Peace.</p> <p>Capability assessment and Capacity building in biosafety and biosecurity, including bio-risk and waste management:</p> <ul style="list-style-type: none"> <li>- Mapping of regional bio-laboratories and facilities (both public and private) including information on state of the art, available equipment and areas of expertise;</li> <li>- Organisation and provision of a training programme on biosafety, biosecurity and bio-risk management including specific training for scientists and laboratory technicians on laboratory equipment and maintenance;</li> <li>- Development of a flexible and sustainable training system applicable to a broad range of countries and government structures on biosafety and biosecurity standards and procedures in BSL2+ and BSL3 laboratories;</li> <li>- Development of a training programme for relevant experts on methodology to design, build, and monitor high level security containment biological laboratories (BSL2+ and BSL3);</li> <li>- Development of a training programme for laboratory experts on guidance and regulations (WHO/HSE/GCR/2012.12) concerning the transport of infectious substances;</li> <li>- Development of a training programme for laboratory experts on safety and security procedures related to the management of biological waste;</li> <li>- Organisation of workshops to improve regional cooperation and harmonisation with international standards on the safe and secure management of biological waste.</li> </ul>
<i>Project Title</i>	<i>Mitigating Biological Security Risks in the ASEAN region</i>
Partner Country/Region	Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam (Association of Southeast Asian Nations (ASEAN) Member countries )
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Association of South-East Asian Nations (ASEAN) Secretariat Mekong Basin Disease Surveillance Network (MBDS) BlueDot

<i>Project Title</i>	<i>Mitigating Biological Security Risks in the ASEAN region</i>
	Health System Research Institute (HSRI), Thailand International Federation of Biosafety Associations (IFBA) Research Institute for Tropical Medicine (RITM), Philippines INTERPOL World Health Organization (WHO)
Project Value	C\$18,706,474
Duration	2013-2018
Description	In partnership with ASEAN member countries, Canada is implementing a program of work to strengthen capacities to detect, rapidly identify and diagnose highly dangerous pathogens and emerging infectious diseases (e.g. Ebola, MERS-CoV) that present regional and global threats. Specific initiatives focus on: strengthening response capacity for health-security threats; improving biosafety and biosecurity systems and capacities; further developing the ASEAN Emergency Operations Centers network; enhancing regional capacity in big data analytics and visualization for disease surveillance; and strengthening the health-security interface capacity of the ASEAN Secretariat.
<i>Project Title</i>	<i>Enhancement of CBRN capacities of South East Asia in addressing CBRN risk mitigation concerning CBRN first response, biosafety and biosecurity, awareness raising and legal framework (Project CBRN 46)</i>
Partner Country/Region	Brunei, Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, Thailand, Vietnam (Southeast Asia)
Implementing Country	Spain – International and Ibero-American Foundation for Administration and Public Policies (FIIAPP)
Collaborating Institution(s) / Partner(s)	Fondazione per la Ricerca sulla Migrazione e Integrazione delle Tecnologie (FORMIT, Italy), Luigi Sacco University Hospital (CLIMVIB, Italy)
Project Value	€3,000,000
Duration	2015-2018
Description	Project funded by the EU Instrument contributing to Stability and Peace.  The project promotes a holistic, cross-cutting approach to CBRN methodology within each partner country in order to ensure the development of a coordinated response to CBRN threats. It aims also to foster regional cooperation at the local and national levels to enhance response and risk management capabilities.  It is organized into three main components:  Enhancing capabilities in crisis management for CBRN first responders through training and exercising.  Evaluating and improving biosafety and biosecurity, including bio-risk and waste management.

<i>Project Title</i>	<i>Enhancement of CBRN capacities of South East Asia in addressing CBRN risk mitigation concerning CBRN first response, biosafety and biosecurity, awareness raising and legal framework (Project CBRN 46)</i>
	Promoting awareness raising concerning risk mitigation and the provision of technical support to strengthen legal framework.
<i>Project Title</i>	<i>Operation Petrichor: Cross-border Collaboration on Biological Threat Mitigation</i>
Partner Country/Region	Cambodia, Laos, Myanmar and Vietnam
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$500,000
Duration	2015 – 2017
Description	This Project is developing cross-border collaboration to better manage infectious diseases in Southeast Asia. The expected outcome of this project is to enhance the capacity of Cambodia, Laos, Myanmar and Vietnam to better prevent, detect and respond to trans-boundary infectious disease biological threats, whether deliberately caused or naturally occurring, on both a national and regional basis.
<i>Project Title</i>	<i>Developing and Strengthening Regional Laboratory Networks of Select Zoonotic Diseases towards better biosafety-biosecurity practices</i>
Partner Country/Region	India / South East Asia
Implementing Country	United States – Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s) / Partner(s)	National Center for Disease Control (NCDC) and Indian Association of Medical Microbiologists (IAMM)
Project Value	US\$180,000 (FY 2018-2019)
Duration	1 year
Description	Major Accomplishments within the Reporting Period:  Review and capacity building for bio-risk management and basic microbiology testing at veterinary laboratory in Assam (July- August, 2018)  CDC worked in-country with CDC collaborating partners in India to launch testing for human and animal pathogens in one of its new laboratory facilities. Biological risk assessments were performed and resulting mitigations included the addition of freezer and door locks, enhancement of sample management practices including development and implementation of SOPs for accessioning, handling, storage, tracking, and waste management of pathogens and specimens.

<i>Project Title</i>	<i>Developing and Strengthening Regional Laboratory Networks of Select Zoonotic Diseases towards better biosafety-biosecurity practices</i>
	<p>Molecular diagnostic techniques and methods (Aug 7-9, 2018)</p> <p>To increase laboratory capacity for detection of dangerous organisms, we performed a three day, hands-on training of basic molecular diagnostic techniques for 16 participants at the ONGC Center of Advanced Studies (OCAS) in Lucknow, Uttar Pradesh. A second training spanning 4 days, with similar objectives and components was conducted with CDC support from May 8-11 where 92 lab technicians from different districts of Madhya Pradesh were trained and assessed.</p> <p>Development of a model for an integrated laboratory and sample referral network in Madhya Pradesh (July-September, 2018)</p> <p>CDC assisted district hospitals in Indore and Bhopal to launch and establish biosafety and biosecurity procedures and practices as part of a new hospital microbiology testing facility. Laboratories at both hospitals can now perform their own basic diagnostic work, and the lab in Bhopal has received BEP support that allowed the appointment of two biosafety officers. In addition, CDC has facilitated the formation of a laboratory referral network so that samples from adjoining districts can be referred to these hospitals, and samples received by the hospitals can be referred to nearest medical colleges for advanced testing if needed.</p> <p>CDC India provided support to the Government of Madhya Pradesh for Hospital and Laboratory Information Management System (HIS &amp; LIMS). An IT expert supported through BEP funds is helping design the lab information system that is integrated in the e-Hospital system developed by the state. The LIMS will cover all fields including patient details, sample logging, test details and reporting. Once developed, the system can be upgraded to create an inventory for high-risk pathogens at centers that work with and store such samples.</p>

<i>Project Title</i>	<i>Parliamentarians for Global Action Biological Weapons Convention - Campaign Indonesia</i>
Partner Country/Region	Indonesia
Implementing Country	Netherlands
Project Value	€45,076 (Dutch contribution: € 25,000 )
Duration	June 2017 – December 2017
Description	<p>Parliamentarians for Global Action (PGA) is currently conducting a project that aims to better the implementation of the Biological Weapons Convention (BWC) in Indonesia. The second aim of this project is to better Indonesia's adherence to the obligations of the Security Council resolution 1540. PGA members are parliamentarians across the world who work together in order to solve international</p>

<i>Project Title</i>	<i>Parliamentarians for Global Action Biological Weapons Convention - Campaign Indonesia</i>
	issues. They do this by raising awareness among local parliamentarians.
<i>Project Title</i>	<i>Securing Supply Chain</i>
Partner Country/Region	Indonesia
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction – Emerging Technologies Program
Collaborating Institution(s)/Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$200,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	ISN/CTR works to mitigate global biological threats by supporting partner countries in the following programmatic activities: Emerging technology tools and traditional know-your-customer training to enhance the security of biotechnological and pharmaceutical supply chain
<i>Project Title</i>	<i>Bioterrorism Evidence Exploitation Workshop and Operation</i>
Partner Country /Region	Indonesia, Iraq, Malaysia, Philippines, Singapore, Thailand
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$741,967
Duration	2016-2018
Description	To support the Government of Iraq and select countries in Southeast Asia (Malaysia, Philippines, Indonesia, Singapore and Thailand) to better prepare for, detect and respond to bioterrorism threats. This Project is designed to strengthen the capabilities of law enforcement experts to conduct effective responses to biological attacks and mitigate serious threats posed by terrorist groups operating in Iraq and Southeast Asia.
<i>Project Title</i>	<i>Laboratory Securing and Decommissioning</i>
Partner Country /Region	Indonesia, Malaysia, and the Philippines

<i>Project Title</i>	<i>Laboratory Securing and Decommissioning</i>
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement Program
Collaborating Institution(s) / Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$1,950,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	<p>ISN/CTR works to mitigate biological threats by supporting partner countries in the following activities related to laboratory securing and/or decommissioning:</p> <p>Site assessments for risk mitigation strategies of mobile and fixed laboratories</p> <p>Training for laboratory staff and directors for laboratory sustainability</p>
<i>Project Title</i>	<i>German Biosecurity Programme</i>
Partner Country/Region	Kazakhstan
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bundeswehr Institute of Microbiology (IMB) (implementing institution)
Project Value	€248,108 in 2022 (€722,614 for 2020–22)
Duration	2020–22
Description	This project aims to strengthen prevention and response capabilities to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and non-proliferation principles, practices, and instruments; enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”
<i>Project Title</i>	<i>SB150 - Microbiology biosafety cabinet training and maintenance</i>
Partner Country /Region	Kyrgyzstan and Tajikistan- Central Asia
Implementing Country	United Kingdom – Counter Proliferation and Arms Control Directorate, Ministry of Defence (MOD)

<i>Project Title</i>	<i>SB150 - Microbiology biosafety cabinet training and maintenance</i>
Collaborating Institution(s) / Partner(s)	UK – Defence Science and Technology Laboratory, Animal and Plant Health Agency Tajikistan - Tajik Research Institute of Preventative Medicine. Kyrgyzstan – Biofactory CJC “Altyn-Tamyr” USA – Eagleson Institute
Project Value	US\$44,500
Duration	1 year : Feb 2017 – Sep 2017
Description	<p>To promote improved bio-safety practices, UK and other donors to Tajikistan have provided biosafety cabinets as essential items of equipment to improve laboratory safety. To ensure that these cabinets remain functional and safe, regular maintenance and certification is required. Building upon previous training provided, this project has evaluated and supported the development of scientist from Tajikistan and from Kyrgyz Republic. The project included a seminar to promote the importance of these activities with Institute Directors and relevant Ministry officials.</p> <p>The project has provided further training to allow key Tajik and Kyrgyz individuals to monitor and approve the performance of cabinets within their institutes and also to offer their skills to other in-country institutes.</p> <p>This work supports the wider adoption of improved biosafety practices.</p>
<i>Project Title</i>	<i>Investigation and Response to Emerging Viral Pathogens (Pilot Project)</i>
Partner Country /Region	Lao PDR
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Institut Pasteur du Laos Public Health Agency of Canada
Project Value	C\$286,000
Duration	2021-2023
Description	This project aims to build sustainable local capacity in Laos to investigate and respond to emerging zoonotic viral diseases and reduce the threat of potential deliberate use of these novel pathogens by building and fostering scientific partnership between Canada and Laos. This project



<i>Project Title</i>	<i>Reinforced collaboration for the Investigation and Response to Emerging Viral Pathogens</i>
Partner Country /Region	Lao PDR
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Institut Pasteur du Laos Public Health Agency of Canada
Project Value	C\$5,520,000
Duration	2021-2025
Description	This project aims to build sustainable local capacity in Laos to investigate and respond to emerging zoonotic viral diseases and reduce the threat of potential deliberate use of these novel pathogens by building and fostering scientific partnership between Canada and Laos.
<i>Project Title</i>	<i>Supporting Laos to Prevent, Detect and Respond to COVID-19</i>
Partner Country /Region	Lao PDR
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Institut Pasteur du Laos
Project Value	C\$168,079
Duration	2020
Description	This project provided critical personal protective equipment, reagents, consumables and supplies to assist with the detection and diagnosis of suspected cases of COVID-19 in Lao PDR.
<i>Project Title</i>	<i>European Union Council Decision 2016/51; Workshop in Malaysia in Support of the Biological Weapons Convention Extended Assistance Programmes</i>
Partner Country/Region	Malaysia
Implementing Country	European Union
Collaborating Institution(s) / Partner(s)	The initiative was co-organised by STRIDE and the Implementation Support Unit (ISU) of the Biological Weapons Convention (BWC), United Nations Office for Disarmament Affairs, and sponsored by the European Union BWC The Netherlands Biosecurity Office, part of the Netherlands National Institute for Public Health and the Environment (RIVM), has granted expert guidance and assistance throughout this project.

<i>Project Title</i>	<i>European Union Council Decision 2016/51; Workshop in Malaysia in Support of the Biological Weapons Convention Extended Assistance Programmes</i>
Project Value	€15,000
Duration	2018
Description	<p>Laboratory biosecurity is of continuously growing interest due to increasing concerns about deliberate biological events and emerging biological risks. These risks continue to be magnified by globalisation, the rapid pace of scientific development, and the dual-use aspect of technologies. Worldwide laboratory capacities and capabilities are expanding. This calls for new global and concrete actions to improve laboratory biosafety and biosecurity practises to protect both researchers and the community. Hence, laboratories require comprehensive bio-risk management programs to minimise the risk of accidental and deliberate releases of infectious biological materials. In line with the aforementioned, Malaysia prioritised the concern of national laboratory safety and security and focused on finding solutions to enhance biosecurity performances within laboratories to detect and prevent the deliberate release of biological agents. The Science and Technology Research Institute for Defence, Ministry of Defence Malaysia, collaborated with the Netherlands Biosecurity Office to increase awareness and responsibility among Malaysian laboratories. The goal was to integrate biosecurity practices in their national bio-risk management programs. As part of this bilateral engagement, a comprehensive biosecurity checklist was developed for national laboratory assessment and monitoring for laboratories. In the international context, Malaysia is one of the first to develop and implement a national biosecurity checklist for laboratory assessment and monitoring. This Malaysian biosecurity checklist is based on Malaysian expert opinion and national- and international guidelines and regulations and sets out different questions related to eight priority areas of biosecurity. The biosecurity checklist provides a practical approach that enables laboratories, especially those that handle and store Viable Biological Materials, to systematically identify, manage, and mitigate laboratory risks.</p>

<i>Project Title</i>	<i>Integrating Technical and Legal Frameworks to Counter Biological Weapons Threats</i>
Partner Country/Region	Malaysia; Indonesia; and regional Southeast Asia
Implementing Country	U.S. Department of State, Office of Weapons of Mass Destruction Terrorism (ISN/WMDT)
Collaborating Institution(s) / Partner(s)	The Pacific Northwest National Laboratory (PNNL)
Project Value	US\$500,000
Duration	2020-2023

<i>Project Title</i>	<i>Integrating Technical and Legal Frameworks to Counter Biological Weapons Threats</i>
Description	This project will integrate scientific resources (laboratories, personnel, methods, data) into all levels of a nation's policy, legislative, investigative, and prosecutorial framework for host nations' counterterrorism and counter-proliferation (CTCP) programs. Partners' CTCP-related investigative and prosecutorial elements will know who to ask for data and where to send data to coordinate timely and successful responses and employ data-driven decisions. Partners will incorporate awareness of developing technology into CTCP frameworks for interdiction and prosecution.
Gender Equality	WMDT encourages and supports diversity in all our efforts. Participation of women, minorities, and other underrepresented groups is strongly encouraged based on the belief that collaboration is more robust when people with different backgrounds, perspectives, and experiences have the opportunity to contribute. As such, WMDT seeks to achieve a gender balance in this course by encouraging partner departments and agencies to nominate both male and female candidates to participate.
<i>Project Title</i>	<i>Philippines Advanced BioRisk Officer Training Program (PhABOT) 5.0</i>
Partner Country/Region	Philippines
Implementing Country	United States – Department of State's Biosecurity Engagement Program
Collaborating Institution(s) / Partner(s)	CRDF Global
Project Value	US\$200,000
Duration	2018-2019
Description	This course consists of three sets of two-week sessions, one in July 2018 and one in November 2018, and one to be held in January 2019, for a total of six weeks of training. The project sought to develop fully competent bio-risk management officers that are also bio-risk management trainers. The course took 20 new safety officers and provided them training in bio-risk management (as defined by the internationally accepted standards CWA 15793:2011, Biorisk Management standard and CWA 16335, Biosafety Officer Competency standard). The course had a heavy focus on biosecurity and emphasis that biological agents can be misused, accidentally or deliberately. The course emphasized methods for biosecurity risk assessment, personal suitability assessments, how to secure dangerous biological agents and how to properly account for and justify their use. In addition, the course gave the students an extensive collection of resources and materials that they could use for reference, use in their own program assessments, and use in their own teaching and trainer development. All course trainers were local, previous graduates from the Ph-ABOT program. This fifth iteration of the program is the first conducted under the Philippines National Training Center for Biosecurity and

<i>Project Title</i>	<i>Philippines Advanced BioRisk Officer Training Program (PhABOT) 5.0</i>
	Biosafety, which the US Department of State's Biosecurity Engagement Program previously established.
<i>Project Title</i>	<i>EU-CBRN Centres of Excellence project 81: BIOSEC - Enhanced Biosecurity in South-East Asia</i>
Partner Country/Region; International Organization/Initiative	South-East Asia, Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, Singapore, Thailand, Vietnam
Implementing Country	European Union (The Netherlands, Italy), United Kingdom
Collaborating Institution(s)/Partner(s)	UK Health Security Agency (UK HSA) (United Kingdom), Dutch National Institute for Public Health and the Environment (RIVM), The Verification Research (VERTIC), Training and Information Centre (United Kingdom), Azienda Socio Sanitarie Territoriali (ASST) Fatebenefratelli Sacco (Italy), The European CBRNE Center, Umeå University (Sweden), The Mahidol Oxford Tropical Medicine Research Unit (MORU) (United Kingdom - Thailand)
Project Value	€3.799.850
Duration	Nov 2019 – May 2024
Description	<p>Global infectious disease outbreaks are of increasing concern for the international community. Reactive surveillance systems with rapid detection capacities, close coordination between human and animal health authorities and efficient reporting to other key sectors are required to ensure a rapid and effective response. Also the potential unauthorized acquisition, theft, transfer or intentional misuse of high-risk biological materials, especially pathogens, pests and biological toxins with dual-use possibilities, whether in relation to illicit trafficking, bioterrorism or agro-terrorism need to be quickly tackled in the region.</p> <p>The aim of BIOSEC is to provide a set of recommendations for improving biosecurity management system in South East Asia with effective tools to enhance capabilities to respond to highly communicable diseases or global catastrophic biological events, such as pandemics.</p>
<i>Project Title</i>	<i>Establishment of a National Inventory of Dangerous Pathogens (NIDP) in Sri Lanka</i>
Partner Country/Region; International Organization/Initiative	Sri Lanka
Implementing Country	The Netherlands

<i>Project Title</i>	<i>Establishment of a National Inventory of Dangerous Pathogens (NIDP) in Sri Lanka</i>
Collaborating Institution(s)/Partner(s)	BTWC ISU, Disaster Preparedness And Response Division, Ministry of Health and Deputy Director General Laboratory Services of Sri Lanka
Project Value	€46,000
Duration	2022
Narrative Description	The Netherlands also contributes to the implementation of EU Council Decision 2019/97 in support of the BTWC by assisting selected BTWC States Parties through so-called “National Preparedness Programmes” (NPP) aimed at preventing and responding to attacks involving biological agents. The Netherlands has responded to an assistance request from Sri Lanka, received through the BTWC’s Implementation Support Unit (ISU). This project aims to establish a National Inventory of Dangerous Pathogens (NIDP) in Sri Lanka, including training activities to increase awareness among stakeholders on biosecurity and dual use related risks. A first online workshop was organized in May 2022. An in-person training was, consequently, held in Thailand to raise awareness among national stakeholders. A third and last workshop was held in November 17-18, 2022, in Sri Lanka.

<i>Project Title</i>	<i>Improved preparedness for outbreaks of zoonotic diseases in Tajikistan</i>
Partner Country/Region	Tajikistan
Implementing Country	Sweden, through the Swedish University of Agricultural Sciences
Collaborating Institution(s) or Partner(s)	UK Defence Science and Technology Laboratory (dstl)
Project Value	SEK 800 000 /€90,000
Duration	2017
Description	Contribution from the Sida administered by the Ministry for Foreign Affairs; biosecurity outbreak simulation to test the ability of national authorities in Tajikistan to respond to outbreaks and prevent and manage crises; practical workshop to develop standard operating procedures and good laboratory practices based on Swedish-Tajik bilateral cooperation.

<i>Project Title</i>	<i>Diagnostics of Rabies and Brucella in Tajikistan</i>
Partner Country /Region	Tajikistan
Implementing Country	United Kingdom – Ministry of Defence
Collaborating Institution(s) / Partner(s)	International Science and Technology Centre, Kazakhstan
Project Value	£617,000

<i>Project Title</i>	<i>Diagnostics of Rabies and Brucella in Tajikistan</i>
Duration	2015-2019
Description	The aim of the project is to improve capabilities to detect and characterise brucellosis and rabies in the veterinary and public health sectors in Tajikistan, whilst also establishing improved biosafety and biosecurity practices. Brucella and rabies are both high consequence pathogens which are endemic, the project helps to improve capabilities to respond to both natural and deliberate disease outbreaks involving these and a range of other such pathogens.
<i>Project Title</i>	<i>T2119 – Development of capabilities in both arbovirus and arthropod vector identification in Tajikistan.</i>
Partner Country /Region	Tajikistan – Central Asia
Implementing Country	United Kingdom – Counter Proliferation and Arms Control Directorate, Ministry of Defence (MOD)
Collaborating Institution(s) / Partner(s)	UK – Defence Science and Technology Laboratory, Natural History Museum, Public Health England. Tajikistan – Institute of Zoology and Parasitology, Tajik Research Institute of Preventative Medicine.
Project Value	US\$430,000
Duration	2 years : Nov 2015 - Apr 2017
Description	<p>Previous UK funded work that has identified the presence of a number of pathogenic viruses including Crimean-Congo haemorrhagic fever virus (CCHF), West Nile Fever Virus, Issyk-Kul virus and Tick Borne Encephalitis virus in the Tajikistan. This two-year project has aimed to strengthen the surveillance skills and to instil the safe and secure working practices developed in previous UK funded projects. This work addresses the requirement for sustainable national surveillance and diagnostic capabilities for vector-borne viral diseases within Tajikistan and has included establishing collaborations with UK experts at Public Health England and the Natural History Museum.</p> <p>The project has successfully embedded and linked capabilities in arthropod vector identification, virus detection and arbovirus disease outbreak surveillance in Tajikistan.</p> <p>Enhanced surveillance has identified a previously unrecognised focus of CCHF in the northern Tajikistan.</p> <p>Cases of CCHF in Tajik health workers has been largely eliminated during the life span of the UK programme as a result of increased hazard awareness and improved biosafety controls.</p>
<i>Project Title</i>	<i>T2198 – Molecular characterisation of field isolates and improving surveillance for rabies in Tajikistan.</i>
Partner Country /Region	Tajikistan – Central Asia

<i>Project Title</i>	<i>T2198 – Molecular characterisation of field isolates and improving surveillance for rabies in Tajikistan.</i>
Implementing Country	United Kingdom – Counter Proliferation and Arms Control Directorate, Ministry of Defence (MOD)
Collaborating Institution(s) / Partner(s)	UK – Defence Science and Technology Laboratory, Animal and Plant Health Agency, University of Surrey.  Tajikistan – National Center for Veterinary Diagnostics, State Sanitary Epidemiological Surveillance Service, State Scientific and Research Institute for the Forestry Agency, Institute of Problems of Biological Safety
Project Value	US\$450,000
Duration	3 years : Feb 2016 – Jan 2019
Description	<p>Reported cases of Rabies have increased in Tajikistan in the past ten years. The control of the disease requires appropriate surveillance, accurate laboratory diagnosis and an understanding of disease epidemiology. This project has included the training of scientists in safe and effective surveillance and diagnostic approaches, using internationally recognised diagnostic procedures. Improving biosafety and biosecurity in collaborating institutes has been an underpinning component of the project. Initiatives to raise public and official awareness of this treatable disease are addressed within the project. Expected impact includes policy relevant information on the spread of rabies in the region.</p> <p>The project is providing tools and training to embed molecular diagnostic techniques to internationally recognised standards.</p> <p>Improvements in diagnostic capabilities have been supported by improvements in surveillance both in animals and people.</p> <p>Training and equipment for enhanced biosecurity and biosafety have been provided.</p> <p>Public engagement activities are informing national disease control strategies and enhancing public disease awareness.</p>
<i>Project Title</i>	<i>T2199 – Improving capabilities to detect and characterise Brucella in the veterinary and public health sectors in Tajikistan.</i>
Partner Country /Region	Tajikistan – Central Asia
Implementing Country	United Kingdom – Counter Proliferation and Arms Control Directorate, Ministry of Defence (MOD)
Collaborating Institution(s) / Partner(s)	UK – Defence Science and Technology Laboratory, Animal and Plant Health Agency (APHA)
Project Value	Tajikistan – National Center for Veterinary Diagnostics, State Sanitary Epidemiological Surveillance Service, Dushanbe Dairy Kombinat
Duration	US\$450,000
Description	3 years : Jan 2016 – Dec 2018

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<i>Project Title</i>	<i>NIAID Foreign Laboratory Research Grant and Contract Program</i>
Partner Country/Region	Thailand
Implementing Country	United States
Collaborating Institution(s) / Partner(s)	Department of Health and Human Services (HHS)/ National Institutes of Health (NIH) and Centers for Disease Control and Prevention (CDC)
Project Value	US\$155,000
Duration	2017-2018
Description	Biosafety and security evaluation of foreign laboratories receiving NIH research grants for research using biological agents that have the potential to be used as biological weapons.

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*NON-MONETARY CONTRIBUTION*


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Activity Title	Strengthening Biosafety and biosecurity in Bangladesh
Nature of activity or contribution	Biosafety Resource Persons Training; National level training
Partner Country/Region; International Organization/Initiative	Bangladesh
Implementing Country	United States Department of Health and Human Services
Collaborating Institution(s) / Partner(s)	ASM/ Bangladesh Biosafety and Biosecurity Society
Duration	10 days; June 7-17, 2022
Description	Trained 28 personnel from various laboratories, medical and veterinary institutes on the biosafety and biosecurity principles and practices. The training took place at the Center for Advance Research Studies at the University of Dhaka and at national Institute of Biotechnology.

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*NON-MONETARY CONTRIBUTION*


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Activity Title	Strengthening Biosafety and biosecurity in Bangladesh
Nature of activity or contribution	Division level Biosafety Trainings at three different Divisions.
Partner Country/Region; International Organization/Initiative	Bangladesh
Implementing Country	United States Department of Health and Human Services
Collaborating Institution(s) / Partner(s)	ASM/ Bangladesh Biosafety and Biosecurity Society
Duration	June -August, 2022



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*NON-MONETARY CONTRIBUTION*

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Description	<p>Three divisional level training programs were organized during June- August 2022.</p> <p>The first program was organized at Chattogram. A total of 29 participants participated in this program from different institutes. The program was organized at the Bangladesh Institute at Tropical and Infectious Diseases.</p> <p>The second program was organized at Mymensingh division inviting different districts' participants. A Total of 50 participants participated in the program.</p> <p>Program was organized at the Bangladesh Agricultural University Mymensingh.</p> <p>The third program was organized at Dhaka at the Auditorium of the National Institute of Preventive and Social Medicine. A total of 140 participants participated in the Dhaka divisional program.</p>
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*NON-MONETARY CONTRIBUTION*

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Activity Title	Strengthening Biosafety and biosecurity in Bangladesh
Nature of activity or contribution	Procurement of Biosafety Cabinet Certification equipment
Partner Country/Region; International Organization/Initiative	Bangladesh
Implementing Country	United States Department of Health and Human Services
Collaborating Institution(s) / Partner(s)	ASM
Duration	July 2022
Description	Standardized and calibrated equipment are purchased to conduct certification of biosafety cabinets located in the laboratories, medial colleges, veterinary laboratories and instates, national public health laboratory (IEDCR)

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*NON-MONETARY CONTRIBUTION*

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Activity Title	Strengthening Biosafety and biosecurity in Bangladesh
Nature of activity or contribution	Training of Biosafety Cabinet Certifiers
Partner Country/Region; International Organization/Initiative	Bangladesh; India

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*NON-MONETARY CONTRIBUTION*

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Implementing Country	United States Department of Health and Human Services
Collaborating Institution(s) / Partner(s)	ASM/ Bangladesh Biosafety and Biosecurity Society
Duration	June 2022
Description	Two biomedical engineers were prepared for training on the biosafety cabinets' certifications at the NSF training center in India. Due to delay in visa processing only person could avail the training. One person successfully received the training and will be subject to certification examination in near future.

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*NON-MONETARY CONTRIBUTION*

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Activity Title	Strengthening Biosafety and Biosecurity in Thailand and Laos: Biosafety Cabinet Certifier Development
Nature of activity or contribution	Provide training and mentoring 10 BSC trainees of Thailand National Institute of Health (NIH) and 4 BSC trainees of Laos National Centers for Laboratory and Epidemiology (NCLE).
Partner Country/Region	Thailand and Laos
Implementing Country	United States Department of Health and Human Services
Collaborating Institution(s)/Partner(s)	National Institute of Health (NIH), Thailand and National Centers for Laboratory and Epidemiology (NCLE), Laos.
Duration	Thailand: 3 days: July 18-20, 2022 4 days: August 15-18, 2022 3 days: November 28-30, 2022  Laos: 3 days: November 9-11, 2022
Description	Thailand: Three training courses were organized during July-November 2022.  The first training course was conducted at the Training Center for Excellent in Medical Sciences (TEMS), NIH. A total of 40 participants participated in this program from different division.  The second training course was conducted at BSL 2 laboratory facilities. A Total of 11 BSC candidates participated in the program.  Program was organized at the Thai NIH.

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The third training course will be conducted at TEMS, Thai NIH. A total of 11 BSC candidates will participate in this course.

Laos:

An intensive training course was conducted at RRL, FMD Reference Laboratory, Department of Livestock Development, Pak Chong district, Nakhon Ratchasima province, Thailand. This training is aimed to provide overview and hand on for BSC certification for BSC candidate before NSF examination. Four BSC candidate of Laos were participated. There were also additional 7 BSC candidates participated this training (1 CDC DGHP Lab Branch/ 1 RRL FMD Reference Lab/ 2 National Institute of Animal Health (NIAH)/ 2 Mahidol-Oxford Tropical Medicine Research Unit (MORU)).

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*NON-MONETARY CONTRIBUTION*

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Activity Title	Bio-Safety and External Quality Assurance
Partner Country/Region	Vietnam
Implementing Country	Japan
Collaborating Institution(s)/Partner(s)	National Institute of Infectious Diseases
Duration	2018
Description	Capacity of National Laboratory Network on Biosafety and Examination of prioritized (including highly hazardous) infectious pathogens is developed in model sites of Vietnam.
	The course objectives of the External Quality Assurance (EQA) is that participants who come from National Institute of Hygiene and Epidemiology(NIHE) learn the EQA system and the present situation of BSL-3 in Japan and utilize the knowledge for EQA activities in NIHE.
	The course objectives of the Biosafety is that participants who come from Pasteur Institute of Ho Chi Minh City (PIHCMC) learn the use and maintaining of BSL-3 laboratories which planned to setup in PIHCMC, and utilize the knowledge for BSL-3 management in PIHCMC.

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*NON-MONETARY CONTRIBUTION*

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Activity Title	The Project for Capacity Development for Medical Laboratory Network on Biosafety and Examination of Highly Hazardous infectious Pathogens
Partner Country/Region	Vietnam
Implementing Country	Japan

*NON-MONETARY CONTRIBUTION*

Project Value	Technical Assistance
Duration	July 2017- July 2022
Description	To improve the medical laboratory network on biosafety and enhance examination skill of infectious pathogens including highly hazardous infectious pathogens

**IV. Europe**

<i>Project Title</i>	<i>Ecology and evolution of avian influenza virus (AIV) in wild birds in Georgia and establishing the host population structure.</i>
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Partner Country/Region	Caucasus - Georgia
Implementing Country	United Kingdom
Collaborating Institution(s) or Partner(s)	The Defence Threat Reduction Agency (DTRA), US; The University of Cambridge, UK; The Animal and Plant Health Agency (APHA), UK; The National Centre for Disease Control, Georgia
Project Value	£300,000
Duration	3 years (2014 – 17)
Description	<p><u>Study objectives</u></p> <p>The objectives of this study were to:</p> <ul style="list-style-type: none"> <li>Isolate and geographically map circulating AIV strains,</li> <li>Establish the role of wild birds in disseminating AIV,</li> <li>Understand the evolutionary dynamics of AIV in the Caucasus region,</li> <li>Study the migration routes, population structure and intensity of contacts during migration,</li> <li>Model the risk of AIV spread from other areas into Georgia,</li> <li>Assist the integration of Georgia into international AIV surveillance and research.</li> </ul>

Study overview

Over ten thousand samples for avian influenza viruses were collected and analysed from wild birds in the Republic of Georgia. This density of data from one key study area, on the boundary between Europe and Asia (Eurasia), where migratory flyways overlap, is unparalleled globally.

As well as fully characterizing more than 60 low pathogenic avian influenza viruses, highly pathogenic avian influenza (HPAI) H5N8 viruses in both the 2015 and 2016/2017 diffusion waves and an HPAI H5N1 virus from the 2.3.2.1c clade in 2016 were isolated.

<i>Project Title</i>	<i>Ecology and evolution of avian influenza virus (AIV) in wild birds in Georgia and establishing the host population structure.</i>
	<p>The population genetics work yielded a critical insight into the inter-connectivity between bird populations throughout Eurasia and will improve models of the global dispersion of AIV. This project has provided valuable data from a geographically strategic site to improve understanding of AI within wild bird species and thus the risks of incursion from wild birds into domestic birds.</p>
	<p><u>Project conclusions and potential follow-on activities</u></p>
	<p>Future needs: addressing logistical sustainability issues on a longer-term basis.</p>
	<p>Movement away from 'training' of individuals in set tasks, as they then just move on; more focus on education capability and opportunities for sustainability.</p>
	<p>Continued engagement with the Georgian Government and competent authorities to advocate for future international infectious disease collaborations and integration into the international scientific community.</p>
	<p>Funding support to maintain surveillance for AIVs and to extend to other pathogens of concern such as the Newcastle Disease virus.</p>
<i>Project Title</i>	<i>SHARP Joint Action (Strengthened International Health Regulations and Preparedness in the EU)</i>
Partner Country/Region	Europe
Implementing Country	Finland and Norway
Collaborating Institution(s) / Partner(s)	<p>Coordinated by the Finnish Institute for Health and Welfare in Finland and led by a Steering Committee, the partnership consists of 26 Associated Partners and 35 Affiliated Entities from 30 countries (24 EU members, 3 EEA/EFTA members and 3 European neighbourhood countries):</p>
	<p>Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Moldova (Republic of), Netherlands, Norway, Poland, Portugal, Serbia, Slovenia, Spain, Sweden and United Kingdom.</p>
Project Value	<p>SHARP Joint Action (2019 – March 2023) is co-funded by the Health Programme of the European Union (80%) and by partners' own contributions (20%).</p>
Duration	2019-2023
Description	<p>SHARP Joint Action aims to strengthen preparedness in the EU against serious cross-border threats to health and support the implementation of International Health Regulations (2005). The department of bacteriology has mainly been involved in WP7 (Laboratory preparedness and responsiveness). The objective of this WP has been strengthened laboratory preparedness and responsiveness to</p>

<i>Project Title</i>	<i>SHARP Joint Action (Strengthened International Health Regulations and Preparedness in the EU)</i>
	detect highly pathogenic infectious agents of Risk Group 3 (RG3) bacteria and Risk Group 4 (RG4) viruses. This includes quality assurance of diagnostic methods, the evaluation of new diagnostic approaches and the improvement of biosafety and biosecurity systems in highly specialized SHARP partner laboratories (EMERGE Laboratory Network).
<i>Project Title</i>	<i>German Biosecurity Programme</i>
Partner Country/Region	Georgia
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bundeswehr Institute of Microbiology (IMB) (implementing institution)
Project Value	€259,989 in 2022 (€ 767,826 for 2020–22)
Duration	2020–22
Description	This project aims to strengthen prevention and response capabilities to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and non-proliferation principles, practices, and instruments; enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”
<i>Project Title</i>	<i>Strengthening biosafety and measures to prevent and monitor Crimean Congo hemorrhagic fever (CCHF) in Kosovo</i>
Partner Country/Region	Kosovo
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine
Project Value	€164,000 (2017-2019)
Duration	2013-2019
Description	The goal is to strengthen the capabilities for the prevention and control of Crimean-Congo haemorrhagic fever in Kosovo. This includes, inter alia, training in safe and reliable diagnostics and guidance and support (experts, equipment, consumables) for ongoing diagnostic challenges.

<i>Project Title</i>	<i>Strengthening biosafety and measures to prevent and monitor Crimean Congo hemorrhagic fever (CCHF) in Kosovo</i>
	This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.
<i>Project Title</i>	<i>Biosecurity in Southeast and Eastern Europe</i>
Partner Country/Region	The Southeast and Eastern European region is a designated target region in the EU CBRN Centres of Excellence initiative and includes non-EU countries, specifically: Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, North Macedonia, Georgia, Moldova, Montenegro, Serbia, and Ukraine, supplemented with WHO EURO countries, including Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan from the Central Asia region.
Implementing Country	The Netherlands
Collaborating Institution(s) / Partner(s)	The Ministries of Health, National Institutes for Public Health of the partner countries
Project Value	€495,000
Duration	2020-2023
Description	The overall goals of the project are to support biosecurity prioritized actions in the SEEE region. Informed by national needs, RIVM aims to implement existing biosecurity tools that have been developed by RIVM experts and tools that are recognized by the WHO's International Health Regulations (IHR) as crucial to biosecurity capabilities. The project aims to develop and contribute to novel biosecurity tools and resources as seen fit for regional needs. In addition, RIVM aims to support SEEE Countries with National Biosecurity Assessments, implementation of IHR biosafety and biosecurity capacities, and support with implementation of National Inventories of Dangerous Pathogens. To align RIVM activities with ongoing work in the region, RIVM collaborates with regional organizations and experts, international committees and stakeholders already present in the region.
<i>Project Title</i>	<i>German Biosecurity Programme - Projects on strengthening biosafety and biosecurity in Ukraine</i>
Partner Country/Region	Ukraine
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine (BNITM) Friedrich Löffler Institute (FLI) (implementing institution) Bundeswehr Institute of Microbiology (IMB) (implementing institution)
Project Value	€627,658 in 2022 (€1,868,217 for 2020–22)
Duration	2020-2022

<i>Project Title</i>	<i>German Biosecurity Programme - Projects on strengthening biosafety and biosecurity in Ukraine</i>
Description	This project aims to strengthen prevention and response capabilities to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and non-proliferation principles, practices, and instruments; enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”
<i>Project Title</i>	<i>Projects on the Prevalence and Diagnostics of Glanders, Brucella, Crimean-Congo-haemorrhagic fever and African swine fever in Ukraine and the establishment of a German-Ukraine initiative on risk management for zoonotic diseases</i>
Partner Country/Region	Ukraine
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine, Bundeswehr Institute of Microbiology, Friedrich-Loeffler-Institute for Animal Health and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Project Value	€1,110,000 (2018-2019)
Duration	2016-2019
Description	The aim of the projects in Ukraine is to develop long-lasting networks on the risk management of infectious diseases within the framework of standardized detection, diagnostics and monitoring of highly pathogenic agents. Activities include the implementation of quality assessed diagnostic assays in order to conduct epidemiological investigations, trainings with regard to biosafety and biosecurity in dealing and handling highly pathogenic agents and laboratory equipment support.
<i>Project Title</i>	<i>Support for strengthening biosafety and biosecurity in Ukraine</i>
Partner Country/Region	Ukraine
Implementing Country	The European Union
Collaborating Institution(s) / Partner(s)	The Organization for Security and Co-operation in Europe
Project Value	€1.9 million
Duration	2019-2024



<i>Project Title</i>	<i>Support for strengthening biosafety and biosecurity in Ukraine</i>
Description	EU provides support to OSCE project to harmonize existing Ukrainian regulations on biosafety and biosecurity with international standards; establish veterinary surveillance system sustainability in Ukraine for diseases related to especially dangerous pathogens ('EDP-related diseases'); organise awareness-raising, education and training for life scientists.
<i>Project Title</i>	<i>Education and awareness-raising in Ukraine (Project P633)</i>
Partner Country/Region	Ukraine
Implementing Country	United Kingdom, Ministry of Defence
Collaborating Institution(s) / Partner(s)	Science and Technology Center in Ukraine Palladin Institute of Biochemistry of the National Academy of Sciences of Ukraine
Project Value	US\$371,100
Duration	2014-2018
Description	<p>At the meeting of States Parties to the Biological and Toxin Weapons Convention in December 2008, it was recognised that scientists working in the life sciences were not well aware of the concept of dual-use. It was agreed that education and awareness-raising amongst life science researchers could help to prevent the malicious application of knowledge and/or technology. There is no doubt that, due to the revolutionary progress in the life sciences, access to information, technologies and materials which may be used with malicious intent is becoming increasingly easy and affordable for the vast majority of countries, certain groups and individuals.</p> <p>The main objectives of this project are to collect information, develop a network and to disseminate knowledge on biosafety, biosecurity and bioethics amongst life sciences experts, specialists in the field of biotechnology and pharmaceutical industries; and to prepare and submit to the Government of Ukraine, relevant ministries, agencies and universities, recommendations on the need to implement obligatory curriculum covering biosafety, biosecurity, and dual-use for students studying biology, medicine and agrarian sciences at university level.</p> <p>Specific project activities to date have included i) the development of guidelines and training materials on biosecurity, biosafety and bioethics for teachers, lecturers and mentors in the medical, biological and agricultural sciences, ii) the translation and printing of the joint UK and Canadian-funded publications '<i>Preventing Biological Threats: What You Can Do?</i>' and '<i>Biological Security Education Handbook: The Power of Team-Based Learning</i>' and iii) development and maintenance of the website <a href="http://www.bsseducation.com.ua">www.bsseducation.com.ua</a>.</p> <p>In order to develop and improve the teaching methods, the materials developed during the course of this project have been presented at well-attended regional workshops and</p>

<i>Project Title</i>	<i>Education and awareness-raising in Ukraine (Project P633)</i>
	<p>conferences, and International symposia. Reference material and resources from these symposiums, as well as details of the testing of the proposed educational module; have been specified on the website.</p> <p>Implementation of this project will make a significant contribution to the development of a reliable biosecurity and biosafety system in Ukraine, and may serve as an example for other countries. The project is due to complete in December 2017.</p>
<i>Project Title</i>	<i>Development of a vaccine platform for African Horse Sickness Virus using a synthetic biology approach</i>
Partner Country/Region	United Kingdom
Implementing Country	Italy – Istituto Zooprofilattico Sperimentale dell'Abruzzo e Molise
Collaborating Institution(s) / Partner(s)	University of Glasgow, Centre for Virus Research (CVR) – United Kingdom
Project Value	€143,990
Duration	2017-2019
Description	<p>IZSAM in partnership with CVR are implementing a project to exploit synthetic biology, as well as established molecular methods, for the development of a universal vaccine platform that can be rapidly deployed against any African Horse Sickness Virus (AHSV) serotype, including potentially new emerging (or previously uncharacterized) strains.</p> <p>Specific project short term aims are:</p> <ol style="list-style-type: none"> <li>1. To develop a Reverse Genetics (RG) system for the genetic manipulation of AHSV;</li> <li>2. To use RG to rapidly generate seed viruses for the production of a universal AHSV vaccine platform based on inactivated “synthetic” viruses.</li> </ol> <p>Specific long-term aims are:</p> <ol style="list-style-type: none"> <li>3. To produce the “synthetic” vaccines in a vaccine manufacturer setting;</li> <li>4. To determine their ability to induce neutralizing antibodies in experimental animal models;</li> <li>5. To determine their ability to induce neutralizing antibodies in natural host;</li> <li>6. To determine their ability to elicit adequate protective immunity in the natural host</li> </ol>
<i>Project Title</i>	<i>Development of open online university-level educational modules on biosecurity using established global digital education platforms.</i>
Partner Country/Region	United Kingdom

<i>Project Title</i>	<i>Development of open online university-level educational modules on biosecurity using established global digital education platforms.</i>
Implementing Country	United Kingdom, Foreign & Commonwealth Office
Collaborating Institution(s) or Partner(s)	Biosecure Ltd, UK Ministry of Defence, UK
Project Value	£61,500
Duration	9 months (June 2017-March 2018)
Description	<p>This project aims to develop and promote a standalone, online English-language course on biosecurity issues accessible to all via the FutureLearn Massive Open Online Course (MOOC).</p> <p>Worldwide there are few dedicated university modules addressing biosecurity. Where modules exist, they are predominantly classroom taught (passive learning), with notable divergences in the content, scope and quality. There are very few online courses on the MOOC platform that address issues pertaining to biosecurity. Currently, only four online courses touch on such issues. Each of these are taught courses, and therefore only available at certain times of the year.</p> <p>This project will build upon the joint UK-Canada funded publication <i>'Preventing Biological Threats: What can you do?: A guide to biological security issues and how to address them'</i> produced by Bradford University (2015), updating and amending content in line with new developments in the field and in light of a new international certification in biosecurity, in order to deliver open-access online training tools, underpinned by best practice in active and blended learning.</p> <p>The purpose of the course is to ensure that students gain a comprehensive understanding of the biosecurity challenges inherent in the life sciences, responses to risks, and their place in ensuring that relevant science and technology is used safely and securely. To that end, the overarching learning objectives as set out in <i>Preventing Biological Threats</i> are to enable students to a) Assess, evaluate and make informed judgements about biological benefits and threats and global responses to them, b) Evaluate the biosecurity aspects of scientific research and industrial processes, and ensure their own work is responsibly conducted, and c) Collaborate with others in government, academia or industry to inform and educate colleagues about biosecurity issues.</p> <p>The project is divided into three phases:</p> <p>Phase one (complete) was the development of a detailed implementation plan through the performance of six activities (background research, gap analysis, identification of experts to present material, development of a method to review material, review material &amp; development of a recording plan). This phase was designed to review the source materials (<i>Preventing Biological Threats</i> and the body of knowledge contained in the IFBA Biosecurity certification), describe how they will be improved, and decide expert engagement and a detailed timeline for accomplishing the project.</p>

<i>Project Title</i>	<i>Development of open online university-level educational modules on biosecurity using established global digital education platforms.</i>
	<p>Phase two (ongoing) will encompass the recording and editing of the substantive material, including up to 20 videos, each presented by a suitable expert and making use of updated materials.</p> <p>Phase three (ongoing) comprises the construction of the course, including integrating subject matter videos and team-based learning tools. Course content will be supplemented by purpose-written multiple-choice questions for use in assessing learning impact and for final certification in the course. The University of Bath will conduct an internal review and testing with a pool of students, before the final sign-off and online launch of the course.</p>
<i>NON-MONETARY CONTRIBUTION</i>	
Activity Title	NBF Nordic Biopreparedness Forum
Nature of activity or contribution	A Nordic network for BSL3 laboratory preparedness
Partner Country/Region	Denmark, Finland, Iceland, Norway, Sweden
Implementing Country	Norway: Norwegian Institute of Public Health (NIPH)
Collaborating Institution(s)/Partner(s)	The forum includes the Nordic countries Denmark, Finland, Iceland, Norway and Sweden, with participants from the sectors: public health, veterinary medicine, defence research and food safety.
Duration	Continuous since 2015
Narrative Description	A Nordic collaboration between agencies and institutes that handle agents causing severe infectious diseases. In particular, the collaboration focuses on laboratory preparedness for analysis of samples containing high-consequence agents requiring diagnostics at biosafety level 3 (BSL3). These matters are of concern to several sectors: public health, veterinary medicine, defence research and food safety.
<i>NON-MONETARY CONTRIBUTION</i>	
Activity Title	Emergency Medical Teams (EMT)
Nature of Activity or Contribution	The Norwegian EMT, a governmental resource certified in 2018, is called an EMT1, which means that it can provide basic health services in a field clinic, including transport of patients, but not surgery.
Partner Country/Region	Europe
	The EMT capacity is registered in the European Civil Protection Pool as an offered capacity under the UCPM (EU Civil Protection Mechanism)

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*NON-MONETARY CONTRIBUTION*

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Implementing Country	Norway
Collaborating Institution(s)/Partner(s)	The Norwegian Directorate for Civil Protection (DSB)
Duration	Continuous
Narrative Description	Emergency Medical Teams (EMT) are teams of health professionals (medical doctors, nurses, physiotherapists, paramedics, etc.) that provide direct clinical care to people affected by emergencies and disasters and support local health systems. EMT can be sent from both governmental (civil and military teams) and non-governmental organizations and their response can be national or international. The teams originally worked with trauma and surgical care, but the response to the Ebola outbreaks has demonstrated the value they can have in other contexts, such as epidemics and complex emergencies. The EMTs works under the overall guidance of the so called "Classification and Minimum Standards for Emergency Medical Teams in sudden-onset disasters", developed under the coordination of the World Health Organization (WHO), who also are responsible for the EMT coordination worldwide. The various EMTs are classified according to what they can do.

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*NON-MONETARY CONTRIBUTION*

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Activity Title	The European Commission for the Control of Foot and Mouth Disease (EuFMD)
Partner Country/Region	Europe
Implementing Country	Norway
Collaborating Institution(s)/Partner(s)	Norwegian Food Safety Authority (NFSA)
Duration	Continuous
Narrative Description	EuFMD works with member countries on their preparedness, with European neighbours to put in place sustainable control programs, and to support and promote the global strategy for progressive control of Foot-and-Mouth Disease through close partnership with DG-SANTE of the European Commission (EC) and with the Food and Agriculture Organization of the United Nations (FAO) and the World Organisation for Animal Health (WOAH). The EuFMD was founded in 1954 and has now 39 member states in Europe. Norway has been a member from the start. The EuFMD organizes a training program which includes a range of practical training workshops, real time training in countries with FMD and many virtual learning courses.

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*NON-MONETARY CONTRIBUTION*

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Activity Title	NBN Nordic Biosafety Network
Nature of activity or contribution	Nordic network for discussion of and collaboration on topics related to applied laboratory biological biosafety and biosecurity. Annual meetings are arranged with alternating host countries; between meetings the contact is upheld via an online forum.
Partner Country/Region; International Organization/Initiative	Nordic Region
Implementing Country	Norway: Norwegian Institute of Public Health (NIPH)
Collaborating Institution(s)/Partner(s)	Members from national authorities and institutes, public health, academia and industry in the Nordic countries.
Duration	Continuous since 2005
Narrative Description	The Nordic Biosafety Network is an expanding community with members from national authorities and institutes, public health, academia and industry. Nordic Biosafety Network runs the Nordic Biosafety Network Forum, an internet-based forum for discussions concerning biosafety and biosecurity. It offers a new possibility for members of the Nordic Biosafety Network to find colleagues for co-operation, to find members with certain expertise, to the sharing of best practices with regards to technology and techniques relevant to biosafety, simply to discuss all aspects of bio-risk management.

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*NON-MONETARY CONTRIBUTION*

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Activity Title	The Nordic Baltic Contingency Group (NBVCG)
Partner Country/Region; International Organization/Initiative	Nordic region
Implementing Country	Norway: Norwegian Food Safety Authority (NFSA)
Collaborating Institution(s)/Partner(s)	Nordic Council of Ministers, Nordic and Baltic countries
Duration	Continuous since 2006
Narrative Description	An ongoing project initiated by the Nordic Council of Ministers in 2006. The group has one member, a veterinarian from the veterinary/food safety authority, from each of the Nordic and Baltic countries. The Presidency is rotated between the Nordic countries. The NBVCG conducts seminars, mini-seminars, simulation exercises and other events to facilitate cooperation, sharing of knowledge and networking in the area of animal health and contagious animal diseases. The focus has been on emerging diseases and vector borne diseases, contingency planning and subjects which are relevant in the handling of outbreaks. The group activities are financed by the Nordic Council on a yearly basis, and participation is free. The

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*NON-MONETARY CONTRIBUTION*

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Norwegian Food Safety Authority plays a key role in the NBVCG network.

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*NON-MONETARY CONTRIBUTION*

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Activity Title	EuroBioTox
Partner Country/Region; International Organization/Initiative	Norway
Implementing Country	Germany
Collaborating Institution(s)/Partner(s)	Norwegian Institute of Public Health (NIPH) 63 institutions from 23 countries, including 13 core members and 50 network partners
Duration	2017-2023
Narrative Description	European programme for the establishment of validated procedures for the detection and identification of biological toxins. The main objectives have been to increase detection capabilities to an advanced technical level, and to establish a pan-European network of competence

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## V. Middle East

<i>Project Title</i>	<i>Biosecurity Engagement in Iraq</i>
Partner Country/Region	Iraq
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	CRDF Global
Project Value	US\$699,432
Duration	2016-2018
Description	To improve laboratory equipment operation and maintenance standards in Iraq the following activities were implemented:  basic laboratory equipment maintenance and repair training for Iraqi experts;  implementation of a bio-risk management train-the-trainer course involving international subject matter experts;  promotion of bio-risk management through a comprehensive curriculum on responsible science.

<i>Project Title</i>	<i>Bioterrorism Risks and Controls Workshop for Iraq</i>
Partner Country/Region	Iraq
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$107,900
Duration	2016-2017
Description	This workshop seeks to enhance the capacity of the Government of Iraq to better prevent, detect, and respond to biological threats, arising as a result of deliberate acts of terror, and address threats posed by the potential acquisition and use of biological weapons by the Islamic State of Iraq and Levant (ISIL).

<i>Project Title</i>	<i>Iraq Autonomous Region of Kurdistan. Realization and implementation of an information system for sanitary monitoring in the autonomous region of Kurdistan- Iraq</i>
Partner Country/Region	Iraq
Implementing Country	Italy – Ministry of Foreign Affairs and International Cooperation
Collaborating Partner(s)	University Tor Vergata of Rome
Project Value	€1,605,601
Duration	2017-2020



<i>Project Title</i>	<i>Iraq Autonomous Region of Kurdistan. Realization and implementation of an information system for sanitary monitoring in the autonomous region of Kurdistan- Iraq</i>
Description	The initiative aims at extending to the whole Iraqi Kurdistan Region the health information system set up in a recently concluded pilot project. The information system will be able to collect, analyze, disseminate and utilize data regarding disease occurrence, vaccinations, child-births and deaths. These data, registered in all the health centers and hospitals of the Region, will be key for assessing the health status of the internal displaced persons and refugees, assessing the health needs and programming the health services. Training of local staff will be delivered to assure a proper management of the information system and decision making process, including post university education aimed at institutional building and project's sustainability.
<i>Project Title</i>	<i>Biodefense Policy Landscape Analysis Tool (BPLAT)</i>
Partner Country/Region	Iraq and regional Middle East and North Africa
Implementing Country	U.S. Department of State, Office of Weapons of Mass Destruction Terrorism (ISN/WMDT)
Collaborating Partner(s)	Defense Threat Reduction Agency (DTRA); Department of Energy (DOE); United Nations Office on Drugs and Crime (UNODC); Pacific Northwest National Laboratory (PNNL)
Project Value	US\$250,000
Duration	Ongoing
Description	The workshop series seeks to strengthen and identify gaps in Government of Iraq biodefense related policies and practices that non-state adversaries would otherwise attempt to exploit. The BPLAT is a data visualization tool that helps to provide clarity and understanding of the span of biodefense policies, roles, and responsibilities of Iraqi ministries with equities in biodefense. The BPLAT tool will be socialized and passed on to the Government of Iraq in a series of virtual workshops.
<i>Project Title</i>	<i>CBRN 34. Strengthening Capacities in CBRN event response and related Medical Emergency response under strengthened CBRN event preparedness</i>
Partner Country/Region	Iraq, Jordan, Lebanon
Implementing Country	European Union; Leader of the Project: Military Institute of Hygiene and Epidemiology (Poland); Partners: FIIAPP (Spain), ICIS (Italy),
Collaborating Partner(s)	Military Institute of Chemistry & Radiometry, University of Rome Tor Vergata (Italy)
Project Value	€3,914,034
Duration	10-Apr-14 / 09-Apr-17
Description	Project funded by the EU Instrument contributing to Stability and Peace.

<i>Project Title</i>	<i>CBRN 34. Strengthening Capacities in CBRN event response and related Medical Emergency response under strengthened CBRN event preparedness</i>
	The main aim of the CBRN CoE initiative is to enhance national CBRN policies and capacities in third partner countries and to promote national, regional and international cooperation in CBRN risk mitigation. The origin of the risk can be criminal (proliferation, theft, sabotage and illicit trafficking), accidental (industrial catastrophes, in particular chemical or nuclear, waste treatment and transport) or natural (mainly pandemics). The CBRN CoE initiative supports the reinforcement of the institutional capacity needed to fight against this risk.
<i>Project Title</i>	<i>Enhancing Biosecurity capacities in Jordan</i>
Partner Country/Region	Jordan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Middle East Scientific Institute for Security (MESIS) United Kingdom Ministry of Defence (MoD) Public Health England (PHE)
Project Value	C\$726,525
Duration	2018
Description	Canada supported Jordan through the provision of equipment, supplies and training (with support from UK MOD and PHE) to make full and effective use of the mobile lab provided to JAF-RMS and the modular laboratory to the MOH.
<i>Project Title</i>	<i>Strengthening Biological Security and Laboratory Capacity in Jordan</i>
Partner Country/Region	Jordan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Project Value	C\$269,372
Duration	2019-2020
Description	This project supports the maintenance, operation and servicing of Canadian-funded laboratories in Jordan with a focus on training of engineers who will be performing long-term maintenance on these laboratories. Project activities include facility and equipment maintenance and the preparation and provision of instructional videos to ensure long-term sustainability.

<i>Project Title</i>	<i>Sustainable Biosecurity in Jordan: Support for the National Committee for Biosecurity and Biosafety</i>
Partner Country/Region	Jordan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Middle East Scientific Institute for Security (MESIS)
Project Value	US\$245,000
Duration	2019-2021
Description	This project strengthened sustainable biosafety and biosecurity in Jordan through support for the National Committee for Biosecurity and Biosafety (NCBB). The high-level NCBB has a mandate to oversee and coordinate all relevant national biosecurity activities in Jordan. Project activities included: support for the establishment of a Task Force for Planning and Assessment; support for the development of national biosecurity policies and regulatory frameworks, and the development of best-practice guidelines to ensure the effective operation of biological facilities in Jordan (including those funded by Canada).
<i>Project Title</i>	<i>WOAH Veterinary Education Twinning between the Royal Veterinary College (RVC)/Jordan University of Science and Technology (JUST)</i>
Partner Country /Region	Jordan / Middle East Regional
Implementing Country	United Kingdom – Ministry of Defence United States – Defense Threat Reduction Agency
Collaborating Partner(s)	WOAH, Royal Vet College, USA DTRA, Jordan University of Science and Tech.
Project Value	£340,000
Duration	2015-2018
Description	The long-term objective is to provide the region with a supply of well qualified veterinary practitioners trained to a recognised international standard who will in time raise standards of veterinary health care, including disease surveillance and control capabilities across the MENA region. It seeks to promote concepts of bio-threat awareness and reduction, and to spread a culture of ethical science by building improved capacity for biosecurity, modern diagnostics, and disease surveillance. It will also enhance capability for research on endemic and emerging diseases
<i>Project Title</i>	<i>Development Research.</i>
Partner Country /Region	Lebanon, Middle East

<i>Project Title</i>	<i>Development Research.</i>
Implementing Country	Sweden, through the Swedish Research Council
Collaborating Partner(s)	N/A
Project Value	SEK 567,000/€58,240
Duration	2015-2020
Description	Research project grants and research network grants focusing on: prevention, diagnosis and treatment of infectious diseases; improving food security; mitigating spread of resistance to drugs and antibiotics; and improvement of vector control.
<i>Project Title</i>	<i>Biorisk Management Training and Certification in French and Arabic Languages</i>
Partner Country /Region	Middle East and North Africa
Implementing Country	US - Department of State's Biosecurity Engagement Program
Collaborating Partner(s)	International Federation of Biosafety Associations
Project Value	US\$175,000
Duration	2016-2017
Description	The project leverages existing French and Arabic-speaking Biosafety Associations and subject matter experts in the MENA region to develop and deliver the training and IFBA certification program to new audiences in their native languages. The program empowered local Biosafety Associations to independently deliver the certification program in subsequent years on their own once initially trained and accredited by the IFBA as approved exam proctors.
<i>Project Title</i>	<i>Shipping Workshop for Algerian Institutions</i>
Partner Country /Region	Middle East and North Africa (MENA); Algeria
Implementing Country	US - US Department of State's Biosecurity Engagement Program
Collaborating Partner(s)	Sandia National Laboratories
Project Value	US\$110,000
Duration	2017
Description	The US, in partnership with Algeria, implemented a workshop designed to help facilities develop sustainable shipping programs to reduce the risks associated with shipping infectious substances. Building capacity on this topic was achieved through training personnel at facilities to become certified International Air Transportation Association (IATA) dangerous goods infectious substance shipping trainers. During the workshop,

<i>Project Title</i>	<i>Shipping Workshop for Algerian Institutions</i>
	participants received infectious substance certification training, followed by the administration of an exam to demonstrate understanding of the IATA regulations and competence in the performance of packaging per IATA regulations. Following IATA shipping training, participants completed train-the-trainer instruction to position them to be able to establish comprehensive shipping programs at their facilities and train others within their facility and, additionally, in Algeria, to ship infectious substances according to IATA requirements.
<i>Project Title</i>	<i>Biological Risk Management in the Middle East and North Africa (MENA) Region</i>
Partner Country /Region	MENA - Morocco, Algeria, Egypt, Lebanon, Jordan, Iraq, Turkey and UAE
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Federation of Biosafety Associations (IFBA) Tunisian National Biosafety Association
Project Value	C\$44,700
Duration	2016-2017
Description	To promote safe, secure and responsible work with biological materials in the Middle East and North Africa, IFBA and the Tunisian National Biosafety Association convened a Biological Risk Management Symposium and follow-on conference in Tunisia in April 2017.
<i>Project Title</i>	<i>MENA Advanced BioRisk Officer Training Program 2.0</i>
Partner Country /Region	Middle East and North Africa (MENA): Algeria, Egypt, Lebanon, Morocco, and Tunisia
Implementing Country	United States- US Department of State's Biosecurity Engagement Program
Collaborating Partner(s)	US\$302,000
Project Value	Elizabeth R Griffith Foundation
Duration	2017
Description	This course consisted of two sets of two-week sessions, one in July 2017 and one in October/November 2017, for a total of 4 weeks of training. The project sought to develop fully competent bio-risk management officers that are also bio-risk management trainers. The course took 20 new safety officers and provided them training in bio-risk management (as defined by the internationally accepted standards CWA 15793:2011, Biorisk Management standard and CWA 16335, Biosafety Officer Competency standard). The course had a heavy focus on biosecurity and emphasis that biological agents can be misused,

<i>Project Title</i>	<i>MENA Advanced BioRisk Officer Training Program 2.0</i>
	accidentally or deliberately. The course emphasized methods for biosecurity risk assessment, personal suitability assessments, how to secure dangerous biological agents and how to properly account for and justify their use. In addition, the course gave the students an extensive collection of resources and materials that they could use for reference, use in their own program assessments, and use in their own teaching and trainer development. A number of the course trainers were local, previous graduates from the MENA-ABOT program.
<i>Project Title</i>	<i>MENA Twinning Round V</i>
Partner Country /Region	Middle East and North Africa - Egypt, Jordan, Mali, Morocco, and Tunisia,
Implementing Country	United States - US Department of State's Biosecurity Engagement Program
Collaborating Partner(s)	US\$333,000
Project Value	Sandia National Laboratories
Duration	2017
Description	The United States implemented a project to bring bio risk management (BRM) professionals from select MENA countries together with experienced, credentialed, and well networked BRM professionals from the United States to work together on Biosafety and Biosecurity projects. The two groups of BRM professionals were paired or "twinned" as partners, with the MENA twins receiving training and support to perform a gap analysis and address a discrete biosafety or biosecurity issue, either at their home institution or in their home country. The "twins" then worked together jointly over a six-month period, with the U.S. "twins" offering support and guidance to the MENA "twin". After six months, participants reconvened in Morocco to present their joint project results.
<i>NON-MONETARY CONTRIBUTION</i>	
Activity Title	CWMD Capacity Building
Nature of activity or contribution	CBRN Center of Excellence
Partner Country/Region	Jordan
Implementing Country	Jordan, France, Poland
Collaborating Institution(s)/Partner(s)	ICCSS-Poland
Duration	Continuous since 2022
Narrative Description	Build and expand the CBRN Center of Excellence for the DEC (Directorate of Engineering Corps)

## VI. Multi-Regional And Global Programming

<i>Project Title</i>	<i>International Global Partnership Initiated Academia for the Control of Health Threats (GIBACHT): Training of scientists from Africa and Asia for the prevention of highly dangerous diseases</i>
Partner Country/Region	Africa and Asia
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine and Robert Koch Institute
Project Value	€1,310,000 (2017-2019)
Duration	2013-2019
Description	<p>GIBACHT is an educational programme established and funded by the Federal Foreign Office. The training programme focuses on threats and risks conferred by biological agents and bioweapons and their successful prevention and control.</p> <p>The objectives of the programme are:</p> <ul style="list-style-type: none"> <li>To provide basic understanding and training in control of infectious diseases and the management of biohazards;</li> <li>To intensify and sustain international co-operation in the fields of biosafety, biosecurity and the prevention and management of epidemics;</li> <li>To strengthen national and local centres for infectious disease epidemiology and management, biosafety and biosecurity.</li> </ul>
<i>Project Title</i>	<i>European and Developing Countries Clinical Trials Partnership (EDCTP)</i>
Partner Country/Region	Africa and Europe
Implementing Country	Sweden
Collaborating Institution(s) / Partner(s)	Swedish International Development Cooperation Agency
Project Value	SEK 37,500,000/€3,851,882
Duration	2015-2020
Description	<p>The European &amp; Developing Countries Clinical Trials Partnership (EDCTP) aims to accelerate the development of new or improved drugs, vaccines, microbicides and diagnostics against HIV/AIDS, tuberculosis and malaria as well as other poverty-related infectious diseases in sub-Saharan Africa, with a focus on phase II and III clinical trials.</p>

<i>Project Title</i>	<i>Promoting Universality and Implementation of the Biological and Toxin Weapons (BTWC)</i>
Partner Country/Region	Africa, the Caribbean, Central America, Latin America and Asia
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Parliamentarians for Global Action (PGA)
Project Value	C\$747,790
Duration	2016-2020
Description	To promote universality and implementation of the BTWC in Africa, Latin America and Caribbean and to enhance national implementation measures for the Convention.
Project Title	Facility-Level Biorisk Management Systems and Training
Partner Country/Region	Africa: African Union, Cameroon, Kenya, Liberia, Nigeria, Senegal, Gabon, South Africa, Uganda  Indo-Pacific: India, Indonesia, Malaysia, Philippines, Thailand, Vietnam
Implementing Country	United States Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Partner(s)	ALL Regions: United States Interagency (e.g., United States CDC, USAID, United States Department of Energy Sandia National Laboratories (DOE/SNL)), FAO, WOA, WHO  Africa:  African Union: African Union Pan-African Veterinary Vaccine Center (AU PANVAC),  Cameroon: Center Pasteur du Cameroon, National Public Health Laboratory (NPHL) du Cameroon, LANAVET;  Kenya: Kenya Wildlife Service, KEMRI, CVL, KEVEVAPI, NVQCL, ICRH, KCRH; Liberia: NPHIL;  Nigeria: Nigerian Centre for Disease Control (NCDC), Nigerian Ministry of Defense Health Implementation Program (NMOD-HIP); National Institute for Veterinary Research (NVRI).  Senegal: LNERV;  Gabon: Interdisciplinary Center for Medical Research in Franceville (CIRMF);  South Africa: University of Pretoria (UP), National Health Laboratory Service (NHLS), National Institute for Communicable Diseases (NICD), NIOH, Agricultural Research Council (ARC) Onderstepoort Veterinary Institute (OVI), University of Cape Town (UCT); University of the Free State;  Uganda: UVRI Entebbe and Arua, NADDEC, Mbale District Veterinary BSL-2 Laboratory, NaLIRRI, Uganda Wildlife Authority (UWA) Queen Elizabeth National Park;



<i>Project Title</i>	<i>Promoting Universality and Implementation of the Biological and Toxin Weapons (BTWC)</i>
	<p>Middle East: Iraq: GoI MOH, MOA and MOE, KRG MOH and MOA, United Kingdom MoD;</p> <p>Jordan: MOA, MoH, JAF, RMS, MOI, Jordan Customs Department, JUST;</p> <p>Kazakhstan: Central Reference Laboratory;</p> <p>Europe:</p> <p>Armenia: MOH, NCDPC, MOE;</p> <p>Azerbaijan: MOH, ASA; Georgia: NCDC, Laboratory of the Ministry of Agriculture (LMA), National Food Agency (NFA);</p> <p>Türkiye: MOH, Ministry of Agriculture and Forestry;</p> <p>Ukraine: MOH, FSCP and MOD;</p> <p>Indo-Pacific:</p> <p>Cambodia: MAFF/NAPRHI, MORU;</p> <p>India: MoST, Council for Scientific and Industrial Research.</p> <p>Indonesia: TNI;</p> <p>Malaysia: MOH, MOA/DVS, STRIDE;</p> <p>Laos: MORU, Center for Infectology Lao Christophe Mérieux (CILM);</p> <p>Philippines: PPSC, PNP, Multiple RADDLs, RITM, ADDRL;</p> <p>Thailand: Pak Chong Regional FMD Laboratory, Chulalongkorn University, MORU, National Institute for Animal Health;</p> <p>Vietnam: MOH/General Department of Preventive Medicine (GDPM), MARD/DAH, NIHE, PI-NT, PI-HCMC, RAHOs, NCVD, Tay Nguyen Institute of Hygiene and Epidemiology (TIHE), VOHUN</p>
Project Value	Controlled Unclassified Information (CUI)
Duration	2021-2022 (continuing)
Description	BTRP supports biosafety and bio-risk management training, infectious waste management training, technical assistance, and procurement of Personal Protective Equipment (PPE) and biosafety equipment in partner countries. BTRP also supports biosafety laboratory upgrades and construction in partner countries.

<i>Project Title</i>	<i>Facility-Level Biorisk Management Systems and Training</i>
Partner Country/Region	Armenia, Azerbaijan, Cameroon, Ethiopia, Georgia, Guinea, India, Indonesia, Iraq, Jordan, Kazakhstan, Kenya, Liberia,

<i>Project Title</i>	<i>Facility-Level Biorisk Management Systems and Training</i>
	Malaysia, Philippines, Senegal, Sierra Leone, South Africa, Tanzania, Thailand, Turkey, Uganda, Ukraine, Uzbekistan, Vietnam
Implementing Country	United States – Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	<p>ALL CCMDs: U.S. Interagency (e.g., U.S. Centers for Disease Control (CDC), U.S. Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO), Organization for Animal Health (WOAH), World Health Organization (WHO)</p> <p>AFRICOM: Cameroon: Center Pasteur du Cameroon, National Public Health Laboratory (NPHL) du Cameroon; Ethiopia: African Union Pan-African Veterinary Vaccine Center (AU PANVAC), National Animal Health Diagnostic Investigation Center (NAHDIC) and Armauer Hansen Research Institute (AHRI); Guinea: MOH; Kenya: KEMRI, CVL, KEVEVAPI, NVQCL, ICRH, KCRH; Liberia: NPHIL; Senegal: Laboratoire National d’Elevage et de Recherches Vétérinaires (LNERV), National Public Health Laboratory (NPHL); Sierra Leone: Ministry of Health and Sanitation (MoHS); South Africa: National Health Laboratory Service (NHLS); Tanzania: Ministry of Health, Community Development, Gender, Elderly, and Children (MoHCDEC), TVLA, CVL, CIDB, MoLF; Uganda: UVRI Entebbe and Arua, NADDEC, Mbale District Veterinary BSL-2 Laboratory, NaLIRRI, Uganda Wildlife Authority (UWA) Queen Elizabeth National Park</p> <p>CENTCOM: Iraq: CGI MOH and MOA, KRG MOH and MOA, NBMC, DoS/ISN/CTR, GPP, DSTL, Jordan: MOA, MoH, JAF, RMS, CSU, CDD, PSD, JUST; Kazakhstan: KSCQZD, MOH, Uzbekistan: MOH, SVC</p> <p>EUCOM: Armenia: MOH, NCDPC, MOA; Azerbaijan: MOH, FSA, SVS; RVL; CRL; Khachmaz, Lankaran, Imishli and Shamkir Anti-Plague Division S(APD); Georgia: NCDC, LMA, NFA; Turkey: MAF, MOH; Ukraine: MOH, MOD;</p> <p>INDOPACOM: India: MoST, Council for Scientific and Industrial Research. Indonesia: TNI; Malaysia: MOH, MOA/DVS), STRIDE; Philippines: PPSC, PNP, Multiple RADDLs, RITM, ADDRL; Thailand: Pakchong FMD Laboratory, Chulalongkorn University, MORU, WOAHRRL, Institute for Animal Health, AFRIMS; Vietnam: MOH, DAH, MARD, National Institute of Veterinary Medicine</p>
Project Value	US\$42,500,000
Duration	2017-2018
Description	BTRP supports biosafety and bio-risk management training, technical assistance, and procurement of Personal Protective Equipment (PPE) and biosafety equipment in partner countries. BTRP also supports biosafety laboratory upgrades and construction in partner countries.

<i>Project Title</i>	<i>National-Level Regulatory Frameworks</i>
Partner Country/Region	Africa: African Union South, Central & East Regional Collaboration Centers (RCC), Cameroon, Kenya Indo-Pacific: Cambodia, Laos, Philippines, Vietnam
Implementing Country	United States Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP), Canada
Collaborating Partner(s)	ALL Regions: United States Interagency (e.g., United States CDC, USAID, DOE/SNL), FAO, WOA, WHO  Africa: African Union: African Union South, Central & East Regional Collaboration Centers (RCC) of the Africa CDC; Kenya: MOH, Ministry of Agriculture Livestock and Fisheries (MOALF);  Middle East: Iraq: National Biorisk Management Committee (NBMC), GoI MOH, MOE and MOHE, KRG MOH, MOE; Uzbekistan: State Veterinary Committee  Europe: Armenia: Government of Armenia; Ukraine: MOH  Indo-Pacific: Cambodia: MOH/NIPH, MAFF/NAPRHI, WHO, US CDC, MORU; Laos: MOH, MoAF, MoST; Philippines: PPSC, PNP, Multiple RADDLs, RITM, ADDRL; Vietnam: MOH, MARD
Project Value	Controlled Unclassified Information (CUI)
Duration	2021-2022 (continuing)
Description	BTRP supports biosafety and biosecurity legislative framework development in partner countries. Support includes working with partners to develop appropriate legislation to address pathogens and biosafety regulations for public health laboratories at national and provincial laboratories.

<i>Project Title</i>	<i>Laboratory Diagnostics</i>
Partner Country/Region	Armenia, Azerbaijan, Cambodia, Ethiopia, Georgia, Guinea, India, Iraq, Jordan, Laos, Liberia, Kazakhstan, Kenya,

<i>Project Title</i>	<i>Laboratory Diagnostics</i>
	Philippines, Sierra Leone, Turkey, Uganda, Ukraine, Uzbekistan, Vietnam
Implementing Country	United States – Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	<p>ALL CCMDS: U.S. Interagency (e.g., U.S. Centers for Disease Control (CDC), U.S. Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO), Organization for Animal Health (WOAH), World Health Organization (WHO)</p> <p>AFRICOM: Ethiopia: Ethiopian Public Health Institute (EPHI), NAHDIC; Guinea: MOH; Liberia: NPHIL; Kenya: Ministry of Health (MoH), County Governments, Ministry of Agriculture, Fisheries, Livestock and Irrigation (MALFI), National Public Health Laboratory Systems (NPHLS); Sierra Leone: MoHS; South Africa: Regional Diagnostic Demonstration Center (RDDC) at National Institute for Communicable Diseases (NICD); Uganda: NADDEC, NaLIRRI, UWA, and Makerere University</p> <p>CENTCOM: Iraq: CGI MOH and MOA, KRG MOH and MOA, NBMC, DoS/ISN/CTR, GPP, DSTL; Jordan: MOH, RMS, MOA; Kazakhstan: KSCQZD, MOH, Uzbekistan: MOH, SVC</p> <p>EUCOM: Armenia: MOH, NCDPC, MOA; Azerbaijan: MOH, FSA, SVS; RVL; CRL; Khachmaz, Lankaran, Imishli and Shamkir Anti-Plague Divisions (APD); Georgia: NCDC, LMA, NFA; Turkey: MAF, MOH; Ukraine: MOH, MOD</p> <p>INDOPACOM: Cambodia: Naval Medical Research Unit Two (NAMRU-2), Diagnostic Microbiology Development Program (DMDP), Fondation Mérieux, Armed Forces Research Institute of Medical Sciences, NIPH, Royal Cambodian Armed Forces (RCAF), Central Media Making Laboratory, Provincial Referral Hospital Laboratories, Mahidol-Oxford Tropical Medicine Research Unit (MORU); India: MOST; Laos: MORU, National Animal Health Lab (NAHL), Mahosot hospital, Laos Military Medical Department (MMD); Philippines: PPSC, PNP, Multiple RADDLs, RITM, ADDRL Vietnam: MARD</p>
Project Value	US\$38,300,000
Duration	2017-2018
Description	BTRP support includes laboratory diagnostics training on EDPs, laboratory construction, laboratory modernization to include facility improvements and procurement of laboratory equipment and consumables, laboratory quality management systems (LQMS), and laboratory information management systems (LIMS). BTRP also supports National Public Health Laboratory Systems Laboratory Mapping projects in partner countries.

<i>Project Title</i>	<i>Laboratory Diagnostics</i>
Partner Country/Region	<p>Africa: Cameroon, Guinea, Kenya, Liberia, Nigeria, Kenya, Senegal, South Africa, Uganda</p> <p>Middle East: Iraq, Jordan, Kazakhstan</p> <p>Europe: Armenia, Azerbaijan, Georgia, Ukraine</p> <p>Indo-Pacific: Cambodia, India, Indonesia, Laos, Malaysia, Philippines, Thailand, Vietnam</p>
Implementing Country	United States Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Partner(s)	<p>ALL Regions: United States Interagency (e.g., United States CDC, USAID, USDA); FAO, WOA, WHO</p> <p>Africa:</p> <p>Cameroon: LANAVET</p> <p>Guinea: MOH;</p> <p>Kenya: MOH, ILRI, MOALF, KEMRI, ZDU, University of Nairobi, County Governments, National Public Health Laboratory Systems (NPHLS);</p> <p>Liberia: NPHIL, LCRP, SCNL;</p> <p>Senegal: LNERV</p> <p>South Africa: Regional Diagnostic Demonstration Center (RDDC) at National Institute for Communicable Diseases (NICD), ARC-OVI, UP;</p> <p>Middle East:</p> <p>Iraq: GoI MOH, MOA and MOHE, KRG MOH and MOA, UK MOD; Jordan: MOH, RMS, JUST, MOA;</p> <p>Kazakhstan: CRL;</p> <p>Europe:</p> <p>Armenia: MOH, NCDPC, MOE;</p> <p>Azerbaijan: MOH, ASA, Veterinary Scientific Research Institute, FSA;</p> <p>Georgia: State Laboratory of Agriculture, NFA;</p> <p>Ukraine: MOH;</p> <p>Indo-Pacific:</p> <p>Cambodia: Diagnostic Microbiology Development Program (DMDP), NIPH, Provincial Referral Hospital Laboratories, MORU; India: MOST, National Centre for Biological Sciences (NCBS), Kerala Veterinary and Animal Sciences University (KVASU), Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS), OUAT;</p>

<i>Project Title</i>	<i>Laboratory Diagnostics</i>
	<p>Indonesia: TNI;</p> <p>Laos: MORU, National Animal Health Lab (NAHL), Mahosot hospital, Laos Military Medical Department (MMD);</p> <p>Malaysia: UM, Naval Medical Research Center Asia (NMRC-A), Department of Wildlife and National Parks (DWNP), NPHL; Philippines: PPSC, PNP, Multiple RADDLs, RITM, ADDRL;</p> <p>Thailand: Chulalongkorn University; Vietnam: MOH/GDPM, TIHE, PI-NT, PI-HCMC, MARD/DAH, RAHOs, NCVD</p>
Project Value	Controlled Unclassified Information (CUI)
Duration	2021-2022 (continuing)
Description	BTRP support includes laboratory diagnostics training on EDPs, laboratory construction, laboratory modernization to include facility improvements and procurement of laboratory equipment and consumables, laboratory quality management systems (LQMS), and laboratory information management systems (LIMS). BTRP also supports National Public Health Laboratory Systems Laboratory Mapping projects in partner countries.
Project Title	Consolidation and Securing of Pathogens
Partner Country/Region	Armenia, Azerbaijan, Cambodia, Cameroon, India, Indonesia, Iraq, Jordan, Kazakhstan, Kenya, Laos, Liberia, Malaysia, Philippines, Sierra Leone, South Africa, Tanzania, Thailand, Turkey, Uganda, Ukraine, Uzbekistan, Vietnam
Implementing Country	United States – Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	<p>ALL CCMDS: U.S. Interagency (e.g., U.S. Centers for Disease Control (CDC), U.S. Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO), Organization for Animal Health (WOAH), World Health Organization (WHO)</p> <p>AFRICOM: Cameroon: National Veterinary Laboratory (LANAVET) Annex – Yaoundé; Kenya: Kenya Medical Research Institute (KEMRI), Central Veterinary Lab (CVL), Kenya Veterinary and Vaccines Production Institute, (KEVEVAPI) National Veterinary Quality Control Laboratory (NVQCL), Isiolo County Referral Hospital (ICRH), Kajiado County Referral Hospital (KCRH); Liberia: National Public Health Institute of Liberia/National Reference Laboratory (NPHIL/NRL) and Bong County Regional Reference Laboratory (RRL); Sierra Leone: Central Public Health Reference Laboratory (CPHRL); South Africa: State Veterinary Office (SVO) in Kruger National Park; Tanzania: Tanzania Veterinary Laboratory Agency's (TVLA), Central Veterinary Laboratory (CVL), the Center for Infectious Disease and Biotechnology (CIDB), Ministry of Livestock and Fisheries (MoLF); Uganda: Uganda Virus Research Institute (UVRI) Entebbe and Arua, National Animal Disease</p>

<i>Project Title</i>	<i>Laboratory Diagnostics</i>
	<p>Diagnostics and Epidemiology Center (NADDEC), Mbale District Veterinary BSL-2 Laboratory, and National Livestock Resource Research Institute (NaLIRRI)</p> <p>CENTCOM: Iraq: Central Government of Iraq (CGI) Ministries of Health (MOH) and Agriculture (MOA), Kurdistan Regional Government (KRG) MOH and MOA, National Biorisk Management Committee (NBMC), Department of State Bureau of International Security and Non-proliferation Cooperative Threat Reduction (DOC/ISN/CTR), Canada's Weapons Threat Reduction Program, United Kingdom Defense Science and Technology Laboratory (DSTL); Jordan: MOA, MOH, Jordanian Armed Forces (JAF) Royal Medical Service (RMS), Chemical Support Unit (CSU), Civil Defense Department (CDD), Public Security Directorate (PSD), Jordan University of Science and Technology (JUST); Uzbekistan: MOH, State Veterinary Committee (SVC); Kazakhstan: Kazakh Scientific Center of Quarantine and Zoonotic Diseases (KSCQZD), MOH</p> <p>EUCOM: Armenia: MOH, National Center for Disease Control and Prevention (NCDCP), MoA; Azerbaijan: MOH; Food Safety Agency (FSA); State Veterinary Service (SVS); Republican Veterinary Lab (RVL); Central Reference Laboratory (CRL); Khachmaz, Lankaran, Imishli and Shamkir Anti-Plague Divisions (APD); Georgia: Lugar Center, National Center for Disease Control and Public Health (NCDC), Laboratory of the Ministry of Agriculture (LMA); Turkey: Ministry of Agriculture and Forestry (MAF), MOH; Ukraine: MOH), Ministry of Defense (MoD)</p> <p>INDOPACOM: Cambodia: National Institute of Public Health (NIPH); India: Ministry of Science and Technology (MoST); Indonesia: Tentara National Indonesia (TNI); Malaysia: MOH, MOA/Department of Veterinary Services, Malaysian Science and Technology Research Institute for Defense (STRIDE); Philippines: Philippines Public Safety College (PPSC), Philippines National Police (PNP), Multiple Regional Animal Disease Diagnostic Laboratory (RADDLs), Research Institute of Tropical Medicine (RITM), Animal Disease Diagnostic Reference Laboratory (ADDRL); Thailand: Pakchong Regional Foot-and-Mouth Disease (FMD) Laboratory; Chulalongkorn University, Mahidol Oxford Tropical Medical Research Unit (MORU), WOH Regional Reference Laboratory (RRL) FMD, Institute for Animal Health, Armed Forces Research Institute of Medical Sciences (AFRIMS); Vietnam: MOH, Ministry of Agriculture and Rural Development (MARD), Department of Animal Health (DAH), National Institute of Veterinary Medicine</p>
Project Value	US\$46,400,000
Duration	2017-2018
Description	BTRP supports biosecurity training, biosecurity laboratory upgrades and construction, and installation of Pathogen Access Control Systems (PACS) in partner countries. BTRP also works to assist partners with pathogen consolidation.

<i>Project Title</i>	<i>Consolidation and Securing of Pathogens</i>
Partner Country/Region	<p>Africa: Cameroon, Kenya, Liberia, Senegal, Uganda</p> <p>Middle East: Iraq</p> <p>Europe: Armenia, Azerbaijan</p> <p>Indo-Pacific: Cambodia, India, Indonesia, Laos, Malaysia, Philippines, Thailand, Vietnam</p>
Implementing Country	United States Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Partner(s)	<p>ALL Regions: United States Government (e.g., United States Centers for Disease Control (United States CDC), United States Agency for International Development (USAID)); Food and Agriculture Organization of the United Nations (FAO), World Organisation for Animal Health (WOAH), World Health Organization (WHO)</p> <p>Africa:</p> <p>Cameroon: National Veterinary Laboratory (LANAVET) Annex – Yaoundé, Annex – Douala and Garoua Headquarters</p> <p>Guinea: National Institute of Public Health (INSP) /Mobile Diagnostic Laboratory;</p> <p>Kenya: Kenya Medical Research Institute (KEMRI), Central Veterinary Lab (CVL), Kenya Veterinary and Vaccines Production Institute, (KEVEVAPI) National Veterinary Quality Control Laboratory (NVQCL), Isiolo County Referral Hospital (ICRH), Kajiado County Referral Hospital (KCRH);</p> <p>Liberia: National Public Health Institute of Liberia/National Reference Laboratory (NPHIL/NRL);</p> <p>Senegal: Laboratoire National d’Elevage et de Recherches Vétérinaires (LNERV)</p> <p>Uganda: Uganda Virus Research Institute (UVRI) Entebbe and Arua, National Animal Disease Diagnostics and Epidemiology Center (NADDEC), Mbale District Veterinary BSL-2 Laboratory, and National Livestock Resource Research Institute (NaLIRRI)</p> <p>Middle East:</p> <p>Iraq: Government of Iraq (GoI) Ministries of Health (MOH), Agriculture (MOA) and Higher Education (MOHE), Kurdistan Regional Government (KRG) MOH and MOA, United Kingdom Ministry of Defence (MoD)</p> <p>Europe:</p> <p>Armenia: MOH, National Center for Disease Control and Prevention (NCDCP), Ministry of Economy (MoE);</p>



<i>Project Title</i>	<i>Consolidation and Securing of Pathogens</i>
	<p>Azerbaijan: MOH, Food Safety Agency (FSA); Agrarian Services Agency (ASA), Ministry of Ecology and Natural Resources</p> <p>Indo-Pacific:</p> <p>Cambodia: Ministry of Health (MOH)/ National Institute of Public Health (NIPH), Ministry of Agriculture, Forestry, and Fisheries (MAFF)/ National Animal Production and Health Research Institute (NAPRHI), Mahidol Oxford Tropical Medical Research Unit (MORU);</p> <p>India: MoST; Indonesia: Tentara National Indonesia (TNI);</p> <p>Laos: Ministry of Agriculture and Forestry (MoAF), MOH, Ministry of Science and Technology (MoST), MORU;</p> <p>Malaysia: MOH/National Public Health Laboratory (NPHL), Ministry of Agriculture (MOA), Department of Veterinary Services (DVS)/Veterinary Research Institute (VRI), Science and Technology Research Institute for Defense (STRIDE), Malaysia One-Health University Network (MyOHUN);</p> <p>Philippines: Philippines Public Safety College (PPSC), Philippines National Police (PNP), Multiple Regional Animal Disease Diagnostic Laboratory (RADDLs), Research Institute of Tropical Medicine (RITM), Animal Disease Diagnostic Reference Laboratory (ADDRL);</p> <p>Thailand: Pak Chong Regional Foot-and-Mouth Disease (FMD) Laboratory, Chulalongkorn University, MORU, National Institute for Animal Health; Vietnam: MOH, National Institute for Hygiene and Epidemiology (NIHE), Pasteur Institute-Na Trang (PI-NT) &amp; Pasteur Institute Ho Chi Minh City (PI-HCMC), Ministry of Agriculture and Rural Development (MARD), Department of Animal Health (DAH), National Center of Veterinary Diagnostics (NCVD), National Institute of Veterinary Research (NIVR), Regional Animal Health Offices (RAHOs), Institute of Microbiology and Biotechnology- Vietnam National University (IMBT-VNU), National Hospital of Tropical Diseases (NHTD), Vietnam One-Health University Network (VOHUN)</p>
Project Value	Controlled Unclassified Information (CUI)
Duration	2021-2022 (continuing)
Description	BTRP supports biosecurity training, biosecurity laboratory upgrades and construction, and installation of Pathogen Access Control Systems (PACS) in partner countries. BTRP also works to assist partners with pathogen consolidation.
Project Title	Disease Detection
Partner Country/Region	<p>Africa: Cameroon, Kenya, Liberia, Nigeria, Senegal, South Africa, Tanzania, Uganda</p> <p>Middle East: Iraq, Jordan, Kazakhstan</p> <p>Europe: Armenia, Azerbaijan, Georgia</p>

<i>Project Title</i>	<i>Consolidation and Securing of Pathogens</i>
	Indo-Pacific: Cambodia, India, Laos, Malaysia, Philippines, Vietnam
Implementing Country	United States Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Partner(s)	ALL Regions: United States Interagency (e.g., US CDC, USAID, United States Department of Agriculture (USDA)); FAO, WOA, WHO
	Africa:
	Cameroon: Ministry of Public Health (MINSANTE), Ministry of Livestock, Fisheries, and Animal Industries (MINEPIA), and LANAVET;
	Kenya: MOH, MOALF, KEMRI, ZDU, University of Nairobi, International Livestock Research Institute (ILRI);
	Liberia: NPHIL, Liberia Chimpanzee Rescue and Protection (LCRP), Society for the Conservation of Nature of Liberia (SCNL);
	Nigeria: Nigerian Centre for Disease Control (NCDC);
	Senegal: LNERV
	South Africa: ARC-OVI, NICD, UP;
	Tanzania: MOH, Kilimanjaro Clinical Research Institute (KCRI), Global Animal Health Tanzania (GAHT), One Health Coordination Desk-Prime Minister's Office (OHCD-PMO), Tanzania Wildlife Research Institute (TAWIRI), TVLA;
	Uganda: UVRI Entebbe and Arua, UWA, NADECC, Makerere University (MU), Central Diagnostic Laboratory (CDL), Ugandan Ministry of Agricultural, Animal Industry and Fisheries (MAAIF)
	Middle East:
	Iraq: GoI MOA, KRG MOA;
	Jordan: MOA;
	Kazakhstan: National Veterinary Reference Center (NVRC), Research Institute for Biological Safety Problems (RIBSP), Scientific Practical Center for Sanitary and Epidemiological Expertise and Monitoring (SPC-SEEM)
	Europe:
	Armenia: MoH, MOE, Food Safety Inspection Body (FSIB);
	Azerbaijan: MOH, ASA;
	Georgia: Tbilisi State Medical University (TSMU), NCDC, LMA

<i>Project Title</i>	<i>Consolidation and Securing of Pathogens</i>
	<p>Indo-Pacific:</p> <p>Cambodia: Kampong Cham National School of Agriculture (KCNSA), MOH/NIPH, MAFF/NAPRHI, WHO, United States CDC, MORU;</p> <p>India: Kerala Veterinary and Animal Sciences University (KVASU), Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS), Odisha University of Agriculture and Technology (OUAT), National Centre for Biological Sciences (NCBS);</p> <p>Laos: Institute Pasteur du Laos (IPL), Lao Military Medical Department, Lao Oxford Mahosot Hospital Welcome Trust Research Unit (LOMWRU), MORU;</p> <p>Malaysia: University of Malaya (UM);</p> <p>Philippines: Multiple RADDLs,</p> <p>Vietnam: NIHE, DAH, IMBT-VNU, NIVR, Military Hospital 103</p>
Project Value	Controlled Unclassified Information (CUI)
Duration	2021-2022 (continuing)
Description	BTRP support human and veterinary clinician training on diagnosis of pathogens. BTRP support also includes research projects related to surveillance and diagnosis of pathogens.

<i>Project Title</i>	<i>Epidemiological Analysis and Investigation</i>
Partner Country/Region	<p>Africa: Cameroon, Kenya, Liberia, Senegal, Uganda</p> <p>Middle East: Iraq, Jordan, Kazakhstan</p> <p>Europe: Armenia, Ukraine</p> <p>Indo-Pacific: Cambodia, Laos, Philippines, Vietnam</p>
Implementing Country	United States Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Partner(s)	<p>ALL Regions: United States Interagency (e.g., US CDC, USAID); FAO, OIE, WHO</p> <p>Africa:</p> <p>Cameroon: MINSANTE, MINEPIA, Ministry of Wildlife (MINFOF), Ministry of Defense (MINDEF), Ministry of Justice (MINJUSTICE) Ministry of Higher Education (MINESUP), and Police Department</p> <p>Kenya: MOH, MOALF, KEMRI, ZDU, ILRI, University of Nairobi;</p> <p>Liberia: LCRP, SCNL, NPHIL;</p> <p>Senegal: HEOC, LNERV</p>

<i>Project Title</i>	<i>Epidemiological Analysis and Investigation</i>
	Uganda: CDL, NADECC, NaLIRRI, UWA, UVRI, MAAIF, Makerere University (MU)
	Middle East: Iraq: GoI MOH and MOA, KRG MOH and MOA; Jordan: MOA; Kazakhstan: MOH
	Europe: Armenia: MOH, NCDPC, MOE; Ukraine: MOH, FSCP, and MOD
	Indo-Pacific: Cambodia: General Directorate of Animal Health and Production (GDAHP); National Animal Health and Production Research Institute (NAHPRI); Cambodian Government's Applied Epidemiology Training (AET); Cambodian Applied Veterinary Epidemiology Training (CAVET); Mekong Basin Disease Surveillance (MBDS) Network; Laos: The Department of Communicable Disease Control (DCDC); Philippines: Department of Animal Health; Vietnam: MOH/GDPM, NIHE, TIHE, PINT, PI HCMC
Project Value	Controlled Unclassified Information (CUI)
Duration	2021-2022 (continuing)
Description	BTRP sponsors the United States CDC's Basic and Advanced Field Epidemiology Training Program (FETP), the FAO's FETP-Veterinary (FETP-V), and WHO Frontline Field Epidemiology Training Program (FETP-F). BTRP also provides technical support, including workshops and table-top exercises.

<i>Project Title</i>	<i>MEDILABSECURE : Preventing biological risks by strengthening institutional capacities in the context of One Health</i>
Partner Country/Region	Albania, Algeria, Armenia, Bosnia and Herzegovina, Burkina Faso, Egypt, Georgia, Jordan, Kosovo, Lebanon, Libya, Mali, Mauritania, Montenegro, Morocco, Niger, North Macedonia, Palestine, Senegal, Serbia, Tunisia, Turkey
Implementing Country	European Union
Collaborating Partner(s)	Institut Pasteur Paris Institut de Recherche pour le Développement (IRD) Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA)

<i>Project Title</i>	<i>MEDILABSECURE : Preventing biological risks by strengthening institutional capacities in the context of One Health</i>
	Istituto Superiore di Sanità (ISS) (Italian National Institute of Health), Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "Giuseppe Caporale" (IZSAM), Avia-GIS NV (Avia-GIS)
Project Value	€5.555.255
Duration	42 Months
Description	This project broadly aims to strengthen the network of laboratories and public health institutions providing capacity building and networking activities globally. In particular, it aims to: strengthen and harmonize preparedness and response capacities on health threats related to (arbo)zoonotic viruses and their vectors in the target regions; and enhance awareness of the added value of integrated surveillance, risk assessment and early warning to prevent and control epidemics and epizootics.
<i>Project Title</i>	<i>Project 36: MediPIET Further Development and Consolidation of the Mediterranean Programme for Intervention Epidemiology Training (HS/2013/329-859)</i>
Partner Country/Region	Albania, Algeria, Armenia, Bosnia and Herzegovina, Egypt, Former Yugoslav Republic of Macedonia, Georgia, Jordan, Kosovo <sup>1</sup> , Lebanon, Libya, Moldova, Montenegro, Morocco, Palestine <sup>2</sup> , Serbia, Tunisia, Ukraine  Two observer countries: Turkey and Israel  As members of the Scientific Advisory Board: Greece, France and Spain  <sup>1</sup> This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.  <sup>2</sup> This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.
Implementing Country	Spain – Consortium FIIAPP – Instituto de Salud Carlos III
Collaborating Institution(s) / Partner(s)	Institute of Public Health (Albania); Institute National de Santé Publique (Algeria); National Center for Disease Control and Prevention (Armenia); Institute for Public Health, Public Health Institute of the Republic of Srpska (Bosnia and Herzegovina); Ministry of Health and Population (Egypt); Institute of Public Health (Former Yugoslav Republic of Macedonia); National Center for Disease Control and Public Health (Georgia); Ministry of Health (Jordan); Institute for Public Health (Kosovo); The Epidemiology Surveillance Program at the Ministry of Public Health (Lebanon); Ministry of Health (Libya); Ministry of Health (Morocco); The National Center for Public Health (Moldova); Institute for Public Health (Montenegro); National Institute of Public Health (Palestine); Institute of

Project Title	<i>Project 36: MediPIET Further Development and Consolidation of the Mediterranean Programme for Intervention Epidemiology Training (HS/2013/329-859)</i>
Project Value	€6,450,000
Duration	2014-2018
Description	<p>Public Health of Serbia “Dr. Milan Jovanovic Batut” (Serbia); The Observatory of New and Emerging Diseases (Tunisia); State Body «Ukrainian I.I Mechnikov Anti-Plague Research Institute of the Ministry of Health of Ukraine»; Ministry of Health of the State of Israel; Public Health Institution of Turkey; Institut de Veille Sanitaire (France); Hellenic Centre for Disease Control and Prevention (Greece); Instituto de Salud Carlos III (Spain)</p> <p>MediPIET is an EuropeAid-DEVCO funded project under the Instrument contributing to Stability and Peace, linked to the Chemical, Biological, Radiological and Nuclear Centres of Excellence initiative – CBRN CoE. The Consortium FIIAPP-ISCH, with the scientific leadership of ECDC, leads the project.</p> <p>This Project has been established under a regional perspective to contribute to the overall objective of enhancing health security in the Mediterranean basin by supporting capacity building for prevention and control of natural or man-made health threats posed by communicable diseases and other threats through a sustainable training programme in intervention epidemiology.</p> <p>The MediPIET project is aimed at consolidating a competent workforce in intervention epidemiology to carry out essential public health functions for prevention and control of national and cross-border challenges posed by communicable diseases and other health threats enhancing the biological aspect of CBRN CoE.</p> <p>The main objectives are:</p> <ul style="list-style-type: none"> <li>· Establishing a network of epidemiologists and trainers in field epidemiology among Public Health institutions of the participating countries in order to contribute to the reinforcement of the prevention and response to health threats</li> <li>· Training field epidemiologists in charge of the essential activities of public health for the prevention and control of communicable diseases and other risks, with a common language in the region</li> <li>· Promoting the collaboration, the exchange of experiences and knowledge between the countries of the Mediterranean and the commitment at the sustainability at national and regional levels</li> <li>· Reinforce institutional capacity at national and regional levels</li> </ul> <p>The above objectives are achieved through:</p> <p>A two years’ fellowship programme</p> <p>18 training modules with learning by doing methodology for fellows and additional participants</p>

<i>Project Title</i>	<i>Project 36: MediPIET Further Development and Consolidation of the Mediterranean Programme for Intervention Epidemiology Training (HS/2013/329-859)</i>
	<p>12 training of trainers</p> <p>International Assignments</p> <p>Annual Scientific Conference</p> <p>Establishment of a network of Junior and Senior epidemiologists, network of Training Sites, a Training Centres Forum</p>
<i>Project Title</i>	<i>MediLabSecure: Preventing vector-borne diseases around the Mediterranean and Black Sea regions by creating new networks</i>
Partner Country/Region	Albania, Algeria, Armenia, Bosnia and Herzegovina, Egypt, Georgia, Jordan, Kosovo, Lebanon, Libya, Moldova, Montenegro, Morocco, Palestine, Serbia, former Yugoslav Republic of Macedonia, Tunisia, Turkey, Ukraine (Mediterranean and Black Sea non-EU countries)
Implementing Country	<p>European Union – DEVCO/EuropeAid</p> <p>France (general and network coordination)</p> <p>Italy</p> <p>Spain (network coordination)</p>
Collaborating Institution(s) / Partner(s)	<p>Institut Pasteur Paris (France); Centro de Investigación en Sanidad Animal – INIA (Spain); MIVEGEC – IRD (France); National Centre for Epidemiology, Surveillance and Health Promotion – ISS (Italy); Institute of Public Health, Food Safety and Veterinary Institute, (Albania); Institut Pasteur d'Algérie, Institut National de la Médecine Vétérinaire (Algeria), National Center for Disease Control, Republican Veterinary, Sanitary and Phyto-Sanitary Center for laboratory services (Armenia); University Clinical Center, Veterinary Faculty Sarajevo, Public Institution Veterinary Institute of the Republic of Srpska "Dr. Vaso Butozan" Banja Luka, Ministry of Civil Affairs, Public Health Institute (Bosnia and Herzegovina); National Research Center, Animal Health Research Institute, Ain Shams University, Ministry of Health and Population (Egypt); National Center for Disease Control and Public Health, Laboratory of Ministry of Agriculture (Georgia); Ministry of Health, Ministry of Agriculture (Jordan); National Institute of Public Health of Kosovo, University of Prishtina - Faculty of Agriculture and Veterinary Sciences (Kosovo); Rafik hariri University Hospital, Lebanese Agricultural Research Institute, Lebanese University Faculty of Public Health, Ministry of Public Health (Lebanon); National Centre for Disease Control (Libya); National Center for Public Health, Republican Veterinary Diagnostic Center, Institute of Zoology (Moldova), Institute of Public Health, Diagnostic Veterinary Laboratory, Biotechnical faculty (Montenegro); Institut Pasteur du Maroc, Office national de sécurité sanitaire des produits alimentaires, Institut National d'Hygiène, Ministry of Health (Morocco); Ministry of Health, Veterinary School - An-Najah National University (Palestine); Institute of Public</p>

<i>Project Title</i>	<i>MediLabSecure: Preventing vector-borne diseases around the Mediterranean and Black Sea regions by creating new networks</i>
Project Value	€3,300,000
Duration	2014-2018
Description	<p>Project funded by the EU Instrument contributing to Stability and Peace.</p> <p>Countries of the Mediterranean and Black Sea regions have common sea borders and, as a result, share common public health issues and threats.</p> <p>The MediLabSecure project aims at consolidating a Laboratory Network on the emerging viruses that are pathogens for humans and/or animals.</p> <p>It will represent a cluster for awareness, risk assessment, monitoring and control of these vector borne diseases. This cluster will require the interaction of four laboratory sub-networks, one for human health, one for animal health, one for entomology and one for public health reinforcement.</p> <p>The MediLabSecure network will encompass partner countries around the Mediterranean and Black Sea Regions (19 non-EU countries) by means of a collaborative execution of the stated work packages to address public health-related national needs.</p>

<i>Project Title</i>	<i>WHO Collaborating Centre for Laboratory Preparedness and Response to High Threat Pathogens and Biorisk</i>
Partner Country/Region	Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, North Macedonia, Georgia, Moldova, Montenegro, Serbia, and Ukraine, supplemented with WHO EURO countries, including Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan from the Central Asia region.
Implementing Country	The Netherlands
Collaborating Institution(s) / Partner(s)	WHO Euro and WHO Head Quarters



<i>Project Title</i>	<i>WHO Collaborating Centre for Laboratory Preparedness and Response to High Threat Pathogens and Biorisk</i>
Project Value	€1.1 M
Duration	August 2021- August 2024
Description	The Netherlands Institute for Public Health and the Environment (RIVM) is home to several WHO Collaborating Centres. The WHO Collaborating Centre for Laboratory Preparedness and Response for High Threat Pathogens and Biorisk, launched in 2021, supports the WHO through capacity and capability building activities aimed at laboratory preparedness as well as response activities to high threat pathogens and bio-risk management. The work of the Centre takes place in the WHO Euro region, with a focus on the Balkans, Caucasus, and Central Asia. Thus far, activities performed by the Centre have included the performance of country assessments to map the current situation in diagnostic capacities; the delivery of various training activities (either in country or at RIVM) such as a Biosafety Level 3 training and a training program focusing on hantavirus, which covers diagnostics and bio-risk assessment; the development of tools to prioritize high threat pathogens and improve sustainability; development of the draft document “Preparing for emergencies – A guidance for health laboratories,” which provides critical considerations for public health laboratories to improve their response to emerging pathogens or disasters that hamper laboratory operations, in close collaboration with WHO; and, the provision of ad hoc expert advice and technical laboratory support where needed.
<i>Project Title</i>	<i>Training for Biological/Toxin Threats and Response/Law Enforcement Training</i>
Partner Country/Region	Algeria, Armenia, Egypt, Indonesia, Philippines, Malaysia, Nigeria, Iraq, Kenya, Jordan, Morocco, Turkey, Tunisia, India, Tajikistan, Kyrgyzstan
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement and Iraq Programs
Collaborating Institution(s) / Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$8,100,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	ISN/CTR works to mitigate global biological threats by supporting partner countries in the following programmatic activities: Combatting low technology toxin threats through law enforcement and laboratory training, counter-CBW investigations training, improving cross-sector communication on bio threats.

<i>Project Title</i>	<i>Mitigating Biosecurity Gaps through Adoption of Robust Pathogen Inventory Systems in the NEA Region</i>
Partner Country/Region	Algeria, Egypt, Jordan, Morocco, and Tunisia
Implementing Country	The Netherlands
Collaborating Institution(s) / Partner(s)	CRDF Global and Jordan CDC & Ministry of Health. The project was funded by the United States Department of State's Cooperative Threat Reduction Biosecurity Engagement program through a Cooperative Agreement issued to CRDF Global.
Project Value	US\$34,184
Duration	2019-2022
Description	The objective of this project was to develop a database tool to facilitate Jordanian National Committee for Biosecurity identification and analysis of pathogen stores in Jordan. CRDF Global and the National Institute of Public Health and the Environment (RIVM), on behalf of the Department of State, hosted a one-day virtual meeting with the Jordanian National Committee for Biosecurity. This meeting identified Jordanian needs and explained the processes needed to implement a National Inventory of Dangerous Pathogens (NIDP) in Jordan. In addition, RIVM has made the NIDP software tool and subsequent guidance documents available for Jordan. Due to the COVID pandemic the project has been extensively adjusted and reduced to focus on only on Jordan.
<i>Project Title</i>	<i>Improvement of epidemiological and serological tools for diagnosis and control of Brucellosis in the Mediterranean region (Brucmednet)</i>
Partner Country/Region	Algeria, Greece, Italy, Portugal, Tunisia (Countries of Mediterranean Region)
Implementing Country	Italy – Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise in the frame of ARIMNet2 - Coordination of Agricultural Research in the Mediterranean; FP7-ERANET-2013 RTD – KBBE.2013.1.4-0.3; Grant agreement no. 618127  ARIMNet2 topic A3 “Developing sustainable production in the context of increasing ecological and climate stresses – Common Mediterranean challenges in animal and plant health”
Collaborating Institution(s) / Partner(s)	Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise (IZSAM), Istituto Zooprofilattico Sperimentale della Sicilia IZSSi, Hellenic Agricultural Organization DEMETER, Faculty of Veterinary Medicine Benha University (BVM), Instituto Nacional de Investigación Agrária e Veterinária (INIAV), Institute of Veterinary Research in Tunisia (IRVT)United Nations Secretary-General's Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons (UNSGM), the WHO CC for Genomics (DTU), The Global Microbial Identifier (GMI)
Project Value	€408,858
Duration	2016-2019

<i>Project Title</i>	<i>Improvement of epidemiological and serological tools for diagnosis and control of Brucellosis in the Mediterranean region (Brucmednet)</i>
Description	<p>Brucmednet project, coordinated by IZSAM (Italy) wants to strengthen capacities to detect, rapidly identify and diagnose Brucellosis, a worldwide spread zoonosis and a special threat for the Mediterranean region. Project aim is to improve brucellosis surveillance, control and eradication in the Mediterranean area developing “easy access” epidemiological tools and diagnostic assays suitable for differentiating infected from vaccinated animals (DIVA strategy).</p> <p>Specific project activities include:</p> <p>Development of MLVA panels (molecular fingerprint) for B. melitensis and B. abortus and development a freely accessible web-based server for Brucella VNTR data. This will implement molecular tools useful for epidemiological investigations and trace-back of Brucella infection sources in the Mediterranean region and over;</p> <p>Characterization of B. melitensis surface and sub-surface proteome and immunoreactive epitopes to develop novel serological diagnostic tools for DIVA strategy, to improve brucellosis control and eradication programs, using recombinant antigens.</p> <p>Enhancement of Laboratory capabilities to detect and identify Brucella strains in project partners Countries (Mediterranean region)</p>
<i>Project Title</i>	<i>Know Your Customer/Funder and Funder Screening for Labs</i>
Partner Country/Region	Angola, Gabon, Guinea, Sierra Leone, South Africa, Nigeria, Indonesia, Malaysia, Philippines, Kenya, South Africa, Tanzania, Uganda, Gabon, India, Vietnam, Georgia, Bulgaria, Serbia, Romania, Kazakhstan, Tajikistan
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement Program
Collaborating Institution(s) / Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$2,400,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	ISN/CTR works to mitigate global biological threats by supporting partner countries in the following programmatic activities: Raising awareness of exploitative investments in laboratory infrastructure and predatory research partnerships, know your collaborator best practices for research and manufacturing, KYC and due diligence training for biotech start-ups, contract research organizations, and industry.

<i>Project Title</i>	<i>Capacity Building: developing sustainable international collaborations on animal, public, and environmental health in Ibero-America.</i>
Partner Country/Region	Argentina; Brazil; Chile; Peru; Spain
Implementing Country	United States
Project Value	€266,641
Duration	01/01/2017-31/12/2018
Description	We will create a network for strategic research partnership in Ibero-America, including those in one of the OVPR-identified priority regions.
<i>Project Title</i>	<i>Epidemiological Analysis and Investigation</i>
Partner Country/Region	Armenia, Azerbaijan, Cambodia, Cameroon, Ethiopia, Iraq, Kazakhstan, Kenya, Laos, Liberia, South Africa, Turkey, Ukraine, Uzbekistan, Vietnam
Implementing Country	United States – Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	<p><u>ALL CCMS</u>: U.S. Interagency (e.g., U.S. Centers for Disease Control (CDC), U.S. Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO), Organization for Animal Health (WOAH), World Health Organization (WHO)</p> <p><u>AFRICOM</u>: Cameroon: Ministry of Public Health (MINSANTE), Ministry of Livestock, Fisheries, and Animal Industries (MINEPIA), and LANAVET</p> <p>Ethiopia: Ministry of Defense and Police Force; Kenya: MOH; Liberia: NPHIL; South Africa: National Department of Health NICD, Department of Agriculture, Forestry, and Fisheries</p> <p><u>CENTCOM</u>: Iraq: CGI MOH and MOA, KRG MOH and MOA; Kazakhstan: KSCQZD, MOH, Uzbekistan: MOH, SVC</p> <p><u>EUCOM</u>: Armenia: Ministry of Health (MoH), National Center for Disease Control and Prevention (NCDCP), and Ministry of Agriculture (MoA); Azerbaijan: Ministry of Health (MoH); Food Safety Agency (FSA); State Veterinary Service (SVS); Republican Veterinary Lab (RVL); Central Reference Laboratory (CRL); Khachmaz, Lankaran, Imishli and Shamkir Anti-Plague Division (APD) sites; Turkey: MAF; Ukraine: MoH, MoD</p> <p><u>INDOPACOM</u>: Cambodia: General Directorate of Animal Health and Production (GDAHP); National Animal Health and Production Research Institute (NAHPRI); Cambodian Government's Applied Epidemiology Training (AET); Cambodian Applied Veterinary Epidemiology Training (CAVET); Mekong Basin Disease Surveillance (MBDS) Network; Laos: the Department of Communicable Disease Control (DCDC); Vietnam: MOH</p>

<i>Project Title</i>	<i>Epidemiological Analysis and Investigation</i>
Project Value	US\$16,400,000
Duration	2017-2018
Description	BTRP sponsors the U.S. Centers for Disease Control and Prevention's (CDC) Basic and Advanced Field Epidemiology Training Program (FETP), the Food and Agriculture Organization's (FAO) FETP-Veterinary (FETP-V), and World Health Organization (WHO) Frontline Field Epidemiology Training Program (FETP-F). BTRP also provides technical support, including workshops and table-top exercises.
<i>Project Title</i>	<i>Disease Detection</i>
Partner Country/Region	Armenia, Azerbaijan, Cambodia, Cameroon, Ethiopia, Georgia, Kazakhstan, Kenya, Laos, Senegal, Sierra Leone, Tanzania, Ukraine, Uzbekistan
Implementing Country	United States – Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	<p><u>ALL CCMDS</u>: U.S. Interagency (e.g., U.S. Centers for Disease Control (CDC), U.S. Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO), Organization for Animal Health (WOAH), World Health Organization (WHO))</p> <p><u>AFRICOM</u>: Cameroon: MINSANTE, MINEPIA, and LANAVET; Ethiopia: NAHDIC, AHRI; Kenya: MOH, MALFI; Senegal: Institute for Health Research, Epidemiological Surveillance and Training (IRESSEF); Tanzania: Nelson Mandela African Institute of Science and Technology</p> <p><u>CENTCOM</u>: Kazakhstan: KSCQZD, MOH, Uzbekistan: SVC</p> <p><u>EUCOM</u>: Armenia: MoH, NNCDPC, MOA; Azerbaijan: MOH, FSA, SVS, RVL, CRL, Khachmaz, Lankaran, Imishli and Shamkir Anti-Plague Divisions (APD); Georgia: Tbilisi State Medical University (TSMU), NCDC, LMA; Ukraine: MOH, MOD</p> <p><u>INDOPACOM</u>: Cambodia: Kampong Cham National School of Agriculture (KCNSA); Laos: Institute Pasteur du Laos (IPL), Lao Military Medical Department, Lao Oxford Mahosot Hospital Wellcome Trust Research Unit (LOMWRU), MORU</p>
Project Value	US\$7,600,000
Duration	2017-2018 (continuing)
Description	BTRP support human and veterinary clinician training on diagnosis of EDPs. BTRP support also includes research projects related to surveillance and diagnosis of EDPs.

<i>Project Title</i>	<i>Reporting and Communications</i>
Partner Country/Region	Armenia, Azerbaijan, Cameroon, Iraq, Jordan, Malaysia, Philippines, Ukraine, Uzbekistan
Implementing Country	United States – Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	<p>ALL CCMDS: U.S. Interagency (e.g., U.S. Centers for Disease Control (CDC), U.S. Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO), Organization for Animal Health (WOAH), World Health Organization (WHO))</p> <p>AFRICOM: Cameroon: MINSANTE, MINEPIA, and LANAVET</p> <p>CENTCOM: Iraq: CGI MOH and MOA, KRG MOH and MOA; Jordan: MoH, RMS, MoA, CDD; Uzbekistan: MOH, SVC</p> <p>EUCOM: Armenia: Ministry of Health (MoH), National Center for Disease Control and Prevention (NCDPC), and Ministry of Agriculture (MoA); Azerbaijan: Ministry of Health (MoH); Food Safety Agency (FSA); State Veterinary Service (SVS); Republican Veterinary Lab (RVL); Central Reference Laboratory (CRL); Khachmaz, Lankaran, Imishli and Shamkir Anti-Plague Division (APD) sites; Ukraine: MoH, MoD</p> <p>INDOPACOM: Malaysia: MoH, MOA/DVS, STRIDE; Philippines: PPSC, PNP, Multiple RADDLs, RITM, ADDRIL, National Institute of Health, the Bureau of Animal Industry-Animal Welfare Division</p>
Project Value	US\$15,800,000
Duration	2017-2018
Description	BTRP supports projects designed to increase partner capacity to communicate and report EDPs. Support includes development, installation and training on electronic reporting systems, training on multi-sectoral communications, and construction / equipping health emergency operations centers.

<i>Project Title</i>	<i>Laboratory Security Procurements and Security Upgrades</i>
Partner Country/Region	Armenia, Brazil, Bulgaria, Gabon, Georgia, Democratic Republic of the Congo, Iraq, Kazakhstan, Kenya Lebanon, Malaysia, Mexico, Morocco, Romania, Sierra Leone, South Africa, Thailand, and Yemen
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement and Iraq Programs
Collaborating Institution(s) / Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$3,525,000

<i>Project Title</i>	<i>Laboratory Security Procurements and Security Upgrades</i>
Duration	2022
Description	ISN/CTR works to mitigate biological threats by supporting partner countries in the following activities related to security upgrades for laboratories:  Procuring laboratory and physical security equipment  Performing biosafety and biosecurity risk assessments
<i>Project Title</i>	<i>Enhancing Sustainable Biosafety, Biosecurity and Biorisk Management in West Africa, MENA and ASEAN</i>
Partner Country/Region	ASEAN, Mali, MENA
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Federation of Biosafety Associations (IFBA)
Project Value	C\$875,664
Duration	2018-2020
Description	The project supports the development of national biosafety and biosecurity implementation measures in Mali; strengthens biological risk management across West Africa/ MENA; and advances sustainable biosafety and biosecurity in the ASEAN region.
<i>Project Title</i>	<i>German Biosecurity Programme - International Global Partnership Initiated Academia for the Control of Health Threats (GIBACHT): Training of scientists from Africa and Asia for the prevention of highly dangerous diseases</i>
Partner Country/Region	Multiple countries in Asia and Africa
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine, Robert Koch Institute, African Field Epidemiology Network (AFENET), and Swiss Tropical and Public Health Institute (Swiss TPH)
Project Value	2013-2019: €2,402,000 2020-2022: €1,216,800
Duration	2013-2022
Description	GIBACHT is an educational fellowship programme for professionals from Africa, the Middle East, South Asia and Central Asia. The training programme focuses on threats and risks conferred by biological agents and bioweapons and their successful prevention and control. Its objectives include providing training on the control of infectious diseases and the management of biohazards, fostering international cooperation on biosafety, biosecurity and the prevention and management of epidemics as well as strengthening national and local centres for infectious disease epidemiology and

Project Title	<p><i>German Biosecurity Programme - International Global Partnership Initiated Academia for the Control of Health Threats (GIBACHT): Training of scientists from Africa and Asia for the prevention of highly dangerous diseases</i></p>
Gender Equality	<p>management, biosafety and biosecurity. The fellowship comprises of fields trips, the conduct of case studies and simulations, e-learning modules, and the integration into the GIBACHT alumni network.</p> <p>In 2021, the programme further supported micro-projects on COVID-19 management suggested and implemented by GIBACHT alumni, which included simulations, trainings and awareness raising measures.</p> <p>All projects in the framework of the German Biosecurity Programme have been designed considering their potential contribution to UN Res. 1325. Attempts to contribute to gender equality include <i>inter alia</i> gender-sensitive monitoring of participants, encouragement of women (especially regarding participation in events and activities, the support of female leadership and female young scientists) as well as approached to gender-sensitive activity- and event-planning.</p>
Project Title	<p><i>Understanding Pathogen, Livestock, Environment Interactions involving Bluetongue Virus (PALE-Blue). EC H2020-SFS-2016-2</i></p>
Partner Country/Region	<p>Belgium, France, Germany, Israel , Italy, Kenya, Morocco, Netherlands, Senegal, Spain, Sweden, Tunisia, Turkey, United Kingdom (coordinator)</p>
Implementing Country	<p>United Kingdom (coordinator); France; Italy; Germany; Belgium; Spain; Netherlands; Israel; Sweden; Turkey; Morocco; Kenya; Senegal; Tunisia</p>
Collaborating Institution(s) / Partner(s)	<p>Agence Nationale de Sécurité Sanitaire de l'alimentacion de l'environnement et du travail (Francia); Centre de Cooperation International en Recherche Agronomique pour le Developpement (Francia); Environmental Research Group Oxford Limited (United Kingdom); Friedrich Loeffler Institut-Bundesforschungsinstitut fuer Tiergesundheit (FLI) (Germany); Hassan II Institute of Agronomy &amp; Veterinary Medicine (Morocco); Institut Pasteur de Tunis (Tunisia); Institut Senegalais de Recherches Agricoles (Senegal); Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA) (Spain); International Livestock Research Institute (ILRI) (Kenya); Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise (IZSAM) (Italy); K.U. Leuven (Universidad Católica de Lovaina; Kafkas Üniversitesi; Kimron Veterinary Institute (Turkey); Statens Veterinærmedicinska Anstalt (Sweden); STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (Netherlands); The Pirbright Institute (TPI) (United Kingdom); Universidad Complutense (UCM) (Spain); Université Libre de Bruxelles (ULB) (Belgium); University of Glasgow (United Kingdom); University of Nottingham (United Kingdom)</p>
Project Value	<p>€6,039,301</p>



<i>Project Title</i>	<i>Understanding Pathogen, Livestock, Environment Interactions involving Bluetongue Virus (PALE-Blue). EC H2020-SFS-2016-2</i>
Duration	2017-2020
Description	New outbreaks caused by bluetongue viruses (BTVs) have emerged in European livestock every year since 1998. These events that have been linked to climate change, resulted in massive losses due to fatalities, reduced productivity, reproductive failures, restricted animal movements/trade, and surveillance/vaccination costs. PALE-Blu brings together European institutes with expertise in BTV research and diagnosis, with partners in endemic regions (Africa, the Middle East and Turkey) that act as a ‘source’ for BTV strains that emerge in Europe. Full-genome sequence-analyses will increase the accuracy of BTV-strain distribution maps, to identify pathways and mechanisms for spread into and within Europe, as well as appropriate prevention strategies. PALE-Blu will analyse the genetic connectivity of <i>Culicoides</i> vector populations in different regions, as well as the movements of individual BTV lineages and genes. Together with reverse genetics technologies and infection/replication studies in new <i>Culicoides</i> cell lines, or adults from different <i>Culicoides</i> species, this will elucidate the genetic basis for geographic localisation/movement of BTV strains and serotypes. We will analyse differences in saliva proteins from <i>Culicoides</i> species, their ability to modify the BTV surface proteins (proteases) and effects on efficiency of transmission (in both directions) between vertebrate hosts and insect-vectors. These studies will provide a better understanding of incursion risks for different BTV strains, supporting effective control strategies. PALE-BLU will explore more effective and cross-serotype subunit-vaccines that are DIVA assay compatible and generate a stronger immune response from a single inoculation. We will also explore the potential for use of antiviral agents to induce immediate protection post vaccination. More effective diagnostic systems to better detect mixed infections will also be developed by multiplexing existing or novel diagnostic assay systems.

<i>Project Title</i>	<i>Cybersecurity and Research Data Protection Training</i>
Partner Country/Region	Brazil, Bulgaria, Malaysia, Singapore, Thailand, Vietnam, Kenya, South Africa, Gabon, Sierra Leone, Tunisia, Morocco, India, , Mexico, Georgia, and Serbia
Implementing Country	United States Department of State, Bureau of International Security and Nonproliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement and Emerging Technologies Programs
Collaborating Institution(s) / Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$4,130,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022

<i>Project Title</i>	<i>Cybersecurity and Research Data Protection Training</i>
Description	<p>ISN/CTR works to mitigate biological threats by supporting partner countries in the following activities related to cybersecurity and data protection:</p> <p>Raising awareness through training of cybersecurity risks and cyber hygiene best practices</p> <p>Grants to enhance data protection and security measures</p> <p>Increasing collaboration on data sharing between public and private sector laboratories</p>
<i>Project Title</i>	<i>Biosafety Officer and Laboratory Personnel Training Programs</i>
Partner Country/Region	Brazil, Democratic Republic of the Congo, Indonesia, Malaysia, Singapore, Thailand, Nigeria, , Somalia, Iraq, Yemen, Egypt, Jordan, Morocco, Tunisia, Turkey, Mexico, Tajikistan, Kazakhstan, Georgia, and Kyrgyzstan
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement and Iraq Programs
Collaborating Institution(s) / Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$3,000,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	<p>ISN/CTR works to mitigate biological threats by supporting partner countries in the following activities related to personnel training:</p> <p>Establishing certification programs for biosafety and bio risk officers,</p> <p>including IT personnel</p> <p>Training on topics including personnel reliability and insider threats</p> <p>Implementation of train-the-trainer programs to develop mentorship programs and cadres of biosafety and biosecurity champions</p>
<i>Project Title</i>	<i>Biosafety and Biosecurity Curriculum Development and Training</i>
Partner Country/Region	Brazil, Philippines, Indonesia, Malaysia, Vietnam, Thailand, South Africa, Angola, Nigeria, Democratic Republic of the Congo, Somalia, Iraq, Yemen, Mexico, Armenia, Bulgaria, Georgia, Kazakhstan, Tajikistan, Egypt, Jordan, Libya, Tunisia, Morocco, Jordan, Turkey, India, Lebanon
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement and Iraq Programs
Collaborating Institution(s) / Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations

<i>Project Title</i>	<i>Biosafety and Biosecurity Curriculum Development and Training</i>
Project Value	US\$5,430,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	<p>ISN/CTR works to mitigate biological threats by supporting partner countries in the following activities related to biosafety and biosecurity training and curriculum development:</p> <p>Proper use of PPE, waste disposal, biosafety cabinet use and certification, and maintenance of laboratory equipment</p> <p>Testing techniques, including molecular testing</p> <p>Development and implementation of biosafety and biosecurity curriculum and certification programs</p> <p>Training of laboratory personnel, laboratory managers/directors, biosafety professionals, and security personnel on biosafety and biosecurity best practices</p>
<i>Project Title</i>	<i>BIOSEC - Enhanced Biosecurity in South-East Asia</i>
Partner Country/Region	Brunei Darussalam   Cambodia   Indonesia   Lao PDR   Myanmar   Philippines   Singapore   Thailand   Vietnam
Implementing Country	European Union
Collaborating Institution(s) / Partner(s)	<p>SCJS (Sustainable Criminal Justice Solutions Group)</p> <p>Public Health England (PHE) (United Kingdom),</p> <p>Rijksinstituut voor Volksgezondheid en Milieu (RIVM)</p> <p>Verification Research (VERTIC), Training and Information Centre (United Kingdom),</p> <p>Azienda Socio Sanitarie Territoriali (ASST) Fatebenefratelli Sacco (Italy),</p> <p>The European CBRNE Center, Umeå University (Sweden),</p> <p>The Mahidol Oxford Tropical Medicine Research Unit (MORU) (United Kingdom - Thailand)</p>
Project Value	€3.799.850
Duration	42 months
Description	<p>The aim is to provide a set of recommendations for improving biosecurity management system in South East Asia with effective tools to enhance capabilities to respond to highly communicable diseases or global catastrophic biological events, such as pandemics:</p> <p>WP1: Raising awareness on biosecurity and biosecurity risk</p> <p>WP2: Review national legislations and guidelines in compliance with relevant international obligations in the area of biosecurity and contribute to their effective enforcement.</p> <p>WP3: Strengthen the level of enforcement of biosecurity related legislation, national and local guidelines, particularly border control monitoring.</p> <p>WP4: Building national inventories of high-risk biological materials, dual- use research, technologies and information.</p>

<i>Project Title</i>	<i>BIOSEC - Enhanced Biosecurity in South-East Asia</i>
	WP5: microbial forensics WP6: Security framework for facilities
<i>Project Title</i>	<i>Sample Transport and Sample Sharing</i>
Partner Country/Region	Bulgaria, Philippines, Gabon, Ghana, Cameroon, Nigeria, Democratic Republic of the Congo, , Serbia, Libya, Tunisia, Morocco, Egypt, Iraq, and Jordan
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement and Iraq Programs
Collaborating Institution(s) / Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$1,875,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	ISN/CTR works to mitigate biological threats by supporting partner countries in the following activities related to sample transport and sharing for high consequence pathogens:
<i>Project Title</i>	<i>STRONGLABS: Preventing biological risks by strengthening Public Health Laboratories</i>
Partner Country/Region	Burkina Faso, Iraq, Kyrgyzstan, Mali, Niger, Tajikistan, Tunisia , Uzbekistan
Implementing Country	European Union
Collaborating Institution(s) / Partner(s)	World Health Organisation (WHO)
Project Value	€2.500.000
Duration	36 months
Description	Activities for the project are organized in three work packages: 1. Strengthening specimen referral transport systems; 2. Implementing laboratory biosafety & biosecurity regimes; 3. Assuring that quality laboratory diagnostic capacity exists for priority diseases.
<i>Project Title</i>	<i>National-Level Regulatory Frameworks</i>
Partner Country/Region	Cambodia, Iraq, Kenya, Laos, Philippines, Senegal, Ukraine, Uzbekistan
Implementing Country	United States – Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	<u>ALL CCMDS</u> : U.S. Interagency (e.g., U.S. Centers for Disease Control (CDC), U.S. Agency for International Development (USAID), Food and Agriculture Organization

<i>Project Title</i>	<i>National-Level Regulatory Frameworks</i>
	<p>of the United Nations (FAO), Organization for Animal Health (WOAH), World Health Organization (WHO)</p> <p><u>AFRICOM</u>: Kenya: MOH, MOA; Senegal: LNERV</p> <p><u>CENTCOM</u>: Iraq: CGI MOH and MOA, KRG MOH and MOA, NBMC, DoS/ISN/CTR, GPP, DSTL; Uzbekistan: MOH, UzStandard</p> <p><u>EUCOM</u>: Ukraine: MOH, MOD; Uzbekistan: MOH, SVC</p> <p><u>INDOPACOM</u>: Cambodia: MOH; Laos: MOH, Ministry of Agriculture and Fisheries (MoAF), Ministry of Science and Technology (MoST); Philippines: PPSC, PNP, Multiple RADDLs, RITM, ADDRL</p>
Project Value	US\$5,770,000
Duration	2017-2018 (continuing)
Description	BTRP supports biosafety and biosecurity legislative framework development in partner countries. Support includes working with partners to develop appropriate legislation to address Especially Dangerous Pathogens (EDPs) and biosafety regulations for public health laboratories at national and provincial laboratories.
<i>Project Title</i>	<i>Projects on minimizing risks on public health and dangers arising from biological threats through Crimean-Congo-haemorrhagic fever and rift valley fever in Mauretania, Cameroon and Sierra Leone, the establishment of a laboratory network in Pakistan and strengthening the cooperation with Egypt in terms of biosecurity</i>
Partner Country/Region	Cameroon, Egypt, Mauritania, Pakistan, Sierra Leone
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Friedrich-Loeffler-Institute for Animal Health
Project Value	€1,562,000 (2017-2019)
Duration	2013-2019
Description	The projects focus on surveillance, diagnostics and good laboratory practice. They include training; seminars and lectures on epidemiology, diagnostic techniques, biosafety and biosecurity for scientists; the collection and examination of samples with new laboratory equipment and the installation of a network of institutes and laboratories in order to strengthen the diagnostic capacities and the sustainability of the projects.
<i>Project Title</i>	<i>Global Prevention and Control of Select Agent Brucella Species</i>
Partner Country/Region	Cameroon, Ethiopia, Iraq, Jordan
Implementing Country	United States – Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC)

<i>Project Title</i>	<i>Global Prevention and Control of Select Agent Brucella Species</i>
Collaborating Institution(s) / Partner(s)	U.S. Department of State Biosecurity Engagement Program (BEP); U.S. Department of Defense, Defense Threat Reduction Agency (DTRA)  Iraq Ministry of Health, Global Health Development  Jordan Ministry of Health, Jordan Royal Medical Services, Jordan Ministry of Agriculture, EMPHNET  Cameroon Ministry of Livestock Fisheries and Animal Industries, National Veterinary Laboratory (LANAVET)  Ethiopia Ministry of Health, Ethiopia Public Health Institute, Ethiopia Ministry of Livestock and Agriculture Resources, National Animal Health Diagnostic Investigation Center, Ohio State University, Jimma University
Project Value	US\$500,000
Duration	2018-2022
Description	Partnering with nations that have identified brucellosis as a priority zoonotic infection, the CDC Bacterial Special Pathogens Branch executes projects to build country capacity for: estimating disease burden in both humans and animals, describing important risk factors associated with disease transmission, and implementing prevention and control measures like laboratory surveillance and vaccine implementation.  Develop standard operating procedures and guidelines for appropriate livestock surveillance and safe sample collection, transportation and storage for <i>Brucella</i> specimens.  Training of animal laboratories on bio-safety and bio-security when working with <i>Brucella</i> species, molecular diagnostic techniques and sub-typing of circulating <i>Brucella</i> species from animal specimens.  Counsel public health agencies on developing clinical treatment guidelines for human brucellosis infection, and assist in educating clinicians on appropriate diagnostic practices.  Conduct in-country assessments to determine national-level laboratory capacity and infrastructure, including biosafety and biosecurity, for brucellosis animal testing.
<i>Project Title</i>	<i>NIAID Foreign Laboratory Biodefense Research Grant and Contract Program</i>
Partner Country/Region	Canada, France, Netherlands, Spain, Senegal, Belgium, Germany, Hong Kong
Implementing Country	United States Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s) / Partner(s)	NIH, CDC
Project Value	US\$200,000

<i>Project Title</i>	<i>NIAID Foreign Laboratory Biodefense Research Grant and Contract Program</i>
Duration	2021-2022
Description	Biosafety and biosecurity evaluation of foreign laboratories receiving NIH research grants or contracts for research using biological agents that have the potential to be used as biological weapons.
Gender Equality	N/A. Please note, this program oversees extramural awardee compliance with US federal select agent regulations and NIAID select agent policies and terms of award.
<i>Project Title</i>	<i>One Health Biosafety and Biosecurity Programming</i>
Partner Country/Region	DRC, India, Indonesia, Nigeria, Kenya, Somalia, Tanzania
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement Program
Collaborating Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$1,500,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	ISN/CTR works to mitigate global biological threats by supporting partner countries in the following programmatic activities: community public and animal healthcare worker engagement, disease detection and surveillance, bio risk management training, and risk communication training.
Project Title	Establishment of Biorepositories and Sample Management Programs
Partner Country/Region	Democratic Republic of the Congo, Iraq, Libya, Tunisia, and India
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement and Iraq Programs
Collaborating Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$1,165,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	ISN/CTR works to mitigate biological threats by supporting partner countries in the following activities related to developing sample management programs and establishing sample repositories:  Setting up sample biorepositories  Developing and implementing sample management standard operating procedures  Training on sample management best practices for sustainability

<i>Project Title</i>	<i>Establishing and Improving Legal and Regulatory Frameworks</i>
Partner Country/Region	Egypt, Indonesia, Malaysia, Philippines, Thailand, Libya, Tajikistan
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement Program
Project Value	United States national laboratories, universities, research institutes and non-governmental organizations
Collaborating Partner(s)	US\$1,600,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	ISN/CTR works to mitigate global biological threats by supporting partner countries in the following programmatic activities: Assessing the regulatory environment of countries, drafting legislation at the national and regional level, engaging with government stakeholders, implementing a OneHealth framework.
<i>Project Title</i>	<i>Genomics Capacity Building for Rapid Disease Detection and Diagnosis: Strengthened by Responsible Science, Bioethics, and Mentorship</i>
Partner Country/Region	Egypt, Jordan, Lebanon, Morocco, Tunisia (MENA Region)
Implementing Country	United States – Department of State’s Biosecurity Engagement Program
Project Value	US\$280,000
Collaborating Partner(s)	Los Alamos National Laboratory, Harvard University
Duration	2017-2018
Description	In this project, early- and mid-career bioscience investigators from the MENA region received training in genomics and culture-free molecular diagnostics and bioethics. Specifically, collaborating partners engaged with regional bio-scientists possessing dual-use research of concern expertise and/or access to dangerous biological agents to encourage the adoption of culture-free disease diagnosis techniques and the responsible conduct of science. This project aimed to create a lasting and sustainable culture of responsible science in the region by pairing experienced scientists who have a proven record of robust bio-risk management (BRM) practices and responsible research with scientists at earlier career stages in a mentor/mentee framework. The first training event took place in 2017 at the Jordan University of Science and Technology BRM and Genomics Training Center, with a subsequent remote engagement planned for December 2018.



<i>Project Title</i>	<i>Projects on minimizing risks on public health and dangers arising from biological threats through Crimean-Congo-haemorrhagic fever and rift valley fever in Mauretania, Cameroon and Sierra Leone, the establishment of a laboratory network in Pakistan and strengthening the cooperation with Egypt in terms of biosecurity</i>
Partner Country/Region	Egypt, Pakistan, and Sub-Saharan Africa (Cameroon, Mauretania, Sierra Leone)
Implementing Country	Germany
Project Value	Friedrich-Loeffler-Institute
Collaborating Partner(s)	€1,500,000 (2017-2019)
Duration	2013-2019
Description	The projects focus on surveillance, diagnostics and good laboratory practice. They include training; seminars and lectures on epidemiology, diagnostic techniques, biosafety and biosecurity for scientists; the collection and examination of samples with new laboratory equipment and the installation of a network of institutes and laboratories in order to strengthen the diagnostic capacities and the sustainability of the projects.
<i>Project Title</i>	<i>National Biorisk Management Oversight Program – Development and Implementation of Legislation for Oversight of High Consequence Agents and Toxins</i>
Partner Country/Region	Ethiopia, Senegal, Tanzania, Thailand, Turkey
Implementing Country	United States of America (USA) - U.S. Department of Defense, Defense Threat Reduction Agency, Biological Threat Reduction Program
Collaborating Institution(s) / Partner(s)	U.S. Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC) in-country office(s) and local in-country partners
Project Value	Total amount (approximately) US\$1,200,000.00
Duration	2017-2108
Description	The CDC, CSELS, Division of Laboratory Systems (DLS) National Biorisk Management Oversight Program engages foreign countries' ministry officials and stakeholders to develop and implement elements of a national biosafety and biosecurity oversight system capable of evaluating and regulating laboratories working with high-consequence agents and toxins (HCATs). Facilitate the development of country-specific legislative frameworks to support the development and implementation of a National Biorisk Management Oversight Program to monitor and regulate laboratories working with HCATs. // Create awareness of biosafety and biosecurity principles and practices with institutions that work with HCATs  Support the implementation of bio-risk management best practices to reduce the risk of an accidental exposure and/or intentional release of HCATs

<i>Project Title</i>	<i>Establishment of German-Georgian, German-Kazakh networks for biosecurity and diagnosis of dangerous infectious diseases</i>
Partner Country/Region	Georgia, Kazakhstan
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bundeswehr Institute of Microbiology and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Project Value	€1,807,000 (2017-2019)
Duration	2013-2019
Description	The aim of the projects in Georgia and Kazakhstan is to develop long-lasting networks within the framework of standardized detection, diagnostics and monitoring of highly pathogenic agents as well as awareness raising in the participating countries. Activities include the implementation of quality assessed diagnostic assays in order to conduct epidemiological investigations and establish a monitoring system (surveillance), trainings with regard to biosafety and biosecurity in dealing and handling highly pathogenic agents and laboratory equipment support.
<i>Project Title</i>	<i>German Biosecurity Programme - Establishment of German-Kazakh and South-West Asian networks for biosecurity and diagnosis of dangerous infectious diseases</i>
Partner Country/Region	Georgia, Kazakhstan
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bundeswehr Institute of Microbiology and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Project Value	2013-2019: €3,682,000 2020-2022: €1,515,360
Duration	2013-2022
Description	The projects' focus lies on fostering the partner institutions' capacities in the fields of standardized detection, diagnostics and monitoring of highly pathogenic agents. Activities include the training of experts in detection and diagnostics of dangerous pathogens, strengthening the application of international laboratory standards, conducting studies on the occurrence of dangerous pathogens in the regions, laboratory equipment support, and fostering regional cooperation in the field of research and biosafety and biosecurity, e.g. through the organization of international symposia and cross-country exchanges on biosecurity-relevant topics.  Furthermore, the projects aim at raising awareness for biosecurity and responsible scientific conduct, which <i>inter alia</i> includes the training and support of young scientists.
Gender Equality	All projects in the framework of the German Biosecurity Programme have been designed considering their potential contribution to UN Res. 1325. Attempts to contribute to gender equality include <i>inter alia</i> gender-sensitive monitoring of participants, encouragement of women (especially

<i>Project Title</i>	<i>German Biosecurity Programme - Establishment of German-Kazakh and South-West Asian networks for biosecurity and diagnosis of dangerous infectious diseases</i>
	regarding participation in events and activities, the support of female leadership and female young scientists) as well as approached to gender-sensitive activity- and event-planning.
<i>Project Title</i>	<i>German Biosecurity Programme</i>
Partner Country/Region	Georgia, Kazakhstan, Morocco, Sudan, Tunisia, Ukraine
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH (implementing institution)
Project Value	€1,780,000 in 2022 (€5,517,500 for 2020–22)
Duration	2020–22
Description	This project aims to strengthen prevention and response capabilities of beneficiary countries to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and non-proliferation principles, practices, and instruments; and enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”
<i>Project Title</i>	<i>Analysing the Spread of Anthrax in Pakistan and Jordan</i>
Partner Country /Region	Jordan, Pakistan
Implementing Country	United Kingdom: Ministry of Defence United States: Department of Defense
Collaborating Partner(s)	Georgetown University Centre for Global Health and Security
Project Value	£37,000
Duration	2018- 2019
Description	This project includes environmental sampling of farm sites in Jordan and Pakistan and analysis of sample material. The project will review existing legislation related to disease surveillance and reporting; it will also identify national capability gaps in these areas and assist Ministries of Health and Agriculture in the development of strategic plans to develop effective legal frameworks for disease surveillance, and reporting consistent

<i>Project Title</i>	<i>Analysing the Spread of Anthrax in Pakistan and Jordan</i>
	with obligations under the World Health Organization (WHO) International Health Regulations. Anthrax is a priority agent of security and proliferation concern.
<i>Project Title</i>	<i>7th World One Health Congress 2022</i>
Partner Country/Region	Global
Implementing Country	Canada - Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Duke-NUS, Singapore
Project Value	C\$95,000
Duration	2021-2023
Description	This project supported the organization and implementation of the 7th World One Health Congress, which aimed to strengthen global health security and enable multi-sectoral and interdisciplinary solutions for major One Health challenges by better connecting disparate stakeholders from global science and health security policy communities.
<i>Project Title</i>	<i>Advancing International Commitments on Biosafety and Biosecurity Capacity Building Through the International Experts Group of Biosafety and Biosecurity Regulators (IEGBBR) Secretariat</i>
Partner Country/Region	Global
Implementing Country	Canada - Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Public Health Agency of Canada
Project Value	C\$624,000
Duration	2018-2022
Description	The International Experts Groups of Biosafety and Biosecurity Regulators (IEGBBR) coordinates and leads concurrent projects related to the international alignment, strengthening and advancement of biosafety and biosecurity regulatory oversight mechanisms. This project supports the development of action items related to enhancing best practices (operational, policy and regulatory oversight mechanisms) and approaches to address challenges from implementation of national and regional biosafety frameworks, valuable lessons learned from recent laboratory incidences, inspections and reporting, challenges in the interoperability and compatibility of international biosafety standards, as well as challenges and mechanisms to strengthen international regulatory preparedness to address biosafety and biosecurity issues related to emerging technologies (e.g. novel gene drives, CRISPR-Cas, etc.).

<i>Project Title</i>	<i>Analytical Approach for Biosafety and Biosecurity</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Centre for Biosecurity, Public Health Agency Canada (CB - PHAC)
Project Value	C\$189,900
Duration	2018-2019
Description	<p>The Analytical Approach is a “how-to” guide that supports the objectives of the Global Partnership (GP) Against the Spread of Weapons and Materials of Mass Destruction, World Health Organization (WHO) and Global Health Security Agenda (GHS) specifically the Biosafety and Biosecurity Action Package Prevent-3 (APP3) by providing guidance for countries to develop national policies and oversight mechanisms for biosafety and biosecurity. The Approach has undergone multiple years of development, with the current focus on translating the tool and converting it to an online platform that is widely promoted.</p> <p>The Analytical Approach for Biosafety and Biosecurity:</p> <ul style="list-style-type: none"> <li>is a modular, scalable step-by-step process that can be used in a non-linear way by regional, national or local authorities;</li> <li>provides a structure for critical thinking that will assist with clarifying and defining country-specific issues, and identifying feasible solutions;</li> <li>supports risk management for both moderate and high risk pathogens and toxins using safety and security lenses;</li> <li>includes practical guidance, overview of common policy instruments, and options for combining them into a national program; and</li> <li>assists officials to identify and prepare sound recommendations to decision-makers.</li> </ul>
<i>Project Title</i>	<i>Biological Threat Reduction in the ASEAN Region and Africa</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Project Value	C\$170,000
Duration	2022-2024
Description	Through this project, Canada provides expert support and technical advice to ASEAN Member States, the ASEAN Secretariat and African partners to help mitigate biological threats, strengthen biological security in ASEAN and Africa and enhance the capacity of participating countries to address

<i>Project Title</i>	<i>Biological Threat Reduction in the ASEAN Region and Africa</i>
	emerging infectious diseases and other security-relevant biological threats.
<i>Project Title</i>	<i>Biological Threat Reduction through Vaccine Research &amp; Development</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Coalition for Epidemic Preparedness Innovations (CEPI)
Project Value	C\$24,000,000
Duration	2017-2023
Description	This project supports the acceleration of the development of vaccines against priority emerging infectious diseases, as well as enable access to these vaccines for affected populations during diseases outbreaks, thereby helping to mitigate the threat from emerging infectious outbreaks, whether naturally occurring or deliberately caused. Additionally, this project supports international efforts to develop vaccines to respond to the COVID-19 pandemic.
<i>Project Title</i>	<i>Building a Global Bioterrorism Threat Surveillance System: Aligning Health, Security, and Law Enforcement</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	BlueDot Inc. International Criminal Police Organization (INTERPOL)
Project Value	C\$4,477,000
Duration	2021-2024
Description	Building on a comprehensive two-year feasibility and suitability assessment, this projects aims to build a global early warning disease surveillance platform for use by the law enforcement community to provide timely information and intelligence to address biological threats and incidents.
Project Title	Collaboration with Public Health Agency of Canada to Strengthen Global Biosecurity & Biosafety
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada

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Project Title	Collaboration with Public Health Agency of Canada to Strengthen Global Biosecurity & Biosafety
Collaborating Institution(s) / Partner(s)	Public Health Agency of Canada (PHAC)
Project Value	C\$508,000
Duration	2016-2018
Description	This Project will make tangible contributions to strengthening global biosafety and biosecurity by supporting PHAC to: a) enhance collaboration between the International Experts Group on Biosafety and Biosecurity Regulation and countries that require technical support to strengthen their national biosafety and biosecurity policies and capacities, and b) assist countries to establish whole-of-government national biosafety and biosecurity systems.

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<i>Project Title</i>	<i>Connecting One Health Science and Global Health Security Policy</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	One Health Platform
Project Value	C\$679,500
Duration	2019-2021
Description	The project is supporting the One Health Platform, a Scientific Reference Network and a Strategic Forum of One Health Stakeholders, to establish a bio-threats scanning group and convene both the inaugural World One Health Forum in Ethiopia (Nov 2019), and the <a href="#">6<sup>th</sup> World One Health Congress</a> (which was held virtually due to the COVID-19 pandemic, 30 October-3 November 2020). It also supports outreach to strengthen the global “One Health” community and connect disparate stakeholders from Global Health Security Sector.

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<i>Project Title</i>	<i>Contextualized Global Disease Threat Surveillance</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL) BlueDot Inc.
Project Value	C\$1,174,810
Duration	2018-2021

<i>Project Title</i>	<i>Contextualized Global Disease Threat Surveillance</i>
Description	This project is exploring the development of an electronic system that operationalizes machine learning and big data analytics to detect global disease outbreaks in order to identify potential deliberate biological incidents. Project activities include: assessment of current capabilities related to biological information-sharing to identify needs and gaps; establishment of a framework of cooperation and specification requirements to implement the platform; and the establishment of working groups to identify the legal, technical and analytical issues.
<i>Project Title</i>	<i>Countering Disinformation Against Public Health Labs</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	King’s College London
Project Value	£185,592
Duration	2022-2023
Description	This project is developing resources for disarmament diplomats, national policymakers and institutions to counter current disinformation campaigns and broader disinformation efforts that threaten to undermine the BTWC and the broader biological non-proliferation regime.
<i>Project Title</i>	<i>Development of an Online Biological Resource Library</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Georgetown University Center for Global Health Science and Security
Project Value	C\$350,000
Duration	2020-2022
Description	This project located and validated a wide array of biosafety and biosecurity tools and brought them together in a purpose-built virtual library. The final product can be found at <a href="https://biosecuritycentral.org">https://biosecuritycentral.org</a>
<i>Project Title</i>	<i>Development of Tools and Commitments to Strengthen Global Biological Security</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program



<i>Project Title</i>	<i>Development of Tools and Commitments to Strengthen Global Biological Security</i>
	Global Affairs Canada
Collaborating Partner(s)	Nuclear Threat Initiative (NTI)
Project Value	US\$850,000 (C \$1,114,558)
In-Kind Contribution	Project value not inclusive of funding from the Open Philanthropy Project and the US Defense Threat Reduction Agency (DTRA)
Duration	2018-2021
Description	This project aimed to enhance national biosecurity capability in priority countries by identifying gaps and obstacles to strengthen biosecurity, eliciting new biosecurity-relevant commitments, and building cross-border collaboration to advance achievement of biosecurity-specific targets, consistent with the Biosecurity Deliverables of the Global Partnership and with the Global Health Security Agenda (GHSA).
<i>Project Title</i>	<i>Elimination of a Bioterrorism Threat: Rinderpest Post-Eradication</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	World Organisation for Animal Health (WOAH)
Project Value	C\$4,153,000
Duration	2016-2018
Description	Canada is supporting WOAH's efforts to strengthen global health security and contribution to reducing biological threats globally by reducing the risk of an intentional or unintentional release of the rinderpest virus and by increasing the ability and capacity of countries to rapidly control and then re-eradicate an incursion of the disease if it occurs.
<i>Project Title</i>	<i>Enabling Actions Toward Measurable Improvement in Global Biological Security (Global Biosecurity Dialogue)</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Nuclear Threat Initiative (NTI)
Project Value	C\$1,350,000
Duration	2021-2024
Description	Building on previous work with NTI, this project further supports the Global Biosecurity Dialogue and associated support to the Global Partnership and the Global Health

<i>Project Title</i>	<i>Enabling Actions Toward Measurable Improvement in Global Biological Security (Global Biosecurity Dialogue)</i>
	<p>Security Agenda (GHSA) – specifically the Action Package on Biosafety and Biosecurity - with the purpose of bolstering specific biosecurity actions and security sector participation.</p> <p>This project aims to engage new biosecurity partners/champions to discuss specific barriers and identify creative solutions to national and regional biosecurity capability, and to create linkages between identified gaps and resourced actions to fill them.</p>
<i>Project Title</i>	<i>Fortifying Institutional Resilience Against Biological Threats</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	World Organisation for Animal Health (WOAH)
Project Value	C\$10,000,000
Duration	2022-2025
Description	Through this project, WOAH will provide the technology platform, as well as scientific and evidence-based tools, support and coordination to enhance the emergency management preparedness and response capacity in member countries, regionally and internationally. This includes establishing an OIE Incident Management System; conducting multi-sectoral capacity building activities for emergency management amongst OIE Members; developing guidance and standards for emergency management; and disseminating best practices for emergency management, including the deliberate release of pathogens.
<i>Project Title</i>	<i>Global Biological Security Dialogue</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Nuclear Threat Initiative (NTI)
Project Value	US\$187,250
Duration	2017-2018
Description	This Project aims to enhance national biosecurity capability in countries by identifying gaps and obstacles to strengthen biosecurity, elicit new biosecurity-relevant commitments, and to build cross-border collaboration to advance achievement of biosecurity-specific targets, consistent with those within the Biosecurity Deliverables of the Global Partnership and

<i>Project Title</i>	<i>Global Biological Security Dialogue</i>
	Global Health Security Agenda (GHSA) and Joint External Evaluation.
<i>Project Title</i>	<i>Global Biosecurity Enhancement Programme for Law Enforcement</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	INTERPOL
Project Value	C\$7,280,000
Duration	2022-2025
Description	This project will enhance INTERPOL’s ability to assist Member States in preventing and responding to biological threats and incidents, and strengthen the capacity of law enforcement agencies to anticipate, detect and respond to biological threats and incidents. Activities will include awareness-raising on the biological threat landscape amongst INTERPOL Member States; and the delivery of needs and capability assessments to identify strengths and areas of improvement in preventing and responding to bioterrorism and biological incidents, and training and capacity building activities for law enforcement personnel and collaborating agencies in select member countries.
<i>Project Title</i>	<i>Global Biosecurity Risk Analysis and Needs Assessment</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Public Health Agency Canada – The Centre for Biosecurity (CB - PHAC)  United Nations International Crime and Justice Research Institute (UNICRI)
Project Value	C\$92,699
Duration	2018-2019
Description	The allocation of biological security resources requires a clear and comprehensive understanding of biosafety and biosecurity needs at the national and regional levels. Following an assessment of regional needs in Africa, sponsored by the 2018 Italian Presidency of the GP and the EU CBRN Centers of Excellence Initiative, it was agreed there would be value in expanding the analysis to other priority regions, including South-East Asia, the Middle East and South America. The project would identify priorities for

<i>Project Title</i>	<i>Global Biosecurity Risk Analysis and Needs Assessment</i>
	biosafety and biosecurity capacity building by country and region.
<i>Project Title</i>	<i>Global Health Security Conference 2019</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution	University of Sydney
Project Value	AU\$110,000
Duration	2018-2019
Description	The Global Health Security Conference 2019, to be held in Sydney, Australia from 18-20 June 2019, will bring together up to 1,000 practitioners, researchers, educators, leaders and decision-makers across the fields of public health, medicine, veterinary science, agriculture, government, defence, international relations, sociology and anthropology to examine the progress made to date in strengthening partnership for global health security, identify the gaps and consider new opportunities for enhancing the international community's ability to respond more efficiently and effectively to future adverse health and security crises.
<i>Project Title</i>	<i>Global Health Security (GHS) Network &amp; GHS Conference 2022</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution	Global Health Security Network
Project Value	C\$250,000
Duration	2019-2022
Description	This project builds on the successful outcomes of the Canadian-sponsored first <a href="#">International Scientific Conference on Global Health Security</a> (GHS2019), which led to the creation of a professional association to facilitate future events and build a community of practice – the Global Health Security Network (GHSN). This project aims to further strengthen opportunities for collaboration between global health and global security experts to enhance the international community's ability to respond more efficiently and effectively to adverse health and security crises. Project activities include organization and conduct of the second International Scientific Conference on Global Health Security (GHS2022), which will be held in June 2022 in Singapore, and capacity-building support to strengthen the membership and impact of the GHSN.

<i>Project Title</i>	<i>Global Health Security (GHS) Network &amp; GHS Conference 2022</i>
Gender Equality	<p>This project integrated a number of gender equality considerations including: ensuring gender and geographic diversity in panel speakers and participants; providing access to free childcare as part of an effort to reduce structural barriers to women (and men) participating in the conference; and devoting time for researchers and practitioners to present and discuss how gender impacts global health security and biological threat reduction.</p> <p>Additionally, while the field of global health and arms control is predominantly led by men of the global north, many of the younger generation in the field (particularly in global health) are female. This project supported efforts to highlight these discrepancies, supporting women in their efforts to be heard, and ensuring that women are not kept out of decision making, research and leadership positions solely due to gender. GHSN worked closely with Women in Global Health and other networks to help reach the most qualified global professionals.</p>

<i>Project Title</i>	<i>Global Laboratory Leadership Programme (GLLP) training</i>
Partner Country/Region	Global
Implementing Country	United Kingdom plus other G7 partners.
Collaborating Institution	UK APHA input coordinated by the World Organisation for Animal Health (WOAH)
Project Value	€14,018.69 (WOAH) + £25,000 (APHA)
Duration	Ongoing; will complete late 2022.
Description	<p>The GLLP is a WHO initiative based on the Laboratory Leadership Competency Framework that aims to harmonize and build global consensus on critical laboratory leadership competencies applicable across all laboratories with public health impact. Laboratories, and their capacity to rapidly test and diagnose illness, food safety, and contamination, are essential. Specialized training for laboratory leaders, such as the Global Laboratory Leadership Programme, support a country's ability to respond to future outbreaks and health emergencies.</p> <p>The review of the GLLP learning materials is complete and the materials are currently being tested in more than 10 pilots across the globe to ensure their fitness for purpose and make any necessary changes to incorporate the animal health laboratory perspective and/or a more integrated, One Health approach. WOAH and APHA staff specialised in One Health activities are currently reviewing the testing version to ensure that Tripartite outputs like the Tripartite Guide to Addressing Zoonotic Diseases in Countries and the Joint Risk Assessment Operational Tool are fully referenced, aligned, and leveraged. This activity will be presented in conjunction</p>

<i>Project Title</i>	<i>Global Laboratory Leadership Programme (GLLP) training</i>
	with the National Focal Point Training for Laboratories (Africa).
	Opportunities to sponsor participants to join sub-regional GLLP programmes driven by the WHO AFRO regional office; other GLLP partners in the Africa region are being sought out. Outreach with WOAHA Members' Veterinary Services on the GLLP is underway in the region to ensure participation and benefit for veterinary laboratory leaders is optimal and engagement of VS from the earliest stages of planning alongside human health laboratory partners, as these are principle targets for WOAHA's involvement in the programme.
Gender Equality	The GLLP is a WHO training programme available and accessible to suitably qualified laboratory managers of both genders, and therefore providing equality of opportunity.
	The work of WHO is aligned with and supports the advancement of the Sustainable Development Goals, particularly SDG 3: <i>Ensure healthy lives and promote well-being for all at all ages</i> , and SDG 5: <i>Achieve gender equality and empower all women and girls</i> . The WHO is committed to non-discrimination and to leaving no-one behind. It seeks to ensure that every person, regardless of gender, can live a healthy life.

<i>Project Title</i>	<i>Grand Challenge on Sustainable Diagnostic Laboratories: Phase 1</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	World Organisation for Animal Health (WOAH)
Project Value	C\$952,154
Duration	2022-2023
Description	This project aims to determine the scope of and parameters for a Grand Challenge for Sustainable Diagnostic Laboratories in low-resource environments, and will inform a clear plan for implementation, a robust donor outreach strategy, and a risk management plan. A successful first phase will validate the hypothesis that there are untapped innovative solutions with a high potential to address the challenge of sustainable diagnostic labs, and enable the full-scale launch and funding of a Grand Challenge in the next phase.

<i>Project Title</i>	<i>Insider Threat Awareness and Online Training Material</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program

<i>Project Title</i>	<i>Insider Threat Awareness and Online Training Material</i>
Collaborating Partner(s)	Global Affairs Canada The Centre for Biosecurity, Public Health Agency Canada (CB - PHAC)
Project Value	C\$56,453
Duration	2018-2019
Description	This project will develop insider threat awareness training materials for stakeholders who handle and store biological material. These new materials will enhance insider threat awareness by providing tools to organizations that handle and store biological materials to better prepare for, detect, and respond to this potential threat.
<i>Project Title</i>	<i>INTERPOL's Bioterrorism Prevention Unit Initiative for enhancing Biological Preparedness</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL) BlueDot
Project Value	C\$6,085,000
Duration	2018-2021
Description	This project encompasses two distinct but complementary projects that will enhance the ability of the international law enforcement community to address a wide range of serious biological terrorism-related threats. This collaboration will enable INTERPOL to develop and deliver an extensive array of support to countries, while at the same time enhancing its own internal capabilities to implement biological threat reduction programming. Support will include: tailored multiagency capacity building and training packages; the provision of critical equipment and associated biological response resources; conducting cross-border operations to counter the illicit smuggling of biological materials used in terrorist attacks; and completion of a feasibility assessment on the development of an innovative biological incident analysis platform at INTERPOL (based on the “BlueDot” also extensively used in the ASEAN region).
<i>Project Title</i>	<i>INTERPOL's Chemical and Biological Terrorism Prevention and Response Initiative</i>
Partner Country/Region	Global - West Africa, South East Asia and Middle East and North Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada

<i>Project Title</i>	<i>INTERPOL's Chemical and Biological Terrorism Prevention and Response Initiative</i>
Collaborating Institution(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$4,713,985
Duration	2016-2018
Description	Canada is supporting activities that will enhance the capabilities of INTERPOL to assist its 190 member countries, particularly those partner countries in the Middle East and North Africa, Southeast Asia, and West and Sub-Saharan Africa to better prevent, prepare for, detect and respond to chemical and biological terrorism threats through a comprehensive package of programming assistance and countermeasures.
<i>Project Title</i>	<i>Mitigation of Animal Disease Threats through Sustainable Laboratory Biosafety and Biosecurity</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	World Organisation for Animal Health (WOAH)
Project Value	C\$3,278,000
Duration	2018-2023
Description	This project supports WOA to strengthen biological safety and biosecurity at high-risk and vulnerable laboratories around the world. Project activities include regional and global analysis on investment needs for veterinary laboratories; implementation of an action plan to improve sustainable laboratory biosafety and biosecurity; enhancing veterinary laboratory capacity for diagnosis and control of priority diseases; further developments to the Performance of Veterinary Services (PVS) tool; and an open innovation competition to generate solutions to improve laboratory sustainability.
Gender Equality	The project's delivery integrates improved gender and age balance in the laboratory setting through the collection and analysis of data from member countries and by providing expertise to Member Countries about workforce issues in the laboratory setting and in the PVS Sustainable Laboratories Tool. The project also integrates enhanced gender-balanced participation in training, meetings, and project management.
<i>Project Title</i>	<i>One Health- Global Perspectives on Health and Security</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program



<i>Project Title</i>	<i>One Health- Global Perspectives on Health and Security</i>
Collaborating Partner(s)	Global Affairs Canada One Health Platform
Project Value	C\$136,000
Duration	2018
Description	This project provided targeted support to a Special Plenary Session on “Global Perspectives on Health and Security: the Future of Biological Threat Reduction” at the 5th International One Health Congress, held in Saskatoon, Saskatchewan from 22-25 June 2018. This special plenary session was the first One Health Congress to emphasise biological threat reduction aiming at strengthening links between the health and the security community, and advancing scientific knowledge concerning the emergence and spread of potentially harmful zoonotic diseases and biological toxins, with special attention to dual use research of concern.
<i>Project Title</i>	<i>Strengthening Biosecurity in Africa, the Biological and Toxin Weapons Convention and the G7-led Global Partnership</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Wilton Park Executive Agency United Kingdom Foreign and Commonwealth Office
Project Value	£27,000
Duration	2020-2021
Description	This project supported the organization and implementation of three virtual conferences, which advanced priorities within the Global Partnership Against the Spread of Weapons and Materials of Mass Destruction:  Event 1: Shaping a Signature Initiative to Mitigate Biological Threats in Africa;  Event 2: Cross-Regional Collaboration to Strengthen the Biological and Toxin Weapons Convention (BTWC); and  Event 3: The Future of the G7-led Global Partnership (reducing the threat from Weapons of Mass Destruction)
<i>Project Title</i>	<i>Strengthening Global Mechanisms and Capacities for Responding to Deliberate Use of Biological Agents – Phase II</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program

<i>Project Title</i>	<i>Strengthening Global Mechanisms and Capacities for Responding to Deliberate Use of Biological Agents – Phase II</i>
	Global Affairs Canada
Collaborating Partner(s)	Biological and Toxin Weapons Convention's Implementation Support Unit (ISU) via United Nations Office for Disarmament Affairs
Project Value	C\$874,079
Duration	2018-2021
Description	This project builds upon existing multilateral initiatives and seeks to strengthen the ability to deliver assistance in the event of deliberate use of biological agents. Project activities include: the development of a <a href="#">Bio-Emergency Management Framework for Deliberate Events</a> ; the development of a platform to exchange intelligence among participating agencies; and a table-top exercise aimed to test progress made on the implementation of Article VII of the Biological and Toxins Weapons Convention.
<i>Project Title</i>	<i>Strengthening the Biological and Toxin Weapons Convention (BTWC): Contribution to the Working Capital Fund</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Biological and Toxin Weapons Convention's Implementation Support Unit (ISU) via the United Nations Office for Disarmament Affairs (UNODA)
Project Value	C\$100,000
Duration	In effect starting in 2020 with no expiration and to be used as required
Description	This project provides support to the BTWC through a contribution to the working capital fund that was established at BTWC Meeting of States Parties held in Geneva in December 2018. This fund is intended to serve as a source of short-term financing in order to provide a better foundation for financial predictability and sustainability of the BTWC.
<i>Project Title</i>	<i>Strengthening the United Nations Secretary General's Mechanism Through the Development of a Quality Management System</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	CHC Global

<i>Project Title</i>	<i>Strengthening the United Nations Secretary General's Mechanism Through the Development of a Quality Management System</i>
	United Nations Office for Disarmament Affairs
Project Value	C\$785,000
Duration	2020-2021
Description	This project produced guidance documents for the United Nations Secretary General's Mechanism for the Investigation of Alleged Use of Biological Weapons that are fit-for-purpose and that adapt or incorporate relevant documentation from related processes. This includes strategic manuals, policy documents and detailed field guides for use by personnel on the ground to support the investigation of deliberate biological events. The project supports fulfilment of Canada's commitment to serve as a Champion for item 11 (Develop framework to respond to any use of biological weapons) and Supporter for item 10 (Readiness to investigate alleged use of biological weapons) of the UN Secretary General's Agenda for Disarmament.
<i>Project Title</i>	<i>Strengthening UN capacity to investigate allegations of chemical, biological and toxin weapons use through the UN Secretary-General's Mechanism</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	UN Office of Disarmament Affairs (UNODA)
Project Value	C\$5,000,000
Duration	2022-2023
Description	Building on previous work to strengthen the UN Secretary General's Mechanism for Investigation of Alleged Chemical and Biological Weapons (UNSGM), this project will further support UNODA to ensure the UNSGM is ready and equipped to investigate a deliberate biological attack through the delivery of training exercises, the assessment of equipment readiness, and the development of a biosecurity expert roster.
<i>Project Title</i>	<i>Strengthening WHO Capacity to Respond to the Deliberate Use of Chemical and Biological Weapons</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	World Health Organization (WHO)

<i>Project Title</i>	<i>Strengthening WHO Capacity to Respond to the Deliberate Use of Chemical and Biological Weapons</i>
Project Value	C\$10,140,000
Duration	2018-2023
Description	This project supports the WHO's Health Emergency Program to further strengthen its capacity to respond to deliberate use of chemical and biological weapons through the Health Security Interface (HSI) Secretariat (established in fiscal year 2017/2018 with funding from Canada's Weapon Threats Reduction Program). Project activities include the development of a multidisciplinary "deliberate event readiness and response team" that will be empowered, trained, and equipped to deploy in response to chemical or biological weapons use anywhere in the world.
<i>Project Title</i>	<i>Sustainable Laboratories for High-Consequence Pathogens in Low Resource Environments – Phase II</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Chatham House
Project Value	£450,000
Duration	2018-2021
Description	This project aimed to identify tangible design and operational adjustments for biological containment facilities in low-resource environments. Although primarily focussed on Africa, lessons learned and outcomes can be applied globally. Based on the outcomes of Phase I (2017-2018), Phase II of the project created a <a href="#">Prior Assessment Tool for Sustainable Laboratories</a> , which supports efforts to tailor laboratory infrastructure to local risks and resources without compromising biosafety and biosecurity, and developed core specifications for sustainable laboratories.
<i>Project Title</i>	<i>WOAH Biological Threat Reduction Activities</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution	World Organisation for Animal Health (WOAH)
Project Value	C\$2,903,757
Duration	2016-2018
Description	Canada is supporting WOAH efforts to mitigate serious biological security threats posed by infectious diseases of

<i>Project Title</i>	<i>WOAH Biological Threat Reduction Activities</i>
	<p>animal origin and to assist member countries to better prevent, detect and respond to animal disease outbreaks. These activities include establishment of a “Biological Threat Reduction” ad hoc group to develop specific methodologies for veterinary laboratories related to the investigation of suspicious or deliberate biological incidents; assistance to member countries to implement the Performance of Veterinary Services Pathway; support for veterinary laboratory twinning projects to address biosafety and biosecurity concerns for high consequence pathogens of security concern; support for WOAHPVS experts to participate in the Global Health Security Agenda (GHSA) Joint External Evaluation process; conduct of regional biological threat reduction seminars for national focal points to the WOAHPVS; and convening of the 2nd Global Conference on Biological Threat Reduction “Enhancing Health and Security for All”, held in October 2017 in Ottawa, Canada, which brought together more than 350 participants from roughly 100 countries, international organizations (WOAH, WHO, INTERPOL, United Nations of Disarmament Affairs) and non-governmental bodies to identify new and innovative ways to mitigate biological threats.</p>

<i>Project Title</i>	<i>WOAH Sustainable Lab Biosafety and Biosecurity</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	World Organisation for Animal Health (WOAH)
Project Value	C\$3,336,063
Duration	2018-2021
Description	<p>This project will support the WOAHPVS to strengthen biological safety and biosecurity at laboratories around the world. It will address challenges and recommendations to sustainable laboratory as identified at the WOAHPVS consultation on Sustainable Laboratory Biosafety and Biosecurity, which was also funded by Canada. The project activities include:</p> <ul style="list-style-type: none"> <li>regional and global analysis on investment needs for veterinary laboratories to provide concrete and evidence-based arguments developed for decision makers on impact on global health, security and trade;</li> <li>implementation of an action plan to improve sustainable laboratory biosafety and biosecurity;</li> <li>support for veterinary laboratory twinning projects to address sustain biosafety and biosecurity concerns for high consequence pathogens of security concern;</li> <li>further develop the sustainable Performance of Veterinary Services (PVS) laboratories tool; and</li> </ul>

<i>Project Title</i>	<i>WOAH Sustainable Lab Biosafety and Biosecurity</i>
	open innovation competition to offer solution to improve the sustainability of laboratories.
<i>Project Title</i>	<i>World Health Organization (WHO) Biological Threat Reduction Programming</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution	World Health Organization (WHO)
Project Value	C\$3,287,803
Duration	2016-2018
Description	Canada is supporting WHO to address multiple high-priority, high-value biological threat reduction activities, including: strengthening global biological security (biosecurity) and biological safety (biosafety); improving collaboration at the “animal-human interface” to ensure more effective and rapid response to zoonotic disease threats (i.e. disease that originates in animals but can spread to humans) ; and enhancing global early warning and risk monitoring capacities to detect, assess and inform about global biological threats.
<i>Project Title</i>	<i>Support to the Biological and Toxins Weapons Convention (BTWC)</i>
Partner Country/Region	Global
Implementing Country	The European Union
Collaborating Institution(s)/Partner(s)	United Nations Office of Disarmament Affairs (UNODA)/BTWC Implementation Support Unit
Project Value	Approx. total of €5 million
Duration	2019-2024
Description	EU provides support to ISU’s projects for a broad range of activities including capacity building, awareness raising, legislative support, universalisation of the Convention as well as preparations for the Ninth Review Conference. The support also focuses specifically on supporting the ISU project in the context of the GP Signature Initiative for strengthening biosafety and biosecurity in Africa.
Gender Equality	Gender equality aspect is by default included in EU support
<i>Project Title</i>	<i>German Biosecurity Programme; German Online Platform for Biosecurity and Biosafety (GO4BSB)</i>
Partner Country/Region	Global
Implementing Country	Germany

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<i>Project Title</i>	<i>German Biosecurity Programme; German Online Platform for Biosecurity and Biosafety (GO4BSB)</i>
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine (BNITM) (implementing institution)
Project Value	€98,399 in 2022 (€292,863 for 2020–22)
Duration	2020–22
Description	This project aims to strengthen global prevention and response capabilities to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and non-proliferation principles, practices, and instruments; enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”

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<i>Project Title</i>	<i>German Biosecurity Programme; GIBACHT network for researchers and scientists</i>
Partner Country/Region	Global
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine (BNITM) (implementing institution)
Project Value	€390,461 in 2022 (€1,222,282 for 2020–22)
Duration	2020–22
Description	This project aims to strengthen global prevention and response capabilities to better prevent biological risks and respond safely in the event of an emergency; improve the abilities to detect and diagnose highly pathogenic agents; create and expand networks in and between countries that coordinate action on biological risks; ensure that international biosafety and biosecurity standards are increasingly applied; strengthen awareness regarding biosecurity and non-proliferation principles, practices, and instruments; enhance scientific exchange on biological security.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”

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<i>Project Title</i>	<i>German Contribution to Strengthen the Reference Laboratories Bio in the UNSGM (RefBio)</i>
Partner Country/Region	Global
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Robert Koch Institute, UN Office for Disarmament Affairs (UNODA)
Project Value	2017: €85,000 2018-2021: €1.944.000
Duration	2017-2021
Description	The project aims at strengthening the UN Secretary-General's Mechanism (UNSGM) that was established to investigate allegations concerning the use of chemical and biological weapons. For possible UNSGM missions, the UN maintains a roster of reference laboratories that are listed by the UN member countries. Within the project, those reference laboratories shall be strengthened in their detection and diagnostics methods to ensure quality assurance of the interpretation of results. Moreover, the project intends to establish an assessment scheme for laboratory results and to contribute to the definition of minimal standards for reference laboratories within the UNSGM. Project activities include the organization of meetings, workshops and external quality assurance exercises (EQAEs) for bacteria, viruses and bio toxins, complemented by an EQA on SARS-CoV-2 in 2020/2021.
Gender Equality	The projects have been designed considering their potential contribution to UN Res. 1325. Attempts to contribute to gender equality include <i>inter alia</i> gender-sensitive monitoring of participants, encouragement of women (especially regarding participation in events and activities, the support of female leadership and female young scientists) as well as approached to gender-sensitive activity- and event-planning.
<i>Project Title</i>	<i>German Online Platform for Biosecurity &amp; Biosafety (GO4BSB)</i>
Partner Country/Region	Global
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine, Bundeswehr Institute of Microbiology, Friedrich-Loeffler-Institute for Animal Health and Robert Koch Institute
Project Value	2017-2019: €224,000 2020-2022: €292,900
Duration	2017-2022
Description	GO4BSB is an e-learning platform established in support of all projects of the German Biosecurity Programme. GO4BSB is used to provide learning material, training modules and course rooms to complement trainings in all projects that are part of the programme. Content focuses <i>inter alia</i> on biosafety and biosecurity, detection and diagnostics as well as



<i>Project Title</i>	<i>German Online Platform for Biosecurity &amp; Biosafety (GO4BSB)</i>
	responsible scientific conduct. An e-library provides further resources on topics related to biosafety & biosecurity, the BTWC, Australia Group and UN Resolution 1540. The platform is used to foster exchange between registered users from various countries and contributes to monitoring project progress. In 2021, the platform further offered e-learning tools and online material specifically catered to support the COVID-19 response.
Gender Equality	All projects in the framework of the German Biosecurity Programme have been designed considering their potential contribution to UN Res. 1325. Attempts to contribute to gender equality include <i>inter alia</i> gender-sensitive monitoring of participants, encouragement of women (especially regarding participation in events and activities, the support of female leadership and female young scientists) as well as approached to gender-sensitive activity- and event-planning.

<i>Project Title</i>	<i>Strengthening the UN Secretary General's Mechanism (UNSGM)</i>
Partner Country/Region	Global
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Robert Koch Institute (RKI) (implementing institution), in cooperation with UN Office for Disarmament Affairs (UNODA), Swedish Defence Research Institute (FOI)
Project Value	2019-2021: €725.500 2021-2023: €999.300 (€383,925 in 2022)
Duration	2019–23
Description	This project aims to strengthen the UN Secretary- General's Mechanism (UNSGM) which was established to investigate allegations concerning the use of chemical and biological weapons by means of the delivery of training for international experts from the UNSGM roster for a possible UNSGM mission. A full-scale ten-day exercise that simulated an investigation of a possible use of biological and toxin weapons ("Capstone Exercise") and a "Table-Top Exercise" were conducted in Berlin in 2022.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on "Women, disarmament, non-proliferation and arms control."

<i>Project Title</i>	<i>Strengthening the UNSGM Reference Laboratories</i>
Partner Country/Region	Global
Implementing Country	Germany

<i>Project Title</i>	<i>Strengthening the UNSGM Reference Laboratories</i>
Collaborating Institution(s) / Partner(s)	Robert Koch Institute (RKI) (implementing institution) in cooperation with UN Office for Disarmament Affairs (UNODA)
Project Value	€717.045 in 2022
Duration	2021–23
Description	The project aims at strengthening reference laboratories in detection and diagnostics methods, establishing an assessment scheme for laboratory results, and defining minimal standards for reference laboratories within the UNSGM. Project activities include the organisation of meetings, workshops and external quality assurance exercises (EQAEs) for bacteria, viruses and bio toxins.
Gender Equality	Gender equality is ensured in the creation and delivery of programmatic activities, based on the objectives expressed in UN Security Council Resolution 1325 (2000) and UN General Assembly Resolution 75/48 of 17 December 2020 on “Women, disarmament, non-proliferation and arms control.”
<i>Project Title</i>	<i>Managing acute and long-term effects of deliberate exposures to chemical and biological hazards</i>
Partner Country/Region	Global
Implementing Institution	Italy and the World Health Organization (WHO)
Project Value	US\$698,913
Duration	2018-2020
Description	Over the course of three years, WHO aims to strengthen its support to countries in assessing, monitoring and managing the immediate health consequences, and the long-term sequelae, of exposure to selected chemical and biological hazards during a deliberate event with a focus on the possible mental health components.
<i>Project Title</i>	<i>Donations to specialized UN agencies relevant for implementing Article X of the BTWC</i>
Partner Country/Region	Global
Implementing Institution	Netherlands and the World Health Organization (WHO)
Project Value	US\$94 million in 2020-2021
Duration	Longstanding Dutch support to WHO
Description	The Netherlands has a strong tradition in international cooperation on biosafety and biosecurity and it belongs to the world’s largest donors to the specialized UN agencies relevant for implementing Article X of the BTWC. In this regard, the longstanding Dutch support for the World Health Organization (WHO) is particularly noteworthy. The Netherlands seeks to back the WHO’s work with a sizeable contribution, of which a large part is not earmarked. The

<i>Project Title</i>	<i>Donations to specialized UN agencies relevant for implementing Article X of the BTWC</i>
	WHO undertakes various initiatives, including guiding public health responses to use of biological (and chemical) weapons, as well as ensuring access to quality and use of medical products and technologies. The Netherlands is among the top 5 global contributors to the WHO, having contributed US\$ 62 million in 2018-2019 and US\$ 94 million in 2020-2021.
<i>Project Title</i>	<i>Legislative assistance for national implementation of the BTWC and CWC</i>
Partner Country/Region	Global
Implementing Institution	Norway, Ministry of Foreign Affairs
Collaborating Institution(s)/Partner(s)	VERTIC – Verification Research Training and Information Centre
Project Value	NOK 5,800,000
Duration	2019-2022
Description	This project strengthens the universalisation and implementation of international instruments for the non-proliferation of chemical and biological weapons and the security related materials in national and legal frameworks, including the Biological and Toxin Weapons Convention (BTWC), the Chemical Weapons Convention and related provisions of UN Security Resolution (UNSCR) 1540.
<i>Project Title</i>	<i>Reducing Biological Risks by Promoting the Peaceful Use of Biology</i>
Partner Country/Region	Global
Implementing Institution	Norway, Ministry of Foreign Affairs
Collaborating Institution(s)/Partner(s)	BWC Implementation Support Unit
Project Value	NOK 3,300,000
Duration	2021-2023
Description	In the context of the implementation of Article X of the BWC, the project supports cooperation and assistance activities that aim to reduce biological risks by promoting the peaceful use of biology in developing States Parties of the BWC. The project aims to increase biological safety and security in developing countries and to enhance the ability of developing countries to implement and comply with their commitments to the BWC without hampering their economic or technological development.
<i>Project Title</i>	<i>The Coalition for Epidemic Preparedness Innovations (CEPI)</i>
Partner Country/Region	Global
Implementing Institution	Norway: The Ministry of Foreign Affairs, The Ministry of Health and Care Services

<i>Project Title</i>	<i>The Coalition for Epidemic Preparedness Innovations (CEPI)</i>
Collaborating Institution(s)/Partner(s)	Japan, Germany, UK, Gates Foundation, Wellcome Trust
Project Value	NOK 5,600,000,000 (NOK 5,6 billion)
Duration	2017-2026
Description	<p>CEPI is a global partnership between public, private, philanthropic, and civil society organisations launched in Davos in 2017 to develop vaccines to stop future epidemics.</p> <p>Its mission is to accelerate the development of vaccines and other biologic countermeasures against epidemic and pandemic threats so they can be accessible to all people in need.</p> <p>CEPI will advance vaccines against known threats through proof-of-concept and safety testing in humans and will establish investigational vaccine stockpiles before epidemics begin.</p> <p>The partnership will fund new and innovative platform technologies with the potential to accelerate the development and manufacturing of vaccines against previously unknown pathogens (e.g. within 16 weeks from identification of antigen to product release for clinical trials).</p> <p>CEPI also supports and coordinates activities to improve our collective response to epidemics, strengthen capacity in countries at risk, and advance the regulatory science that governs product development.</p>
Gender Equality	CEPI works to ensure non-discrimination and gender equality through reflecting the goals of the WHO and the OHCHR for health programmes and services to be available, acceptable, accessible, and of good quality, as set out in the UN Human-Rights Based Approach to Health.
<i>Project Title</i>	<i>Global Alliance for Vaccines and Immunisation (GAVI)</i>
Partner Country/Region	Global
Implementing Country	Sweden through the Ministry for Foreign Affairs
Project Value	SEK 300,000,000/€30,815,058
Duration	2016-2020
Description	Gavi is an international organisation with an aim to improve access to new and underused vaccines for children living in the world's poorest countries. Gavi brings together public and private sectors with the shared goal of creating equal access to vaccines for children, wherever they live.

<i>Project Title</i>	<i>Development of technologies for characterization of bio-threat agents</i>
Partner Country/Region	Global
Implementing Country	Sweden – Ministry for Foreign Affairs
Project Value	SEK 1,200,000/€115,484 (2018)
Duration	2018
Description	In collaboration with other countries develop new technologies for genome based identification and characterization of bio-threat agents; for investigations of alleged use of biological weapons, in co-operation with UNODA.
<i>Project Title</i>	<i>International Centre of Insect Physiology and Ecology (icipe), Nairobi, Kenya.</i>
Partner Country/Region	Global
Implementing Country	Sweden through the Swedish International Development Cooperation Agency
Project Value	SEK 5,000,000/€513,584
Duration	2016-2021
Description	<p>icipe's mission is to help alleviate poverty, ensure food security and improve the overall health status of peoples of the tropics, by developing and extending management tools and strategies for harmful and useful arthropods, while preserving the natural resource base through research and capacity building. The Centre's vision is to pioneer global science in entomology, to improve the well-being and resilience of people and the environment to the challenges of a changing world, through innovative and applied research, alongside deep exploratory study, impact assessment, evaluation and sustainable capacity building.</p> <p>Some insects are disease vectors and are responsible for the transmission of dilapidating human and livestock diseases, exacerbating Africa's already disproportionate share of the global disease burden. Such diseases include malaria (transmitted by mosquitoes), human and animal trypanosomosis, commonly known as sleeping sickness and nagana respectively, which are transmitted by tsetse. Other vector-borne diseases are: dengue, kala-azar, Rift Valley fever and yellow fever.</p>
<i>Project Title</i>	<i>International Vaccine Institute</i>
Partner Country/Region	Global
Implementing Country	Sweden – Swedish International Development Cooperation Agency
Project Value	SEK 5,075,451/€488,449 (2018)
Duration	2015-2019

<i>Project Title</i>	<i>International Vaccine Institute</i>
Description	The International Vaccine Institute (IVI) is a not-for-profit International Organization established in 1997 as an initiative by the United Nations Development Programme (UNDP). IVI is among the few organizations in the world dedicated to vaccines and vaccination for global health. IVI focuses on vaccines against infectious diseases of the most impoverished. IVI aims to make vaccines available and accessible for vulnerable populations in developing countries.
<i>Project Title</i>	<i>The Global Fund to Fight Aids, Tuberculosis and Malaria (GFATM)</i>
Partner Country/Region	Global
Implementing Country	Sweden through the Ministry for Foreign Affairs
Project Value	SEK 800,000,000/€82,173,489
Duration	2017-2019
Description	The Global Fund is a 21st-century partnership organization designed to accelerate the end of AIDS, tuberculosis and malaria as epidemics. The Global Fund is a partnership between governments, civil society, the private sector and people affected by the diseases. The Global Fund raises and invests nearly US\$4 billion a year to support programs run by local experts in countries and communities most in need.
<i>Project Title</i>	<i>The International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B)</i>
Partner Country/Region	Global
Implementing Country	Sweden through the Swedish International Development Cooperation Agency
Project Value	SEK 5,000,000/€513,584
Duration	2016-2021
Description	The International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b) is an international health research institution located in Dhaka, dedicated to addressing the health challenges that disproportionately affect people living in poverty in Bangladesh and other low- and middle-income countries. icddr,b has the capacity to undertake a full spectrum of research spanning population-based studies and demographic surveillance, large-scale clinical trials, hospital-based clinical studies, and laboratory research
<i>Project Title</i>	<i>The Network ReAct</i>
Partner Country/Region	Global

<i>Project Title</i>	<i>The Network ReAct</i>
Implementing Country	Sweden – Swedish International Development Cooperation Agency
Project Value	SEK 16,881,977/€1,624,664 (2018)
Duration	2015-2018
Description	ReAct articulates its mission as a world free of fears related to untreatable infections. This mission will be achieved by addressing the issue of antibiotic resistance (ABR) and retaining the effectiveness of existing as well as promoting the development of new antibiotics. The overall objective of ReAct is to contribute to the development and promotion of equitable and ecologically grounded solutions to contain ABR. This will be achieved through advocacy, partnerships building as well as functioning as an easily accessible center of excellence for the management and dissemination of information and analysis on ABR. Support is also given to several countries in Africa, Latin America and South East Asia for development of national policies and frameworks for use of antibiotics.
<i>Project Title</i>	<i>The UNICEF-UNDP-World Bank-WHO Special Programme for Research and Training in Tropical Diseases (TDR)</i>
Partner Country/Region	Global
Implementing Country	Sweden – Swedish International Development Cooperation Agency
Collaborating Institution(s) / Partner(s)	World Health Organization (WHO)
Project Value	SEK 47,709,240/€4,591,825 (2018)
Duration	2016-2019
Description	TDR is a global programme of scientific collaboration that helps facilitate, support and influence efforts to combat diseases of poverty. 2018 is the first year of TDR's new strategy 2018-2023, where a focus is on "infectious diseases of poverty" including "access for the most vulnerable". TDR supports effective and innovative global health research through the strengthening the research capacity of disease-affected countries, and promoting the translation of evidence into interventions that reduce the burden of infectious diseases and build resilience in the most vulnerable populations.
<i>Project Title</i>	<i>Understanding pathogen, livestock, environment interactions involving bluetongue virus (PALE-Blue)</i>
Partner Country/Region	Global
Implementing Country	United Kingdom (coordinator); France; Italy; Germany; Belgium; Spain; Netherlands; Israel; Sweden; Turkey; Morocco; Kenya; Senegal; Tunisia
Project Value	€6,039,301
Duration	2017-2020

<i>Project Title</i>	<i>Understanding pathogen, livestock, environment interactions involving bluetongue virus (PALE-Blue)</i>
Description	New outbreaks caused by bluetongue viruses (BTVs) have emerged in European livestock every year since 1998. These events that have been linked to climate change resulted in massive losses due to fatalities, reduced productivity, reproductive failures, restricted animal movements/trade, and surveillance/vaccination costs. PALE-Blu brings together European institutes with expertise in BTV research and diagnosis, with partners in endemic regions (Africa, the Middle East and Turkey) that act as a ‘source’ for BTV strains that emerge in Europe. Full-genome sequence-analyses will increase the accuracy of BTV-strain distribution maps, to identify pathways and mechanisms for spread into and within Europe, as well as appropriate prevention strategies. PALE-Blu will analyse the genetic connectivity of Culicoides vector populations in different regions, as well as the movements of individual BTV lineages and genes. Together with reverse genetics technologies and infection/replication studies in new Culicoides cell lines, or adults from different Culicoides species, this will elucidate the genetic basis for geographic localisation/movement of BTV strains and serotypes. We will analyse differences in saliva proteins from Culicoides species, their ability to modify the BTV surface proteins (proteases) and effects on efficiency of transmission (in both directions) between vertebrate hosts and insect-vectors. These studies will provide a better understanding of incursion risks for different BTV strains, supporting effective control strategies. PALE-BLU will explore more effective and cross-serotype subunit-vaccines that are DIVA assay compatible and generate a stronger immune response from a single inoculation. We will also explore the potential for use of antiviral agents to induce immediate protection post vaccination. More effective diagnostic systems to better detect mixed infections will also be developed by multiplexing existing or novel diagnostic assay systems.

<i>Project Title</i>	<i>Biorisk Management Research Agenda</i>
Partner Country /Region	Global
Implementing Country	United States, Department of State, Bureau of International Security and Nonproliferation, Office of the Nonproliferation and Disarmament Fund
Collaborating Partner(s)	American Biosafety Association, United States Department of Agriculture, Gryphon Scientific, and more to be determined
Project Value	US\$1,400,000
Duration	November 2022 – October 2025
Description	ISN/NDF is partnering with biosafety experts, professional associations, international organizations, and key stakeholders to organize and implement a series of workshops to identify and assess current evidence gaps at all laboratory levels and develop a tailored research agenda that facilitates the



<i>Project Title</i>	<i>Biorisk Management Research Agenda</i>
	promulgation of scientifically sound practices for laboratory bio-risk management.
Gender Equality	To be incorporated in the inclusion of women and minorities in the agenda development discussions and project planning committee
<i>Project Title</i>	<i>Biosecurity for the Next Generation – Online Course</i>
Partner Country /Region	Global
Implementing Country	United Kingdom – Ministry of Defence and Foreign and Commonwealth Office
Collaborating Partner(s)	Biosecure
Project Value	£69,000
Duration	2017-2019
Description	In the period 2017 to 2018 the Foreign and Commonwealth Office funded the development of an open online course on biosecurity, entitled “Biosecurity for the Next Generation”, which draws on the Bradford Guide: Preventing Biological Threats: What You Can Do. In 2018/2019 MOD are funding some follow-on work to raise awareness of the course to encourage participation on a large scale. Both the Bradford Guide and accompanying Handbook, and “Biosecurity for the Next Generation” are freely available on line at <a href="https://www.bradford.ac.uk/social-sciences/peace-studies/research/publications-and-projects/guide-to-biological-security-issues/Guide_final.pdf">https://www.bradford.ac.uk/social-sciences/peace-studies/research/publications-and-projects/guide-to-biological-security-issues/Guide_final.pdf</a> and <a href="http://www.futurelearn.com/courses/biosecurity">www.futurelearn.com/courses/biosecurity</a> respectively.
<i>Project Title</i>	<i>Laboratory Twinning Feedback Workshop</i>
Partner Country /Region	Global
Implementing Country	United Kingdom
Collaborating Partner(s)	The World Organisation for Animal Health (WOAH)
	Open to all WOAH reference laboratories and candidate reference laboratories that are, or have previously been, involved in laboratory twinning activities.
Project Value	€121,495.33
Duration	Workshop delayed due to COVID travel restrictions; now expected to take place in 2023.
Description	The WOAH Laboratory Twinning Programme has been in place since 2006 and aims to improve global capacity for disease prevention, detection, and control through capacity building and networking. The programme enables WOAH to use its network of Reference Laboratories and Collaborating

<i>Project Title</i>	<i>Laboratory Twinning Feedback Workshop</i>
	<p>Centres to assist “Candidate” institutes wishing to improve their capacity and scientific expertise. The aim is to strengthen national and regional laboratories capabilities, and for some of the Candidate institutes to become WOAHA Reference Laboratories and Collaborating Centres for the benefit of their country and region.</p> <p>The main objectives of the workshop are to:</p> <p>Collect feedback from institutes participating in OIE Laboratory twinings in relation to the short and long-term repercussions of the project.</p> <p>Understand which factors affect the sustainability of the outputs of the twinning in the long-term.</p> <p>Collate best practices to ensure longer term sustainability of the twinning.</p> <p>Assess how the OIE can support the creation of networks amongst candidate laboratories.</p> <p>Determine what the “minimum requirements” that a Candidate Institute should have in place are to ensure the successful foundations of a twinning project.</p> <p>Discuss synergy with other initiatives (PVS, other twinings etc.)</p> <p>Review the indicators of success of Twinning, i.e., beyond establishment of an OIE reference centre</p>

<i>Project Title</i>	<i>Development of a Biorisk Management Graduate Certificate Program</i>
Partner Country /Region	Global
Implementing Country	United States Department of Agriculture
Collaborating Partner(s)	USDA ARS, Indiana University of Pennsylvania
Project Value	US\$461,000
Duration	2022-2027
Description	<p>The goal of this initiative is to develop and offer an online Biosafety/Biorisk Management Certificate at Indiana University of PA (IUP) for both students and professionals interested in gaining the necessary skills to support the safe and secure execution of life science operations with a focus on high/maximum containment facilities. The objectives of this certificate program are to:</p> <p>Prepare students and professionals for entry into the biosafety/bio-risk management profession</p> <p>Enable students to be well versed in the core competencies needed by biosafety professionals as identified by ABSA International.</p>

<i>Project Title</i>	<i>Development of a Biorisk Management Graduate Certificate Program</i>
Gender Equality	The graduate certificate program will be open to all individuals who meet the university's requirements for the program.
<i>Project Title</i>	<i>Global Biological Threat Reduction and Border Security</i>
Partner Country/Region	Global
Implementing Country	United States, Department of State, Bureau of International Security and Nonproliferation, Office of the Nonproliferation and Disarmament Fund
Collaborating Institution(s) / Partner(s)	Dynamis, Iraqi Ministry of Health, Jordanian National Center for Security and Crisis Management, Jordanian Ministry of Health, Compliance and Capacity Skills International, State University of New York Albany Center for Policy Research, Health Security Partners, Georgetown University Center for Global Health and Security Studies and the Elizabeth R. Griffin Program, Global Implementation Solutions, Gryphon Scientific
Project Value	US \$18,000,000
Duration	April 2021 – September 2025
Description	In response to the COVID-19 pandemic, ISN/NDF is conducting activities in biosafety and biosecurity capacity building, multisectoral coordination, and border security and export control efforts related to biological non-proliferation priorities. Bilateral and multilateral projects include implementing biosecurity, emergency management, and bio-surveillance software solutions in Iraq and Jordan; closing gaps in implementing biological export and border legislation and regulations in Africa; addressing bio-risk management vulnerabilities in Central Africa through regional collaboration; evidence-based approaches to implementing biosafety in diagnostic and research laboratories; enhancing One Health capacities through multisectoral engagement; detecting and identifying outbreaks of high consequence pathogens and improving bio-risk management practices in laboratories in Sub-Saharan Africa; enhancing capacities to detect outbreaks in the Middle East and North Africa region; strengthening molecular diagnostics and bio-informatic networks and improving cybersecurity practices in South America; and conducting red teaming exercises with government and industry to address biological proliferation and border control threats in Southeast Asia.
Gender Equality	Addressed by activity through proactive inclusion of women and minorities as project beneficiaries, implementers, and experts
<i>Project Title</i>	<i>Global Partnership Biosecurity Signature Initiative</i>
Partner Country/Region	Global

<i>Project Title</i>	<i>Global Partnership Biosecurity Signature Initiative</i>
Implementing Country	United States, Department of State, Bureau of International Security and Non-proliferation, Office of the Non-proliferation and Disarmament Fund
Collaborating Institution(s) / Partner(s)	United Nations Office of Disarmament Affairs, Biological Weapons Convention Implementation Support Unit
Project Value	US\$1,500,000
Duration	December 2022 – June 2026
Description	The purpose of this project is to enhance BWC membership and implementation in the African region by supporting staffing and personnel costs for the ISU to (i) promote universalization of the BWC in Africa; (ii) provide assistance for the development of BWC implementing legislation; (iii) support the preparation and submission of Confidence-Building Measures (CBMs); and (iv) facilitate the establishment or designation of National Contact Points (NCPs).
Gender Equality	Addressed by activity through proactive inclusion of women and minorities as project beneficiaries, implementers, and experts

<i>Project Title</i>	<i>Supporting Partner Capabilities to Address Russian Malign Influence</i>
Partner Country/Region	Global
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction (ISN/CTR), Special Projects
Collaborating Institution(s) / Partner(s)	Universities, research institutes and non-governmental organizations
Project Value	US\$1,500,000
Duration	Ongoing; started in 2019
Description	<p>ISN/CTR raises foreign partner capacity to identify and respond to the Russian Government's active measures attacks that seek to undermine longstanding non-proliferation norms.</p> <p>Counter CBR Assassination Training: This area of focus will seek to enhance partner Government capacity to identify and respond to the Russian Government's use of chemical, biological, and radiological (CBR) materials in assassinations – especially in a hostile information environment where disinformation attacks seek to undermine investigative efforts.</p> <p>Laboratory Capacity Building and Hardening: ISN/CTR will build and strengthen foreign scientific capacity to support law enforcement, first responders, and larger efforts to identify the dissemination of CBR material by the Russian Government.</p>

<i>Project Title</i>	<i>Supporting Partner Capabilities to Address Russian Malign Influence</i>
	Strengthening Non-proliferation Norms: ISN/CTR will increase foreign Government and private sector support for non-proliferation norms, as well as the adoption of cybersecurity best practices.
<i>Project Title</i>	<i>International Guidelines for Biosecurity Ethics</i>
Partner Country/Region	Global
Implementing Country	United States - Department of State, Office of Weapons of Mass Destruction Terrorism (ISN/WMDT)
Collaborating Institution(s) / Partner(s)	John Hopkins University Center for Health Security; Ingenuity and Purpose (IAP); Ministry of Foreign Affairs of the People's Republic of China (MFA); Tianjin University; The United Nations on Drugs and Crime (UNODC)
Project Value	US\$125,000
Duration	2020-2022
Description	Development of biosecurity ethical guidelines to be refined and endorsed by BWC States Parties, bioscience community.
<i>Project Title</i>	<i>International Science Advisory Body for Biosecurity</i>
Partner Country/Region	Global
Implementing Country	United States - Department of State, Office of Weapons of Mass Destruction Terrorism (ISN/WMDT)
Collaborating Institution(s) / Partner(s)	Federation of American Scientists (FAS); Ingenuity and Purpose (IAP)
Project Value	US\$175,000
Duration	Ongoing
Description	Establishment of an international forum to provide technical analyses of scientific developments and emerging biotechnologies.
<i>Project Title</i>	<i>Protecting Chemical and Biological Weapons (CBW)-relevant Dual-Use Materials, Equipment, and Expertise</i>
Partner Country /Region	Global
Implementing Country	United States Department of State, Bureau of International Security and Nonproliferation, Office of Cooperative Threat Reduction (ISN/CTR), Special Projects
Collaborating Partner(s)	Universities, research institutes and non-governmental organizations
Project Value	US\$900,000
Duration	Ongoing; started in 2020

<i>Project Title</i>	<i>Protecting Chemical and Biological Weapons (CBW)-relevant Dual-Use Materials, Equipment, and Expertise</i>
Description	<p>Protect partners from Russia's exploitation of dual-use material, equipment, technology, knowledge, and expertise at government, commercial, and scientific institutions to prevent the proliferation of WMDs.</p> <p>These efforts include:</p> <p>Providing open-source information that illuminates potential procurement, financial, and logistics networks supplying sensitive dual-use chemical and biological equipment, technology, dangerous pathogens, and/or weaponizable materials to the Russian Federation and its proxies for proliferation purposes and develop tailored, prompt, and actionable capacity-building activities;</p> <p>Enhancing partner public and private sector capacity and coordination to help prevent illicit procurement networks, supply chains, and transshipment that may wittingly or unwittingly facilitate Russian proliferation; and</p> <p>Providing awareness and best practices to networks, and communities of practice to protect expertise, research collaboration, explicit, and tacit knowledge from exploitation by the Russian Government for proliferation purposes.</p>
<i>Project Title</i>	<i>Regulation of the importation of infectious biological materials that could cause disease in humans into the United States (CDC Import Permit Program (IPP))</i>
Partner Country /Region	Global
Implementing Country	U.S. Department of Health and Human Services (HHS)/ Centers for Disease Control and Prevention (CDC)
Collaborating Partner(s)	U.S. Department of Homeland Security/Custom and Border Protection and local in-country partners
Project Value	US\$18.6 million (includes funding for both FSAP and IPP programs)
Duration	Ongoing
Description	The CDC Import Permit Program regulates the importation of infectious biological materials that could cause disease in humans in order to prevent their introduction and spread into the U.S. The program ensures that the importation of these agents is monitored and that facilities receiving permits have appropriate biosafety measures in place to work with the imported agents.
Gender Equality	Gender equal
<i>Project Title</i>	<i>Strengthening Implementation of the Biological and Toxin Weapons Convention (BWC)</i>
Partner Country /Region	Global

<i>Project Title</i>	<i>Strengthening Implementation of the Biological and Toxin Weapons Convention (BWC)</i>
Implementing Country	United States, Department of State, Bureau of International Security and Nonproliferation, Office of the Nonproliferation and Disarmament Fund
Collaborating Partner(s)	United States Department of State., CRDF Global, The Verification Research, Training and Information Centre (VERTIC)  United Nations Institute for Disarmament Research, Africa, Southeast Asia, Latin America
Project Value	US\$5,000,000
Duration	2019-Present
Description	This project supports the creation of a searchable database containing information about the status of implementation of BWC States Parties and it designs and carries out pilot assistance projects to improve BWC State Party national implementation measures. The project will review BWC legislation and conduct drafting legislation sessions with key partner country stakeholders along with outreach and awareness raising with parliamentarians and pertinent civil society organizations.
<i>Project Title</i>	<i>Global Biosecurity Engagement Activities</i>
Partner Country/Region	Global, including, but not limited to: Afghanistan, Algeria, Armenia, Azerbaijan, Bangladesh, Bulgaria, Cameroon, Democratic Republic of the Congo, Egypt, Gabon, Guinea, Georgia, India, Indonesia, Jordan, Kazakhstan, Kenya, Kyrgyzstan, Lebanon, Libya, Malaysia, Morocco, Nigeria, Philippines, Romania, Serbia, Sierra Leone, Slovakia, Somalia, South Africa, Tajikistan, Tanzania, Turkmenistan, Tunisia, Turkey, Ukraine, Uzbekistan, and Yemen.
Implementing Country	United States - Department of State, Office of Cooperative Threat Reduction (ISN/CTR)
Collaborating Institution(s) / Partner(s)	U.S. national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$14,000,000 (calculated on an annual basis)
Duration	Ongoing, started in 2006
Description	ISN/CTR's Biosecurity Engagement Program (BEP) works to mitigate global biological threats by denying state and non-state actors access to biological expertise, materials, and equipment that could be used to develop and disseminate biological weapons.  BEP efforts include:  Preventing non-state or state actor from acquiring or misapplying high consequence pathogens, bio-toxins, and other potentially weaponizable biological materials, dual-use equipment, and/or scientific expertise

<i>Project Title</i>	<i>Global Biosecurity Engagement Activities</i>
	<p>Securing life science institutions and high consequence pathogens from both insider and outsider threats</p> <p>Assessing and disrupting emerging proliferation pathways related to biological material, dual-use equipment, or WMD-relevant expertise</p> <p>Training foreign partners to identify and deter the use of clandestine bioweapon laboratories by proliferator state and non-state actors</p> <p>Enhancing partner capacity to safely and securely identify, control, and attribute outbreaks caused by high consequence pathogens</p> <p>Partnering with non-scientific interlocutors such as policymakers, law enforcement, military, and diplomatic audiences to prevent biological attacks</p> <p>Promoting the adoption of and compliance with international frameworks that advance biological non-proliferation objectives</p> <p>Identifying and/or disrupting efforts by proliferator states to subvert or evade international biological science treaties/norms through strategic investments or partnerships</p>
<i>Project Title</i>	<i>Building Global Resilience Against Agro-Terrorism and Agro-Crime</i>
Partner Country/Region	<p>Global</p> <p>Africa</p> <p>Association of Southeast Asian Nations (ASEAN)</p>
Implementing Country	<p>Canada – Weapons Threat Reduction Program</p> <p>Global Affairs Canada</p>
Collaborating Institution(s) / Partner(s)	<p>Food and Agriculture Organization of the United Nations (FAO)</p> <p>International Criminal Police Organization (INTERPOL)</p> <p>World Organisation for Animal Health (WOAH)</p>
Project Value	C\$7,371,000
Duration	2018-2023
Description	<p>Gender equality is being integrated through: the inclusion and consultation of gender perspectives in the training modules/materials being developed, enhancing outcomes and providing gender responsive models for other regions to adapt in emergency management; ensuring gender balance amongst trainers and speakers in regional workshops; and addressing and promoting gender considerations at the global conference on emergency management.</p>
Gender Equality	<p>Gender equality is being integrated through: the inclusion and consultation of gender perspectives in the training modules/materials being developed, enhancing outcomes and providing gender responsive models for other regions to adapt in emergency management; ensuring gender balance amongst</p>



<i>Project Title</i>	<i>Building Global Resilience Against Agro-Terrorism and Agro-Crime</i>
	trainers and speakers in regional workshops; and addressing and promoting gender considerations at the global conference on emergency management.
<i>Project Title</i>	<i>Support for Canada's International Response to the COVID- 19 Pandemic</i>
Partner Country/Region	Global Association of Southeast Asian Nations (ASEAN) Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Association of Southeast Asian Nations (ASEAN) Secretariat Coalition for Epidemic Preparedness Innovations (CEPI) Canadian National Institute for Communicable Diseases, South Africa National Health Laboratory Services, South Africa
Project Value	C\$146,600,000
Duration	2017-2022
Description	<p>These projects, implemented by and through Canada's Weapons Threat Reduction Program, supported Canada's international response to the COVID-19 pandemic. Support included:</p> <p>\$90 million to the Coalition for Epidemic Preparedness Innovations (CEPI) for research, development, testing, and licensing of COVID-19 vaccines;</p> <p>\$1.4 million to acquire, equip, and certify twenty mobile laboratories for rapid diagnosis of COVID-19 and other infectious disease for South Africa's National Institute for Communicable Diseases;</p> <p>\$10.4 million for the in-kind provision of personal protective equipment (PPE) to the Africa Centres for Disease Control and Prevention, which in turn distributed items to African member states most in need; and</p> <p>\$44.8 million for the in-kind provision of PPE to the ASEAN Secretariat and ASEAN member states.</p>
<i>Project Title</i>	<i>Bridging the Implementation Gap in Global Biosecurity</i>
Partner Country/Region	Global East Africa West Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Federation of Biosafety Associations

<i>Project Title</i>	<i>Bridging the Implementation Gap in Global Biosecurity</i>
Project Value	C\$428,000
Duration	2020-2022
Description	This project builds upon previous collaborations to address the implementation gap in biosecurity in Africa and the ASEAN region by strengthening sustainable biological risk management and biosecurity across these regions and closing the gap between policy development and implementation. Project activities include: support for the 2020-21 South-South Global Mentorship Program; delivery of a virtual global biosafety and biosecurity conference; delivery of a regional workshop to strengthen national biosafety associations in East Africa; support for the development of a new West African Biological Safety Network; and the establishment of an Equity-Focused Coordinating Committee to ensure the representation of marginalized groups in the biosafety and biosecurity communities.
Gender Equality	This project, through activities such as the Equality-focused Coordinating Committee and the 2020-21 Global Mentorship Program, provide de-centralized spaces for gender minorities across the global biosafety and biosecurity community to exchange their unique perspectives and is a step towards a complete understanding of global health security and sustainable health security practices. Additionally, the Global Mentorship Program considers the intersectional nature of developing biosafety professionals, where factors such as gender, language, culture, and geographic location are being addressed. Promoting and retaining women leaders in global biosafety and biosecurity, and highlighting their unique contributions and perspectives, is a key aspect of the program.
<i>Project Title</i>	<i>Collaboration to Strengthen Sustainable Laboratory Biosecurity</i>
Partner Country/Region	Global Jordan, Nigeria, Sierra Leone
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	United Kingdom Ministry of Defence Defence Science and Technology Laboratory (Dstl) Public Health England (PHE)
Project Value	£234,000
Duration	2018-2022
Description	This project aims to enhance capabilities to prevent, detect and respond to biological threats, whether naturally occurring, accidental or deliberate in origin through the delivery of training activities. Training activities were delayed owing to pandemic restrictions, but have since recommenced.

<i>Project Title</i>	<i>Enhancing Global Bioterrorism Prevention and Biological Preparedness</i>
Partner Country/Region	Global Middle East and North Africa Southeast Asia
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$4,910,000
Duration	2018-2023
Description	This project supports INTERPOL’s Bioterrorism Prevention Unit to engage with and support partner countries to prevent and/or respond to a wide range of serious biological terrorism-related threats. Activities include: tailored multi-agency capacity building and training packages; the provision of critical equipment and associated biological response resources; cross-border operations to counter the illicit smuggling of biological materials used in terrorist attacks; and a feasibility assessment of a bio-security surveillance system.
Gender Equality	This project is integrating gender equality considerations where possible, including in project activities and reporting.  Additionally, an emphasis is being placed on gender-balanced participation in trainings and meetings and increased awareness of gender equality in the law enforcement community.
<i>Project Title</i>	<i>United Nations Secretary General’s Mechanism (UNSGM) Biological Sample Transfer Virtual Tabletop Exercise (TTX)</i>
Partner Country/Region	TTX held virtually, with participation from stakeholders in Germany, Kenya, Switzerland, South Africa, and Malaysia in partnership with the United Nations and WHO.
Implementing Country	United States Department of State Bureau of International Security and Non-proliferation’s Offices of Weapons of Mass Destruction Terrorism (WMDT) and Biological Policy Staff (BPS)
Collaborating Institution(s) / Partner(s)	Kenya, Switzerland, Malaysia, UNODA
Project Value	US\$206,500
Duration	2-3 March 2022
Description	Forty participants from 7 countries, the UN, and World Health Organization attended. The TTX focused on strengthening the

<i>Project Title</i>	<i>United Nations Secretary General's Mechanism (UNSGM) Biological Sample Transfer Virtual Tabletop Exercise (TTX)</i>
	UN Secretary-General's Mechanism (UNSGM). Participants identified potential challenges and mitigation strategies when moving a biological sample across international boundaries during a UNSGM strong investigation into an alleged bioterrorism incident. Participants focused on the requirement for coordination at all phases of the mission between the UN team and support countries, and national-level coordination among different agencies involved to build resilience during the investigation.
<i>Project Title</i>	<i>Bioterrorism Evidence Exploitation Workshop and Operation</i>
Partner Country/Region	Indonesia, Iraq, Malaysia, Philippines, Singapore and Thailand
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$741,967
Duration	2016-2018
Description	To support the Government of Iraq and select countries in Southeast Asia (Malaysia, Philippines, Indonesia, Singapore and Thailand) to better prepare for, detect and respond to bioterrorism threats. This Project is designed to strengthen the capabilities of law enforcement experts to conduct effective responses to biological attacks and mitigate serious threats posed by terrorist groups operating in Iraq and Southeast Asia.
<i>Project Title</i>	<i>Strengthening Scientific Networks</i>
Partner Country/Region	Indonesia, Libya, Malaysia, Morocco, Tunisia, Singapore, Vietnam, Thailand, Taiwan,
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement Program
Collaborating Institution(s) / Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$1,200,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	ISN/CTR works to mitigate global biological threats by supporting partner countries in the following programmatic activities: develop and strengthen scientific networks to promote sustainability of biosafety and biosecurity measures.

<i>Project Title</i>	<i>Global prevention and control of anthrax</i>
Partner Country/Region	Low and Middle-Income Countries that have identified anthrax as a priority pathogen: Uganda, Ethiopia, Bangladesh, India, Cameroon
Implementing Country	United States – Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s) / Partner(s)	US Department of Defense, Defense Threat Reduction Agency (DTRA), Armed Forces Health Surveillance Branch Global Emerging Infections Surveillance (GEIS) section.  Uganda Ministry of Health, Ministry of Agriculture Animal Industry and Fisheries.  Ethiopia Ministry of Health, Ethiopian Public Health Institute, Ethiopia Ministry of Agriculture and Livestock Resources, National Animal Health Diagnostic Investigation Center.  Bangladesh Ministry of Health, Institute of Epidemiology, Disease Control and Research, Bangladesh Ministry of Fisheries and Livestock, Bangladesh Department of Livestock Resources, Central Disease Investigation Laboratory  India National Institute of Veterinary Epidemiology and Disease Informatics, Manipal University  Cameroon Ministry of Public Health, Center Pasteur of Cameroon, Cameroon Ministry of Livestock Fisheries and Animal Industries, National Veterinary Laboratory (LANAVET)
Project Value	US\$600,000
Duration	2018-2022
Description	In partnership with endemic and hyper-endemic countries that have prioritized anthrax preparedness/prevention, the CDC Bacterial Special Pathogens Branch is implementing projects to strengthen the capacity to detect, rapidly identify, diagnose, and prevent anthrax in human and animal populations.  Build surveillance, laboratory diagnostic, and outbreak response capacity for anthrax.  Provide training and laboratory supplies for molecular detection of anthrax rather than riskier culture confirmation methods.  Support biosafety assessments of laboratories conducting anthrax activities.  Evaluate improved diagnostic methods to improve biosafety and biosecurity of anthrax testing using inactivated samples  Revise infection control guidance for sample collection, transport and storage for animal and human samples, as well as post exposure guidelines.  Assist with the development of national strategic plans and guidelines for surveillance and outbreak management of anthrax in humans and animals.

<i>Project Title</i>	<i>Global prevention and control of anthrax</i>
	Develop risk-mapping models using environmental variables and historical outbreak locations to help focus limited public health resources to areas of highest risk.
<i>Project Title</i>	<i>MediLabSecure: Preventing vector-borne diseases around the Mediterranean and Black Sea regions by creating new networks</i>
Partner Country/Region	Mediterranean and Black Sea non-EU countries, including Albania, Algeria, Armenia, Bosnia and Herzegovina, Egypt, Georgia, Jordan, Kosovo <sup>1</sup> , Lebanon, Libya, Moldova, Montenegro, Morocco, Palestine <sup>2</sup> , Serbia, The former Yugoslav Republic of Macedonia, Tunisia, Turkey, Ukraine.
	<p>1. This designation is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.</p> <p>2. This designation shall not be construed as recognition of a State of Palestine and is without prejudice to the individual positions of the Member States on this issue.</p>
Implementing Country	European Union DEVCO/EuropeAid. France (general and network coordination), Italy, Spain (network coordination).
Project Value	€3,300,000
Duration	4 years (January 1 <sup>st</sup> 2014-December,31 <sup>st</sup> 2017)
Description	<p>Project funded by the EU Instrument contributing to Stability and Peace.</p> <p>Countries of the Mediterranean and Black Sea regions have common sea borders and, as a result, share common public health issues and threats.</p> <p>The MediLabSecure project aims at consolidating a Laboratory Network on the emerging viruses that are pathogens for humans and/or animals.</p> <p>It will represent a cluster for awareness, risk assessment, monitoring and control of these vector borne diseases. This cluster will require the interaction of four laboratory sub-networks, one for human health, one for animal health, one for entomology and one for public health reinforcement.</p> <p>The MediLabSecure network will encompass partner countries around the Mediterranean and Black Sea Regions (19 non-EU countries) by means of a collaborative execution of the stated work packages to address public health-related national needs.</p>
<i>Project Title</i>	<i>Strengthening Healthcare Workforce and Field Epidemiologists</i>
Partner Country/Region	Nigeria, Yemen
Implementing Country	United States Department of State, Bureau of International Security and Non-proliferation, Office of Cooperative Threat Reduction - Biosecurity Engagement Program

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<i>Project Title</i>	<i>Strengthening Healthcare Workforce and Field Epidemiologists</i>
Collaborating Institution(s) / Partner(s)	United States national laboratories, universities, research institutes and non-governmental organizations
Project Value	US\$1,800,000 (calculated on an annual basis)
Duration	Ongoing or completed in 2022
Description	ISN/CTR works to mitigate global biological threats by supporting partner countries in the following programmatic activities: Supporting the establishment of FETP programs, community healthcare worker engagements and trainings.

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*NON-MONETARY CONTRIBUTION*


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Activity Title	Countermeasure for Communicable Diseases
Partner Country/Region; International Organization/Initiative	Afghanistan, Democratic Republic of Congo, India, Nigeria
Implementing Country	Japan
Collaborating Institution(s) / Partner(s)	Nagasaki University, Center for International Collaborative Research
Duration	2017-2018
Description	Communicable disease is still severe disease burden and need to address by whole of the world. Especially in developing countries, it is not only the threat for each individual but also severe burden of socio and economic development of the country. By learning the experiences from Japan, participants are expected to acquire and utilize the necessary knowledge and skills related to Countermeasure for Communicable Diseases.

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*NON-MONETARY CONTRIBUTION*


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Activity Title	Laboratory Diagnosis Techniques for the Control of Vaccine Preventable Diseases, including Poliomyelitis, Measles and Rubella
Partner Country/Region; International Organization/Initiative	Afghanistan, Kingdom of Eswatini, Nigeria, Philippines
Implementing Country	Japan
Collaborating Institution(s) / Partner(s)	National Institute of Infectious Diseases
Duration	2018
Description	To assess the efficacy of immunization for vaccine-preventable diseases (VPDs), highly qualified surveillance and laboratory diagnosis activities are crucial. The course is organized to acquire the standardized laboratory technique and knowledge of quality control/assurance

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*NON-MONETARY CONTRIBUTION*

through hands-on training, towards the effective control of VPDs, including polio, measles, and rubella.

*NON-MONETARY CONTRIBUTION*

Activity Title	Confidence Building Measures (CBMs) under the Biological Weapons Convention (BWC)
Nature of activity or contribution	Training workshop
Partner Country/Region	CARICOM Member States; Kenya
Implementing Country	Switzerland
Collaborating Institution(s)/Partner(s)	Spiez Laboratory; BWC Implementation Support Unit (ISU)
Duration	on-going since 2020
Support to Non-Proliferation Instruments and Multi-Lateral Treaties	Biological Weapons Convention (BWC) BWC Implementation Support Unit (ISU)
Narrative Description	<p>This project aims to support states that are party to the BWC in their efforts towards: (i) developing and adopting national legislation to provide for the implementation of the BWC and related matters, including biosafety and biosecurity; and (ii) participating in confidence-building measures and submitting the respective reports to the BWC ISU.</p> <p>The project also aims to raise awareness and build capacity on BWC implementation and related matters at the regional and national levels.</p>
Gender Equality	Satisfied

*NON-MONETARY CONTRIBUTION*

Activity Title	Biosafety and biosecurity exchange program between Lusophone Countries
Nature of activity or contribution	International cooperation – exchange program in biosafety and biosecurity
Partner Country/Region; International Organization/Initiative	Community of Portuguese Speaking Countries
Implementing Country	Portugal
Collaborating Institution(s)/Partner(s)	Fórum de Saúde Militar – Community of Portuguese Speaking Countries
Duration	3 years



*NON-MONETARY CONTRIBUTION*

Support to Non-proliferation Instruments And Multilateral Treaties	Cooperation under article X of the Biological Weapons Convention;
Narrative Description	Contribution to core capacities of International Health Regulations

*NON-MONETARY CONTRIBUTION*

Activity Title	Strengthening of Community Health System for Infectious Diseases Control(A)
Partner Country/Region; International Organization/Initiative	Democratic Republic of Congo, Kenya, Liberia, Malawi, Myanmar, Nigeria, Pakistan
Implementing Country	Japan
Collaborating Institution(s) / Partner(s)	TA Networking Corp.
Duration	2018
Description	<p>This program is designed for prevention of infectious diseases through enhancement of public health, and focuses on following contents.</p> <p>1. Roles of public health and prevention, 2. Surveillance system, 3. Health program with community participation, 4. Communication mechanism of related organizations, 5. Measures for remote area by utilizing local resources, 6. Experience of TB and malaria control in Okinawa</p>

*NON-MONETARY CONTRIBUTION*

Activity Title	Strengthening laboratory techniques and surveillance system for global control of HIV and related infectious diseases
Partner Country/Region; International Organization/Initiative	East Timor, Ghana, Honduras, Malawi, Myanmar , Philippines, Sudan
Implementing Country	Japan
Collaborating Institution(s) / Partner(s)	National Institute of Infectious Diseases, AIDS Research Center
Duration	2018
Description	<p>The course will be conducted at National Institute of Infectious Diseases in Japan. Lectures will be given to provide basic knowledge required for the diagnosis and monitoring of HIV/AIDS and other viral infections, and practical hands-on trainings will be held not only to improve laboratory techniques but also to strengthen the whole laboratory management system, including maintenance/quality control of the laboratory, data</p>

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*NON-MONETARY CONTRIBUTION*

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management, etc. In addition, field visits, reflection, and discussions will help to understand the roles/collaborative relationship between central and regional laboratories involved in the infectious disease surveillance system.

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Activity Title	International CBRN Survive to Function (StF) Course
Nature of Activity or Contribution	Providing practical CBRN training to ICRC to allow them to recognise the signs & symptoms of a CBRN incident and to safely carry out immediate response drills.
Partner Country/Region	Global
Implementing Country	Ireland
Collaborating Institution(s)/Partner(s)	ICRC Irish Department of Foreign Affairs and Trade
Duration	5 days for full training course provided to ICRC staff. This course commenced in 2015. Training was paused during the COVID pandemic. Training resumed in 2022 and is planned to continue in 2023.
Description	The Irish Defence Forces through the School of Military Engineering (SME) runs a 5-day training course that focuses on immediate personal response to a CBRN incident. The course also provides an understanding of current CBRN threats.
	In June 2022 training was delivered to staff of the ICRC. This is an annual course which will continue in 2023.

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*NON-MONETARY CONTRIBUTION*

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Activity Title	The Global Framework for the Progressive Control of Transboundary Animal Diseases (GF-TADs)
Partner Country/Region	Global
Implementing Country	Norway
Collaborating Institution(s)/Partner(s)	Norwegian Food Safety Authority (NFSA)
Duration	Continuous since 2004
Description	GF-TADs was launched in 2004. GF-TADs is a joint initiative of FAO and WOA, with the expected participation of WHO for the zoonoses, to achieve the prevention, detection and control of transboundary animal diseases (TADs) and in particular to address their original and global dimensions. GF-TADs is a facilitating mechanism which will endeavour to empower regional alliances in the fight against transboundary animal diseases (TADs), to provide for capacity building and to

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assist in establishing programmes for the specific control of certain TADs based on regional priorities. In Europe the following diseases are prioritized: African Swine Fever, Lumpy Skin disease, rabies, and on a secondary level FMD, Avian Influenza, Brucellosis and Pestes de Petit Ruminants. They provide a variety of capacity building training and learning programs.

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Activity Title	CELULEX Exercise / STRATEGY table top exercise
Nature of activity or contribution	Simulation Exercise
Partner Country/Region; International Organization/Initiative	Global
Implementing Country	Portugal
Collaborating Institution(s)/Partner(s)	Biological Defense Laboratory  World Organisation for Animal Health (WOAH); Food and Agriculture Organization of the United Nations (FAO).
Duration	1 week
Narrative Description	The simulation exercise was focused on multi-sectoral collaboration and coordination with relevant international organizations regarding the response to natural or deliberate biological events or incidents. The scenario was planned to emphasize the animal health-security interface. The observers included several participants from WOA, FAO and several European Institutions.

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Activity Title	UNSGM Designated Laboratories Workshop
Nature of activity or contribution	Annual experts workshop series
Partner Country/Region; International Organization/Initiative	Global
Implementing Country	Switzerland
Collaborating Institution(s)/Partner(s)	Swiss Federal Department of Foreign Affairs Swiss Federal Department of Defence, Civil Protection and Sport UN Office for Disarmament Affairs (UNODA)

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*NON-MONETARY CONTRIBUTION*

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Duration	2015 to on-going
Support to Non-proliferation Instruments And Multilateral Treaties	Secretary-General's Mechanism for Investigation of Alleged Use of Chemical and Biological Weapons, Biological Weapons Convention (UNODA)
Narrative Description	The UNSGM is the only international instrument available for investigating allegations of use of biological weapons. As such, it not only adds an important capability of relevance to the BTWC in the absence of pertinent institutional resources, but also acts as a deterrent against use and thus contributes to biological threat reduction.

Switzerland, together with several other UN Member States, has therefore been actively supporting efforts to strengthen the operational capabilities of the Mechanism for many years.

Switzerland's particular focus is on a network of trusted laboratories designated under the UNSGM in support of investigations of alleged use of biological weapons. Such a collaborative network provides greater transparency and confidence in scientific competencies, analytical skills and quality assurance systems.

In 2017, a milestone was achieved with a starting series of laboratory exercises dedicated to the UNSGM. The Swiss UNSGM Designated Laboratories Workshop series provides for a useful platform for a continued exchange of ideas and for developing a roadmap of further necessary steps to put a network of trusted laboratories at the disposal of the UNSGM.

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*NON-MONETARY CONTRIBUTION*

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Activity Title	Establishing a global culture of biosafety, biosecurity, and responsible conduct in the life sciences
Partner Country/Region; International Organization/Initiative	Global
Implementing Country	United States - Department of Health and Human Services (HHS)/ Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s) / Partner(s)	U.S. Department of Health and Human Services, U.S. Department of Agriculture, other U.S. Government Departments/Agencies and representatives of governments, academia, industry, intergovernmental organizations, non-governmental organizations, professional organizations, DIY Bio community laboratories, and other members of the voluntary International Working Group on Strengthening the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences

*NON-MONETARY CONTRIBUTION*

Duration	Ongoing
Support to Non-proliferation Instruments And Multilateral Treaties	<p>BWC and UNSCR 1540.</p> <p>This activity also supports GP Biological Security Deliverable 5 (Reduce biological proliferation risks through the advancement and promotion of safe and responsible conduct).</p>
Narrative Description	<p>Federal and contract support staff at the United States Department of Health and Human Services – Administration for Preparedness and Response (HHS/ASPR) collaborated with personnel from Mali’s National Institute of Public Health on a research project to examine organizational culture among laboratory workers in Mali. The team used the beliefs, opinions, and attitudes survey from the <a href="#">(Self) Assessment Framework</a> for their study. This framework was designed by the International Working Group on Strengthening the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences, a voluntary group co-lead by HHS/ASPR and the United States Department of Agriculture’s Animal and Plant Health Inspection Service that also developed in 2021 <a href="#">A Guide to Training and Information Resources on the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences</a>.</p> <p>The survey was distributed by members of the team based in Mali to public health, medical, and veterinary laboratory workers across five Malian regions. The survey results were shared with HHS/ASPR personnel and together the team members from the two nations analyzed the data collected. The results offered insights into perceptions held by Malian laboratory workers about the importance of implementing biosafety and biosecurity measures and the state of biosafety and biosecurity across their respective laboratories. The study also helped identify potential opportunities to build a greater culture of responsibility among laboratory workers through promotion of safe and secure laboratory best practices and increasing training to identify and prevent misuse of biotechnologies. The HHS/ASPR and Mali team co-authored an article detailing the study and its results, titled <a href="#">Building a Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences: A View from Mali</a>.</p> <p>HHS/ASPR and USDA/APHIS coordinate jointly the activities of The International Working Group on Strengthening the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences, which meets periodically to share information and lessons learned. In 2022, the following organizations/individuals led briefings to this group: Drs. Tatyana Novossiolo, Malcolm Dando and Lijun Shang (UK), on “Biological Security Education, Awareness, and Outreach as Essential Elements of Strengthening the Review of Science and Technology under the BTWC”; Professor Nariyoshi Shinomiya, the</p>

## NON-MONETARY CONTRIBUTION

	<p>President of Japan's National Defense Medical College, on "Cutting Edge Life Science and Dual Use Research of Concern - Our Attempts at Biosecurity Education"; Dr. Daniel Greene from Stanford University, on "Inspiring a Culture of Responsibility in the Life Sciences: Lessons from Social Psychology"; Dr. Holden Thorp, Editor-in-Chief, Science Journals, on "Safe Science: Safety Culture Research Applied to Laboratory Safety"; Dr. Filippa Lentzos (King's College London, UK) on "Countering Russian disinformation against public health labs"; Dr. Susan Cropp from FBI / Weapons of Mass Destruction Directorate on "Bio-smuggling at US Ports of Entry"; and Dr. Emmanuelle Tuerlings from WHO, on the recently published WHO <a href="#">Global guidance framework for the responsible use of the life sciences: mitigating biorisks and governing dual-use research</a>.</p>
Gender Equality	<p>The International Working Group on Strengthening the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences promotes initiatives and shares resources related to women empowerment and gender equality.</p>

## NON-MONETARY CONTRIBUTION

Activity Title	International Working Group on Strengthening the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences
Partner Country/Region; International Organization/Initiative	Global
Implementing Country	United States
Collaborating Institution(s) / Partner(s)	HHS [Office of the Assistant Secretary for Preparedness and Response (ASPR), NIH, CDC, Food and Drug Administration (FDA)], U.S. Department of Agriculture, U.S. Department of Defense, U.S. Department of Homeland Security, FBI, Environmental Protection Agency, Royal Scientific Society of Jordan, Netherlands National Institute for Public Health and the Environment, Denmark Centre for Biosecurity and Biopreparedness, ABSA-International, European Biosafety Association, International Federation of Biosafety Associations, INTERPOL, WHO, WOA, other industry, academia, and non-governmental organizations
Duration	Ongoing
Description	<p>International working group using crowdsourcing to develop guiding principles and educational/training resources to promote a culture of biosafety, biosecurity, and responsible conduct in the life sciences, based on the culture model and assessment methodology developed by IAEA for the nuclear safety and security culture. Conducts periodic webinars on the culture</p>

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of biosafety, biosecurity, and responsible conduct; outreach at conferences, workshops, training events; published articles; and shared information and associated materials on their websites and in their training and educational activities. The group supports and promotes, globally, a culture of biosafety, biosecurity, and responsible conduct in the life sciences and promotes effective oversight globally of dual-use research, encourages engagement among the health, scientific, biotechnology, enthusiast, and security communities in the United States, and with international partners, to reduce the risk of misuse. Supports GP Biological Security Deliverable 5 (*Reduce biological proliferation risks through the advancement and promotion of safe and responsible conduct*). The International Working Group is currently developing *A Guide to Training and Information Resources on the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences*, to be published in 2019.

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