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

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Item 7 of the provisional agenda

Consideration of the factual reports of the Meetings of Experts reflecting their deliberations, including possible outcomes

International Activities of Global Partnership Member Countries related to Article X of the Biological and Toxin Weapons Convention

Submitted by Canada, Denmark, European Union, Germany, Italy, Japan, the Netherlands, Spain, Sweden, United Kingdom, and United States

1. The member countries of the *Global Partnership Against the Spread of Weapons and Materials of Mass Destruction*¹ 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 both “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 bacteriological (biological) agents and toxins for peaceful purposes” and to “avoid hampering the economic or technological development of States Parties to the Convention or international

¹ 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.



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 contributes significantly to mitigation of global biological threats, whether they be naturally occurring, the result of accidental releases (including from laboratories) or a deliberate biological weapons 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 in 2018.

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) or 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 Organization for Animal Health (OIE)
Duration	2018-2022
Description	<p>The ERFAN project has the following specific objectives:</p> <ul style="list-style-type: none"> • 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; • 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 OIE Twinning Projects, in SADC and Arab Maghreb Union (UMA) Regions; • 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; • to improve the monitoring and controlling of zoonosis, transboundary animal diseases, animal welfare and food-borne diseases, in accordance with OIE standards; • to create an African community which will benefit from stronger global disease surveillance networks; • 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.

<i>Project Title</i>	<i>Improved regional management, preparedness and response to outbreaks crisis 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	<p>Project funded by the EU Instrument contributing to Stability and Peace.</p> <p>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.</p>
<i>Project Title</i>	<i>Agreement between FAO & 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 – Istituto Zooprofilattico Sperimentale Abruzzo Molise
Collaborating Institution(s) or Partner(s)	Food and Agriculture Organization (FAO)
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 & 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</p>

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	<p>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 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>Enable & 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	€3,790,000
Duration	2016-2018
Description	The project aims to establish a regional biosecurity network to rapidly respond to biological threats. A mobile laboratory was handed over to the G5 Sahel biosecurity network in March 2018 and a Rapid Response Team receives training to ensure future cross-border deployment of mobile laboratory.
<i>Project Title</i>	<i>Management of hazardous chemical and biological waste in the African Atlantic Facade region (Project CBRN 35)</i>
Partner Country/Region	Côte d'Ivoire, Gabon, Liberia, Mauritania, Morocco, Senegal, Togo, Tunisia
Implementing Country	Spain – International and Ibero-American Foundation for Administration and Public Policies (FIIAPP)
Collaborating Institution(s) / Partner(s)	Insubria Center on International Security (ICIS, Italy); AENOR; GRS
Project Value	€3,871,800 (Project funded by the EU Instrument contributing to Stability and Peace)
Duration	2014-2018
Description	The objective of this project is to enhance best practices in hazardous chemicals and biological (CB) waste management in the AAF region and in Tunisia. In terms of content, aspects related to sampling, detection, measurement, protection, decontamination, mitigation, transport, containment, site remediation and disposal should be considered in each country, while keeping a regionally consistent approach as much as

<i>Project Title</i>	<i>Management of hazardous chemical and biological waste in the African Atlantic Facade region (Project CBRN 35)</i>
	possible. This will include the elaboration of comprehensive standard procedures and technology solutions for CB.
<i>Project Title</i>	<i>The Project of 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>Advanced Training Program for Fostering Global Leaders on Infectious Disease Control to Build Resilience against Public Health Emergencies</i>
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
Project Value	In-kind contribution
Duration	2017-2022
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)).
<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 or Partner(s)	Public Health Agency of Canada – National Microbiology Laboratory (NML)

<i>Project Title</i>	<i>Building In-Country Capacity in Africa for Advanced Warning and Surveillance of Infectious Disease Outbreaks</i>
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>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>Strengthening Sustainable Biosafety & 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 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>Biosecurity in East Africa</i>
Partner Country/Region	Ethiopia, Kenya, Tanzania
Implementing Country	The Netherlands

<i>Project Title</i>	<i>Biosecurity in East Africa</i>
Collaborating Institution(s) or Partner(s)	The Ministries of Health of Ethiopia, Kenya, Tanzania
Project Value	€495,000
Duration	2017-2019
Description	<p>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 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 biorisk 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>The Project for 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.

<i>Project Title</i>	<i>Pan-African Network for Rapid Research, Response, Relief and Preparedness for Infectious Diseases Epidemics (PANDORA-ID)</i>
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<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 Republic of Congo – Fondation Congolaise pour la Recherche Médicale Project funded by the EDCTP EU programme
Collaborating institution(s)/partner(s)	University College London (UCL); Fondation Congolaise 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); Eberhard Karls Universität Tübingen (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 Développement (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)
Project Value	€9,997,501.25
Duration	2018-2022
Description	<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, clinical trialists, ethicists and social scientists to take</p>

<i>Project Title</i>	<i>Pan-African Network for Rapid Research, Response, Relief and Preparedness for Infectious Diseases Epidemics (PANDORA-ID)</i>
	leadership of emerging infections and the One HEALTH portfolio in all African regions
<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 or 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 Institution or 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 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	Ministry of Health and Ministry of Education, Science and Technology,

<i>Project Title</i>	<i>Biosecurity Partnership Programme in East Africa</i>
institution(s)/partner(s)	including National Commission for Science, Technology and Innovation
Project Value	US\$2,300,000
Duration	2014-2016/2016-2019
Description	<p>The purpose of the programme is to contribute to the development of national biosecurity and biopreparedness 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 biopreparedness capacity building.</p>
<i>Project Title</i>	<i>Swedish research collaboration with Kenya</i>
Partner Country/Region	Kenya
Implementing Country	Sweden – Swedish International Development Cooperation Agency
Collaborating Institution(s) or 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 trypanosomiasis (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 Institution(s)/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 between Somalia and Kenya, which will improve transboundary One Health surveillance.
<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 or Partner(s)	International Federation of Biosafety Associations (IFBA)
Project Value	C\$236,000
Duration	2016-2018
Description	This project supported the Government of Mali to mitigate threats posed by infectious diseases in West Africa through the development of

<i>Project Title</i>	<i>Development of a National Biosafety and Biosecurity System in Mali</i>
	a comprehensive national biosafety and biosecurity system.
<i>Project Title</i>	<i>Focal Partnerships within the German Biosecurity Programme</i>
Partner Country/Region	Morocco, Sudan, Tunisia
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH Robert Koch Institute
Project Value	€12,313,000 (2017-2019)
Duration	2013-2019
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 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. It is implemented by leading German research institutions and has a total budget of over 19 million Euros for three years (2017-2019).</p> <p>In the focal countries Tunisia, Morocco and Sudan the programme cooperates with the respective Health Ministries and subordinated central laboratories and institutions. Activities are implemented within the whole thematic range of the programme and according to specific needs. Examples are:</p> <p>Awareness raising: Implementation of national risk communication systems for biological threats, including policy advising, media and communication trainings etc.;</p> <p>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;</p> <p>Networking: Establishing laboratory networks (e.g. area specific, issue specific, national- and country-level); establishing and training national preparedness plans for biological threats;</p> <p>Capacity development: Policy advisory and 'ignition' conferences and workshops towards national biosafety and biosecurity policy in the security and health sector; support for planning, monitoring and evaluation methods and tools for executives concerned with biosafety and biosecurity.</p>
<i>Project Title</i>	<i>Biosecurity in Lagos State: Provision of a BioBank and Laboratory</i>
Partner Country/Region	Nigeria

<i>Project Title</i>	<i>Biosecurity in Lagos State: Provision of a BioBank and Laboratory</i>
Implementing Country	Canada – Weapons Threat Reduction Program, Global Affairs Canada
Collaborating Institution or 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 such as Ebola or Lassa Fever.

<i>Project Title</i>	<i>Enable & Enhance Initiative - Nigeria</i>
Partner Country/Region	Nigeria
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine
Project Value	€475,000
Duration	2016-2018
Description	<p>The project's goal is to advance Nigerian diagnostics and surveillance of haemorrhagic fevers such as Lassa fever to reduce regional biological risks.</p> <p>The partners receive assistance with establishing a training centre for molecular diagnostics.</p>

<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	<p>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</p>

<i>Project Title</i>	<i>West Africa Lassa Fever Project</i>
	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
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>Ebola Response and Biosecurity in Sierra Leone</i>
Partner Country/Region	Sierra Leone
Implementing Country	Canada – Weapons Threat Reduction Program, Global Affairs Canada
Collaborating Institution or Partner(s)	Public Health England (PHE) Public Health Agency Canada - National Microbiology Laboratory (NML) Global Emerging Pathogens Treatment Consortium (GET) Sierra Leone Ministry of Health
Project Value	C\$4,342,341.37
Duration	2016-2019
Description	As Ebola and other especially dangerous pathogens present significant security concerns, Canada is supporting the Government of Sierra Leone to locate, assess, prioritise and destroy or consolidate all Ebola samples resulting from the 2014-15 outbreak. Phase I activities (March-August 2016) included reconnaissance and data collation at priority laboratories and biosecurity training. Phase II (Sept 2016-Sept 2017) initiated data collection, temporary consolidation of samples and security upgrades at three sites and produced the design for a new “Biobank” and associated lab for securing all samples, which is being provided by Canada in Phase III (Sept 2017-June 2019). Funding is also facilitating technical and scientific support from Canada’s NML and the UK’s PHE.

<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 Institution or 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>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 institution(s)/partner(s)	National Institute for Infective Diseases Lazzaro Spallanzani (INMI)
Project Value	€298,503.60
Duration	2018-2020
Description	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". 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

<i>Project Title</i>	<i>Support to the decentralization of MDR-TB management in Dodoma Region (DETER-TB)</i>
	prevention and control of transmission in a hospital environment.
<i>Project Title</i>	<i>Enable & Enhance Initiative – Tunisia</i>
Partner Country/Region	Tunisia
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bundeswehr Institute of Microbiology, Robert Koch Institute and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
Project Value	€1,847,000
Duration	2016-2018
Description	The goal of the project is to strengthen Tunisian capacities to respond properly to biological threats. So far, a mobile laboratory was handed over to Tunisian partners in November 2017 and a Rapid Response Team receives training to ensure future deployment of mobile laboratory. Furthermore, an inter-sectoral Task Force for extraordinary biological threats was established.

II. Americas

<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 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

<i>Project Title</i>	<i>ViroRed</i>
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 OVPR-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	Argentina, Brazil, Mexico, 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
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 is</p>

<i>Project Title</i>	<i>Iberoamerican Network for Combating Antimicrobial Resistance (INCAR)</i>
	critical for reducing their dissemination at the hospital, community, and the environmental level. We propose a network able to enhance: 1- Adoption of susceptibility testing and epidemiological analysis recommendations 2- Human capacity building on a multidisciplinary basis 3- Bi and multilateral grant opportunities exploration 4- Strong diffusion efforts 5- Promote technology transfer to areas as such as animal husbandry and food production. 6- Grant access to a well-defined collection of historical and current resistant microorganisms.
<i>Project Title</i>	<i>OIE 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 (OIE)
Project Value	C\$250,000
Duration	2016-2018
Description	Canada is supporting OIE'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>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>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
Collaborating Institution(s) / Partner(s)	Verification, Research, Training and Information Centre (VERTIC)
Project Value	US\$275,000
Duration	2017-2018
Description	VERTIC provided legislative assistance and analysis and conducted outreach to support LAC countries to update national legal frameworks in accordance with the requirements of UNSCR 1540.

III. Asia

<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) or 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
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 to be 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"> - 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; - providing support for strengthening of the national legal systems addressing biosafety and biosecurity and reinforcing biological non-

<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>
	<p>proliferation principles, practices and instruments;</p> <p>- 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;</p> <p>- 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.</p>
<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) or 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 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 (2018)
Duration	2016-2020
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>Mitigating Biological Security Risks in the ASEAN region</i>

<i>Project Title</i>	<i>Mitigating Biological Security Risks in the ASEAN region</i>
Partner Country/Region	Brunei, Cambodia, Indonesia, Laos, 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 or Partner(s)	Association of South-East Asian Nations (ASEAN) Secretariat Mekong Basin Disease Surveillance Network (MBDS) BlueDot 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.

<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>
	<p>It is organized into three main components:</p> <p>Enhancing capabilities in crisis management for CBRN first responders through training and exercising.</p> <p>Evaluating and improving biosafety and biosecurity, including bio-risk and waste management.</p> <p>Promoting awareness raising concerning risk mitigation and the provision of technical support to strengthen legal framework.</p>
<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>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) or 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.
Project Value	€15,000
Duration	2018
Description	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,

<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>
	<p>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 biorisk 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 biorisk 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>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
Project Value	US\$200,000
Collaborating Institution(s) or Partner(s)	CRDF Global
Duration	2018-2019
Description	<p>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 biorisk management officers that are also biorisk management trainers. The course took 20 new safety officers and provided them training in biorisk 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</p>

<i>Project Title</i>	<i>Philippines Advanced BioRisk Officer Training Program (PhABOT) 5.0</i>
	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 Biosafety, which the US Department of State's Biosecurity Engagement Program previously established.
<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
Duration	2015 to 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>Bio-Safety and External Quality Assurance</i>
Partner Country/Region	Vietnam
Implementing Country	Japan
Collaborating Institution(s) / Partner(s)	National Institute of Infectious Diseases
Project Value	In-kind contribution
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.

IV. Europe

<i>Project Title</i>	<i>Strengthening CBRN first response capabilities and regional cooperation in South East Europe, Southern Caucasus, Moldova and Ukraine (P44)</i>
Partner Country/Region	Albania, Armenia, Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia, Georgia, Moldova, Montenegro, Serbia, Ukraine (South East and Eastern Europe)
Implementing Country	European Union
Collaborating Institution(s) or Partner(s)	Belgian Nuclear Research Institute (SCK•CEN), National Institute for Public Health and the Environment, The Netherlands (RIVM), Slovak first responders institute (ISEMI), Polish Institute for Organic Chemistry (IPO), Belgian Institute of Radio Elements (IRE), EU CBRN Centres of Excellence Regional Secretariat, UNICRI regional secretariat
Project Value	€2,953,550
Duration	2015-2018
Description	<p>The task of timely and effectively respond to a CBRN incident, whether it is due to a natural disaster or an accident, is an extremely difficult one, since it involves a considerable effort of coordination and communication between several institution at the national level. Furthermore, since CBRN accidents have no borders and may impact neighbouring countries, it is crucial that a framework for regional cooperation and sharing of information between countries in the region is established.</p> <p>The overall objective of the project is to enhance response capabilities and promote inter-agency and regional cooperation in CBRN first response in the Western Balkan and Black Sea regions by enhancing the capabilities to organise and execute table-top and field exercises, as well as train-the-trainer courses both at national and sub-regional level.</p> <p>These objectives will be achieved through the following activities:</p> <ol style="list-style-type: none"> 1) Assessment of the current situation including the outcomes of some specific activities obtained in the already implemented CBRN CoE projects 2) Development of guidelines and sharing of best practices on the CBRN incident response 3) List of basic equipment for first responders and technical specifications 4) Train-the-trainers and training activities on CBRN incident response for the countries in the Black Sea region 5) Strengthening inter-agency cooperation at sub-regional levels 6) Organisation of CBRN response exercises at national and sub-regional levels
<i>Project Title</i>	<i>Strengthening crime scene forensics capabilities in investigating CBRN incidents in the South East and Eastern Europe region (P57)</i>
Partner Country/Region	Albania, Armenia, Bosnia and Herzegovina, Former Yugoslav Republic of Macedonia, Georgia, Moldova, Montenegro, Serbia, Ukraine (South East and Eastern Europe)
Implementing Country	European Union
Collaborating Institution(s) or Partner(s)	Belgian Nuclear Research Institute (SCK•CEN), National Institute for Public Health and the Environment, The Netherlands (RIVM), Slovak

<i>Project Title</i>	<i>Strengthening crime scene forensics capabilities in investigating CBRN incidents in the South East and Eastern Europe region (P57)</i>
Project Value	first responders institute (ISEMI), Netherlands Forensic Institute (NFI), Belgian National Institute for Criminalistics and Criminology (NICC), Croatian Forensic Science Centre (FSC), EU CBRN Centres of Excellence Regional Secretariat, UNICRI regional secretariat €1,399,670
Duration	2017-2020
Description	<p>While countries in the region possess traditional forensics capabilities for investigation and preparation of court cases, it was highlighted that there is an insufficient amount of knowledge and equipment to carry out traditional forensics works in a CBRN environment, namely in the aftermath of an incident involving CBRN materials.</p> <p>The overall objective of the project of which this contract will be a part is as follows:</p> <ul style="list-style-type: none"> - Strengthen existing traditional forensic capabilities in investigating CBRN incidents among police experts - Develop a training system on forensic investigations in CBRN-related cases - Foster the establishment of networks of CBRN and forensics-related institutions and networks of forensics experts dealing with CBRN-related investigations at the sub-regional level. <p>The objectives of the project will be achieved through the implementation of the following main activities:</p> <ol style="list-style-type: none"> 1) Assessment of current situation regarding CBRN-related investigations and identification of best practices from EU Member States 2) Training for field forensics experts on CBRN crime scene investigations 3) Sub-regional forensics exercises 4) Creation of an informal regional network of forensics experts and forensics institutions and study visits to relevant international institutions 5) Criminal identification and exchange of information between the countries of the region 6) Provision of equipment to support CBRN forensic investigations
<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	<p>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.</p> <p>This designation is without prejudice to positions on status, and is in line</p>

<i>Project Title</i>	<i>Strengthening biosafety and measures to prevent and monitor Crimean Congo hemorrhagic fever (CCHF) in Kosovo</i>
	with UNSCR 1244 and the ICJ Opinion on the Kosovo Declaration of Independence.
<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>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) or 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"> 1. To develop a Reverse Genetics (RG) system for the genetic manipulation of AHSV; 2. To use RG to rapidly generate seed viruses for the production of a universal AHSV vaccine platform based on inactivated “synthetic” viruses. <p>Specific long-term aims are:</p>

<i>Project Title</i>	<i>Development of a vaccine platform for African Horse Sickness Virus using a synthetic biology approach</i>
	<p>3. To produce the “synthetic” vaccines in a vaccine manufacturer setting;</p> <p>4. To determine their ability to induce neutralizing antibodies in experimental animal models;</p> <p>5. To determine their ability to induce neutralizing antibodies in natural host;</p> <p>6. To determine their ability to elicit adequate protective immunity in the natural host</p>

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 Institution(s) / Partner(s)	CRDF Global
Project Value	US\$699,432
Duration	2016-2018
Description	<p>To improve laboratory equipment operation and maintenance standards in Iraq the following activities were implemented:</p> <p>basic laboratory equipment maintenance and repair training for Iraqi experts;</p> <p>implementation of a biorisk management train-the-trainer course involving international subject matter experts;</p> <p>promotion of biorisk management through a comprehensive curriculum on responsible science.</p>

<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 institution(s)/partner(s)	University Tor Vergata of Rome
Project Value	€1,605,601
Duration	2017-2020
Description	<p>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</p>

<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>
	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>CBRN Detection and Response Training</i>
Partner Country/Region	Iraq
Implementing Country	United States – Department of State's Office of Cooperative Threat Reduction
Collaborating Institution(s) / Partner(s)	Response Systems International (RSI), CRDF Global
Project Value	US\$500,000
Duration	2018
Description	The United States implemented a ten-day training for Iraqi security forces in Baghdad, Iraq. Experts in CBRN prevention and response shared best practices and concepts to guide use of personal protective equipment, detection of chemical and biological materials, and first aid for CBRN casualties, in order to enhance Iraqi security forces' ability to continue to operate in areas where CBRN materials are present or may be used.
<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) – \$49696.53 United Kingdom Ministry of Defence (MoD) \$676,828 Public Health England (PHE)
Project Value	C\$726,525
Duration	2018
Description	Since 2012, Canada has committed over \$60 million worth of equipment, infrastructure, training and related support to assist Jordan to guard against potential chemical, biological, radiological and nuclear (CBRN) incidents arising from Syria and Daesh. In 2018, 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>OIE Veterinary Education Twinning between the Royal Veterinary College (RVC)/Jordan University of Science and Technology (JUST)</i>

<i>Project Title</i>	<i>OIE 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 Institution(s)/ Partner(s)	OIE, Royal Veterinary College, USA DTRA, Jordan University of Science and Technology
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

VI. Multi-regional and Global Programming

<i>Project Title</i>	<i>Countermeasure for Communicable Diseases</i>
Partner Country/Region	Afghanistan, Democratic Republic of Congo, India, Nigeria
Implementing Country	Japan
Collaborating Institution(s) / Partner(s)	Nagasaki University, Center for International Collaborative Research
Project Value	In-kind contribution
Duration	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.

<i>Project Title</i>	<i>Laboratory Diagnosis Techniques for the Control of Vaccine Preventable Diseases, including Poliomyelitis, Measles and Rubella</i>
Partner Country/Region	Afghanistan, Kingdom of Eswatini, Nigeria, Philippines
Implementing Country	Japan
Collaborating Institution(s)/Partner(s)	National Institute of Infectious Diseases
Project Value	In-kind contribution

<i>Project Title</i>	<i>Laboratory Diagnosis Techniques for the Control of Vaccine Preventable Diseases, including Poliomyelitis, Measles and Rubella</i>
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 through hands-on training, towards the effective control of VPDs, including polio, measles, and rubella.
<i>Project Title</i>	<i>Promoting Universality and Implementation of the Biological and Toxin Weapons (BTWC)</i>
Partner Country/Region	Africa, Caribbean, Latin America
Implementing Country	Canada – Weapons Threat Reduction Program, Global Affairs Canada
Collaborating Institution(s)/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.
<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, 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"> To provide basic understanding and training in control of infectious diseases and the management of biohazards; To intensify and sustain international co-operation in the fields of biosafety, biosecurity and the prevention and management of epidemics; To strengthen national and local centres for infectious disease epidemiology and management, biosafety and biosecurity.

<i>Project Title</i>	<i>Project 36: MediPIET Further Development and Consolidation of the Mediterranean Programme for Intervention Epidemiology Training (IfS/2013/329-859)</i>
Partner Country/Region	Albania, Algeria, Armenia, Bosnia and Herzegovina, Egypt, Former Yugoslav Republic of Macedonia, Georgia, Jordan, Kosovo ¹ , Lebanon, Libya, Moldova, Montenegro, Morocco, Palestine ² , Serbia, Tunisia, Ukraine Two observer countries: Turkey and Israel As members of the Scientific Advisory Board: Greece, France and Spain 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. 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.
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 Public Health of Serbia “Dr. Milan Jovanovic Batut” (Serbia); The Observatory of New and Emerging Diseases (Tunisia); State Body «Ukrainian I.1 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)
Project Value	€6,450,000
Duration	2014-2018
Description	<u>MediPIET is an EuropeAid-DEVCO funded project under the Instrument contributing to Stability and Peace</u> , linked to the Chemical, Biological, Radiological and Nuclear Centres of Excellence initiative – CBRN CoE. The Consortium FIIAPP-ISCI, with the scientific leadership of ECDC, leads the project. 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. 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.

<i>Project Title</i>	<i>Project 36: MediPIET Further Development and Consolidation of the Mediterranean Programme for Intervention Epidemiology Training (IJS/2013/329-859)</i>
	<p>The main objectives are:</p> <ul style="list-style-type: none"> · 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 · 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 · 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 · Reinforce institutional capacity at national and regional levels <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> <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	European Union – DEVCO/EuropeAid France (general and network coordination) Italy Spain (network coordination)
Collaborating Institution(s) / Partner(s)	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,

<i>Project Title</i>	<i>MediLabSecure: Preventing vector-borne diseases around the Mediterranean and Black Sea regions by creating new networks</i>
	<p>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 Health, Ss. Cyril and Methodius University in Skopje - Faculty of Veterinary Medicine (Republic of Macedonia), Institute of Virology, Vaccines and Sera Torlak, Institute of Veterinary Medicine of Serbia, Faculty of Agriculture - University of Novi Sad, Institute of Public Health of Serbia "Dr. Milan Jovanovic Batut" (Serbia); Institut Pasteur de Tunis, Institut de la Recherche Vétérinaire de Tunisie, Ministère de la Santé Publique/Direction des soins de santé de base (Tunisia); Turkey Public Health Institute, Ankara University - Faculty of Veterinary Medicine, Hacettepe University (Turkey); State Body "Ukrainian I.I. Mechnikov Research Anti-Plague Institute of Ministry of Health of Ukraine", State Scientific and Research Institute of Laboratory Diagnostics and Veterinary and Sanitary Expertise, State Sanitary and Epidemiological Service of Ukraine, State Institution "Kyiv Oblast Laboratory Center of the State Sanitary-Epidemiological Service" (Ukraine)</p>
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>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

<i>Project Title</i>	<i>Improvement of epidemiological and serological tools for diagnosis and control of Brucellosis in the Mediterranean region (Brucmednet)</i>
	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) or 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
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 <i>B. melitensis</i> and <i>B. abortus</i> 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 <i>B. melitensis</i> 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>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)	<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

<i>Project Title</i>	<i>Disease Detection</i>
	<p>Animal Health (OIE), 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>Laboratory Diagnostics</i>
Partner Country/Region	Armenia, Azerbaijan, Cambodia, Ethiopia, Georgia, Guinea, India, Iraq, Jordan, Laos, Liberia, Kazakhstan, Kenya, 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><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 (OIE), World Health Organization (WHO)</p> <p><u>AFRICOM</u>: 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><u>CENTCOM</u>: 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><u>EUCOM</u>: 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><u>INDOPACOM</u>: Cambodia: Naval Medical Research Unit Two (NAMRU-2), Diagnostic Microbiology Development Program (DMDP), Fondation Mérieux, Armed Forces Research Institute of Medical Sciences, NIPH,</p>

<i>Project Title</i>	<i>Laboratory Diagnostics</i>
	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
Project Value	US\$38,300,000
Duration	2017-2018 (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.
<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 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 (OIE), 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>
Project Value	US\$16,400,000

<i>Project Title</i>	<i>Epidemiological Analysis and Investigation</i>
Duration	2017-2018 (continuing)
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>Consolidation and Securing of Pathogens</i>
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><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 (OIE), World Health Organization (WHO))</p> <p><u>AFRICOM</u>: 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 Diagnostics and Epidemiology Center (NADDEC), Mbale District Veterinary BSL-2 Laboratory, and National Livestock Resource Research Institute (NaLIRRI)</p> <p><u>CENTCOM</u>: 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 Nonproliferation 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><u>EUCOM</u>: 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</p>

<i>Project Title</i>	<i>Consolidation and Securing of Pathogens</i>
	<p>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><u>INDOPACOM</u>: Cambodia: National Institute of Public Health (NIPH); India: Ministry of Science and Technology (MoST); Indonesia: Tentara Nasional 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), OIE 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 (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.

<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, 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><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 (OIE), World Health Organization (WHO)</p> <p><u>AFRICOM</u>: 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</p>

<i>Project Title</i>	<i>Facility-Level Biorisk Management Systems and Training</i>
	<p>Elizabeth National Park</p> <p><u>CENTCOM</u>: 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><u>EUCOM</u>: 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><u>INDOPACOM</u>: 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, OIE RRL, Institute for Animal Health, AFRIMS; Vietnam: MOH, DAH, MARD, National Institute of Veterinary Medicine</p>
Project Value	US\$42,500,000
Duration	2017-2018 (continuing)
Description	BTRP supports biosafety and biorisk 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>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><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 (OIE), World Health Organization (WHO)</p> <p><u>AFRICOM</u>: Cameroon: MINSANTE, MINEPIA, and LANAVET</p> <p><u>CENTCOM</u>: Iraq: CGI MOH and MOA, KRG MOH and MOA; Jordan: MoH, RMS, MoA, CDD; Uzbekistan: MOH, SVC</p> <p><u>EUCOM</u>: 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><u>INDOPACOM</u>: Malaysia: MoH, MOA/DVS, STRIDE; Philippines: PPSC, PNP, Multiple RADDLs, RITM, ADDRL, National Institute of Health, the Bureau of Animal Industry-Animal Welfare Division</p>
Project Value	US\$15,800,000
Duration	2017-2018 (continuing)
Description	BTRP supports projects designed to increase partner capacity to communicate and report EDPs. Support includes development, installation

<i>Project Title</i>	<i>Reporting and Communications</i>
	and training on electronic reporting systems, training on multi-sectoral communications, and construction / equipping health emergency operations centers.
<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 Institution or 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>Understanding pathogen, livestock, environment interactions involving bluetongue virus (PALE-Blue). EC H2020-SFS-2016-2</i>
Partner Country/Region	Belgium, France, Germany, Israel , Italy, Kenya, Morocco, Netherlands, Senegal, Spain, Sweden, Tunisia, Turkey, United Kingdom (coordinator)
Implementing Country	United Kingdom (coordinator); France; Italy; Germany; Belgium; Spain; Netherlands; Israel; Sweden; Turkey; Morocco; Kenya; Senegal; Tunisia
Collaborating Institution(s) / Partner(s)	Agence Nationale de Sécurité Sanitaire de l'alimentation de l'environnement et du travail (Francia); Centre de Cooperation International en Recherche Agronomique pour le Developpement (Francia); Enviromental Research Group Oxford Limited (United Kingdom); Friedrich Loeffler Institut-Bundesforschungsinstitut fuer Tiergesundheit (FLI) (Germany); Hassan II Institute of Agronomy & 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)
Project Value	€6,039,301
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

<i>Project Title</i>	<i>Understanding pathogen, livestock, environment interactions involving bluetongue virus (PALE-Blue). EC H2020-SFS-2016-2</i>
	<p>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 vertebrae 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.</p>
<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)	<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 (OIE), 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, ADDR</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, Mauretania, 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>Strengthening of Community Health System for Infectious Diseases Control(A)</i>
Partner Country/Region	Democratic Republic of Congo, Kenya, Liberia, Malawi, Myanmar, Nigeria, Pakistan
Implementing Country	Japan
Collaborating Institution(s) / Partner(s)	TA Networking Corp.
Project Value	In-kind contribution
Duration	2018
Description	This program is designed for prevention of infectious diseases through enhancement of public health, and focuses on following contents. 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
<i>Project Title</i>	<i>Strengthening laboratory techniques and surveillance system for global control of HIV and related infectious diseases</i>
Partner Country/Region	East Timor, Ghana, Honduras, Malawi, Myanmar, Philippines, Sudan
Implementing Country	Japan
Collaborating Institution(s) / Partner(s)	National Institute of Infectious Diseases, AIDS Research Center
Project Value	In-kind contribution
Duration	2018

<i>Project Title</i>	<i>Strengthening laboratory techniques and surveillance system for global control of HIV and related infectious diseases</i>
Description	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 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 whole infectious disease surveillance system.
<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 Institution(s) or 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 biorisk 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>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
Collaborating Institution(s) / Partner(s)	Weapons Threat Reduction Program, Global Affairs Canada Public Health Agency Canada - The Centre for Biosecurity (CB - PHAC)
Project Value	C\$564,246
Duration	2018-2021
Description	The IEGBBR coordinates and leads concurrent projects related to the international alignment, strengthening, and advancement of biosafety and biosecurity regulatory oversight mechanisms, under the leadership of CB-PHAC. Planned deliverables for the IEGBBR will contribute to global health

<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>
	<p>capacity building initiatives, and are championed by the IEGBBR Secretariat, which will be maintained by the funding received:</p> <p>IEGBBR Compendium of International Biosafety and Biosecurity Oversight Mechanisms;</p> <p>Dual-use Oversight Mechanisms in the IEGBBR;</p> <p>Outreach towards International Biosafety and Biosecurity Capacity-Building;</p> <p>IEGBBR External Communication Strategies.</p>
<i>Project Title</i>	<i>An 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)	Public Health Agency Canada - The Centre for Biosecurity (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> <p>is a modular, scalable step-by-step process that can be used in a non-linear way by regional, national or local authorities;</p> <p>provides a structure for critical thinking that will assist with clarifying and defining country-specific issues, and identifying feasible solutions;</p> <p>supports risk management for both moderate and high risk pathogens and toxins using safety and security lenses;</p> <p>includes practical guidance, overview of common policy instruments, and options for combining them into a national program; and</p> <p>assists officials to identify and prepare sound recommendations to decision-makers.</p>
<i>Project Title</i>	<i>Building Global Resilience Against Agro-Terrorism and Agro-Crime</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program, Global Affairs Canada
Collaborating	World Organisation for Animal Health (OIE)

<i>Project Title</i>	<i>Building Global Resilience Against Agro-Terrorism and Agro-Crime</i>
Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL) Food and Agriculture Organization of the United Nations (FAO)
Project Value	C\$6,715,575
Duration	2018-2022
Description	Canada is supporting OIE, INTERPOL and FAO to build global resilience against agro-terrorism and agro-crime. The project promises to strengthen global capacity to respond to animal health emergencies that result from the intentional release of animal pathogenic biological agents by: assessing and reacting to global agro-terrorism and agro-crime trends and threats; building national capacity for emergency management in specific countries or regions through training, simulation exercising and testing; and improving regional and global coordination between national veterinary services and law enforcement agencies in response to an international emergency.

<i>Project Title</i>	<i>Coalition for Epidemic Preparedness Innovations</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\$14,000,000
Duration	2017-2020
Description	At the G20 Summit in Argentina in December 2018, Prime Minister Trudeau announced that Canada would provide an additional \$10M of funding and technical expertise to support development of vaccines for 5 priority diseases (MERS CoV, Lassa, Nipah, Marburg and Ebola) that pose serious health and security threats. This is on top of the \$4M that was similarly announced at the G20 Summit in Hamburg in July 2017. This contribution will further support CEPI's mission to build a new system for the development of safe, effective and affordable vaccines, thereby helping to mitigate threats from outbreaks of emerging infectious diseases whether naturally occurring, accidental or deliberately caused.

<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, Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Nuclear Threat Initiative (NTI)
Project Value	US\$238,400
Duration	2017-2019
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 Global Health Security Agenda (GHSA) and Joint External Evaluation.
<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 Institution(s) / Partner(s)	World Organisation for Animal Health (OIE)
Project Value	C\$4,153,000
Duration	2016-2018
Description	Canada is supporting OIE'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>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 (Rabat, Morocco, 25-26 October 2017), sponsored by the 2018 Italian Presidency of the Global Partnership and the European Union CBRN Centers of Excellence Initiative, UNICRI and PHAC assessed that there would be value in expanding this analysis to include several priority regions,

<i>Project Title</i>	<i>Global Biosecurity Risk Analysis and Needs Assessment</i>
	including South-East Asia, the Middle East and South America. The project would identify priorities for 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(s) / Partner(s)	University of Sydney
Project Value	AU\$110,000
Duration	2018-2019
Description	Canada will support the convening of a Global Health Security Conference, to be held in Sydney, Australia from 18-20 June 2019. Global Health Security 2019 (GHS 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>Insider Threat Awareness and Online Training Material</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)
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 or Partner(s)	International Criminal Police Organization (INTERPOL) BlueDot

<i>Project Title</i>	<i>INTERPOL's Bioterrorism Prevention Unit Initiative for enhancing Biological Preparedness</i>
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
Collaborating Institution or Partner(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>OIE Biological Threat Reduction Activities</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program, Global Affairs Canada
Collaborating Institution(s) / Partner(s)	World Organisation for Animal Health (OIE)
Project Value	C\$2,903,757
Duration	2016-2018
Description	Canada is supporting OIE efforts to mitigate serious biological security threats posed by infectious diseases of 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;

<i>Project Title</i>	<i>OIE Biological Threat Reduction Activities</i>
	<p>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 OIE PVS 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 OIE; 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 organisations (OIE, 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>OIE Sustainable Lab Biosafety and Biosecurity</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program, Global Affairs Canada
Collaborating Institution(s) / Partner(s)	World Organisation for Animal Health (OIE)
Project Value	C\$3,336,063
Duration	2018-2021
Description	<p>This project will support the OIE to strengthen biological safety and biosecurity at laboratories around the world. It will address challenges and recommendations to sustainable laboratory as identified at the OIE consultation on Sustainable Laboratory Biosafety and Biosecurity, which was also funded by Canada. The project activities include:</p> <p>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;</p> <p>implementation of an action plan to improve sustainable laboratory biosafety and biosecurity;</p> <p>support for veterinary laboratory twinning projects to address sustain biosafety and biosecurity concerns for high consequence pathogens of security concern;</p> <p>further develop the sustainable Performance of Veterinary Services (PVS) laboratories tool; and</p> <p>open innovation competition to offer solution to improve the sustainability of laboratories.</p>
<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, Global Affairs Canada
Collaborating Institution(s) / Partner(s)	One Health Platform
Project Value	C\$136,000

<i>Project Title</i>	<i>One Health- Global Perspectives on Health and Security</i>
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>Reducing Biological Proliferation Risks Posed by Dual Use Research of Concern</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program, Global Affairs Canada
Collaborating Institution(s) / Partner(s)	World Health Organization (WHO)
Project Value	US\$3,243,835
Duration	2018-2022
Description	This project will initiate an innovative collaboration with the WHO to better address the many sensitivities, complexities and threats posed by dual use research of concern (DURC). Through this project, the WHO will establish a Health Science Foresight Secretariat with a mandate to scout, investigate and liaise with major research entities, academies and start-ups on research plans and activities that have the potential to be misapplied. The Secretariat will likewise collaborate with leading research entities and countries to create a Foresight Network (for the early identification and assessment of DURC-related matters) and convene regional meetings with the aim of raising awareness, engaging local expertise, recruiting scientist champions and establishing collaborating centres.

<i>Project Title</i>	<i>Strengthening Global Mechanisms and Capacities for Responding to Deliberate Use of Biological Agents</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program, Global Affairs Canada
Collaborating Institution(s) / Partner(s)	United Nations Office for Disarmament Affairs (UNODA) Wilton Park World Health Organization (WHO)
Project Value	C\$18,436,221
Duration	2018-2020
Description	As global capabilities to respond to and investigate deliberate biological incidents are seriously underdeveloped, Canada identified “Strengthening Global Mechanisms and Capacities for Investigating and Responding to the Deliberate Use of Biological Agents” as a top priority for its 2018 GP

<i>Project Title</i>	<i>Strengthening Global Mechanisms and Capacities for Responding to Deliberate Use of Biological Agents</i>
	Chairmanship. Specific activities include: strengthening the WHO's Health Security Interface (HSI) Secretariat and capacities to respond to chemical and biological weapons (CBW) events; making permanent and further strengthening the HSI Secretariat, including through the development of a multidisciplinary deliberate event readiness and response team; further development of an inter-agency cooperation framework for enhanced response preparedness and coordination by the major international organizations with potential roles in responding to the deliberate use of disease; and support for the BTWC Sponsorship Program and enabling the ISU to conduct critical outreach and participate in key external meetings.
<i>Project Title</i>	<i>World Health Organisation (WHO) Biological Threat Reduction Programming</i>
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program, Global Affairs Canada
Collaborating Institution(s) / Partner(s)	World Health Organisation (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>German Online Platform for Biosecurity & 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	€224,000
Duration	2017-2019
Description	GO4BSB is an e-learning platform established in support of all projects of the German Biosecurity Programme. Online available course rooms, training modules and learning materials as well as an e-library on topics related to biosafety & biosecurity, the BTWC, Australia Group and UN Resolution 1540 shall contribute to the contents of the German Biosecurity Programme. The platform is for registered users only.

<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 Country/Institution	Italy 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>Development of technologies for characterization of biothreat 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 biothreat agents; for investigations of alleged use of biological weapons, in co-operation with UNODA.

<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
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 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>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 Institution(s)/ 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 https://www.bradford.ac.uk/social-sciences/peace-studies/research/publications-and-projects/guide-to-biological-security-issues/Guide_final.pdf and www.futurelearn.com/courses/biosecurity respectively.

<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

<i>Project Title</i>	<i>Bioterrorism Evidence Exploitation Workshop and Operation</i>
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>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 Institution(s)/ 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 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>The UNICEF-UNDP-World Bank-WHO Special Programme for Research and Training in Tropical Diseases (TDR)</i>
Partner Country/Region	World Health Organization (WHO)
Implementing Country	Sweden – Swedish International Development Cooperation Agency
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.