

ANNEX

GPWG Annual Project Report (2018) International Threat Reduction Activities of Member Countries of the *Global Partnership Against the Spread of Weapons and Materials of Mass Destruction*

The international community continues to face serious challenges, regionally and globally, from chemical, biological, radiological and nuclear (CBRN) weapons and related materials. The *Global Partnership Against the Spread of Weapons and Materials of Mass Destruction* was created to address and mitigate these threats.

Global Partnership (GP) member countries¹ work in all parts of the world to prevent terrorists, or those that harbour them, from acquiring or developing CBRN weapons. To this end, cooperative project activities focus on, *inter alia*: securing and destroying dangerous CBRN materials; protecting and/or enhancing vulnerable physical infrastructure; strengthening global networks and supporting international initiatives (such as the Nuclear Security Summit process and the Global Health Security Agenda); and building partner capacity to meet international obligations set out in UN Security Council Resolution (UNSCR) 1540 against WMD proliferation.

In 2018, a total of 295 Projects were implemented by 18 GP Partners: Australia, Belgium, Canada, Denmark, European Union, Finland, France, Germany, Italy, Japan, the Netherlands, New Zealand, Norway, Spain, Sweden, Ukraine, the United Kingdom and the United States. These Projects are valued at close to US\$1.1 billion (or € 960M) and were implemented in dozens of countries in every region of the world. A detailed breakdown of project expenditure by region is attached in Appendix I of this Annex.

This Programming Annex highlights and clearly demonstrates the significance of the collective contribution of GP members to global WMD threat reduction and to the fulfilment of respective national commitments under the Biological and Toxin Weapons Convention (BTWC), the Chemical Weapons Convention (CWC), the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), and UNSCR 1540.

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, United Kingdom and United States.

I. AFRICA

BIOLOGICAL

Project Title	Enhancing Research for Africa Network (ERFAN)
Partner Country/Region	Algeria, Angola, Botswana, Libya, Mauritania, Morocco, Mozambique, Namibia, South Africa, Tanzania, Tunisia, Zambia, Zimbabwe
Implementing Country	Italy
Collaborating Institution(s) / Partner(s)	Italian Ministry of Health, Direzione Generale della Sanità Animale e dei Farmaci Veterinari; Istituto Zooprofilattico Sperimentale del Mezzogiorno (IZSM), Portici; Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Val D'Aosta (IZSPLVD), Torino; Istituto Zooprofilattico Sperimentale della Puglia e Basilicata (IZSPB), Foggia; Istituto Zooprofilattico Sperimentale della Sicilia (IZSSI), Palermo
Project Value	€1,451,000 (estimated budget) through the World 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.

Project Title	Improved Regional Management, Preparedness and Response to Outbreaks Crises in the CBRN Centres of Excellence partner countries of the African Atlantic Façade (Project CBRN 48)
Partner Country/Region	Benin, Cameroon, Cote d'Ivoire, Gabon, Guinea, Liberia, Mauritania, Morocco, Senegal, Sierra Leone, Togo
Implementing Country	France – Expertise France
Collaborating Institution(s) / Partner(s)	International and Ibero-American Foundation for Administration and Public Policies (FIIAPP, Spain)
Project Value	€3,500,000
Duration	2016-2019
Description	Project funded by the EU Instrument contributing to Stability and Peace. The project aims at building and/or reinforcing regional capacity to deal with large scale outbreaks in the AAF Region. The objective is to identify gaps, prepare for coordinated regional solutions and teams, and provide appropriate trainings of local staff and set-up the necessary capacity for a sustainable preparedness against future major biological outbreaks in the AAF region.

Project Title	Enhancing Diagnostic Capacity of Veterinary Laboratories in African Countries
Partner Country/Region	Botswana, Cameroon, Cote d'Ivoire, Ethiopia, Kenya, Senegal, Tanzania, Uganda
Implementing Country	Italy – Istituto Zooprofilattico Sperimentale Abruzzo Molise
Collaborating Institution(s) / Partner(s)	Food and Agriculture Organization (FAO)
Project Value	€626,881
Duration	2016-2019
Description	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

	<p>storage location, the type and the quantity of biological material stored, etc. SILABFA stores all data relating to the stored samples. When samples are received, the user can decide to proceed with analysis of the sample or to simply store the sample until further analysis at a later point in time. The samples stored are identified with the submission numbers and all metadata (owner, sampling date, place, etc.) is recorded in the system.</p> <p>This module has been installed and staff has been trained on this module. Samples received under the EPT2 project have been already collected and registered in the SILABFA-Sample Bank in Kenya and Tanzania. The Sample Bank module can be used alone (Mini_SILAB) and is adapted for interoperability with any external system.</p>
--	---

Project Title	Enable & Enhance Initiative – Mali/G5 Sahel
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.

Project Title	Improvement of National Institute for Research and Biomedical
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.

Project Title	Advanced Training Program for Fostering Global Leaders on Infectious Disease Control to Build Resilience against Public Health Emergencies
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)).

Project Title	Building In-Country Capacity in Africa for Advanced Warning and Surveillance of Infectious Disease Outbreaks
Partner Country/Region	Democratic Republic of Congo, Guinea, Liberia, Nigeria, Republic of Congo, Sierra Leone
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Public Health Agency of Canada National Microbiology Laboratory (NML)
Project Value	C\$800,367
Duration	2017-2021
Description	Canada's NML is implementing a simple, robust and accurate early warning system at the country level capable of identifying Ebola virus positive individuals, which will enable rapid intervention and will strengthen biosecurity and biosafety.

Project Title	Development Research
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.

Project Title	Strengthening Sustainable Biosafety & Biosecurity in East Africa
Partner Country/Region	Ethiopia, Kenya, Rwanda, Tanzania, Uganda, South Sudan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Federation of Biosafety Associations (IFBA)
Project Value	C\$245,000
Duration	2017-2018
Description	This project is focusing on the development of sustainable biosafety and biosecurity in East Africa, enhancing multi-sectoral collaboration and fostering partnerships between the Biorisk Management Association of Kenya, the Biosafety & Biosecurity Association of Uganda, the African Union, relevant government ministries and international partners (including IFBA and Global Partnership members) in the development and implementation of comprehensive and sustainable biosafety and biosecurity strategies and capacity in East Africa.

Project Title	Biosecurity in East Africa
Partner Country/Region	Ethiopia, Kenya, Tanzania
Implementing Country	The Netherlands
Collaborating Institution(s) / Partner(s)	The Ministries of Health of Ethiopia, Kenya, Tanzania
Project Value	€495,000
Duration	2017-2019
Description	<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</p>

	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.
--	--

Project Title	Establishment of Laboratory Surveillance System for Viral Diseases of Public Health Concern
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.

Project Title	Pan-African Network for Rapid Research, Response, Relief and Preparedness for Infectious Diseases Epidemics (PANDORA-ID)
Partner Country/Region	Gabon, Ghana, Nigeria, Republic of Congo, Sierra Leone, Sudan, Tanzania, Uganda, Zambia
Implementing Country	United Kingdom – University College London Italy – National Institute for Infectious Diseases Lazzaro Spallanzani Project funded by the EDCTP EU programme
Collaborating Institution(s) / Partner(s)	University College London (UCL); Fondation Congolese pour la Recherche Medicale (FCRM); HerpeZ Limited by Guarantee; Bernhard-Nocht-Institut fur 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 fur Virologie-Charité-Universitätsmedizin Berlin; National Institute for Medical Research-Tanzania (NIMR); Eberhard Karls Universitaet Tuebingen (EKUT) Institute of Endemic Diseases (IEND); Ifakara Health Institute Trust (IHI); East, Central and Southern African Health Community (ECSA-HC); Chatham House Centre on Global Health; Noguchi Memorial Institute for Medical Research (NMIMR); Emergency Life Support for Civilian War Victims ONG ONLUS (EMERGENCY ONG ONLUS); Kwame Nkrumah University of Science and Technology (KNUST); Institut de Recherche pour le Developpment (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> <ol style="list-style-type: none"> 1) 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. 2) develop capacities for conduct of research (multidisciplinary operational, anthropological, social science, basic science, translational clinical, clinical trials, implementation research) in two situations: <ul style="list-style-type: none"> ○ In the emergency outbreak or epidemic situation. ○ In the inter-epidemic period. 3) 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 leadership of emerging infections and the One HEALTH portfolio in all African regions
--------------------	---

Project Title	Sustainable Laboratories for High-Consequence Pathogens in Low Resource Environments
Partner Country/Region	Ghana, Nigeria
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Royal Institute of International Affairs (Chatham House)
Project Value	£692,529
Duration	2017-2020
Description	<p>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 1 (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.</p>

Project Title	Strengthening Urban Preparedness and Resilience against Biological Threats
Partner Country/Region	Ghana, Nigeria, South Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Royal Institute of International Affairs (Chatham House)
Project Value	£100,183
Duration	2018-2019
Description	This project focuses on capacity building activities required to strengthen urban resilience to biological threats in several large African cities. Building on foundational needs assessments 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.

Project Title	Biosecurity Partnership Programme in East Africa
Partner Country/Region	Kenya
Implementing Country	Denmark
Collaborating Institution(s) / Partner(s)	Ministry of Health and Ministry of Education, Science and Technology, including National Commission for Science, Technology and Innovation
Project Value	US\$2,300,000
Duration	2014-2019
Description	<p>The purpose of the programme is to contribute to the development of national biosecurity and bio-preparedness systems. Areas of support include legislation, awareness raising and capacity building. Results include:</p> <ul style="list-style-type: none"> • A comprehensive biosecurity gap survey covering 86 labs. • Development of the book <i>An efficient and practical approach to Biosecurity</i>. • 8 university training workshops on responsible science reaching approx. 500 students and staff. • 1 2-day train-the-trainers workshop on responsible science for university biosecurity focal points. • 1 Biosecurity High-Level Meeting with senior representatives from the government and legislative branch and other stakeholders. • Support to biosecurity legislation, incl. assistance to draft control list, several drafting workshops and high-level meetings with senior government officials. • Initial steps towards bio-preparedness capacity building.

Project Title	Swedish Research Collaboration with Kenya
Partner Country/Region	Kenya
Implementing Country	Sweden – Swedish International Development Cooperation Agency
Collaborating Partner(s)	International Centre of Insect Physiology and Ecology (Icipe)
Project Value	SEK 14,211,263/€1,367,404 (2018)
Duration	2016-2020
Description	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. Some insects are disease vectors and are responsible for the transmission of dilapidating human and livestock diseases. Such diseases include malaria (transmitted by mosquitoes), human and animal trypanosomosis (commonly known as sleeping sickness and nagana, respectively) which are transmitted by tsetse. Other vector-borne diseases include dengue, kala-azar, Rift Valley fever and yellow fever.

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

Project Title	Enhancing Biosafety, Biosecurity and Bio Preparedness of National Public Health and County Laboratories in the Kenya Ministry of Health. "Biosafety/security/risk management Curriculum Integration"
Partner Country/Region	Kenya
Implementing Country	United States – Department of Defense, Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	Kenya Ministry of Health, CDC Kenya, Sandia National Laboratories, Food and Agriculture Organization, National Institute for Public Health and the Environment (Netherlands), University of Maryland

Project Value	In-kind contribution
Duration	2017-2018
Description	The national curriculum project seeks to integrate and harmonize existing bio risk and biosafety/biosecurity curricula into a nationally applicable and sustainable modular curriculum for pre and in-service training.

Project Title	One Health Surveillance Network for Transboundary Outbreaks between Somalia and Kenya
Partner Country/Region	Kenya , Somalia
Implementing Country	United States – Department of State’s Biosecurity Engagement Program
Collaborating Partner(s)	Global Implementation Solutions
Project Value	US\$240,000
Duration	2018
Description	The United States implemented a project to join the Somalia One Health Technical Working Group (SOH-TWG) with representatives from the Kenya Zoonotic Disease Unit (Kenya-ZDU). Under the guidance of subject matter experts from GIS, SOH-TWG and Kenya-ZDU officials developed operational plans for transboundary Rift Valley Fever and Brucellosis outbreaks during a January 2018 meeting. The operational plans will be exercised during a second meeting to be held in December 2018, where SOH-TWG and Kenya-ZDU officials will run a field-based workshop. This project has resulted in increased biosecurity coordination and cooperation between Somalia and Kenya, which will improve transboundary One Health surveillance.

Project Title	Security Upgrade of Facilities in Libya
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.

Project Title	Development of a National Biosafety and Biosecurity System in Mali
Partner Country/Region	Mali
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Federation of Biosafety Associations (IFBA)
Project Value	C\$236,000
Duration	2016-2018

Description	This project supported the Government of Mali to mitigate threats posed by infectious diseases in West Africa through the development of a comprehensive national biosafety and biosecurity system.
--------------------	---

Project Title	Focal Partnerships within the German Biosecurity Programme
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> <ul style="list-style-type: none"> • Awareness raising: Implementation of national risk communication systems for biological threats, including policy advising, media and communication trainings etc.; • Biosafety and biosecurity: Bio risk management courses and good laboratory practice courses; lab organization support; provision of adequate lab equipment and consumables; • Surveillance: Implementation of SOPs and fail-proof surveillance data exchange systems; • Detection and diagnostics: Training in safe and reliable diagnostics; guidance and support (experts, equipment, consumable) for ongoing diagnostic challenges; • Networking: Establishing laboratory networks (e.g. area specific, issue specific, national- and country-level); establishing and training national preparedness plans for biological threats; • 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.

Project Title	Biosecurity in Lagos State: Provision of a BioBank and Laboratory
Partner Country/Region	Nigeria
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Lagos State Ministry of Health
Project Value	C\$3,729,503.60
Duration	2017-2019
Description	Canada has provided a biosafety laboratory and associated Biobank to be operated by the Lagos State Ministry of Health with the aim to strengthen capabilities to prevent, detect and respond to outbreaks of infectious diseases (e.g. Ebola or Lassa Fever).
Project Title	Enable & Enhance Initiative - Nigeria
Partner Country/Region	Nigeria
Implementing Country	Germany
Collaborating Partner(s)	Bernhard Nocht Institute for Tropical Medicine
Project Value	€475,000
Duration	2016-2018
Description	The project's goal is to advance Nigerian diagnostics and surveillance of haemorrhagic fevers such as Lassa fever to reduce regional biological risks. The partners receive assistance with establishing a training centre for molecular diagnostics.

Project Title	West Africa Lassa Fever Project
Partner Country /Region	Nigeria
Implementing Country	United Kingdom – Ministry of Defence
Collaborating Institution(s) / Partner(s)	Liverpool School of Tropical Medicine Public Health England
Project Value	£230,000
Duration	2018-2020
Description	The project is comprised of two separate but complementary elements, which span both Public Health and Defence Medical Health aspects, with the aim of increasing capability to rapidly deal with infected individuals and minimise the potential of spread of the virus. The project aims to build in country capability for both point of care diagnostics (to aid with early triage of patients, thus reducing the potential for further spread of virus), and training to increase in-country capability with respect to laboratory diagnostics and confirmatory testing at the Federal Teaching Hospital Abakaliki (FETHA). Lassa Fever poses a high risk to national security and public health because it is easily transmitted from person to person and has a high mortality rate. The virus is also of security concern because of its potential for misuse. The project will improve biosecurity by reducing the need for transport and culture of samples. Overall, the project will improve Nigerian capability to respond to LF outbreaks, whether caused deliberately or naturally, as well as to other disease outbreaks involving

	pathogens of security concern. Work is planned to commence in late 2018.
--	--

Project Title	International Cooperation with Ministry of Health from Equatorial Guinea
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 : - Programmes for Malaria, Neglected Tropical Diseases, HIV/AIDS & TB.

Project Title	Ebola Response and Biosecurity in Sierra Leone
Partner Country/Region	Sierra Leone
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / 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
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.

Project Title	Strengthening Biosecurity and Biosafety at South Africa’s National Institute for Communicable Diseases (NICD)
Partner Country/Region	South Africa
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	National Institute for Communicable Diseases (NICD)
Project Value	C\$1,950,000
Duration	2016-2018
Description	Through this project, Canada and South Africa are collaborating to

	strengthen biological safety and biological security at NICD.
--	---

Project Title	European and Developing Countries Clinical Trials Partnership (EDCTP)
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.

Project Title	Support to the Decentralization of MDR-TB Management in Dodoma Region (DETER-TB)
Partner Country/Region	Tanzania
Implementing Country	Italy – Ministry of Foreign Affairs and International Cooperation
Collaborating Partner(s)	National Institute for Infective Diseases Lazzaro Spallanzani (INMI)
Project Value	€298,503.60
Duration	2018-2020
Description	<p>Through the strengthening of the DRRH Clinical Microbiology and TB Laboratory and the MDR TB clinical services, the project supports the decentralization strategy through a targeted intervention on hospital management of MDR-TB cases. The intervention involves the implementation of an integrated model that can guarantee the management of MDR-TB cases from diagnosis to the conclusion of the "intensive phase".</p> <p>This model will be implemented through interventions focused on the different components of the management of complicated MDR-TB patients, specifically: 1. Laboratory diagnosis and microbiological follow-up; 2. Clinical and follow-up activities of patients; 3. Infection prevention and control of transmission in a hospital environment.</p>

Project Title	Establishment of a Sustainable Biosafety Cabinet Technician Training School in Tanzania
Partner Country/Region	Tanzania
Implementing Country	United States
Collaborating Institution(s) / Partner(s)	Muhimbili University of Health and Allied Sciences (MUHAS), Association of Public Health Laboratories (APHL), CDC/CGH/DGHA/International Laboratory Branch, CDC-Tanzania, TZ MoH
Project Value	US\$215,000
Duration	3 Years

Description	<p>A properly certified BSC is one of the most important components of overall laboratory safety to prevent Laboratory Acquired Infections (LAIs). It is recognized best practice to ensure that all BSCs are certified annually by qualified service technicians. Unfortunately, most Low and Middle Income Countries (LMIC) are not able meet this basic requirement for equipment safety.</p> <p>The project aims to create capacity within MUHAS to train and credential bioengineering technicians who can assess, certify, and repair BSCs in Tanzania. While the long-term intent is that is that this training content will be incorporated into a graduate degree bioengineering program with regional impact, the initial scope of the project is focused on establishing a sustainable BSC certification training program for BSC Certification technicians. The main objectives of the project are to: Establish a sustainable BSC program within MUHAS's Bioengineering Department; Create a cadre of BSC trainers within the MUHAS faculty; and Train and credential bioengineering technicians in assessment, repair and certification of BSCs within Tanzania.</p>
--------------------	--

Project Title	Enable & Enhance Initiative – Tunisia
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.

AFRICA: CHEMICAL

Project Title	Chemical Risk Identification and Mitigation Program (CRIMP)
Partner Country/Region	AFRICOM: Algeria, Morocco, Tunisia
Implementing Country	United States, Department of Defense (DOD), Defense Threat Reduction Agency (DTRA), Chemical Weapons Destruction (CWD) Program
Collaborating Institution(s) / Partner(s)	INTERPOL
Project Value	US\$3,200,000
Duration	2018-2022

Description	CRIMP will develop the capacity of Algeria, Morocco, and Tunisia to identify the risk posed by the availability of weaponizable chemicals and their precursors within specific geographic areas so as to prevent access and use by non-state actors. Building upon INTERPOL's network within its 190 member countries, CRIMP brings together law enforcement agencies involved in counterterrorism activities / infrastructure protection and key stakeholders within national / regional chemical industry in order to identify chemicals of particular risk of diversion through a multi-agency chemical risk and threat assessment process, and subsequently facilitates targeted law-enforcement chemical countermeasures activities designed to detect, deter and disrupt non-state actor access to the highest risk chemicals.
--------------------	--

Project Title	Training in Chemical Weapons Verification 2018-2020
Partner Country/Region	Ethiopia and Kenya, and Countries in the DAC List of ODA Recipients having signed and ratified the CWC
Implementing Country	Finland, Ministry for Foreign Affairs of Finland
Collaborating Institution(s) / Partner(s)	The recipient countries during 2012-2017 were Kenya and Ethiopia. Nepal has been selected for a new training recipient country in the Laboratory Capacity Building Program for 2018-2020.
Project Value	€1,350,000 (€450,000 per year for three years)
Duration	Three years (2018-2020)
Description	The objective is to train experts from developing countries in analytical chemistry and in chemistry related to the CWC, stressing the laboratory capacity building aspect, in training of National Authorities in implementation of the CWC (Article VII), and in Economic and Technological Development (Article XI). Industrial declarations (Article VI: Activities not prohibited under this Convention) are also taught.

Project Title	Support to the OPCW for CW destruction efforts in Libya
Partner Country/Region	Libya
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	The Organisation for the Prohibition of Chemical Weapons
Project Value	C\$6,000,000
Duration	2012-2018
Description	This Project supported the Libyan chemical weapons destruction program in order to fulfil Libya's obligations under the CWC. Activities included: deployment of inspectors and verification inspections and provision of CW destruction and verification equipment and related training.

Project Title	Support to the OPCW for the Removal of CW Precursors from Libya
Partner Country/Region	Libya
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	The Organisation for the Prohibition of Chemical Weapons
Project Value	€500,000
Duration	2016-2019
Description	To support the activities of the Secretariat in relation to the removal and destruction of Libyan Category 2 chemical weapons. Activities included deployment of inspection teams for verification of destruction and the provision of verification equipment and technical experts.

Project Title	Support to CWC States Parties and CWC National Authorities to further the Implementation of Article VII of the CWC
Partner Country/Region	Malawi, Nigeria and other CWC SPs in Africa
Implementing Country	United Kingdom, Department for Business, Enterprise & Industrial Strategy (BEIS)
Collaborating Institution(s) / Partner(s)	The OPCW Technical Secretariat and Individual States Parties
Project Value	In kind contribution by BEIS
Duration	Current and ongoing since 2016
Description	<p>The UK, through BEIS, has worked closely with the OPCW Technical Secretariat and other States Parties for many years to help build capacity in the implementation of Article VI and Article VII by providing tailor made training and support to other CWC SPs on verification and implementation measures and also to OPCW inspectors through mock inspection exercises.</p> <p>Since 2016 BEIS has partnered with the National Authorities of Malawi and Nigeria and will start a new partnership in 2019 with Gambia. These partnerships are aimed at furthering the national implementation of the CWC in the partner SP's through the sharing of knowledge, experience and best practice and focus on key priorities such as developing national implementing legislation, strengthening the roles and functions of the National Authority and a range of wider issues.</p>

AFRICA: NUCLEAR AND RADIOLOGICAL SECURITY

Project Title	IAEA Regional Workshop on Developing and Implementing Nuclear Security Systems and Measures for Major Public Events
Partner Country/Region	Africa
Implementing Country	France
Collaborating Partner(s)	IAEA
Project Value	€64,000
Duration	5 days (November 2018)
Description	Training for African countries on the security of major public events.

Project Title	Global Material Security (GMS) Program
Partner Country/Region	Africa
Implementing Country	United States
Project Value	US\$14,900,000
Duration	2018
Description	Work with partners worldwide to build sustainable capacity to secure nuclear and radioactive materials and to deter, detect, and investigate the trafficking of those materials.

Project Title	International Nuclear Safeguards Engagement Program (INSEP)
Partner Country/Region	Africa
Implementing Country	United States
Collaborating Institution(s) / Partner(s)	INSEP Projects work to: 1) Build capacity within the State System of Accounting for and Control of Nuclear materials to implement IAEA safeguards agreements; 2) Improve reporting under and promote implementation of the Comprehensive Safeguards Agreement and Additional Protocol; 3) Provide training and assistance to address facility-specific safeguards challenges.
Project Value	US\$2,388,000
Duration	2018

Project Title	Nuclear Detection Strategy in Morocco
Partner Country/Region	Morocco
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Moroccan Nuclear and Radiation Safety and Security Agency (AMSSNuR)
Project Value	C\$113,875
Duration	2018
Description	The project aims to strengthen Morocco's capacity to detect and deter unauthorized transfers of nuclear and other radioactive material across its international boundaries. The development of an effective and sustainable

	national nuclear detection architecture is a critical part of Morocco's efforts to deter, detect, and interdict nuclear and radioactive material that is out of regulatory control, and ultimately, to prevent acts of nuclear terrorism.
--	---

AFRICA: CBRN & UNSCR 1540

Project Title	International Non-proliferation Export Control Program (INECP)
Partner Country/Region	Africa
Implementing Country	United States
Project Value	US\$285,000
Duration	2018
Description	INECP imparts: (1) sufficient understanding of civil nuclear and dual-use materials, equipment, and technology; and (2) sufficient understanding of risk analysis in the export licensing and enforcement fields, so that partners can effectively implement multilateral supplier regime guidelines and control lists, as well as relevant United Nations Security Council Resolutions (UNSCRs) within their own systems of control. INECP identifies opportunities to promote the sustainment of national export control capacities by: using a train-the-trainer approach; tailoring curriculum offerings and other technical resources to address specific partner needs; helping partners develop implementation plans that identify interagency roles and responsibilities; and developing Action Sheets and other formalized mechanisms like Statements of Intent (SOIs), which map each side's commitments to joint projects and activities.

Project Title	Management of hazardous chemical and biological waste in the African Atlantic Facade region (Project CBRN 35)
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 possible. This will include the elaboration of comprehensive standard

	procedures and technology solutions for CB.
--	---

II. AMERICAS

BIOLOGICAL

Project Title	Anthrax Domestic Prevention and Preparedness
Partner Country/Region	Americas
Implementing Country	United States – Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s) / Partner(s)	CDC Center for Preparedness and Response State and Local Governments
Project Value	US\$900,000
Duration	2018-2022
Description	<p>The CDC Bacterial Special Pathogens Branch monitors trend, responds to outbreaks and spillover events, provides diagnostics support, and improves preparedness for accidental or intentional anthrax exposure. The BSPB coordinates with state and local partners to improve rapid information sharing regarding key results from epidemiologic investigations, medical countermeasure use, laboratory based surveillance and data from the healthcare system.</p> <ul style="list-style-type: none"> • Provide financial and technical support to develop domestic workforce skills for safely diagnosing anthrax from clinical specimens. • Develop a standardized, consistent, and computable post-exposure prophylaxis, triage and treatment guidance tool and disseminate to health care systems for use during a wide-area aerosol release of <i>B. anthracis</i> spores in the United States. • Continue expanding the <i>B. anthracis</i> whole genome sequence database and disseminate information on diversity of U.S. and international isolates. • Support the U.S. Laboratory Response Network through strain verification of isolates for proficiency testing/controls and improving diagnostic techniques. • Update the Council of State and Territorial Epidemiologists case definition of anthrax to account for emergence of <i>B. cereus</i> biovar <i>anthracis</i>, new clinical evidence, and changes in diagnostic techniques.

Project Title	ViroRed
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
Description	The increase of travels and the speed of communications make respiratory and arthropod-borne viruses common problems for the entire world. 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.

Project Title	Capacity Building: Developing Sustainable International Collaborations on Animal, Public, and Environmental Health in Ibero-America.
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.

Project Title	Iberoamerican Network for Combating Antimicrobial Resistance (INCAR)
Partner Country/Region	Argentina, Brazil, Mexico, Spain
Implementing Country	Spain
Collaborating Institution(s) / Partner(s)	Universidad de Sao Paulo (USP), la Universidad de Barcelona (UB), la Universidad de Buenos Aires (UAB), la Universidad Autónoma de México y la Universidad Complutense de Madrid (UCM)
Project Value	€58,400
Duration	2017-2018
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. Antimicrobial resistance has experienced a vertiginous evolution due to injudicious use of antimicrobial agents in humans and in the agro-industrial complex, coupled to human migratory patterns as well as global trade and has led to the emergence and dissemination of previously ignored markers and genetic platforms that pose a significant risk for multi-, extremely- or pan-resistant microorganism infections.</p> <p>Their rapid detection, characterization and understanding of their flux are critical for reducing their dissemination at the hospital, community, and the environmental level.</p> <p>We propose a network able to enhance:</p> <ol style="list-style-type: none"> 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.

Project Title	OIE Veterinary Legislation Support Programme in Americas
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.
--	--

Project Title	Development Research
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.

Project Title	Improving domestic surveillance and response capacity for <i>Brucella</i> species
Partner Country/Region	United States
Implementing Country	United States – Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s) / Partner(s)	Center for Preparedness and Response; Division of Preparedness and Emerging Infections; National Institute of Occupational Safety and Health; United States Department of Labor, Occupational Safety and Health Administration; United States Department of Agriculture, National Veterinary Services Laboratory; State and Local Governments
Project Value	US\$500,000
Duration	2018-2022
Description	The Federal Select Agent Program identifies several <i>Brucella</i> species as having the potential to pose a severe threat to both human and animal health. Brucellosis is an acute febrile illness that if treated appropriately is curable. However, if not treated or inadequately treated, it can become a chronic infection causing recurrent fevers, arthritis, or endocarditis. Brucellosis occurs rarely in the United States, but the <i>Brucella</i> genus has expanded in recent years with new species (bats, rodents, foxes, frogs, etc.). BSPB activities focus on: <ul style="list-style-type: none"> • Continue sequencing human <i>B. suis</i> isolates from the United States in partnership with USDA/National Veterinary Services Laboratory • Develop, optimize and validate a real-time PCR method to determine <i>Brucella</i> species and provide the technology to Laboratory Response

	<p>Network sites to strength diagnostic capacity at reference laboratories in a safe and secure manner.</p> <ul style="list-style-type: none"> • Support to state and local laboratories through laboratory confirmation and testing environmental samples and food matrices for <i>Brucella</i> spp. • Epidemiologic support to state and local health departments to identify source of brucellosis cases. • Collaborate with USDA to reduce risk of brucellosis related to the <i>Brucella abortus</i> RB51 vaccine strain • Collaborate with NIOSH, USDA, and OSHA to develop guidelines for prevention on <i>Brucella</i> spp. transmission to slaughterhouse inspectors and workers. • Expand capacity to detect <i>Brucella</i> in clinical specimens by implementing an automated blood culture system for differing specimen types.
--	---

AMERICAS: NUCLEAR AND RADIOLOGICAL SECURITY

Project Title	INTERPOL Operation STONE in the Caribbean
Partner Country/Region	Bahamas, Jamaica and Panama
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$827,181
Duration	2017-2019
Description	This project will strengthen national and regional capacities to detect and interdict illicit cargos of nuclear or other radiological materials being shipped through major port terminals in Panama, Jamaica and Bahamas.

Project Title	Nuclear Security Detection Architecture in Latin America
Partner Country/Region	Bolivia, Chile, Colombia, Cuba, Ecuador, Mexico, Paraguay, Peru, Uruguay
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$2,750,000
Duration	2018-2022
Description	This project will assist nine Latin American countries in establishing efficient and effective national Nuclear Security Detection Architectures to detect nuclear and other radiological material out of regulatory control.

Project Title	IAEA recovery of high-activity DSRS in Latin America
Partner Country/Region	Bolivia, Dominican Republic, Ecuador, Paraguay, Peru, Uruguay
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency
Project Value	C\$5,955,535
Duration	2017-2019
Description	This project will remove 32 high activity radioactive sources in six countries in Latin America (Bolivia, Dominican Republic, Ecuador, Paraguay, Peru and Uruguay). These states have accumulated devices no longer in use containing Canadian and other origin high activity (category 1 and 2) Disused Sealed Radioactive Sources (DSRS). The devices containing the DSRS are currently in temporary storage without a long-term life-cycle management strategy resulting in security concerns. To address these concerns, IAEA assistance has been requested to remove the high activity DSRS.

Project Title	Regulatory Infrastructure Development in Latin America and the Caribbean
Partner Country/Region	Chile, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Paraguay, Uruguay
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$1,878,956
Duration	2017-2019
Description	This project will support the efforts of the IAEA to build nuclear and radiological security and safety capacity in 8 states in Latin America and the Caribbean

Project Title	Enhancing the Capacity of Colombia to Detect Illicitly Trafficked Nuclear and Radiological Material
Partner Country/Region	Colombia
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Policía Nacional de Colombia, Canadian Commercial Corporation, U.S. Department of Energy
Project Value	C\$5,402,404
Duration	2014-2019
Description	This project will provide mobile detection and response equipment (including vehicle-mounted radiation detection platforms) to monitor incoming and outgoing cargos at Colombia's main shipping facilities.

Project Title	Radiological Source Security in Colombia
Partner Country/Region	Colombia
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency
Project Value	C\$1,150,000
Duration	2014-2019
Description	This project will enhance radiological security in Colombia by ensuring that all Canadian-origin identified weapons-significant disused sources (21 Cobalt-60 sources, formerly used to power medical teletherapy devices or blood irradiators) will be removed from Colombia or placed into secure storage.

Project Title	International Nuclear Safeguards Engagement Program (INSEP)
Partner Country/Region	Latin America/Caribbean
Implementing Country	United States
Project Value	US\$1,178,000
Duration	2018
Description	INSEP Projects work to: 1) Build capacity within the State System of Accounting for and Control of Nuclear materials to implement IAEA safeguards agreements; 2) Improve reporting under and promote implementation of the Comprehensive Safeguards Agreement and Additional Protocol; 3) Work with partners to address facility-specific safeguards challenges; 4) Develop and test innovative safeguards technologies, tools, and approaches.

Project Title	Global Material Security (GMS) Program
Partner Country/Region	Latin America and the Caribbean
Implementing Country	United States
Project Value	US\$15,900,000
Duration	2018
Description	Work with partners worldwide to build sustainable capacity to secure nuclear and radioactive materials and to deter, detect, and investigate the trafficking of those materials.

Project Title	Disused Sealed Radioactive Source Security in Mexico
Partner Country/Region	Mexico
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	United States Department of Energy (DOE)
Project Value	C\$1,100,000
Duration	2018-2019
Description	This project will support the removal of approximately 36 Canadian-origin Disused Sealed Radioactive Sources from Mexico, including consolidation, conditioning, packaging, shipping, and recycling.

Project Title	Enhancing the Capacity of Mexico to Detect Illicitly Trafficked Nuclear and Radiological Material
Partner Country/Region	Mexico
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Servicio de Administración Tributaria, Canadian Commercial Corporation
Project Value	C\$5,269,964
Duration	2014-2019
Description	This project will strengthen capacities of the Government of Mexico to detect and interdict illicit cargos of radiological materials across its southern border region.

Project Title	Radioactive Source Security: Development of an NSSC to serve Central America
Partner Country/Region	Mexico
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Instituto Nacional de Investigaciones Nucleares (<i>ININ</i>), World Institute of Nuclear Security (WINS)
Project Value	C\$1,100,000
Duration	2016-2018
Description	This project will contribute towards the development of a sustainable and certified training and accreditation centre in Mexico to serve the Central American region.

Project Title	Countering illicit radiological trafficking in Peru
Partner Country/Region	Peru
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	United States Department of Energy, United Nations Office on Drugs and Crime
Project Value	C\$2,846,626
Duration	2015-2019
Description	This project will strengthen capacities of the Government of Peru to detect and interdict illicit cargos of radiological materials, particularly at its principle maritime port of Callao.

Project Title	Counter-Nuclear Smuggling Support to Peru - Phase II
Partner Country/Region	Peru
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	U.S. Department of Energy
Project Value	C\$2,500,000
Duration	2018-2019
Description	This project will support the installation and commissioning of radiation monitoring equipment at the APM Terminals container shipping facility at the Port of Callao, Peru.

AMERICAS: CBRN & UNSCR 1540

Project Title	UNSCR 1540 – Caribbean Community (CARICOM) Implementation Programme
Partner Country/Region	Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago.
Implementing Country	Canada - Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	CARICOM Secretariat
Project Value	US\$330,400 (~C\$440,000)
Duration	2018-2020
Description	The project funds a full-time UNSCR 1540 Coordinator position at the CARICOM Secretariat, providing a strategic link and expert human resource in the Caribbean region to facilitate and support CARICOM Member States to meet their UNSCR 1540 obligations. The coordinator supports, <i>inter alia</i> , the development of omnibus strategic trade legislation related to prohibiting the acquisition, manufacture, and delivery of CBRN materials

	and capacity development among regional customs officials to prevent illicit trade in CBRN-related materials and related technology.
--	--

Project Title	Support for UN Security Council Resolution 1540 Implementation in Latin America and the Caribbean (Phase 2)
Partner Country/Region	Belize, Costa Rica, Dominican Republic, El Salvador, Guyana, Peru and Suriname.
Implementing Country	Canada - Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	UN Regional Centre for Peace, Disarmament and Development (UNLIREC)
Project Value	C\$335,000
Duration	2018-2019
Description	UNLIREC is supporting Belize, Costa Rica, Dominican Republic, El Salvador, Guyana, Peru and Suriname to fulfill UNSCR 1540 obligations, including through: the provision of legal assistance; the provision of specialized training, practical tools and assistance in the drafting and implementation of Voluntary National Action Plans, with emphasis on strengthening inter-institutional and/or multi-sectorial mechanisms and responses to facilitate implementation of these National Action Plans; and conduct of a Caribbean-wide regional workshop on focus lists and licensing practices for proliferation-sensitive items in order to stimulate a dialogue on how to accomplish effective and harmonized strategic trade controls across the region.

Project Title	Support for UNSCR 1540 Implementation in Latin America and the Caribbean (Phase 2)
Partner Country/Region	Colombia, Jamaica, Panama, Paraguay and Uruguay
Implementing Country	Canada - Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Organization of American States / Inter-American Committee Against Terrorism (OAS/CICTE)
Project Value	C\$665,000
Duration	2018-2019
Description	OAS/CICTE is assisting Panama, Jamaica, Colombia, Uruguay and Paraguay to advance full implementation of UNSCR 1540 by drafting and implementing strategic trade legislation to combat proliferation-related offences and their means of financing and finalizing National Action Plans.

Project Title	Legislative Implementation of UNSCR 1540 in LAC – Phase II
Partner Country/Region	Latin America and the Caribbean (LAC)
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating 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.

Project Title	Strengthening Export Controls and Border Security in the Americas and the Caribbean
Partner Country/Region	Latin America and Caribbean
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	United Nations Regional Centre for Peace, Disarmament and Development in Latin America and the Caribbean (UNLIREC), Organisation of American States (OAS), UNSCR 1540 Committee, VERTIC (the Verification Research, Training and Information Centre), Wilton Park, Stimson Center
Project Value	C\$5,900,000
Duration	2015-2018
Description	In the global fight against WMD proliferation, full and effective national implementation of all obligations under the CWC and other multilateral arms control agreements (including the adoption and application of effective export controls and border security measures) plays a critical role. In this context, Canada supported partner countries in the Americas and the Caribbean to establish or enhance domestic controls, adopt effective laws and implement comprehensive measures to prevent the proliferation of CBRN weapons and their means of delivery. Tailored activities included national needs assessments, development of legislative application plans and the provision of requisite equipment, training and related technical assistance to strengthen national and regional capacity to prevent, detect and respond to CBRN incidents. The Project also supported the development and/or enhancement of cargo targeting systems at select, high-volume Latin American and/or Caribbean ports of entry to strengthen capabilities to identify and track shipments of CBRN and other illicit goods and trade flows in and through the region.

Project Title	Strengthening Strategic Trade Controls in the Western Hemisphere
Partner Country/Region	Mexico, Panama and regional activities
Implementing Country	U.S. Export Control and Related Border Security (EXBS) Program
Collaborating Institution(s) / Partner(s)	Multiple
Project Value	US\$2,500,000
Duration	Multiple Year
Description	Summary: Across the Western Hemisphere, EXBS supports core elements of the 2017 National Security Strategy, including disrupting the Democratic People's Republic of Korea's (DPRK) proliferation activities, countering Iran's malign influence, and defeating ISIS and other violent extremist

	<p>organizations.</p> <ul style="list-style-type: none"> • Legal/Regulatory: EXBS is interested in working with Mexico to further develop an effective legal framework for strategic trade controls. Panama has implemented its dual-use Presidential Decree and EXBS is currently seeking methods to encourage maturation of the regulations underpinning the Decree. • Licensing: As a growth region for international trade, proximity to the United States, and home to the Panama Canal, proper licensing is increasingly important in the WHA Region. With an emphasis on DPRK, EXBS seeks to encourage WHA government officials to implement policies and processes that will identify suspect requests from shell companies and false documentation submissions, among other nefarious practices. • Enforcement: EXBS provides hands-on training, exercises and equipment to border officials to aid in identifying concealment techniques used by bad actors to move illegal material (or legal but not authorized material) out of their borders. Enforcement is a critical pillar of EXBS engagement in WHA. • Industry Outreach: Manufacturers, exporters, brokers, freight-forwarders, and the financial industry are a first line of defense against proliferation. EXBS assists the governments of Mexico and Panama to develop national industry outreach programs that will thwart bad actor attempts to purchase or move material across their national borders in route to DPRK or otherwise.
--	--

Project Title	International Non-proliferation Export Control Program (INECP)
Partner Country/Region	North and Central America
Implementing Country	United States
Project Value	US\$125,000
Duration	2018
Description	INECP imparts: (1) a sufficient understanding of civil nuclear and dual-use materials, equipment, and technology; and (2) a sufficient understanding of risk analysis in the export licensing and enforcement fields, so that partners can effectively implement multilateral supplier regime guidelines and control lists, as well as relevant United Nations Security Council Resolutions (UNSCRs) within their own systems of control. INECP identifies opportunities to promote the sustainment of national export control capacities by: using a train-the-trainer approach; tailoring curriculum offerings and other technical resources to address specific partner needs; helping partners develop implementation plans that identify interagency roles and responsibilities; and developing Action Sheets and other formalized mechanisms like Statements of Intent (SOIs), which map each side's commitments to joint projects and activities.

Project Title	International Non-proliferation Export Control Program (INECP)
Partner Country/Region	South America
Implementing Country	United States
Project Value	US\$154,000
Duration	2018
Description	INECP imparts: (1) a sufficient understanding of civil nuclear and dual-use materials, equipment, and technology; and (2) a sufficient understanding of risk analysis in the export licensing and enforcement fields, so that partners can effectively implement multilateral supplier regime guidelines and control lists, as well as relevant United Nations Security Council Resolutions (UNSCRs) within their own systems of control. INECP identifies opportunities to promote the sustainment of national export control capacities by: using a train-the-trainer approach; tailoring curriculum offerings and other technical resources to address specific partner needs; helping partners develop implementation plans that identify interagency roles and responsibilities; and developing Action Sheets and other formalized mechanisms like Statements of Intent (SOIs), which map each side's commitments to joint projects and activities.

III. ASIA

BIOLOGICAL

Project Title	Strengthening the National Legal Framework and Provision of Specialised Training on Biosafety and Biosecurity in Central Asian Countries (P53)
Partner Country/Region	Afghanistan, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Uzbekistan (Central Asia)
Implementing Country	European Union through International Science and Technology Center (ISTC)
Collaborating Institution(s) / Partner(s)	Sustainable Criminal Justice Solutions (SCJS), Public Health England (PHE), the Verification Research, Training and Information Centre (VERTIC), National Institute for Public Health and the Environment, The Netherlands (RIVM), EU CBRN Centres of Excellence Regional Secretariat, UNICRI regional secretariat
Project Value	€5,000,000
Duration	2016-2020
Description	<p>The spread of emergent diseases and invasive species has increased dramatically in recent years. In parallel, numerous developments - such as the rapidly increasing transboundary movements, trade liberalisation, increasing concerns about food safety and the environment - have heightened the need for international cooperation in controlling and managing transboundary pests and diseases. At the same time, biosafety and biosecurity systems require being up-to-date with international standards and staff needs proper training and knowledge. Therefore, new biosafety and biosecurity initiatives are critical for both public health and to prevent epidemics and pandemics.</p> <p>The overall objective is to enhance biosafety and biosecurity capacities within the Central Asia region by:</p> <ul style="list-style-type: none"> • 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-proliferation principles, practices and instruments; • 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; and • 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.
--	--

Project Title	Swedish research collaboration with Bangladesh
Partner Country/Region	Bangladesh
Implementing Country	Sweden – Swedish International Development Cooperation Agency
Collaborating Institution(s) / Partner(s)	International Center of Diarrhoeal Disease Research, Bangladesh (icddr,b)
Project Value	SEK 4,567,906/€439,565 (2018)
Duration	2016-2020
Description	The International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b) is an international health research institution located in Dhaka. The contribution intends to develop skills and competencies of scientific and other staff; especially local junior researchers at mid-level, through a capacity training program. The participants are selected in competition and will go through a career development program including running research projects. In addition, the contribution intends to finalise the establishment of a 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.

Project Title	Development Research
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.

Project Title	Strengthening biosafety and biosecurity status of Bangladesh
Partner Country/Region	Bangladesh / South East Asia
Implementing Country	United States – Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s) / Partner(s)	International Center for Diarrheal Disease Research, Bangladesh
Project Value	US\$177,465,000 (FY 2017-2019)
Duration	Ongoing project since 2013
Description	Bangladesh is a country under threat of several emerging and re-emerging infectious diseases identified to cause severe morbidity and mortality. Additionally, concerns have been raised about several endemic infectious

	<p>agents such as anthrax as being potential agents of bioterrorism. Handling of many of these pathogens requires containment laboratory safety and security principles and practices for diagnostic or research activities, as well as storage. Bangladesh's present life science infrastructure is inadequate to face these current biological threats, as it has no high containment facilities and only an incipient culture of biosafety and biosecurity. Thus it requires overall strengthening of biosafety and biosecurity practices in the country. Specific project activities for year 2018-2019 are:</p> <ul style="list-style-type: none"> • Biosafety cabinet certifications at national level MoH, MoAg and armed forces laboratories. • Trainings on the use and maintenance of biosafety cabinets. • Enhance biosafety and biosecurity practices at 10 national and regional level veterinary laboratories.
--	---

Project Title	Mitigating Biological Security Risks in the ASEAN region
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(s) / 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.

Project Title	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)
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	<p>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.</p> <p>It is organized into three main components:</p> <ul style="list-style-type: none"> • Enhancing capabilities in crisis management for CBRN first responders through training and exercising. • Evaluating and improving biosafety and biosecurity, including bio-risk and waste management. • Promoting awareness raising concerning risk mitigation and the provision of technical support to strengthen legal framework.

Project Title	Establishment of German-Georgian, German-Kazakh networks for biosecurity and diagnosis of dangerous infectious diseases
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	<p>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.</p>

Project Title	Developing and Strengthening Regional Laboratory Networks of Select Zoonotic Diseases towards better biosafety-biosecurity practices
Partner Country/Region	India / South East Asia
Implementing Country	United States – Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s) / Partner(s)	National Center for Disease Control (NCDC) and Indian Association of Medical Microbiologists (IAMM)
Project Value	US\$180,000 (FY 2018-2019)
Duration	1 year
Description	<p>Major Accomplishments within the Reporting Period: Review and capacity building for bio-risk management and basic microbiology testing at veterinary laboratory in Assam (July- August, 2018).</p> <p>CDC worked in-country with CDC collaborating partners in India to launch testing for human and animal pathogens in one of its new laboratory facilities. Biological risk assessments were performed and resulting mitigations included the addition of freezer and door locks, enhancement of sample management practices including development and implementation of SOPs for accessioning, handling, storage, tracking, and waste management of pathogens and specimens.</p> <p>Molecular diagnostic techniques and methods (Aug 7-9, 2018) To increase laboratory capacity for detection of dangerous organisms, we performed a three day, hands-on training of basic molecular diagnostic techniques for 16 participants at the ONGC Center of Advanced Studies (OCAS) in Lucknow, Uttar Pradesh. A second training spanning 4 days, with similar objectives and components was conducted with CDC support from May 8-11 where 92 lab technicians from different districts of Madhya Pradesh were trained and assessed.</p> <p>Development of a model for an integrated laboratory and sample referral network in Madhya Pradesh (July-September, 2018) CDC assisted district hospitals in Indore and Bhopal to launch and establish biosafety and biosecurity procedures and practices as part of a new hospital microbiology testing facility. Laboratories at both hospitals can now perform their own basic diagnostic work, and the lab in Bhopal has received BEP support that allowed the appointment of two biosafety officers. In addition, CDC has facilitated the formation of a laboratory referral network so that samples from adjoining districts can be referred to these hospitals, and samples received by the hospitals can be referred to nearest medical colleges for advanced testing if needed.</p> <p>CDC India provided support to the Government of Madhya Pradesh for Hospital and Laboratory Information Management System (HIS & LIMS). An IT expert supported through BEP funds is helping design the lab information system that is integrated in the e-Hospital system developed by the state. The LIMS will cover all fields including patient details, sample</p>

	logging, test details and reporting. Once developed, the system can be upgraded to create an inventory for high-risk pathogens at centers that work with and store such samples.
--	--

Project Title	Bioterrorism Evidence Exploitation Workshop and Operation
Partner Country /Region	Indonesia, Iraq, Malaysia, Philippines, Singapore, Thailand
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$741,967
Duration	2016-2018
Description	To support the Government of Iraq and select countries in Southeast Asia (Malaysia, Philippines, Indonesia, Singapore and Thailand) to better prepare for, detect and respond to bioterrorism threats. This Project is designed to strengthen the capabilities of law enforcement experts to conduct effective responses to biological attacks and mitigate serious threats posed by terrorist groups operating in Iraq and Southeast Asia.

Project Title	European Union Council Decision 2016/51; Workshop in Malaysia in Support of the Biological Weapons Convention Extended Assistance Programmes
Partner Country/Region	Malaysia
Implementing Country	European Union
Collaborating Institution(s) / Partner(s)	The initiative was co-organised by STRIDE and the Implementation Support Unit (ISU) of the Biological Weapons Convention (BWC), United Nations Office for Disarmament Affairs, and sponsored by the European Union BWC The Netherlands Biosecurity Office, part of the Netherlands National Institute for Public Health and the Environment (RIVM), has granted expert guidance and assistance throughout this project.
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, 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

	<p>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>
--	---

Project Title	Philippines Advanced BioRisk Officer Training Program (PhABOT) 5.0
Partner Country/Region	Philippines
Implementing Country	United States – Department of State’s Biosecurity Engagement Program
Project Value	US\$200,000
Collaborating Institution(s) / 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 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.</p>

Project Title	Diagnostics of Rabies and Brucella in Tajikistan
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	2015-2019
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.

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

Project Title	Bio-Safety and External Quality Assurance
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.

ASIA: CHEMICAL

Project Title	OPCW Associate Program
Partner Country/Region	Asian Nations
Implementing Country	Japan
Collaborating Partner(s)	The Organisation for the Prohibition of Chemical Weapons
Duration	Since 2014
Description	OPCW invites scientists, chemical engineers, and technological specialists from developing countries to take part in a capacity-building project to enhance their knowledge of the Chemical Weapons Convention and to develop the skills necessary to operate in a modern chemistry environment. Every year, Japan accepts two associates from Asian nations with a rapidly growing chemical industry for the industrial internship.

Project Title	Sound Management of Chemicals and their Associated Wastes in Southeast Asia (SEACHEM)
Partner Country/Region	Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam
Implementing Country	European Union, through Sustainable Criminal Justice Solutions (SCJS)
Collaborating Institution(s) / Partner(s)	Public Health England (PHE), the Verification Research, Training and Information Centre (VERTIC), National Institute for Public Health and the Environment, The Netherlands (RIVM), International Security and Emergency Management Institute (ISEMI), EU CBRN Centres of Excellence Regional Secretariat, UNICRI regional secretariat
Project Value	€3,000,000
Duration	2017-2020
Description	<p>All Southeast Asian countries involved in this project are party to the relevant international treaties and conventions, namely the UN Non-proliferation treaty to prevent the spread of nuclear weapons and weapons technology; the Chemical Weapons Convention on the prohibition of the development, production, stockpiling, and use of chemical weapons. However it should be elucidated whether all partner countries have already domesticated these conventions and created appropriate national legislation with the means to enforce compliance. The overall objective of the project of which this contract will be a part is to achieve enhanced chemical safety and security in the region, taking the country-specific baseline situation into account.</p> <ul style="list-style-type: none"> • Judicial reinforcement with respect to sound management of chemicals and their wastes; • Enhanced capacity for prevention of chemical incidents including both safety and security aspects; • Enhanced capacity for the regions' mobile detection possibilities and chemical testing laboratories; • Measures to enhance the regions' preparedness and response capacity to chemical incidents; and

	<ul style="list-style-type: none"> Measures to enhance recovery capacity after chemical incidents.
--	---

Project Title	Asian Export Control Seminar
Implementing Country	Japan
Duration	Since 1993
Description	Japan hosts the seminar every year for persons in charge of export control in Asian countries and regions, aiming to enhance Asian and international efforts toward non-proliferation of WMD across Asia and the rest of the world by raising common awareness of the importance of security export control and establishing and enhancing export control systems.

ASIA: NUCLEAR AND RADIOLOGICAL SECURITY

Project Title	Enhancing ASEAN's Ability to Promote Regional Nuclear Security/ASEAN Centre for Energy (ACE)
Partner Country/Region	ASEAN
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s)/Partner(s)	ASEAN Centre for Energy (ACE)
Project Value	C\$465,727
Duration	2016-2018
Description	This project will provide funding to the ASEAN Centre of Energy (ACE) to support capacity building activities aimed at promoting the secure use of nuclear energy. This will be achieved through workshops and outreach in order to encourage a standardized regional approach to nuclear and radiological security in South East Asia.

Project Title	Global Material Security (GMS) Program
Partner Country/Region	Asia (Far East)
Implementing Country	United States
Project Value	US\$30,800,000
Duration	2018
Description	Work with partners worldwide to build sustainable capacity to secure nuclear and radioactive materials and to deter, detect, and investigate the trafficking of those materials.

Project Title	International Nuclear Safeguards Engagement Program (INSEP)
Partner Country/Region	Asia
Implementing Country	United States
Collaborating Institution(s) / Partner(s)	
Project Value	US\$3,144,000
Duration	2018
Description	INSEP Projects work to: 1) build capacity within the State System of Accounting for and Control of Nuclear materials to implement IAEA safeguards agreements; 2) improve reporting under and promote implementation of the Comprehensive Safeguards Agreement and Additional Protocol; 3) provide training and assistance to address facility-specific safeguards challenges; and 4) encourage further cooperation with DOE/NNSA on safeguards issues.

Project Title	Global Material Security (GMS) Program
Partner Country/Region	Asia (South and Central)
Implementing Country	United States
Project Value	US\$34,100,000
Duration	2018
Description	Work with partners worldwide to build sustainable capacity to secure nuclear and radioactive materials and to deter, detect, and investigate the trafficking of those materials.

Project Title	Strengthening DPRK Sanctions Compliance in China
Partner Country/Region	China
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	U.S. Department of State, Saferworld
Project Value	C\$750,000
Duration	2018-2020
Description	This project will help facilitate the provision of international expertise to a comprehensive, multi-year review by China of its control of strategic trade, particularly proliferation-sensitive goods and technologies related to WMD.

Project Title	Prototype Cooperating National Facility for Comprehensive Nuclear-Test-Ban Treaty verification
Partner Country/Region	Kazakhstan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Health Canada, Canadian Commercial Corporation
Project Value	C\$2,189,473
Duration	2018-2021
Description	This project will help address the gap in coverage by the International Monitoring System (IMS) of the Comprehensive Nuclear-Test-Ban Treaty (CTBT) by establishing an atmospheric radionuclide monitoring station in Kazakhstan as the first ever Cooperating National Facility (CNF) that would serve as an additional source of data to detect nuclear test explosions.

Project Title	Strengthening radiological source security in Kazakhstan through the expansion of storage facilities and source consolidation.
Partner Country/Region	Kazakhstan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	United States Department of Energy (DOE)
Project Value	C\$3,000,000
Duration	2017-2022
Description	Strengthening radiological security in Kazakhstan through the removal of disused sources from closed long-term storage buildings at NDFZ, and the expansion of long-term source storage capacity at the Institute of Nuclear Physics.

Project Title	NTI Regional Workshop on Radiological Security in Central Asia
Partner Country/Region	Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Nuclear Threat Initiative (NTI)
Project Value	C\$105,000
Duration	2018-2019
Description	Support to Nuclear Threat Initiative (NTI) to assist with costs related to planning and hosting a Workshop on Radiological Security in Central Asia, to be held in Bishkek during the month of June 2018. Workshop will convene all 5 Central Asian Republics along with representatives from the IAEA, Canada, USA, Russia, and EU to discuss opportunities for strengthened regional coordination on radiological security and illicit trafficking prevention.

Project Title	Support to the Environmental Remediation Account for Central Asia
Partner Country/Region	Kyrgyz Republic, Uzbekistan and Tajikistan
Implementing Country	Belgium, Ministry of Foreign Affairs
Collaborating Institution(s) / Partner(s)	European Bank for Reconstruction and Development (EBRD)
Project Value	€2,000,000
Duration	2018 and following years
Description	<p>The Environmental Remediation Account (ERA) pools donor funds to assist the Central Asian countries to remediate some of the most dangerous sites left by the Soviet era uranium production. The accumulated amount of radioactive material in the region is a threat to the environment and to the health of the population. The presence of radioactive and toxic material also poses a security risk.</p> <p>The strategic basis for the ERA operations is the Strategic Master Plan, which was elaborated by the affected countries, the International Atomic Energy Agency, the European Commission and the EBRD with the support of technical experts funded by the European Union.</p>

Project Title	Enhancements to the Malaysian AELB Nuclear Security Support Centre and Related Training
Partner Country/Region	Malaysia
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$796,080
Duration	2016-2019
Description	This project will provide funding to the IAEA to support enhancements at the Malaysia Atomic Energy Licensing Board (AELB)'s Nuclear Security Support Training Centre (NSSC).

Project Title	IAEA Training Programme for Malaysia Mobile Hot Cell
Partner Country/Region	Malaysia
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$251,000
Duration	2016-2018
Description	This project will assist the Malaysian Nuclear Agency to train the personnel that will be operating the recently manufactured mobile hot cell (MHC) for the conditioning and packaging of high activity disused sealed radioactive sources (DSRS).

Project Title	Physical Protection System Upgrades to Nuclear Facilities in Malaysia
Partner Country/Region	Malaysia
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	United States Department of Energy (DOE)
Project Value	C\$1,450,000
Duration	2015-2018
Description	This project will provide physical protection security upgrades and related training to nuclear facilities in Malaysia.

Project Title	Physical Protection System Upgrades to the Philippines Research Reactor
Partner Country/Region	Philippines
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Philippines Nuclear Research Institute (PNRI), Canadian Commercial Corporation (CCC)
Project Value	C\$1,207,677
Duration	2015-2018
Description	This project will provide physical protection security upgrades to the PNRI research reactor facility.

Project Title	Physical Protection System Upgrades to Thai Nuclear Facilities
Partner Country/Region	Thailand
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	United States Department of Energy (DOE)
Project Value	C\$1,250,000
Duration	2016-2018
Description	This project will provide physical protection security upgrades and related training to nuclear facilities in Thailand.

Project Title	Strengthening Capacity to Secure Radioactive Sources in the Asia-Pacific Region
Partner Country/Region	Thailand
Supporting Country	New Zealand, through the Ministry of Foreign Affairs and Trade
Collaborating Partner(s)	World Institute for Nuclear Security, Office of Atoms for Peace (Thailand)
Project Value	€58,000
Duration	26 October – 2 November 2018
Description	Professional training in radioactive source security for Southeast Asian radiation professionals based on the WINS Elective Course on Radioactive Source Security Management.

Project Title	IAEA Regulatory Review Assistance Mission on Transport Security for Nuclear and Radiological Material: Viet Nam Agency for Radiation and Nuclear Safety (VARANS)
Partner Country/Region	Vietnam
Implementing Country	Australia and the United States
Collaborating Institution(s) / Partner(s)	Supporting agencies included: Australian Radiation Protection and Nuclear Safety Agency (ARPANSA), Oak Ridge National Laboratory (ORNL) and the IAEA
Project Value	The Australian component of this project was sponsored by the IAEA.
Duration	Single mission in 2018
Description	The focus of the mission centred on reviewing and enhancing the legislative and regulatory requirements for transport security of nuclear and other radioactive materials in accordance with international best practice. Draft implementing guidance on developing transport security plans was also reviewed. An assessment of the capability of the regulatory body to perform transport security regulatory functions was also undertaken.

Project Title	Standard Operating Procedures Development Workshop for Nuclear Detection
Partner Country/Region	Vietnam
Supporting Country	New Zealand, through the Ministry of Foreign Affairs and Trade
Collaborating Institution(s) / Partner(s)	US Department of Energy
Project Value	US\$150,000
Duration	26 October – 2 November 2018
Description	A workshop to assist Vietnamese agencies and port operators to develop site-specific Standard Operating Procedures that addresses basic operations, detection, and alarm adjudication to enhance nuclear security. The workshop also assists in creating a framework for official, practical, site-specific SOP that identifies the roles and responsibilities of stakeholders and determines the activities for operating the radiation detection system.

ASIA: CBRN & UNSCR 1540

Project Title	International Non-proliferation Export Control Program (INECP)
Partner Country/Region	Asia
Implementing Country	United States
Project Value	US\$2,109,000
Duration	2018
Description	INECP imparts: (1) a sufficient understanding of civil nuclear and dual-use materials, equipment, and technology; and (2) a sufficient understanding of risk analysis in the export licensing and enforcement fields, so that partners can effectively implement multilateral supplier regime guidelines and control lists, as well as relevant United Nations Security Council Resolutions (UNSCRs) within their own systems of control. INECP identifies opportunities to promote the sustainment of national export control capacities by: using a train-the-trainer approach; tailoring curriculum offerings and other technical resources to address specific partner needs; helping partners develop implementation plans that identify interagency roles and responsibilities; and developing Action Sheets and other formalized mechanisms like Statements of Intent (SOIs), which map each side's commitments to joint projects and activities.

Project Title	Implementing Asia-Pacific Strategy: Strengthening Strategic Trade Controls
Partner Country/Region	Cambodia, Indonesia, Malaysia, Mongolia, the Philippines, Singapore, Thailand, and Vietnam
Implementing Country	U.S. Export Control and Related Border Security (EXBS) Program
Collaborating Institution(s) / Partner(s)	Multiple
Project Value	US\$6,570,000
Duration	Multiple Year
Description	<p>Through bilateral and regional programs across East Asia and the Pacific, EXBS is working to counter proliferation by the Democratic People's Republic of Korea (DPRK); enforce U.S. and UN Security Council sanctions; build strategic trade control frameworks; educate industry on their compliance obligations; and strengthen the enforcement at key land, maritime, and air ports of entry.</p> <ul style="list-style-type: none"> • Legal/Regulatory: EXBS is actively working with Thailand, the Philippines, and Indonesia to strengthen their legal/regulatory frameworks. • Licensing: As a hub of international trade, proper licensing of transfers and exports of strategic goods is essential in the Asia-Pacific region. EXBS works with partner nations to ensure the right tools are in place to prevent transfers of proliferation concern. • Enforcement: Through hands-on training, exercises, and the provision of equipment, EXBS builds partner capacity to identify and interdict illicit goods at major ports of entry throughout the region, and

	<p>encourages regional coordination among maritime law enforcement agencies.</p> <ul style="list-style-type: none"> • Industry Outreach: Manufacturers, exporters, brokers, freight-forwarders, and the financial industry serve as a first line of defense against proliferation. EXBS currently assists the governments of Malaysia, the Philippines, Thailand, and Vietnam to develop national industry outreach programs aimed at strengthening sanctions implementation and industry compliance with strategic trade controls.
--	--

Project Title	International Non-proliferation Export Control Program (INECP)
Partner Country/Region	Near East
Implementing Country	United States
Project Value	US\$182,000
Duration	2018
Description	INECP imparts: (1) A sufficient understanding of civil nuclear and dual-use materials, equipment, and technology; and (2) A sufficient understanding of risk analysis in the export licensing and enforcement fields, so that partners can effectively implement multilateral supplier regime guidelines and control lists, as well as relevant United Nations Security Council Resolutions (UNSCRs) within their own systems of control. INECP identifies opportunities to promote the sustainment of national export control capacities by: using a train-the-trainer approach; tailoring curriculum offerings and other technical resources to address specific partner needs; helping partners develop implementation plans that identify interagency roles and responsibilities; and developing Action Sheets and other formalized mechanisms like Statements of Intent (SOIs), which map each side's commitments to joint projects and activities.

Project Title	International Non-proliferation Export Control Program (INECP)
Partner Country/Region	South Asia
Implementing Country	United States
Project Value	US\$573,000
Duration	2018
Description	INECP imparts: (1) a sufficient understanding of civil nuclear and dual-use materials, equipment, and technology; and (2) A sufficient understanding of risk analysis in the export licensing and enforcement fields, so that partners can effectively implement multilateral supplier regime guidelines and control lists, as well as relevant United Nations Security Council Resolutions (UNSCRs) within their own systems of control. INECP identifies opportunities to promote the sustainment of national export control capacities by: using a train-the-trainer approach; tailoring curriculum offerings and other technical resources to address specific partner needs; helping partners develop implementation plans that identify interagency roles and responsibilities; and developing Action Sheets and other formalized mechanisms like Statements of Intent (SOIs),

	which map each side's commitments to joint projects and activities.
--	---

Project Title	Security and Trade Efficiency Platform in Southeast Asia
Partner Country/Region	Southeast Asia
Implementing Country	Canada - Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	The Stimson Center
Project Value	US\$760,000 (~C\$1,010,856)
Duration	2018-2020
Description	The Security and Trade Efficiency Platform (STEP) initiative illustrates how countering the proliferation of WMD can also produce practical benefits to trade security and economic development. STEP aims to recast the case for WMD non-proliferation by illustrating its innate connection with important local issues, such as trade security and supply chain efficiency. The STEP framework is based on the principle that if the public and private sector collaborate to identify and eliminate security vulnerabilities that expose supply chains to illicit trafficking of dual-use technologies, it will not only help advance global WMD non-proliferation efforts, but also improve local trade capacity. STEP challenges the perceived schism between security and operational efficiencies, namely that added security measures increase the burden on the overall system, resulting in redundancies that slow productivity, by working with the public and private sectors and emphasizing the following principles: WMD Non-proliferation must be framed under the local context; security reinforces trade: security does not stop at the port perimeter; and the importance of understanding the supply chain.

IV. EUROPE

BIOLOGICAL

Project Title	Strengthening biosafety and measures to prevent and monitor Crimean Congo hemorrhagic fever (CCHF) in Kosovo
Partner Country/Region	Kosovo
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine
Project Value	€164,000 (2017-2019)
Duration	2013-2019
Description	The goal is to strengthen the capabilities for the prevention and control of Crimean-Congo haemorrhagic fever in Kosovo. This includes, inter alia, training in safe and reliable diagnostics and guidance and support (experts, equipment, consumables) for ongoing diagnostic challenges. 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.

Project Title	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
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.

Project Title	Development of a vaccine platform for African Horse Sickness Virus using a synthetic biology approach
Partner Country/Region	United Kingdom
Implementing Country	Italy – Istituto Zooprofilattico Sperimentale dell'Abruzzo e Molise
Collaborating Institution(s) / Partner(s)	University of Glasgow, Centre for Virus Research (CVR) – United Kingdom
Project Value	€143,990
Duration	2017-2019
Description	<p>IZSAM in partnership with CVR are implementing a project to exploit synthetic biology, as well as established molecular methods, for the development of a universal vaccine platform that can be rapidly deployed against any African Horse Sickness Virus (AHSV) serotype, including potentially new emerging (or previously uncharacterized) strains.</p> <p>Specific project short term aims are:</p> <ol style="list-style-type: none"> 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> <ol style="list-style-type: none"> 3. To produce the “synthetic” vaccines in a vaccine manufacturer setting; 4. To determine their ability to induce neutralizing antibodies in experimental animal models; 5. To determine their ability to induce neutralizing antibodies in natural host; and 6. To determine their ability to elicit adequate protective immunity in the natural host

EUROPE: CHEMICAL

Project Title	Support for the implementation of the Chemical Weapons Treaty
Implementing Country	The Netherlands and other MS of the CWC, especially MS owning designated laboratories.
Collaborating Institution(s) / Partner(s)	Netherlands Organisation for Applied Scientific Research (TNO – The Netherlands)
Project Value	NA
Duration	Continuous duration being decided every 3 years since entry into force of the CWC
Description	The Netherlands is supporting the OPCW (Organisation for the Prohibition of Chemical Weapons) in several ways. First and foremost, TNO is executing the role of designated laboratory. Furthermore, TNO contributes in OPCW bodies dealing with the verification regime. Finally, TNO provides the OPCW Scientific Advisory Board with a member.

Project Title	Twinning Initiative under the Chemical Weapons Treaty
Implementing Country	The Netherlands
Collaborating Institution(s) / Partner(s)	Netherlands Organisation for Applied Scientific Research (TNO – The Netherlands)
Project Value	NA
Duration	2016-2018
Description	The Netherlands is supporting specific Member States of the OPCW (Organisation for the Prohibition of Chemical Weapons) in their attempts to become a designated lab by providing training and education in the field of environmental or biomedical analysis of samples provided by the OPCW, either in the framework of so-called proficiency tests or real samples.

Project Title	Strengthening of Ukraine's Civil Protection Capacities
Partner Country/Region	Ukraine
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Federal Office for Civil Protection and Disaster Assistance of Germany (BBK) , The State Emergency Service of Ukraine (SES), Administration of the State Border Guard Service of Ukraine (ASBGS)
Project Value	€3,625,000
Duration	2016 – 2019
Description	In cooperation with the local authorities in Ukraine, Germany is implementing a project to strengthen capacities to protect the population from chemical dangers. Specific activities include: <ul style="list-style-type: none"> • Provision of CBRN-detection equipment and according training measures • CBRN expert exchange • CBRN risk and crisis management training (equipment, seminars and exercises)

EUROPE: NUCLEAR AND RADIOLOGICAL SECURITY

Project Title	Global Material Security (GMS) Program
Partner Country/Region	Europe
Implementing Country	United States
Project Value	\$56,200,000
Duration	2018
Description	Work with partners worldwide to build sustainable capacity to secure nuclear and radioactive materials and to deter, detect, and investigate the trafficking of those materials.

Project Title	Illicit Trafficking Radiation Assessment program +10 Phase II, Round Robin Test (ITRAP+10 Phase II, RRT)
Partner Country/Region	European Countries
Implementing Country	France, Germany, Hungary, Austria
Collaborating Institution(s) / Partner(s)	European Commission /DG HOME Agence Française d'Expertise Technique Internationale (Expertise France, France), Institut de Radioprotection et de Sûreté Nucléaire (IRSN, France) Commissariat à l'Énergie Atomique et aux Énergies Alternatives (CEA, France) Center for Energy Research (MTA EK) Seibersdorf Labor GmbH (SL) Fraunhofer Institute for Technological Trend Analysis
Project Value	€572,000
Duration	Starting date: January 1st, 2017 End date: 30 June 2019
Description	<p>The scope of the project is to assist national laboratories in EU member states to build up testing capabilities of nuclear security instruments. These instrument are able to detect radioactive materials movement for instance crossing borders illegally, whether importations, exportations, or shipments in transit.</p> <p>To do so, a round robin is organized using three radiation detection instrument: a Personal Radiation Detectors, a Radioisotope Identifiers, and a pedestrian Spectroscopic Radiation Portal Monitors. Each laboratory prepared and performed an assessment of the performance of such equipment, with the verification of their compliance using the same standard. The final comparison will be used to verify that the results are equivalent, and if all the tests laid down by the current standards are actually achievable.</p>

Project Title	Improving Nuclear and Radiological Security: Engendering Cooperation, Establishing Pragmatic Action
Implementing Country	Finland
Collaborating Partner(s)	The Stimson Center, United States
Project Value	€100,000
Duration	2018-2019
Description	Continuation of a 2018 project consisting of a study, global outreach and creation of a comprehensive database on laws and regulations of UN Members States addressing security of radiological sources by updating and extending the data and revising the coding of measures to reflect the updated IAEA guidance. Conduct further analysis of the data to better understand the gaps in securing radioactive sources; facilitate a discussion on measures to effectively address those gaps; organize outreach to relevant international organisations.

Project Title	International Non-proliferation Export Control Program (INECP)
Partner Country/Region	Europe
Implementing Country	United States
Collaborating Partner(s)	Joint Research Centre
Project Value	US\$440,000
Duration	2018
Description	INECP imparts: (1) A sufficient understanding of civil nuclear and dual-use materials, equipment, and technology; and (2) A sufficient understanding of risk analysis in the export licensing and enforcement fields, so that partners can effectively implement multilateral supplier regime guidelines and control lists, as well as relevant United Nations Security Council Resolutions (UNSCRs) within their own systems of control. INECP identifies opportunities to promote the sustainment of national export control capacities by: using a train-the-trainer approach; tailoring curriculum offerings and other technical resources to address specific partner needs; helping partners develop implementation plans that identify interagency roles and responsibilities; and developing Action Sheets and other formalized mechanisms like Statements of Intent (SOIs), which map each side's commitments to joint projects and activities.

Project Title	International Nuclear Safeguards Engagement Program (INSEP)
Partner Country/Region	Europe
Implementing Country	United States
Project Value	US\$777,000
Duration	2018
Description	INSEP Projects work to: 1) Build capacity within the State System of Accounting for and Control of Nuclear materials to implement IAEA safeguards agreements; 2) Improve reporting under and promote implementation of the Comprehensive Safeguards Agreement and Additional Protocol; 3) Work with partners to address facility-specific safeguards challenges; 4) Develop and test innovative safeguards technologies, tools, and approaches.

Project Title	International Nuclear Safeguards Engagement Program (INSEP)
Partner Country/Region	Former Soviet Union
Implementing Country	United States
Project Value	US\$1,095,000
Duration	2018
Description	INSEP Projects work to: 1) Build capacity within the State System of Accounting for and Control of Nuclear materials to implement IAEA safeguards agreements; 2) Improve reporting under and promote implementation of the Comprehensive Safeguards Agreement and Additional Protocol; 3) Provide training and assistance to address facility-specific safeguards challenges.

Project Title	Nuclear Safety Cooperation with Georgia
Partner Country/Region	Georgia
Implementing Country	Sweden
Collaborating Institution(s) / Partner(s)	DG DEVCO, Swedish International Development Cooperation Agency, Agency for Nuclear and Radiation Safety in Georgia (ANRS)
Project Value	€1,000,000
Duration	2018–2020
Description	The overall objective of the cooperation is for the Swedish Radiation Safety Authority to provide assistance to the Agency for Nuclear and Radiation Safety in Georgia to implement the national radioactive waste management strategy adopted in 2016. The focus in 2018 – 2019 includes a radioactive waste site characterization, concept, design and preliminary safety assessment for the waste storage and processing facilities.

Project Title	Support to Georgia's Nuclear Security Forum
Partner Country/Region	Georgia
Implementing Country	Sweden and the United States
Collaborating Institution(s) / Partner(s)	Civil Council on Defense and Security of Georgia
Project Value	€25,000
Duration	2018
Description	The overall objective of the Forum is to promote national and regional discussions on current international developments concerning vital issues of global security and to promote a wider regional debate among governmental and international organizations, civil society and academia.

Project Title	Kazakhstan Nuclear Security Engagement
Partner Country/Region	Kazakhstan
Implementing Country	United States, Department of Defense, Defense Threat Reduction Agency, Global Nuclear Security (GNS) Program
Collaborating Institution(s) / Partner(s)	Kazakhstan National Guard, Kazakhstan Committee for Atomic and Energy Supervision and Control, National Nuclear Center
Duration	2014-2024
Description	GNS activities focused on securing vulnerable nuclear and high-threat radiological material and training personnel to respond to potential threats. GNS also provided Kazakhstan with a secure inventory management system, meeting all applicable international standards to ensure nuclear materials are accounted for, tracked, and reported. GNS is helping to establish the National Guard Anti-Crisis Training Center to provide long-term nuclear security capability.

Project Title	Supporting activities for decommissioning of the near-surface Radon-type Radioactive Waste Disposal facility in Chisinau, Moldova
Partner Country/Region	Moldova
Implementing Country	Sweden
Collaborating Institution(s) / Partner(s)	National Agency for Regulation of Nuclear and Radiological Activity in Moldova (NARNRA), TSO Inoteh, Radioactive Waste Management Company, Special Facilities 5101, 5102.
Project Value	€28,000
Duration	2018
Description	The objective of the project is to develop a site descriptive model for the Radon-type disposal that will establish baseline radiological status and provide a basis for development of monitoring program and a radiological safety assessment.

Project Title	Physical Protection Upgrades at Radioactive Waste Facility, Chisinau
Partner Country/Region	Moldova
Implementing Country	Sweden, United Kingdom
Collaborating Institution(s) / Partner(s)	National Agency for Regulation of Nuclear Radiological Activities in Moldova (NARNRA), Radioactive Waste Management Company, Special facilities 5101, 5102
Project Value	€120,000
Duration	2018
Description	The overall objective is to upgrade physical protection system (perimeter fence) at the special facilities 5101, 5102 as it does not respond international requirements to facilities housing radioactive materials. The current state of the perimeter fence does not prevent from radiological sabotage or theft of radiological materials from the site that could be used for malicious purposes.

Project Title	Emergency Preparedness Cooperation with Russian authorities
Partner Country/Region	Russia
Implementing Country	Sweden
Collaborating Partner(s)	Rosenergoatom
Project Value	€40,000
Duration	2018
Description	A number of activities were carried out in 2018 under the umbrella of the five-year action plan agreed in 2015 for the cooperation on emergency preparedness and response between Russian, Finnish, Norwegian, Belarusian and Swedish authorities. Workshops and meetings were held in Finland and Sweden. In September, SSM participated as an observer in an emergency preparedness and response exercise at the Balakovo nuclear power plant.

Project Title	Establishment of a Radiation monitoring system at the transport checkpoint 3 at FSUE "Mayak"
Partner Country/Region	Russia
Implementing Country	Sweden
Collaborating Institution(s) / Partner(s)	Rosatom, JSC Scientific Engineering Center "Nuclear Physics Research" and FSUE PO "Mayak"
Project Value	€180,000
Duration	2018
Description	The overall objective is to install an additional radiation monitoring portal for vehicles and pedestrians passing the security check-point 3 at the FSUE Mayak. The existing checkpoint lacks capacity and modern equipment to monitor both incoming and outgoing flow.

Project Title	Non-proliferation Education Programmes at Russian Universities
Partner Country/Region	Russia
Implementing Country	Sweden
Collaborating Institution(s) / Partner(s)	Ural Federal State University, Tomsk State University, St Petersburg University and Novouralsk Technological Institute
Project Value	€100,000
Duration	2018
Description	The project promotes non-proliferation and nuclear security education programmes in Russian academia. The main efforts focus on strengthening capacity building for academic writing in the Urals.

Project Title	Partnership with Leningrad and Kola nuclear power plants
Partner Country/Region	Russia
Implementing Country	Sweden, Norway and Finland
Collaborating Institution(s) / Partner(s)	KOLA NPP, Leningrad NPP, Norwegian radiation Protection Authority (NRPA) and Finnish Radiation and Nuclear Safety Authority (STUK)
Project Value	€600,000
Duration	2018
Description	In partnership with NRPA and STUK, SSM have implemented a project to strengthen the capacity at the KOLA NPP and Leningrad NPP in the following key areas: <ul style="list-style-type: none"> • Knowledge transfer/personnel training in decommissioning • Knowledge transfer/experience exchange in safety culture and HR management • Knowledge transfer/experience exchange in radwaste • Advanced technologies and instruments for various diagnostics off NPP equipment • Advanced technologies and instruments for radiological measurements required for decommissioning • Engineering support and spare parts supply

Project Title	Disused Sealed Radioactive Source Security in Ukraine
Partner Country/Region	Ukraine
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	United States Department of Energy (DOE)
Project Value	C\$1,500,000
Duration	2016-2019
Description	Funding for the provision of storage and transportation containers to securely transport and consolidate disused and orphaned radioactive sources at the Vector facility, in Ukraine’s Chernobyl Exclusion Zone.

Project Title	Physical Protection System Upgrades at the South Ukraine Nuclear Power Plant (SUNPP)
Partner Country/Region	Ukraine
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	United States Department of Energy (DOE)
Project Value	C\$3,000,000
Duration	2016-2019
Description	Strengthening of security and defensive measures at the South Ukraine Nuclear Power Plant (located near the Crimean peninsula), such as provision of surveillance cameras, radiation detection equipment, intrusion barriers, secure transportation containers and related training of nuclear facility staff.

Project Title	Radiation Detection Systems at Border Crossing Points in Ukraine
Partner Country/Region	Ukraine
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	United States Department of Energy (DOE)
Project Value	C\$5,000,000
Duration	2018-2019
Description	Installation of radiation detection systems at 3 critical Ukrainian checkpoints in the Transnistria Region bordering Moldova, and the Donetsk Oblast bordering Russia.

Project Title	Ukraine Nuclear Security Readiness Project
Partner Country/Region	Ukraine
Implementing Country	United States, Department of Defense, Defense Threat Reduction Agency, Global Nuclear Security (GNS) Program
Collaborating Institution(s) / Partner(s)	National Guard, National Police, Security Service of Ukraine, George Kuzmycz Training Center, Radon, Ministry of Energy and Coal Industry,

	State Nuclear Regulatory Inspectorate of Ukraine, Energoatom
Duration	2015-2024
Description	GNS completed two Global Partnership Proposals, including the design and renovation of the Emergency Information Center and the design and renovation of the Inter-ministerial Operations Headquarters. Additionally, GNS is providing training, equipment, and physical security upgrades to enhance Ukraine National Guard nuclear capabilities. Finally, GNS is transitioning from site security efforts to developing counter nuclear smuggling capabilities.

Project Title	Upgrades to Kyiv Training Centre on Physical Protection Systems for Nuclear Security
Partner Country/Region	Ukraine
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Swedish Radiation Safety Authority
Project Value	C\$150,000
Duration	2018-2019
Description	In collaboration with the Swedish Radiation Safety Authority (SSM), Canada will provide technical system upgrades, including computer, software, and printing equipment, to the Kyiv Polytechnical Institute (KPI) to support the recreation of a computer accounting laboratory within the Physical Protection Training Center. Upgrades to the center are part of an international effort including support from the IAEA and US DoE NNSA.

Project Title	Modernisation of the perimeter of South Ukraine NPP in cooperation with State Enterprise „Energoatom“
Partner Country/Region	Ukraine
Implementing Country	Germany – implementing agency: GRS (Gesellschaft für Anlagen- und Reaktorsicherheit), funded by the Federal Foreign Office
Collaborating Institution(s) / Partner(s)	State Enterprise “Energoatom” Ukrainian Ministry of Energy and Coal
Project Value	€4,700,000
Duration	2015-2019
Description	Construction of 10 protected guard booths, their power supply, climatization, interface/communication with alarm station. Upgrade of vehicle access points (cars, trucks, trains), supply and support for installation of vehicle barrier bars, sliding gates and more guard booths

Project Title	Modernization of the physical protection of power unit No 3 of Rivne nuclear power plant in cooperation with State Enterprise “Energoatom”
Partner Country/Region	Ukraine
Implementing Country	Germany – implementing agency: GRS (Gesellschaft für Anlagen- und Reaktorsicherheit), funded by the Federal Foreign Office
Collaborating Institution(s) / Partner(s)	State Enterprise “Energoatom” Ukrainian Ministry of Energy and Coal
Project Value	€2,900,000
Duration	2015-2019
Description	Retrofitting of inner security area of power unit No 3 by modernisation of access control system, detection, video surveillance, elements of barriers as well as by connection of upgraded systems to Central Alarm Station of the plant.

Project Title	Khmelnitsky Nuclear Power Plant Physical Security
Partner Country/Region	Ukraine
Implementing Country	Sweden
Collaborating Institution(s) / Partner(s)	National Nuclear Energy Generation Company “Energoatom”, Ministry of Fuel and Energy of Ukraine and the TSM GROUP Corporation in Ukraine.
Project Value	€201,313
Duration	September 2017 - July 2018
Description	The projects objectives are for the Swedish Radiation Safety Authority to provide technical assistance and support to the Khmelnitsky Nuclear Power Plant regarding modernisation and improvements of its physical protection system in order to meet international standards. For 2019, SSM and its Norwegian counterparts intend to implement further upgrades at the facility.

Project Title	Support to Ukrainian State Body for Export Control
Partner Country/Region	Ukraine
Implementing Country	Sweden
Collaborating Partner(s)	State Service of Export Control of Ukraine (SSECU)
Project Value	€10,000
Duration	2018
Description	The project focuses on facilitating Ukraine’s adjustment process to the EU’s export control principles and procedures. The Swedish Radiation Safety Authority supported updates of the SSECU website with specialized modules for exporters, including search tools and identification of goods.

Project Title	Technical Support to the NMAC State Nuclear Regulatory Inspectorate of Ukraine for IAEA safeguards inspections
Partner Country/Region	Ukraine
Implementing Country	Sweden
Collaborating Partner(s)	State Nuclear Regulatory Inspectorate of Ukraine (SNRIU)
Project Value	€18,000
Duration	2018-2019
Description	During the past year the Swedish Radiation Safety Authority has supported the State Nuclear Regulatory Inspectorate of Ukraine (SNRIU) to improve the technical infrastructure of the national database for nuclear material accountancy and control by modernizing hardware and software to ensure the registry's functionality for reporting to the IAEA under the national safeguards obligations.

Project Title	PSA RiskSpectrum/RiskWatcher Software Tools for NNEGS "Energoatom"
Partner Country/Region	Ukraine
Implementing Country	Sweden/Ukraine
Collaborating Institution(s) / Partner(s)	Swedish radiation safety Authority Norwegian Radiation Protection Authority Lloyd's Register Consulting – Energy AB, Sweden
Project Value	SEK 2,357,760
Duration	2017-2018
Description	<p>Realisation of the Risk monitoring system (RMS) at Energoatom nuclear power plants inclusively procurement of the software tools RiskSpectrum/RiskWatcher (RS/RW) and RiskSpectrum/PSA (RS/PSA), necessary for implementation of PSA and RMS. This task is aimed in improved reactor safety – decrease risks for radiological incidents, as well implementation of PSA methods at nuclear power plants is a requirement of the national Regulatory body of Ukraine (SNRIU).</p> <p>RS/PSA and RS/RW are software for modeling and study of risks and their development over time. RS/PSA is used for modeling NPPS in different configurations while RS/RW is used for risk assessment of different models and configurations as decision making tools with the aim to minimize risks. Implementation of the PSA and RMS .</p>

Project Title	Radiation Detection Systems at Border Crossing Points in Ukraine
Partner Country/Region	Ukraine
Implementing Country	United States
Collaborating Institution(s) / Partner(s)	USA/NNSA Global Material Security Office of Nuclear Smuggling Detection and Deterrence (NSDD)
Project Value	The project is estimated to cost US\$5,000,000, the Finnish contribution being €496,000.
Duration	2018
Description	Radiation detection systems are required at Ukrainian checkpoints at the Moldovan border in the Transnistria Region and the Donetsk Oblast in order to prevent smuggling of nuclear and radiological materials.

Project Title	RN Material Detection, Dosimetry, Decontamination Equipment and Training for Lysichansk Border Detachment, SBGS, Ukraine
Partner Country/Region	Ukraine / Lugansk
Implementing Country	Norway
Collaborating Institution(s) / Partner(s)	Financing through the Norwegian Government's Acton Plan for Nuclear Safety and Security. Implemented by Nordisk Sikkerhet AS (NorSik), Norway State Border Guard Service of Ukraine (SBGS)
Project Value	NOK 5,822,607
Duration	2018-2020
Description	<p>The aim of the project is to enhance the capabilities of the newly established Lysichansk border detachment which is responsible for implementation of such tasks along the uncontrolled area in South-East of Ukraine. The Lysichansk border detachment is in need of technical means – radiation portal monitors, hand-held detectors, personnel dosimeters, personal protective suites, contamination control and decontamination supplies, as well as trainings to enhance radiological and nuclear materials detection and control within the area of responsibility.</p> <p>2-3 days trainings on the usage and maintenance of the delivered equipment will be provided by the supplier. Additional theoretical training, a table-top and field exercises are planning to be organized at the end of the project.</p>

Project Title	Non-Destructive Test (NDT) equipment for nuclear safety systems – Rivne nuclear power plant
Partner Country/Region	Ukraine / Rivne
Implementing Country	Norway/Ukraine
Collaborating Institution(s) / Partner(s)	Financing through the Norwegian Government's Acton Plan for Nuclear Safety and Security. Implemented by Institute of Energy Technique (IFE), Norway NNEGC Energoatom, Ukraine Rivne Nuclear Power Plant, Ukraine DEKRA, Sweden
Project Value	NOK 4,210,000
Duration	2015-2019
Description	The main objective is to increase the nuclear safety at Rivne Nuclear Power Plant by providing equipment for Non-Destructive Tests, with training and field exercise on the usage of the supplied equipment.

Project Title	RN material detection, protection, dosimetry equipment and training for Zhytomyrskyi border detachment, SBGS, Ukraine
Partner Country/Region	Ukraine / Zhytomyr
Implementing Country	Norway
Collaborating Institution(s) / Partner(s)	Financing through the Norwegian Government's Acton Plan for Nuclear Safety and Security. Implemented by Nordisk Sikkerhet AS (NorSik), Norway State Border Guard Service of Ukraine (SBGS)
Project Value	NOK 4,078,000
Duration	2017-2018
Description	The main objective of the project is to enhance SBGS capabilities to detect and intercept illicit trafficking of radiological and nuclear materials along the border with Republic Belarus and .Chornobyl Exclusive Zone which falls and the responsibility of the Zhytomyrskyi State border detachment. Theoretical part of trainings will include presentations about radiation, sources of ionizing radiation – types, parameters, properties; types of radioactive emissions and their properties, methods of protection against radioactive emissions, safety aspects for handling RN materials, the principle of operation of detectors, types of detectors, etc. Practical part is planned to be conducted at one of the SBGS check points with practical exercises on detection, localization and identification of RN materials, establishment of safety measures, safe handling of RN materials, etc.

EUROPE: CBRN & UNSCR 1540

Project Title	Strengthening CBRN First Response Capabilities and Regional Cooperation in South East Europe, Southern Caucasus, Moldova and Ukraine (P44)
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) / 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

Project Title	Strengthening Crime Scene Forensics Capabilities in Investigating CBRN Incidents in the South East and Eastern Europe Region (P57)
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) / Partner(s)	Belgian Nuclear Research Institute (SCK•CEN), National Institute for Public Health and the Environment, The Netherlands (RIVM), Slovak 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
Project Value	€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

Project Title	Countering Russian Aggression and Malign Influence
Partner Country/Region	Balkans, Baltics, Caucasus, Moldova, Ukraine
Implementing Country	U.S. Export Control and Related Border Security (EXBS) Program
Collaborating Partner(s)	Multiple
Project Value	US\$9,900,000
Duration	Multiple Year
Description	<p>In Europe and Eurasia, EXBS advances border security, reform and resiliency, helps strengthen partner capabilities to maintain territorial integrity, prevents diversion of WMD-sensitive material and conventional arms, indigenizes regional enforcement capabilities, and promotes mentorship by countries with mature strategic trade control (STC) systems. EXBS also works to responsibly close out programs in lower-threat countries.</p> <ul style="list-style-type: none"> • Legal/Regulatory and Licensing: EXBS is helping Albania, Kosovo, Moldova, and Ukraine develop an effective capacity to license transfers of strategic goods through mentoring, training, process refinement, and institution building. EXBS also is providing electronic tools to regional partners to facilitate processing of license requests and to promote transparency of interagency review. • Enforcement: EXBS is advancing border security including maritime response capabilities, reform, and resiliency in Georgia, Moldova, Turkey, and Ukraine through hands-on training, realistic exercises, and transfer of surveillance, inspection, and detection equipment. In Ukraine, EXBS is leading an overall modernization and reform effort for the Maritime Border Guards. • Industry Outreach: EXBS assists Balkans partners, Georgia, and Ukraine in developing outreach programs to enterprises implementing STC obligations and sanctions. • Regional Cooperation and Interagency Coordination: EXBS promotes cross-border cooperation between partner countries in the Balkans, Baltics, Caucasus, and East Europe through bilateral/multilateral training, exercises, and operations. EXBS is also encouraging increased interagency coordination by strengthening cross-government working groups and task forces in Azerbaijan, Armenia, Moldova, and Ukraine.

Project Title	CBRNE Law Enforcement Training Initiative (CELECTIVE)
Partner Country/Region	European Union
Implementing Country	European Commission, through European CBRN Center Umea
Collaborating Institution(s) / Partner(s)	European CNRN Center of the University of Umea (UMU - Sweden) Netherlands Organisation for Applied Scientific Research (TNO – The Netherlands); Swedish Defence Research Organisation (FOI - Sweden) National Institute for Chemical, Biological and Radiological Protection (SUJCHBO - Czech Republic)
Project Value	€590,298
Duration	2017-2019
Description	The objective of CELECTIVE is to enhance the capacity of Member States to

	<p>prevent and mitigate CBRN-E risks effectively before they manifest (pre-event phase) by improving the realistic training opportunities for LE practitioners. This will be met by establishing a consolidated training programme that is based on best practices, previous and on-going EU projects, e.g. FP7 Demonstration projects SECUR-ED and EDEN, on activities of LE networks (CEPOL, EODN), and that will emphasize cross-border and cross-sector cooperation. Through coordination with on-going standardization efforts in Europe the team will ensure that the CELECTIVE programme is in line with EU's ambitions in this respect. CELECTIVE's approach is based on a well-known 3-step pedagogical concept (theoretical knowledge – table-top exercise – field exercise), that focuses on learning by reflecting. This promises effective and resource-efficient training for LE practitioners, special intervention groups and other stakeholders involved in critical infrastructure protection. The team will also apply the concept of operational functions, developed in FP7 Integration project PRACTICE, that will support cross sector training and cross border cooperability. CELECTIVE will perform a state-of-the-art review of existing training initiatives and a training need analysis supported by stakeholders and consolidate the findings into the CELECTIVE programme. The programme will for example be equipped with an interactive e-learning platform, adaptable teaching templates and teacher's guidance, newly developed digital scenarios for table-top exercises etc. As a proof of concept we will execute training courses at CBRN-E training facilities, consecutively in three Member States with evaluation and improvements after each event as well as at the end of the series. In addition, the project aims to improve and exploit existing training tools including dedicated CNRN-E training facilities. Facilities and methods need to be as multidisciplinary, joint and international as possible. The project will therefore suggest a strategy for future integration of the CELECTIVE programme into LE training in Member States, utilizing the training components and tools developed during the project.</p>
--	---

Project Title	A harmonised CBRN training curriculum for first responders and medical staff (MELODY)
Partner Country/Region	European Union
Implementing Country	European Commission, through Studiecentrum voor Kernenergie/Centre d'Etude de l'Energie Nucléaire (SCK*CEN)
Collaborating Institution(s) / Partner(s)	Studiecentrum voor Kernenergie/Centre d'Etude de l'Energie Nucléaire (SCK*CEN); Netherlands Organisation for Applied Scientific Research (TNO); National Institute for Public Health and the Environment, the Netherlands (RIVM); University of Rome Tor Vergata; University of Umea; International Security and Emergency Mangement Institute (ISEMI); Campus Vesta; University of Lodz; Western Finland Rescue Training Area (Länsi-Suomen Pelastusharjoitusalueääitiö); Military Police Hungary (Keszzenleti Rendorseg).
Project Value	€2,793,133

Duration	2018-2021
Description	The main objective of this project proposal is to define, develop and deploy a harmonized CBRN training curriculum for first responders and medical staff, by medical staff it is meant ambulance drivers, paramedics and emergency room (ER) personnel. The objectives set out for the project will be achieved through 7 logically designed work packages (WPs), which cover the consultation with existing training facilities in the consortium, leading to a draft document, which will then through consultation with end-users/practitioners will determine how far we are from the actual training needs. Additional effort will be spent in correcting the departures from the existing training material with respect to the actual practitioner's needs. The improved CBRN training curriculum will be assessed and evaluated through a number of dedicated exercises and training activities which will lead to a new set of improvements. A WP has been devoted to demonstration and dissemination activities. The former will deal with showcasing the final product through a set of full scale exercises, whereas the latter will be a continuous effort in raising awareness on the project and its activities at all levels: from practitioner to policy makers. It is expected that, a fully fit-for-purpose CBRN training curriculum for EU first responders and medical staff, properly quality assured and controlled will be delivered three years after the initiation of the project.

Project Title	International Non-proliferation Export Control Program (INECP)
Partner Country/Region	Former Soviet Union
Implementing Country	United States
Project Value	US\$461,000
Duration	2018
Description	INECP imparts: (1) A sufficient understanding of civil nuclear and dual-use materials, equipment, and technology; and (2) A sufficient understanding of risk analysis in the export licensing and enforcement fields, so that partners can effectively implement multilateral supplier regime guidelines and control lists, as well as relevant United Nations Security Council Resolutions within their own systems of control. INECP identifies opportunities to promote the sustainment of national export control capacities by: using a train-the-trainer approach; tailoring curriculum offerings and other technical resources to address specific partner needs; helping partners develop implementation plans that identify interagency roles and responsibilities; and developing Action Sheets and other formalized mechanisms like Statements of Intent, which map each side's commitments to joint projects and activities.

Project Title	Development of Georgia's non-proliferation education and research
Partner Country/Region	Georgia
Implementing Country	Sweden
Collaborating Partner(s)	Civil Council on Defence and Security

Project Value	€35,000
Duration	2018
Description	The objective is to support the improvement of non-proliferation education programmes at Georgian universities. In 2018, the main activities focused on further development of the non-proliferation awareness and research capacity at universities in Tbilisi and Batumi.

Project Title	Arms Control and Disarmament Verification seminar
Partner Country/Region	Russia
Implementing Country	Sweden
Collaborating Partner(s)	Diplomatic Academy of Russian Foreign Ministry, PIR Center
Project Value	€10,000
Duration	2018
Description	In cooperation with PIR Center, a leading Russian nongovernmental research organization in the area of international security, a high level seminar was organized on Arms Control and Disarmament Verification. Topics discussed were: Future of arms control and challenges of verification & verification of multilateral disarmament.

V. MIDDLE EAST

BIOLOGICAL

Project Title	Biosecurity Engagement in Iraq
Partner Country/Region	Iraq
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	CRDF Global
Project Value	US\$699,432
Duration	2016-2018
Description	<p>To improve laboratory equipment operation and maintenance standards in Iraq the following activities were implemented:</p> <ul style="list-style-type: none"> • basic laboratory equipment maintenance and repair training for Iraqi experts; • implementation of a biorisk management train-the-trainer course involving international subject matter experts; • promotion of biorisk management through a comprehensive curriculum on responsible science.

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

Project Title	Enhancing Biosecurity capacities in Jordan
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.

Project Title	OIE Veterinary Education Twinning between the Royal Veterinary College (RVC)/Jordan University of Science and Technology (JUST)
Partner Country /Region	Jordan / Middle East Regional
Implementing Country	United Kingdom – Ministry of Defence United States – Defense Threat Reduction Agency
Collaborating Partner(s)	OIE, Royal Vet College, USA DTRA, Jordan University of Science and Tech.
Project Value	£340,000
Duration	2015-2018
Description	The long-term objective is to provide the region with a supply of well qualified veterinary practitioners trained to a recognised international standard who will in time raise standards of veterinary health care, including disease surveillance and control capabilities across the MENA region. It seeks to promote concepts of bio-threat awareness and reduction, and to spread a culture of ethical science by building improved capacity for biosecurity, modern diagnostics, and disease surveillance. It will also enhance capability for research on endemic and emerging diseases

MIDDLE EAST: CHEMICAL

Project Title	OPCW Fact-Finding Missions (FFM) to investigate CW Use in Syria
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	The Organisation for the Prohibition of Chemical Weapons
Project Value	C\$2,500,000
Duration	2017-2019
Description	This contribution supports the organisation's FFM investigations and the Declaration Assessment Team's activities in determining CW use in Syria. Additionally, the funding supported the initial planning phase for analytical upgrades to its Laboratory. Some of the activities supported: FFM and DAT deployments, verification activities, sample analysis and security measures, systems improvements (e.g. to the establishment of a new situation centre, training of personnel, and for the development of specifications for laboratory upgrade options.

Project Title	OPCW Trust Fund for Syria Missions
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	The Organisation for the Prohibition of Chemical Weapons
Project Value	€2,500,000
Duration	2016-2018
Description	Building on previous contributions to support CW investigation and destruction activities in Syria, Canada provided a further C\$2.5M to the OPCW to enable it to carry out critical verification and monitoring activities in Syria in a timely, responsive and effective fashion.

Project Title	OPCW-UN Joint Investigative Mechanism (JIM) investigations relating to CW use in Syria
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	UN Office for Disarmament Affairs (UNODA)
Project Value	US\$2,000,000
Duration	2016-2021
Description	Canada's funding supported the JIM liquidation phase of the Project (administrative and financial activities) as it closed out its mandate, as well as supporting a lessons-learned exercise to distil the experience of the JIM into transferable lessons for future activities. The remaining funding will support the full operability of the Secretary-General's Mechanism for investigation of the alleged use of chemical, biological and toxin weapons, further to the authority given to the Secretary-General by United Nations General Assembly resolution 42/37 C led by UNODA.

Project Title	Support of Iraqi Officials to Enhance their Chemical Incident Response Capabilities
Partner Country/Region	Iraq
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Civilian Research Development Foundation (CRDF Global)
Project Value	C\$782,000
Duration	2018-2021
Description	This Project aims to increase Iraqi incident prevention and response capacities by supporting the Government of Iraq to enhance interagency structures and coordination mechanisms, secure vulnerable chemicals in high risk facilities and build training capacity to strengthen prevention and response capabilities (via training, workshops, roundtables / meetings and tabletop exercises). It will likewise enhance the security of “precursor” chemicals (i.e. chemicals that can be used to produce weapons), improve coordination with and capabilities of first responders, build the capacity of Iraqi academic, governmental, and professional bodies to conduct chemical security training (using local and regional resources) and promote chemical security culture and best practices.

Project Title	Support to Enhance Leadership Skills of Iraqi Women in the Area of Chemical Security
Partner Country/Region	Iraq
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Civilian Research Development Foundation (CRDF Global)
Project Value	C\$332,000
Duration	2018-2021
Description	In response to serious threats posed by terrorist use of CW in and around Iraq, Canada is supporting CRDF Global to advance leadership skills for women through professional development courses and regional fellowships. This Project will promote an inclusive culture of chemical security in Iraq by providing up to thirty (30) qualified Iraqi women (from technical, research, policy, or educational backgrounds) with the requisite knowledge, skills, resources, and connections to lead chemical security initiatives and contribute to non-proliferation policy-making within their respective sectors.

Project Title	Iraqi First Responder Train & Equip Efforts to Mitigate Chemical Weapons (CW) Threats
Partner Country/Region	Iraq and Kurdistan Regional Government
Implementing Country	The United States, through the U.S. Department of State Bureau of International Security and Nonproliferation / Office of Cooperative Threat Reduction (ISN/CTR)
Collaborating	NGOs; U.S. National Labs; research and training institutions; logistics and

Institution(s) / Partner(s)	training firms; other U.S. agencies
Project Value	US\$15,500,000
Duration	2013-2018
Description	<p>In response to the CW threat posed by ISIS, ISN/CTR continues to implement a series of train & equip efforts to strengthen the capacity of Iraqi first responders to rapidly detect the use of CW, don personal protective equipment (PPE), sample contaminated materials, and decontaminate affected areas/personnel. Specific project activities and implementing partners include:</p> <ul style="list-style-type: none"> • Procurement of specialized PPE to include M40 masks, JSLIST suits, gloves, boots, and canisters for the Iraqi Counter Terrorism Services and Ministry of Defense for use in counter-ISIS operations; • Procurement of specialized equipment for the Iraqi Civil Defense CBRN Teams to efficiently sample CW material used on the battlefield and prepare for expedient transport for analysis Procurement of advanced CW detection training equipment for use by Iraqi Security Forces; • CW incident command training to exercise and build upon Iraqi Security Forces' SOPs to detect the presence of CW, don PPE, and decontaminate during counter ISIS operations; • Specialized training for response to ISIS sabotage/arson attempts targeting industrial chemical facilities

Project Title	Enhancing Chemical Security for the Hashemite Kingdom of Jordan
Partner Country/Region	Jordan
Implementing Country	United States, Department of Defense (DOD), Defense Threat Reduction Agency (DTRA), Chemical Weapons Destruction (CWD) Program
Collaborating Partner(s)	International Centre for Chemical Safety and Security (ICCSS)
Duration	2018-2019
Description	ICCSS will conduct a series of chemical security seminars and assist Jordan stakeholders to conduct a gap analysis. The gap analysis will provide an overview of the state of the chemical sector, identify the most pressing issues, recommendations for future activities, and build a future roadmap in a form of chemical safety and security confidence building measures for the Jordan and the Middle East.

Project Title	Support to Jordan to Mitigate Chemical Weapons Threats
Partner Country/Region	Jordan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Project Value	C\$15,520,000
Duration	2013-2018
Description	Canada has provided equipment, infrastructure, training and related support to assist Jordan to guard against potential CW incidents arising from Syria and Daesh.

Project Title	Chemical Weapons Threat Reduction and Emergency Incident Preparedness for Syrian Civilian Medical Personnel and First Responders
Partner Country/Region	Syrian Civilian Medical Personnel and First Responders Operating in northwest Syria
Implementing Country	The United States: U.S. Department of State Bureau of International Security and Non-proliferation / Non-proliferation and Disarmament Fund (ISN/NDF)
Collaborating Institution(s) / Partner(s)	U.S. and Europe-based chemical detection, evidence collection, and first responder subject matter experts.
Project Value	US\$15,300,000
Duration	2017-2019
Description	<p>In partnership with U.S. and Europe-based chemical detection and first response subject matter experts, the U.S. is conducting a chemical threat reduction training and equipment provision program to strengthen the capabilities of civilian first responders in northwest Syria. Specific project activities and capacity building objectives include:</p> <ul style="list-style-type: none"> • Providing personal protective equipment (PPE), chemical detection gear, medical countermeasures, and sampling supplies to Syrian civilian beneficiaries to help them identify, mitigate, and document potential CW attacks in Syria in accordance with international standards. • Conducting related training on CW detection equipment, clinical protocols, and crisis management for civilian beneficiaries enabling them to mitigate the effects of CW attacks on the communities they serve. • Building beneficiary capabilities to collect, preserve, and ensure proper chain-of-custody of both environmental and biomedical samples to confirm potential CW attacks and hold perpetrators accountable through international attribution efforts.

Project Title	Support for OPCW missions in Syria
Implementing Country	United Kingdom, Foreign and Commonwealth Office
Collaborating Institution(s) / Partner(s)	Organisation for the Prohibition of Chemical Weapons Technical Secretariat
Project Value	£150,000
Duration	Current and ongoing since 2014
Description	UK voluntary National contribution to support the work of the OPCW missions in Syria.

MIDDLE EAST: NUCLEAR AND RADIOLOGICAL SECURITY

Project Title	EMRC Emergency Operations Centre
Partner Country/Region	Jordan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	U.S. Department of Defense, Energy and Minerals Regulatory Commission of Jordan
Project Value	C\$500,000
Duration	2018-2019
Description	This project will help operationalize a nuclear security emergency response centre at the headquarters of the Energy and Minerals Regulatory Commission in Amman.

Project Title	Establishing a Counter Nuclear Smuggling Training Centre in Jordan
Partner Country/Region	Jordan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Energy and Minerals Regulatory Commission of Jordan
Project Value	C\$571,628
Duration	2017-2018
Description	In cooperation with the United States and the European Commission, establish a regional training centre in Jordan for the prevention of illicit trafficking of nuclear and other radiological materials.

Project Title	Establishing Counter Nuclear Smuggling Teams in Jordan
Partner Country/Region	Jordan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	U.S. Department of Defense, Jordanian Armed Forces
Project Value	C\$2,460,000
Duration	2016-2018
Description	This project will help provide nuclear/radiological detection equipment and training to the Jordanian Armed Forces for the establishment of Counter Nuclear Smuggling teams.

Project Title	Nuclear Security Engagement
Partner Country/Region	Jordan
Implementing Country	United States, Department of Defense, Defense Threat Reduction Agency, Global Nuclear Security (GNS) Program
Collaborating Institution(s) / Partner(s)	Jordan Armed Forces; Energy and Minerals Regulatory Commission; Jordan Atomic Energy Commission; Gendarmerie Forces; Public Security Directorate; Civil Defense Directorate; Customs; Global Affairs Canada –

	Weapons Threat Reduction Program (WTRP)
Duration	2016-2023
Description	GNS, in cooperation with WTRP, is providing education, training, equipment, and exercise activities to develop the Jordanian Counter Nuclear Smuggling Team and enhance security for the Jordan Research and Training Reactor's Gendarmerie guard force. These activities will support Jordan's overall nuclear response architecture and enable long-term sustainment.

Project Title	Nuclear Security Support to Jordan's Gendarmerie
Partner Country/Region	Jordan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	U.S. Department of Defense, General Directorate of Gendarmerie of Jordan
Project Value	C\$3,190,507
Duration	2017-2019
Description	This project will help provide necessary nuclear security equipment and training to Jordan's Gendarmerie to support its role as guard force of the Jordan Research and Training Reactor.

Project Title	Strengthening Radiological Security at Jordanian Border Crossings - Group IV
Partner Country/Region	Jordan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Energy and Minerals Regulatory Commission of Jordan, Canadian Commercial Corporation
Project Value	C\$5,836,466
Duration	2017-2019
Description	This project will deploy fixed radiation monitoring equipment at the King Hussein International Airport in Aqaba. Operational and maintenance training on the new equipment will also be delivered.

Project Title	Strengthening Radiological Security at Jordanian Border Crossings - Group V
Partner Country/Region	Jordan
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Energy and Minerals Regulatory Commission of Jordan, Canadian Commercial Corporation
Project Value	C\$4,560,000

Duration	2018-2020
Description	This project will deploy fixed radiation monitoring equipment at the Queen Alia International Airport and Amman Civil Airport in Jordan. Operational and maintenance training on the equipment will be delivered.
Project Title	Support to the Jordanian Gendarmerie for Research Reactor Security
Partner Country/Region	Jordan
Implementing Country	France
Duration	2017/2018/2019
Description	France signed in 2017 a joint statement with Jordan to enhance cooperation in nuclear security. In this context, France implements a project to enhance capacities of forces in charge of the security of the Jordanian Research and Training Reactor (JRTR). The CBRN unit of the French gendarmerie nationale provides assistance to the Jordanian gendarmerie unit and organized four trainings in 2017 and 2018 in Jordan. Jordanian officers were also invited to a visit in France for further exchanges in 2018. Two more trainings are envisaged in Jordan in 2019.

Project Title	International Nuclear Safeguards Engagement Program (INSEP)
Partner Country/Region	Middle East
Implementing Country	United States
Project Value	US\$279,000
Duration	2018
Description	INSEP Projects work to: 1) Build capacity within the State System of Accounting for and Control of Nuclear materials to implement IAEA safeguards agreements; 2) Improve reporting under and promote implementation of the Comprehensive Safeguards Agreement and Additional Protocol; 3) Provide training and assistance to address facility-specific safeguards challenges.

MIDDLE EAST: CBRN & UNSCR 1540

Project Title	Middle East and North Africa: Countering Iran, Syria Chemical Weapons, ISIS and Violent Extremist Organizations
Partner Country/Region	Algeria, Egypt, Iraq, Jordan, Lebanon, Libya, Morocco, Oman, Tunisia, Yemen
Implementing Country	U.S. Export Control and Related Border Security (EXBS) Program
Collaborating Institution(s) / Partner(s)	Multiple
Project Value	US\$12,700,000
Duration	Multiple Year
Description	Across the Middle East and North Africa, EXBS is supporting the core elements of the 2018 National Security Strategy to defeat ISIS and violent extremists, deny the Syrian regime access to sensitive technologies and

	<p>materials, counter Iran’s malign influence, and disrupt the Democratic People’s Republic of Korea’s (DPRK) proliferation activities.</p> <ul style="list-style-type: none"> • Legal/Regulatory: EXBS is developing legal and regulatory frameworks for strategic trade controls in Morocco, Tunisia, and Oman focused on educating partners on DPRK and Iranian sanctions compliance issues. EXBS is also working with the government of Jordan on regulatory reform initiatives to impede the Assad regime’s access to CW precursor materials. • Licensing: As trade continues to grow in the region and governments expand their logistics and supply chain infrastructures, EXBS is working with Jordan and Lebanon to develop mechanisms to ensure they can adequately track illicit materials as they transit and exit their territories. • Enforcement: EXBS is working with frontline enforcement officers at key points of entry. This includes providing C-IED training to Libyan and Egyptian officials. EXBS is also providing land border security training across the region, and advanced frontier border security training to Iraqi, Jordanian, Lebanese and Yemeni security officials. In addition, EXBS is providing air border security training to Iraqi, Jordanian, Libyan and Egyptian partners to mitigate threats posed by ISIS and other violent extremist organizations, including detecting and defeating threats to rail, bus and other “soft targets.” • Industry Outreach: Manufacturers, exporters, brokers, freight-forwarders, and the financial industry are a first line of defense against proliferation. EXBS assists industry partners in Morocco, Jordan, UAE, and Oman to understand national and international strategic trade control obligations and various sanctions.
--	--

Project Title	CBRN Detection and Response Training
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.

VI. MULTI-REGIONAL AND GLOBAL PROGRAMMING

BIOLOGICAL

Project Title	Countermeasure for Communicable Diseases
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.

Project Title	Laboratory Diagnosis Techniques for the Control of Vaccine Preventable Diseases, including Poliomyelitis, Measles and Rubella
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
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.

Project Title	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
Partner Country/Region	Africa and Asia
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Bernhard Nocht Institute for Tropical Medicine and Robert Koch Institute
Project Value	€1,310,000 (2017-2019)
Duration	2013-2019

Description	<p>GIBACHT is an educational programme established and funded by the Federal Foreign Office. The training programme focuses on threats and risks conferred by biological agents and bioweapons and their successful prevention and control.</p> <p>The objectives of the programme are:</p> <ul style="list-style-type: none"> • 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.
--------------------	---

Project Title	Promoting Universality and National Implementation of the Biological and Toxin Weapons Convention and UN Security Council Resolution 1540
Partner Country/Region	Africa, the Caribbean, Central America and Asia
Implementing Country	Canada - Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Parliamentarians for Global Action (PGA)
Project Value	C\$492,790
Duration	2018-2020
Description	<p>This project aims to improve the universality and implementation of the BTWC and UNSCR 1540 in partner countries by:</p> <ul style="list-style-type: none"> • enhancing the knowledge, capabilities and commitment of Members of Parliament (MPs) in up to 42 States across Africa, the Caribbean, Central America and Asia (Timor Leste); • producing revised or new legislation for implementing the BTWC and/or UNSCR 1540 in at least 18 countries; • increasing support from MPs of Non-States Parties to the BTWC for ratification of/accession to the Convention; • improving submission rates of Confidence Building Measures (CBM) Reports by BTWC States Parties (as many of the States Parties engaged through this project have never submitted a CBM); Report/Declaration or have done so only infrequently. • engaging with MPs in 13 of the 15 States that have never submitted a National Report to the UNSCR 1540 Committee to promote compliance with this important reporting requirement; and • introducing and sharing draft/model BTWC implementing legislation with participants to identify opportunities to promote the legislation in parliament, including new anti-terrorism legislation and criminal code reform.

Project Title	Promoting Universality and Implementation of the Biological and Toxin Weapons (BTWC)
Partner Country/Region	Africa, the Caribbean, Latin America
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Parliamentarians for Global Action (PGA)
Project Value	C\$747,790
Duration	2016-2020
Description	To promote universality and implementation of the BTWC in Africa, Latin America and Caribbean and to enhance national implementation measures for the Convention.

Project Title	Project 36: MediPIET Further Development and Consolidation of the Mediterranean Programme for Intervention Epidemiology Training (IFS/2013/329-859)
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 1.1 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, linked to the Chemical, Biological, Radiological and Nuclear Centres of Excellence initiative – CBRN CoE. The</u>

	<p>Consortium FIIAPP-ISCI, with the scientific leadership of ECDC, leads the project.</p> <p>This Project has been established under a regional perspective to contribute to the overall objective of enhancing health security in the Mediterranean basin by supporting capacity building for prevention and control of natural or man-made health threats posed by communicable diseases and other threats through a sustainable training programme in intervention epidemiology.</p> <p>The MediPIET project is aimed at consolidating a competent workforce in intervention epidemiology to carry out essential public health functions for prevention and control of national and cross-border challenges posed by communicable diseases and other health threats enhancing the biological aspect of CBRN CoE.</p> <p>The main objectives are:</p> <ul style="list-style-type: none"> • 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> <ul style="list-style-type: none"> - A two years fellowship programme - 18 training modules with learning by doing methodology for fellows and additional participants - 12 training of trainers - International Assignments - Annual Scientific Conference - Establishment of a network of Junior and Senior epidemiologists, network of Training Sites, a Training Centres Forum
--	---

Project Title	MediLabSecure: Preventing vector-borne diseases around the Mediterranean and Black Sea regions by creating new networks
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	Institut Pasteur Paris (France); Centro de Investigación en Sanidad Animal –

Institution(s) / Partner(s)	<p>INIA (Spain); MIVEGEC – IRD (France); National Centre for Epidemiology, Surveillance and Health Promotion – ISS (Italy); Institute of Public Health, Food Safety and Veterinary Institute, (Albania); Institut Pasteur d'Algérie, Institut National de la Médecine Vétérinaire (Algeria), National Center for Disease Control, Republican Veterinary, Sanitary and Phyto-Sanitary Center for laboratory services (Armenia); University Clinical Center, Veterinary Faculty Sarajevo, Public Institution Veterinary Institute of the Republic of Srpska "Dr. Vaso Butozan" Banja Luka, Ministry of Civil Affairs, Public Health Institute (Bosnia and Herzegovina); National Research Center, Animal Health Research Institute, Ain Shams University, Ministry of Health and Population (Egypt); National Center for Disease Control and Public Health, Laboratory of Ministry of Agriculture (Georgia); Ministry of Health, Ministry of Agriculture (Jordan); National Institute of Public Health of Kosovo, University of Prishtina - Faculty of Agriculture and Veterinary Sciences (Kosovo); Rafik hariri University Hospital, Lebanese Agricultural Research Institute, Lebanese University Faculty of Public Health, Ministry of Public Health (Lebanon); National Centre for Disease Control (Libya); National Center for Public Health, Republican Veterinary Diagnostic Center, Institute of Zoology (Moldova), Institute of Public Health, Diagnostic Veterinary Laboratory, Biotechnical faculty (Montenegro); Institut Pasteur du Maroc, Office national de sécurité sanitaire des produits alimentaires, Institut National d'Hygiène, Ministry of Health (Morocco); Ministry of Health, Veterinary School - An-Najah National University (Palestine); Institute of Public 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. Countries of the Mediterranean and Black Sea regions have common sea borders and, as a result, share common public health issues and threats. The MediLabSecure project aims at consolidating a Laboratory Network on the emerging viruses that are pathogens for humans and/or animals. 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</p>

	<p>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>
--	---

Project Title	Improvement of epidemiological and serological tools for diagnosis and control of Brucellosis in the Mediterranean region (Brucmednet)
Partner Country/Region	Algeria, Greece, Italy, Portugal, Tunisia (Countries of Mediterranean Region)
Implementing Country	Italy – Istituto Zooprofilattico Sperimentale dell’Abruzzo e del Molise in the frame of ARIMNet2 - Coordination of Agricultural Research in the Mediterranean; FP7-ERANET-2013 RTD – KBBE.2013.1.4-0.3; Grant agreement no. 618127 ARIMNet2 topic A3 “Developing sustainable production in the context of increasing ecological and climate stresses – Common Mediterranean challenges in animal and plant health”
Collaborating Institution(s) / Partner(s)	Istituto Zooprofilattico Sperimentale dell’Abruzzo e del Molise (IZSAM), Istituto Zooprofilattico Sperimentale della Sicilia IZSSi, Hellenic Agricultural Organization DEMETER, Faculty of Veterinary Medicine Benha University (BVM), Instituto Nacional de Investigação 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> <ul style="list-style-type: none"> • 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; • 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.

	<ul style="list-style-type: none"> • Enhancement of Laboratory capabilities to detect and identify Brucella strains in project partners Countries (Mediterranean region)
--	---

Project Title	Disease Detection
Partner Country/Region	Armenia, Azerbaijan, Cambodia, Cameroon, Ethiopia, Georgia, Kazakhstan, Kenya, Laos, Senegal, Sierra Leone, Tanzania, Ukraine, Uzbekistan
Implementing Country	United States – Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	<p><u>ALL CCMDS</u>: U.S. Interagency (e.g., U.S. Centers for Disease Control (CDC), U.S. Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO), Organization for Animal Health (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.

Project Title	Epidemiological Analysis and Investigation
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 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>CENTCOM: Iraq: CGI MOH and MOA, KRG MOH and MOA; Kazakhstan: KSCQZD, MOH, Uzbekistan: MOH, SVC</p> <p>EUCOM: 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>INDOPACOM: 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
Duration	2017-2018
Description	BTRP sponsors the U.S. Centers for Disease Control and Prevention's (CDC) Basic and Advanced Field Epidemiology Training Program (FETP), the Food and Agriculture Organization's (FAO) FETP-Veterinary (FETP-V), and World Health Organization (WHO) Frontline Field Epidemiology Training Program (FETP-F). BTRP also provides technical support, including workshops and table-top exercises.

Project Title	Consolidation and Securing of Pathogens
Partner Country/Region	Armenia, Azerbaijan, Cambodia, Cameroon, India, Indonesia, Iraq, Jordan, Kazakhstan, Kenya, Laos, Liberia, Malaysia, Philippines, Sierra Leone, South Africa, Tanzania, Thailand, Turkey, Uganda, Ukraine, Uzbekistan, Vietnam
Implementing Country	United States – Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	<p>ALL CCMDs: U.S. Interagency (e.g., U.S. Centers for Disease Control (CDC), U.S. Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO), Organization for Animal Health (OIE), World Health Organization (WHO))</p> <p>AFRICOM: Cameroon: National Veterinary Laboratory (LANAVET) Annex – Yaoundé; Kenya: Kenya Medical Research Institute (KEMRI), Central Veterinary Lab (CVL), Kenya Veterinary and Vaccines Production Institute, (KEVEVAPI) National Veterinary Quality Control Laboratory (NVQCL), Isiolo County Referral Hospital (ICRH), Kajiado County Referral Hospital (KCRH); Liberia: National Public Health Institute of Liberia/National Reference Laboratory (NPHIL/NRL) and Bong County Regional Reference Laboratory (RRL); Sierra Leone: Central Public Health Reference Laboratory (CPHRL); South Africa: State Veterinary Office (SVO) in Kruger National Park; Tanzania: Tanzania Veterinary Laboratory Agency's (TVLA), Central Veterinary Laboratory (CVL), the Center for Infectious Disease and Biotechnology (CIDB), Ministry of Livestock and Fisheries (MoLF); Uganda: Uganda Virus Research Institute (UVRI) Entebbe and Arua, National Animal</p>

	<p>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 (NCDPC), MoA; Azerbaijan: MOH; Food Safety Agency (FSA); State Veterinary Service (SVS); Republican Veterinary Lab (RVL); Central Reference Laboratory (CRL); Khachmaz, Lankaran, Imishli and Shamkir Anti-Plague Divisions (APD); Georgia: Lugar Center, National Center for Disease Control and Public Health (NCDC), Laboratory of the Ministry of Agriculture (LMA); Turkey: Ministry of Agriculture and Forestry (MAF), MOH; Ukraine: MOH, Ministry of Defense (MoD)</p> <p><u>INDOPACOM</u>: Cambodia: National Institute of Public Health (NIPH); India: Ministry of Science and Technology (MoST); Indonesia: Tentara National Indonesia (TNI); Malaysia: MOH, MOA/Department of Veterinary Services, Malaysian Science and Technology Research Institute for Defense (STRIDE); Philippines: Philippines Public Safety College (PPSC), Philippines National Police (PNP), Multiple Regional Animal Disease Diagnostic Laboratory (RADDLs), Research Institute of Tropical Medicine (RITM), Animal Disease Diagnostic Reference Laboratory (ADDRL); Thailand: Pakchong Regional Foot-and-Mouth Disease (FMD) Laboratory; Chulalongkorn University, Mahidol Oxford Tropical Medical Research Unit (MORU), 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
Description	BTRP supports biosecurity training, biosecurity laboratory upgrades and construction, and installation of Pathogen Access Control Systems (PACS) in partner countries. BTRP also works to assist partners with pathogen consolidation.

Project Title	Facility-Level Biorisk Management Systems and Training
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 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
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.

Project Title	Laboratory Diagnostics
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, Royal Cambodian Armed Forces (RCAF), Central Media Making Laboratory, Provincial Referral Hospital Laboratories, Mahidol-Oxford Tropical Medicine Research Unit (MORU); India: MOST; Laos: MORU, National Animal Health Lab (NAHL), Mahosot hospital, Laos Military Medical Department (MMD); Philippines: PPSC, PNP, Multiple RADDLs, RITM, ADDRL Vietnam: MARD</p>
Project Value	US\$38,300,000
Duration	2017-2018
Description	BTRP support includes laboratory diagnostics training on EDPs, laboratory construction, laboratory modernization to include facility improvements and procurement of laboratory equipment and consumables, laboratory quality management systems (LQMS), and laboratory information management systems (LIMS). BTRP also supports National Public Health Laboratory Systems Laboratory Mapping projects in partner countries.

Project Title	Reporting and Communications
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
Description	BTRP supports projects designed to increase partner capacity to communicate and report EDPs. Support includes development, installation and training on electronic reporting systems, training on multi-sectoral communications, and construction / equipping health emergency operations centers.

Project Title	Enhancing Sustainable Biosafety, Biosecurity and Biorisk Management in West Africa, MENA and ASEAN
Partner Country/Region	ASEAN, Mali, MENA
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Federation of Biosafety Associations (IFBA)
Project Value	C\$875,664
Duration	2018-2020
Description	The project supports the development of national biosafety and biosecurity implementation measures in Mali; strengthens biological risk management across West Africa/ MENA; and advances sustainable biosafety and biosecurity in the ASEAN region.

Project Title	Understanding Pathogen, Livestock, Environment Interactions involving Bluetongue Virus (PALE-Blue). EC H2020-SFS-2016-2
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 linked to climate change, resulted in massive losses due to fatalities, reduced productivity, reproductive failures, restricted animal movements/trade, and surveillance/vaccination costs. PALE-Blu brings together European institutes with expertise in BTV research and diagnosis, with partners in endemic regions (Africa, the Middle East and Turkey) that act as a 'source' for BTV strains that emerge in Europe. Full-genome sequence-analyses will increase the accuracy of BTV-strain distribution maps, to identify pathways and mechanisms for spread into and within Europe, as well as appropriate prevention strategies. PALE-Blu will analyse the genetic connectivity of Culicoides vector populations in different regions, as well as the movements of individual BTV lineages and genes. Together with reverse genetics technologies and infection/replication studies in new Culicoides cell lines, or adults from different Culicoides species, this will elucidate the genetic basis for geographic localisation/movement of BTV strains and serotypes. We will analyse differences in saliva proteins from Culicoides species, their ability to modify the BTV surface proteins (proteases) and effects on efficiency of transmission (in both directions) between vertebrate hosts and insect-vectors. These studies will provide a better understanding of incursion risks for different BTV strains, supporting effective control strategies. PALE-BLU

	will explore more effective and cross-serotype subunit-vaccines that are DIVA assay compatible and generate a stronger immune response from a single inoculation. We will also explore the potential for use of antiviral agents to induce immediate protection post vaccination. More effective diagnostic systems to better detect mixed infections will also be developed by multiplexing existing or novel diagnostic assay systems.
--	--

Project Title	National-Level Regulatory Frameworks
Partner Country/Region	Cambodia, Iraq, Kenya, Laos, Philippines, Senegal, Ukraine, Uzbekistan
Implementing Country	United States – Department of Defense (DoD), Defense Threat Reduction Agency (DTRA), Biological Threat Reduction Program (BTRP)
Collaborating Institution(s) / Partner(s)	<u>ALL CCMDs</u> : U.S. Interagency (e.g., U.S. Centers for Disease Control (CDC), U.S. Agency for International Development (USAID), Food and Agriculture Organization of the United Nations (FAO), Organization for Animal Health (OIE), World Health Organization (WHO) <u>AFRICOM</u> : Kenya: MOH, MOA ; Senegal: LNERV <u>CENTCOM</u> : Iraq: CGI MOH and MOA, KRG MOH and MOA, NBMC, DoS/ISN/CTR, GPP, DSTL; Uzbekistan: MOH, UzStandard <u>EUCOM</u> : Ukraine: MOH, MOD; Uzbekistan: MOH, SVC <u>INDOPACOM</u> : Cambodia: MOH; Laos: MOH, Ministry of Agriculture and Fisheries (MoAF), Ministry of Science and Technology (MoST); Philippines: PPSC, PNP, Multiple RADDLs, RITM, ADDRL
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.

Project Title	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
Partner Country/Region	Cameroon, Egypt, Mauritania, Pakistan, Sierra Leone
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	Friedrich-Loeffler-Institute for Animal Health
Project Value	€1,562,000 (2017-2019)
Duration	2013-2019
Description	The projects focus on surveillance, diagnostics and good laboratory practice. They include training; seminars and lectures on epidemiology, diagnostic techniques, biosafety and biosecurity for scientists; the collection and examination of samples with new laboratory equipment and

	the installation of a network of institutes and laboratories in order to strengthen the diagnostic capacities and the sustainability of the projects.
--	---

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

Project Title	Strengthening of Community Health System for Infectious Diseases Control(A)
Partner Country/Region	Democratic Republic of Congo, Kenya, Liberia, Malawi, Myanmar, Nigeria, Pakistan
Implementing Country	Japan
Collaborating 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

Project Title	Strengthening laboratory techniques and surveillance system for global control of HIV and related infectious diseases
Partner Country/Region	East Timor, Ghana, Honduras, Malawi, Myanmar , Philippines, Sudan
Implementing Country	Japan
Collaborating Partner(s)	National Institute of Infectious Diseases, AIDS Research Center
Project Value	In-kind contribution
Duration	2018
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 infectious disease surveillance system.

Project Title	Genomics Capacity Building for Rapid Disease Detection and Diagnosis: Strengthened by Responsible Science, Bioethics, and Mentorship
Partner Country/Region	Egypt, Jordan, Lebanon, Morocco, Tunisia (MENA Region)
Implementing Country	United States – Department of State’s Biosecurity Engagement Program
Project Value	US\$280,000
Collaborating Partner(s)	Los Alamos National Laboratory, Harvard University
Duration	2017-2018
Description	In this project, early- and mid-career bioscience investigators from the MENA region received training in genomics and culture-free molecular diagnostics and bioethics. Specifically, collaborating partners engaged with regional bio-scientists possessing dual-use research of concern expertise and/or access to dangerous biological agents to encourage the adoption of culture-free disease diagnosis techniques and the responsible conduct of science. This project aimed to create a lasting and sustainable culture of responsible science in the region by pairing experienced scientists who have a proven record of robust 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.
--	---

Project Title	National Biorisk Management Oversight Program – Development and Implementation of Legislation for Oversight of High Consequence Agents and Toxins
Partner Country/Region	Ethiopia, Senegal, Tanzania, Thailand, Turkey
Implementing Country	United States of America (USA) - U.S. Department of Defense, Defense Threat Reduction Agency, Biological Threat Reduction Program
Collaborating Institution(s) / Partner(s)	U.S. Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC) in-country office(s) and local in-country partners
Project Value	Total amount (approximately) US\$1,200,000
Duration	2017-2108
Description	The CDC, CSELS, Division of Laboratory Systems (DLS) National Biorisk Management Oversight Program engages foreign countries' ministry officials and stakeholders to develop and implement elements of a national biosafety and biosecurity oversight system capable of evaluating and regulating laboratories working with high-consequence agents and toxins (HCATs). Facilitate the development of country-specific legislative frameworks to support the development and implementation of a National Biorisk Management Oversight Program to monitor and regulate laboratories working with HCATs. // Create awareness of biosafety and biosecurity principles and practices with institutions that work with HCATs Support the implementation of biorisk management best practices to reduce the risk of an accidental exposure and/or intentional release of HCATs

Project Title	Advancing International Commitments on Biosafety and Biosecurity Capacity Building Through the International Experts Group of Biosafety and Biosecurity Regulators (IEGBBR) Secretariat
Partner Country/Region	Global
Implementing Country	Canada - Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Centre for Biosecurity, Public Health Agency Canada (CB - PHAC)
Project Value	C\$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 capacity building initiatives, and are championed by the IEGBBR Secretariat, which will be maintained by the funding received: <ul style="list-style-type: none"> • IEGBBR Compendium of International Biosafety and Biosecurity

	<p>Oversight Mechanisms;</p> <ul style="list-style-type: none"> • Dual-use Oversight Mechanisms in the IEGBBR; • Outreach towards International Biosafety and Biosecurity Capacity-Building; • IEGBBR External Communication Strategies.
--	---

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

Project Title	Building Global Resilience Against Agro-Terrorism and Agro-Crime
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) 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

	<p>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.</p>
--	---

Project Title	Coalition for Epidemic Preparedness Innovations
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating 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.

Project Title	Development of Tools and Commitments to Strengthen Global Biological Security
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating 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.

Project Title	Elimination of a Bioterrorism Threat: Rinderpest Post-Eradication
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating 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.

Project Title	Global Biosecurity Risk Analysis and Needs Assessment
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Public Health Agency Canada – The Centre for Biosecurity (CB - PHAC) United Nations International Crime and Justice Research Institute (UNICRI)
Project Value	C\$92,699
Duration	2018-2019
Description	The allocation of biological security resources requires a clear and comprehensive understanding of biosafety and biosecurity needs at the national and regional levels. Following an assessment of regional needs in Africa, sponsored by the 2018 Italian Presidency of the GP and the EU CBRN Centers of Excellence Initiative, it was agreed there would be value in expanding the analysis to other priority regions, including South-East Asia, the Middle East and South America. The project would identify priorities for biosafety and biosecurity capacity building by country and region.

Project Title	Global Health Security Conference 2019
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution	University of Sydney
Project Value	AU\$110,000
Duration	2018-2019
Description	The Global Health Security Conference 2019, to be held in Sydney, Australia from 18-20 June 2019, will bring together up to 1,000 practitioners, researchers, educators, leaders and decision-makers across the fields of public health, medicine, veterinary science, agriculture, government, defence, international relations, sociology and anthropology to examine the progress made to date in strengthening partnership for global health security, identify the gaps and consider new opportunities for

	enhancing the international community's ability to respond more efficiently and effectively to future adverse health and security crises.
--	---

Project Title	Insider Threat Awareness and Online Training Material
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	The Centre for Biosecurity, Public Health Agency Canada (CB - PHAC)
Project Value	C\$56,453
Duration	2018-2019
Description	This project will develop insider threat awareness training materials for stakeholders who handle and store biological material. These new materials will enhance insider threat awareness by providing tools to organizations that handle and store biological materials to better prepare for, detect, and respond to this potential threat.

Project Title	INTERPOL's Bioterrorism Prevention Unit Initiative for enhancing Biological Preparedness
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL) BlueDot
Project Value	C\$6,085,000
Duration	2018-2021
Description	This project encompasses two distinct but complementary projects that will enhance the ability of the international law enforcement community to address a wide range of serious biological terrorism-related threats. This collaboration will enable INTERPOL to develop and deliver an extensive array of support to countries, while at the same time enhancing its own internal capabilities to implement biological threat reduction programming. Support will include: tailored multiagency capacity building and training packages; the provision of critical equipment and associated biological response resources; conducting cross-border operations to counter the illicit smuggling of biological materials used in terrorist attacks; and completion of a feasibility assessment on the development of an innovative biological incident analysis platform at INTERPOL (based on the "BlueDot" also extensively used in the ASEAN region).

Project Title	INTERPOL's Chemical and Biological Terrorism Prevention and Response Initiative
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(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.

Project Title	OIE Biological Threat Reduction Activities
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution	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; 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.

Project Title	OIE Sustainable Lab Biosafety and Biosecurity
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating 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> <ul style="list-style-type: none"> • 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 ; • implementation of an action plan to improve sustainable laboratory biosafety and biosecurity; • support for veterinary laboratory twinning projects to address sustain biosafety and biosecurity concerns for high consequence pathogens of security concern; • further develop the sustainable Performance of Veterinary Services (PVS) laboratories tool; and • open innovation competition to offer solution to improve the sustainability of laboratories.

Project Title	One Health- Global Perspectives on Health and Security
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	One Health Platform
Project Value	C\$136,000
Duration	2018
Description	<p>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.</p>

Project Title	Reducing Biological Proliferation Risks Posed by Dual Use Research of Concern
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating 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.

Project Title	Strengthening Global Mechanisms and Capacities for Responding to Deliberate Use of Biological Agents
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 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.

Project Title	World Health Organisation (WHO) Biological Threat Reduction Programming
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution	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.

Project Title	German Online Platform for Biosecurity & Biosafety (GO4BSB)
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.

Project Title	Managing acute and long-term effects of deliberate exposures to chemical and biological hazards
Partner Country/Region	Global
Implementing Institution	Italy and the World Health Organization (WHO)
Project Value	US\$698,913
Duration	2018-2020
Description	Over the course of three years, WHO aims to strengthen its support to countries in assessing, monitoring and managing the immediate health consequences, and the long-term sequelae, of exposure to selected chemical and biological hazards during a deliberate event with a focus on the possible mental health components.

Project Title	Development of technologies for characterization of biothreat agents
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.

Project Title	International Vaccine Institute
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.

Project Title	The Network ReAct
Partner Country/Region	Global
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.

Project Title	Biosecurity for the Next Generation – Online Course
Partner Country /Region	Global
Implementing Country	United Kingdom – Ministry of Defence and Foreign and Commonwealth Office

Collaborating Partner(s)	Biosecure
Project Value	£69,000
Duration	2017-2019
Description	In the period 2017 to 2018 the Foreign and Commonwealth Office funded the development of an open online course on biosecurity, entitled “Biosecurity for the Next Generation”, which draws on the Bradford Guide: Preventing Biological Threats: What You Can Do. In 2018/2019 MOD are funding some follow-on work to raise awareness of the course to encourage participation on a large scale. Both the Bradford Guide and accompanying Handbook, and “Biosecurity for the Next Generation” are freely available on line at 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.

Project Title	International Working Group on Strengthening the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences
Partner Country/Region	Global
Implementing Country	United States
Collaborating Institution(s) / Partner(s)	HHS [Office of the Assistant Secretary for Preparedness and Response (ASPR), NIH, CDC, Food and Drug Administration (FDA)], U.S. Department of Agriculture, U.S. Department of Defense, U.S. Department of Homeland Security, FBI, Environmental Protection Agency, Royal Scientific Society of Jordan, Netherlands National Institute for Public Health and the Environment, Denmark Centre for Biosecurity and Biopreparedness, ABSA-International, European Biosafety Association, International Federation of Biosafety Associations, INTERPOL, WHO, OIE, other industry, academia, and non-governmental organizations
Project Value	In-kind
Duration	ongoing
Description	International working group using crowdsourcing to develop guiding principles and educational/training resources to promote a culture of biosafety, biosecurity, and responsible conduct in the life sciences, based on the culture model and assessment methodology developed by IAEA for the nuclear safety and security culture. Conducts periodic webinars on the culture of biosafety, biosecurity, and responsible conduct; outreach at conferences, workshops, training events; published articles; and shared information and associated materials on their websites and in their training and educational activities. The group supports and promotes, globally, a culture of biosafety, biosecurity, and responsible conduct in the life sciences and promotes effective oversight globally of dual-use research, encourages engagement among the health, scientific, biotechnology, enthusiast, and security communities in the United States, and with international partners, to reduce the risk of misuse. Supports GP Biological Security Deliverable 5 (<i>Reduce biological proliferation risks through the advancement and promotion of safe and responsible conduct</i>).

	The International Working Group is currently developing <i>A Guide to Training and Information Resources on the Culture of Biosafety, Biosecurity, and Responsible Conduct in the Life Sciences</i> , to be published in 2019.
--	--

Project Title	Analysing the Spread of Anthrax in Pakistan and Jordan
Partner Country /Region	Jordan, Pakistan
Implementing Country	United Kingdom: Ministry of Defence United States: Department of Defense
Collaborating Partner(s)	Georgetown University Centre for Global Health and Security
Project Value	£37,000
Duration	2018- 2019
Description	This project includes environmental sampling of farm sites in Jordan and Pakistan and analysis of sample material. The project will review existing legislation related to disease surveillance and reporting; it will also identify national capability gaps in these areas and assist Ministries of Health and Agriculture in the development of strategic plans to develop effective legal frameworks for disease surveillance, and reporting consistent with obligations under the World Health Organization (WHO) International Health Regulations. Anthrax is a priority agent of security and proliferation concern.

Project Title	Global prevention and control of anthrax
Partner Country/Region	Low and Middle-Income Countries that have identified anthrax as a priority pathogen: Uganda, Ethiopia, Bangladesh, India, Cameroon
Implementing Country	United States – Department of Health and Human Services (HHS) / Centers for Disease Control and Prevention (CDC)
Collaborating Institution(s) / Partner(s)	US Department of Defense, Defense Threat Reduction Agency (DTRA), Armed Forces Health Surveillance Branch Global Emerging Infections Surveillance (GEIS) section. Uganda Ministry of Health, Ministry of Agriculture Animal Industry and Fisheries. Ethiopia Ministry of Health, Ethiopian Public Health Institute, Ethiopia Ministry of Agriculture and Livestock Resources , National Animal Health Diagnostic Investigation Center. Bangladesh Ministry of Health, Institute of Epidemiology, Disease Control and Research, Bangladesh Ministry of Fisheries and Livestock, Bangladesh Department of Livestock Resources, Central Disease Investigation Laboratory India National Institute of Veterinary Epidemiology and Disease Informatics, Manipal University Cameroon Ministry of Public Health, Center Pasteur of Cameroon, Cameroon Ministry of Livestock Fisheries and Animal Industries, National Veterinary Laboratory (LANAVET)

Project Value	US\$600,000
Duration	2018-2022
Description	<p>In partnership with endemic and hyper-endemic countries that have prioritized anthrax preparedness/prevention, the CDC Bacterial Special Pathogens Branch is implementing projects to strengthen the capacity to detect, rapidly identify, diagnose, and prevent anthrax in human and animal populations.</p> <ul style="list-style-type: none"> • Build surveillance, laboratory diagnostic, and outbreak response capacity for anthrax. • Provide training and laboratory supplies for molecular detection of anthrax rather than more risky culture confirmation methods. • Support biosafety assessments of laboratories conducting anthrax activities. • Evaluate improved diagnostic methods to improve biosafety and biosecurity of anthrax testing using inactivated samples • Revise infection control guidance for sample collection, transport and storage for animal and human samples, as well as post exposure guidelines. • Assist with the development of national strategic plans and guidelines for surveillance and outbreak management of anthrax in humans and animals. • Develop risk-mapping models using environmental variables and historical outbreak locations to help focus limited public health resources to areas of highest risk.

Project Title	The UNICEF-UNDP-World Bank-WHO Special Programme for Research and Training in Tropical Diseases (TDR)
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	<p>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.</p>

MULTI-REGIONAL AND GLOBAL: CHEMICAL

Project Title	Chemical Threat Detection, Transportation Security, and CBRN First Responder Training
Partner Country/Region	Chemical Security Program partner countries in Southeast Asia and sub-Saharan Africa, including Kenya, Malaysia, and Nigeria
Implementing Country	The United States, through the U.S. Department of State Bureau of International Security and Nonproliferation / Office of Cooperative Threat Reduction (ISN/CTR)
Collaborating Institution(s) / Partner(s)	U.S. National Labs; Kenyan, Nigerian, and Malaysian professional societies, government agencies, and first responders
Project Value	US\$1,500,000
Duration	2017-2019
Description	<p>In partnership with implementing partner Lawrence Livermore National Laboratory, the U.S. is conducting a series of chemical detection, transportation security, and response trainings to strengthen the capabilities of African and Southeast Asian partners to identify and effectively respond to chemical terrorism threats. Specific project activities and capacity building objectives include:</p> <ul style="list-style-type: none"> • Empowering African and Southeast Asian law enforcement and other members of the first responder community to assess and mitigate the effects of chemical weapons incidents; • Linking country partners with international experts on ground transportation security, including rail police and CBRN first responders, to raise awareness of chemical threats to transportation targets and best practices for mitigating these threats; • Establishing effective modes of communication and coordination for incident command response among law enforcement and first responder entities within partner countries; • Building the capabilities of first responders to use chemical weapons-related PPE, detection systems, decontamination materials, and sampling gear to protect responding units and collect relevant information.

Project Title	Chemical Anti-smuggling Enforcement (CHASE) to South East Asia and Middle East
Partner Country/Region	Middle East and Southeast Asia,
Implementing Country	Canada - Weapons Threat Reduction Program Global Affairs Canada's (GAC)
Collaborating Partner(s)	INTERPOL
Project Value	C\$1,436,000
Duration	2015-2018
Description	This Project enhanced the capacity of select ASEAN member states and countries in the Middle East to work both within and across their borders to target illegal movement of chemical warfare agents, toxic industrial

	chemicals, and explosive precursor chemicals in the regions.
--	--

Project Title	Support to CWC States Parties and Regional Authorities for the Implementation of Assistance & Protection under Article X of the CWC
Partner Country/Region	CWC SP in the East Africa Community Region, Caribbean Region, South East Asia and North Africa
Implementing Country	United Kingdom, Ministry of Defence
Collaborating Institution(s) / Partner(s)	The OPCW Technical Secretariat and Individual States and regional authorities such as the East Africa Community (EAC) Secretariat, the Caribbean Community Secretariat (CARICOM) and the Caribbean Disaster Emergency Management Authority (CDEMA).
Project Value	£100,000
Duration	Current and ongoing since 2014
Description	The UK has worked closely with the OPCW Technical Secretariat for many years to build capacity in CWC SP to respond in the event of use or threat of use of chemical weapons or the misuse of toxic industrial chemicals. This has included training on assistance and co-ordination of emergency multi-lateral response, risk and response planning and the development of formal and informal regional response networks and plans. We also run table top exercises to train effective response. In EAC Region we are working with the Czech Republic who are providing chemical protection training; we are supporting this with equipment and specialist evaluation of activities.

Project Title	Support to the OPCW's New Centre for Chemistry and Technology
Partner Country/Region	Global
Implementing Country	Belgium
Collaborating Partner(s)	The Organisation for the Prohibition of Chemical Weapons
Project Value	€2,000,000
Duration	2018
Description	Belgium supports the OPCW to upgrade its existing chemical laboratory to a Centre for Chemistry and Technology. The new Centre will enable the OPCW to keep pace with current threats, by augmenting analytical and training capabilities, enhancing the capability to test, evaluate, and deploy equipment, and developing capacities to engage in research activities.

Project Title	Chemical and Biological Terrorism Prevention and Response Initiative
Partner Country/Region	Global (Middle East and North Africa, West Africa, and South East Asia)
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$4,713,985
Duration	2016-2018

Description	Canada supported activities to enhance the capabilities of INTERPOL to assist 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.
--------------------	---

Project Title	Strengthening Chemical Terrorism Prevention & Response Capacity
Partner Country/Region	Global (Middle East & West Africa)
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$4,800,000
Duration	2018-2021
Description	This INTERPOL-led project aims to enhance the capacity of law enforcement to reduce illegal transnational chemical and explosive threats posed by international crime and/or terrorism in the Middle East and in West Africa and to increase inter-agency and regional collaboration on international criminal investigation and operations to strengthen chemical security.

Project Title	Development of a Compendium of CW Legal Measures to Secure CW Related Materials and Facilities to Assist State Parties in Fulfilling their Obligations under the CWC
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Stimson Center
Project Value	C\$265,000
Duration	2018-2020
Description	Canada is supporting the Stimson Center to develop a compendium of legal measures that States Parties can use to secure CW related materials and facilities to implement their obligations under the CWC and UNSCR 1540. Key activities and milestones will include: development of a compendium of existing national legal frameworks for CW security among States Parties, recommendations for the development of international CW security standards, creation of an online tool to search the compendium and international standards, outreach with international bodies, national regulatory authorities, industry and civil society on the tool, practices, standards and project recommendations, raise awareness about the need to improve the security of CW related materials generally and the establishment of a tool for prioritizing gaps in the global chemical security infrastructure.

Project Title	Support to the OPCW to increase interagency cooperation by assisting their Rapid Response Assistance Mechanism
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	The Organisation for the Prohibition of Chemical Weapons
Project Value	€140,000
Duration	2016-2018
Description	This Project supports Article X of the CWC and as a part of the efforts of the OPCW's Technical Secretariat to fulfil its role in providing emergency measures of assistance to States Parties, the Secretariat intends to enhance its capacity and readiness by establishing a Rapid Response Assistance Mission (RRAM) that can be deployed at short notice to assist States Parties affected by an incident of alleged use of CW by a non-State actor. In addition to assisting States Parties in responding effectively to such situations, the establishment of a RRAM will also enhance the Secretariat's readiness to conduct investigations of alleged use of CW, in accordance with Article IX and Part XI of the Verification Annex to the CWC.

Project Title	Support to the OPCW's New Centre for Chemistry and Technology
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	The Organisation for the Prohibition of Chemical Weapons
Project Value	C\$7,500,000
Duration	2018 – 2021
Description	Ensuring that the OPCW remains well-equipped to prevent, detect and respond to all manner of CW threats is a priority for Canada. In this context, Canada is supporting the OPCW to upgrade its existing chemical laboratory to a Centre for Chemistry and Technology. The new Centre will enable the OPCW to keep pace with current threats and remain fit for purpose ahead of future threats, by augmenting analytical and training capabilities, enhancing the capability to test, evaluate, and deploy equipment, and developing capacities to engage in research activities.

Project Title	Supporting and Enhancing Chemical Non-Proliferation Instruments, Institutions and Practices
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Arms Control Association / The CWC Coalition (CWCC)
Project Value	C\$150,000
Duration	2018-2020
Description	Canada is supporting the Arms Control Association and the CWC Coalition (CWCC) to enhance and expand public awareness concerning the global importance of the CWC and the OPCW to international peace and security by funding civil society participation in key meetings. These key meetings include Conference of State Parties (CSP), the 4th CWC Review Conference (November 2018) and related CWCC initiatives. Specific activities will include: targeted outreach to NGOs, academia, and industry representatives and support to select candidates to attend the annual CWC conferences; organizing side events and related meetings at the CWC conferences including “Open Forums,” a CWCC reception, organizational meetings and possible identification of recommendations to increase NGO engagement; promoting “codes of conduct” and ethical guidelines for national CWC implementation; and organizing plenary statements by NGO representatives, factoring in geographic and gender considerations. These efforts will increase public interest and awareness, both nationally and regionally, to build and sustain the global norm against existence and use of chemical agents and weapons by state or non-state actors. These forums and discussions will also address recent recommendations put forth by the OPCW Open-Ended Working Group on Future Priorities (OEWG-FP), the OPCW Advisory Board on Education and Outreach (ABEO), the OPCW Scientific Advisory Board (SAB), and other OPCW ongoing working groups.

Project Title	Supporting and Enhancing Chemical Non-Proliferation Instruments, Institutions and Practices
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	Green Cross Switzerland / The CWC Coalition (CWCC)
Project Value	C\$40,000
Duration	2017-2018
Description	Canada supported Green Cross Switzerland and the CWC Coalition (CWCC) to enhance and expand public awareness concerning the global importance of the CWC and the OPCW, through sponsorship of NGO participation at the 22 nd Conference of State Parties (CSP), and related CWCC initiatives. Specific activities included: targeted outreach to NGOs, academia, and industry representatives and supported NGOs to attend the

	annual CWC conference; organizing side events and related meetings at the CWC conference including “Open Forums,” CWCC organizational meetings and organizing plenary statements by NGO representatives.
--	--

Project Title	Tools and Programming to Support the CWC and the Implementation of UNSCR 1540 Obligations.
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Stimson Center
Project Value	C\$1,756,000
Duration	2018-2020
Description	Canada is supporting the Stimson Center to deliver two initiatives. (1) to build an on-line tool, - Assistance Support Initiative reaching out to existing and prospective funders and implementers to populate the database with new or updated programs, projects and assistance opportunities, while refining the online tool based on feedback received from States seeking assistance and from funders and implementers. The sub-project will improve the ASI database mechanisms, including the translation into foreign languages to ensure the widest possible pick-up among assistance-seeking States, and will explore how to synchronize the new database with the Global Partnership website, and databases of the BTWC, the CWC and the IAEA, with a view to improving the UNSCR 1540 assistance process. The other side project (2) This sub-project will analyze the WMD proliferation threat landscape in Southeast Asia and determine where targeted Security and Trade Efficiency Platform (STEP) assistance can make the most impact. Due to the serious threat posed by WMD proliferation in and through the Southeast Asia region, there is an urgent need to provide WMD security assistance to potential nodes of illicit trade in Southeast Asia, particularly around the shipping This sub-project STEP will lead to in-depth engagement with government and industry actors to better understand their roles in enforcing relevant regulation and operational processes that secure and optimize the supply chain, serving as a role model for the region.

Project Title	CW Assistance provided by the European Union
Partner Country/Region	Global
Implementing Country	European Union
Collaborating Institution(s) / Partner(s)	<ul style="list-style-type: none"> • AGENCE FRANCAISE D'EXPERTISE TECHNIQUE INTERNATIONALE • Military Institute of Chemistry and Radiometry of Poland (MICHR) • Business and Strategies in Europe S.A (BE) • Sustainable Criminal Justice Solutions (SCJS) • Studiecentrum voor Kernenergie / Centre d'Étude de l'Énergie Nucléaire (SCK•CEN), Belgium • ENCONET CONSULTING GMBH • Expertise France (AFETI), France • Sustainable Criminal Justice Solutions (SCJS), UK • Agriconsulting Europe S.A. (AESA), Belgium • Expertise France • German Office of Economics and Export Control (BAFA), Germany
Project Value	€30,695,935
Duration	2014-2021
Description	<ul style="list-style-type: none"> • MEDISAFE Combating illicit traffic and enhancing the safety of medicines in Eastern and Central Africa • Strengthening chemical and biological waste management in Central Asia countries for improved security and safety risk mitigation • Provision of specialized CBRN equipment for the training of personnel in charge of cross-border control. • On-site Technical Support to CBRN Centre of Excellence (CoE) • Sound management of chemicals and their associated wastes in Southeast Asia (SEACHEM) • Strengthening crime scene forensics capabilities in investigating CBRN incidents in the South East and Eastern Europe region • On-Site Technical Assistance 2 • Strengthening cross-border capacity for control and detection of CBRN substances • Capacity building for medical preparedness and response to CBRN incidents • On-Site Technical Assistance 1 • EU Outreach programme (Export Control Cooperation in South East Asia) • Export control outreach for dual use items

Project Title	Support to the Verification and Assistance functions of the OPCW Technical Secretariat
Partner Country/Region	Global
Implementing Country	United Kingdom, Ministry of Defence
Collaborating Institution(s) / Partner(s)	Organisation for the Prohibition of Chemical Weapons Technical Secretariat
Project Value	£125,000
Duration	Current and ongoing since 2014
Description	The UK has worked closely with the OPCW Technical Secretariat for many years to build capacity to respond to non-routine contingency operations including investigations of use of chemical weapons and co-ordination of assistance and protection.

Project Title	Global Chemical Security Engagement Activities
Partner Country/Region	Global, including Pakistan, Afghanistan, Turkey, Libya, Lebanon, Egypt, Yemen, Philippines, Indonesia, India, Nigeria, Jordan, Kenya, Somalia, Malaysia, Bangladesh, Saudi Arabia, Algeria, Morocco, and Mali
Implementing Country	U.S. Department of State, Office of Cooperative Threat Reduction
Collaborating Institution(s) / Partner(s)	U.S. national laboratories, universities, research institutes and non-governmental organizations
Project Value	~ US\$18,000,000
Duration	Ongoing: started in 2011.
Description	<p>ISN/CTR administers the Chemical Security Program (CSP), which works to secure chemical weapons-related assets (such as chemicals, equipment, technologies, expertise, and infrastructure) against terrorist networks and proliferant states intent on conducting chemical attacks. To accomplish this mission, CSP sponsors efforts to identify and address chemical security vulnerabilities and to detect and investigate early warning signs of chemical attacks. CSP program focus on four goals:</p> <ul style="list-style-type: none"> • Strengthen the ability of partner governments to disrupt chemical attacks • Secure chemical weapons-related assets throughout the chemical supply chain • Strengthen international norms and deterrence against CW use • Develop innovative strategies and explore novel tools to adapt to the constantly evolving CW threat

Project Title	Global Congress on Chemical Security and Emerging Threats
Partner Country/Region	Global; Participating Countries include: Argentina, Australia, Austria, Bangladesh, Belgium, Canada, Colombia, Denmark, Finland, France, Germany, Hungary, Iraq, Italy, Jordan, Kenya, Lebanon, Libya, Malaysia, Mali, Morocco, the Netherlands, Nigeria, Norway, Pakistan, Philippines, Poland, Spain, Sweden, Thailand, Tunisia, Ukraine, United Kingdom
Implementing Country	United States through the Federal Bureau of Investigation and the Department of Homeland Security
Collaborating Institution(s) / Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	US\$100,000 contributed by the FBI towards the Global Congress; Additional funding and support was provided by Global Affairs Canada
Duration	October 29-31, 2018; Expected to become a yearly occurrence
Description	Established by INTERPOL, DHS, and the FBI, this Global Congress convened a new community of experts working to counter the threat of chemical and explosive terrorism by non-state actors. This year's Congress explored specialized case studies highlighting emerging trends in this domain, identified lessons learned and best practices relating to chemical incident attribution and response, and fostered a global network of chemical security experts who specialize in preventing, detecting, mitigating and responding to incidents of chemical and explosive terrorism. This community of experts consists of law enforcement agencies, national policymaking entities, international organizations, and chemical industry – all of which bring unique experience and expertise relevant to mitigating the threats posed by non-state actor access to chemical warfare agents, toxic industrial chemicals, explosive chemical precursors and other emerging chemical materials.

Project Title	Extrabudgetary contribution to the OPCW for special missions in Syria
Partner Country/Region	Multilateral
Implementing Country	Sweden through the Ministry for Foreign Affairs
Project Value	Contribution in 2018: SEK 2,000,000/€190,000
Duration	From 2018
Description	Contribution earmarked for fact-finding missions, Declaration Assessment Team and activities of the Attribution Team in Syria.

Project Title	Study of relevant lessons learned from the field of nuclear security of relevance to the OPCW assistance activities in Chemical Security
Partner Country/Region	Multilateral
Implementing Country	Sweden through the Ministry for Foreign Affairs
Project Value	Contribution in 2018: SEK 200,000/€190,000/£24,800
Duration	2018
Description	In June 2018, the OPCW was tasked by the Conference of States Parties to identify ways to strengthen assistance in chemical security. In order to

	support this effort, VERTIC was asked to review the IAEA Nuclear Security Programme of Activities as well as principles applied to the security of radioactive sources, with a view to making concrete proposals for how lessons learned from the IAEA could be applied to the work of the OPCW. The results were presented at a side event during the Fourth CWC Review Conference.
--	--

Project Title	Loss Prevention and Safety Promotion in the Chemical Process Industries
Partner Country/Region	Transregional (Africa, Asia, South America)
Implementing Country	Germany
Collaborating Institution(s) / Partner(s)	University of Wuppertal (School of Mechanical Engineering and Safety Engineering, Chair for Methods of Safety Engineering/Incident Research) in cooperation with the OPCW
Project Value	€1,800,000 (2013-2020)
Duration	2009 – 2020
Description	Germany has been funding a seminar/workshop series organised and conducted by the University of Wuppertal in cooperation with the OPCW on loss prevention and safety promotion in the chemical process industries. Intended for professionals and public servants working in the context of the chemical industry, the course aims to raise awareness for the necessities and benefits of safe chemical facilities and accordingly the required safety culture. The course contents are designed to illustrate the European Standards concerning chemical safety. Participants are meant to act as multipliers of the conveyed contents in their home countries.

Project Title	UK National funding to contribute to the strengthening of the CWC
Partner Country/Region	Various
Implementing Country	United Kingdom, Foreign and Commonwealth Office
Collaborating Institution(s) / Partner(s)	Organisation for the Prohibition of Chemical Weapons Technical Secretariat
Project Value	£1,000,000
Duration	2018-2021
Description	UK voluntary National contribution to strengthen the implementation of the CWC. It is proposed to include support for the building of a new OPCW Laboratory in The Hague, support for the new Technical Secretariat Attribution function, support to new Laboratories in CWC States and an increase in capacity building in Africa under Article X

MULTI-REGIONAL AND GLOBAL: NUCLEAR AND RADIOLOGICAL SECURITY

Project Title	Countering Nuclear and other Radioactive (R/N) Material Smuggling
Partner Country/Region	Algeria, Armenia, Georgia, Iraq, Jordan, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Ukraine, Uzbekistan
Implementing Country	United States, through the U.S. Department of State's Bureau of International Security and Nonproliferation (ISN) /Office of Weapons of Mass Destruction Terrorism (WMDT)
Collaborating Institution(s) / Partner(s)	Canada, Norway, Sweden, the United Kingdom U.S. Departments of Energy and Justice, U.S. Federal Bureau of Investigation (FBI), U.S. National Laboratories (ORNL and PNNL), UNODC, and INTERPOL
Project Value	US\$3,800,000 - US\$4,000,000 per year
Duration	Ongoing
Description	In partnership with U.S. and international donors, WMDT collaborates with foreign partners to strengthen cooperation and capabilities to prevent, detect, and respond to incidents of R/N material smuggling. Key efforts include: Preventing R/N material from theft or diversion by strengthening R/N material and information technology (IT) security Strengthening capabilities to investigate all aspects of R/N material smuggling networks and incidents; Helping ensure the necessary legal provisions are in place to arrest and prosecute smugglers; Establishing inter-ministerial coordination for R/N material smuggling incident response; and Building technical support and expertise, including the use of nuclear forensics in support of CNS investigations, arrests, and prosecutions

Project Title	Supporting International Efforts to Enhance Nuclear Security Capabilities of Individual States
Partner Country/Region	Baltic countries, Chile, Argentina
Implementing Country	Finland, Ministry for Foreign Affairs, Unit for Arms Control
Collaborating Institution(s) / Partner(s)	Department of Energy (US), Department of State (US), Global Initiative to Combat Nuclear Terrorism (GICNT)
Project Value	€80,000
Duration	2018
Description	Supporting the participation of nuclear security/law enforcement experts and officials from selected countries in GICNT's events.

Project Title	Material Management and Minimization (MMM) Program
Partner Country/Region	Belarus, Italy, Japan, Kazakhstan, Ukraine
Implementing Country	United States
Collaborating Institution(s) / Partner(s)	Partners involve civilian facilities and government entities in each country and the IAEA.
Project Value	Approximately US\$6,270,000 from the U.S. for international partner support
Duration	All projects are multi-year endeavors.
Description	Remove or confirm the disposition of weapons-usable nuclear material. The U.S. works with international partners at civilian sites across the globe to remove or confirm the disposition of high risk nuclear materials (e.g. highly enriched uranium and plutonium) that could be used by terrorists to make an improvised nuclear device.

Project Title	Demonstration Project for Borehole Disposal of Radioactive Sources
Partner Country/Region	Ghana, Malaysia
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$3,220,000
Duration	2015-2020
Description	This project will support demonstrations of a sustainable and cost-effective disposal technology for disused and expended radiological sources in countries with small quantities of such material.

Project Title	Canada's 6th Contribution to WINS for Capacity Building and Professional Development Opportunities for Nuclear Security Professionals
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	World Institute of Nuclear Security (WINS)
Project Value	C\$670,000
Duration	2017-2018
Description	Capacity building through support for the WINS Academy, including scholarships; the promotion of sustainable NSSC's; support for a workshop on Effective Security and Emergency Management Practices; and support for a peer review of, and accreditation of Radioactive Material at Medical Institutes.

Project Title	Canada's Contribution to WINS for Strengthening Nuclear Security Competencies
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	World Institute of Nuclear Security (WINS)
Project Value	C\$3,335,000
Duration	2018-2020
Description	This project will support nuclear security competency building activities, including: supporting the sustainable development of Nuclear Security Support Centres (NSSCs), contribute to the development and sustainability of nuclear security learning services offered by the ININ Nuclear Security Training Centre (Mexico's NSSC), Expand the WINS Gender Champions Programme, Support for the WINS Academy Expansion, add a Repository of Fictional Characters, Organizations and Facilities to the WINS Academy modules, and Strengthening of cyber security competencies in the nuclear industry.

Project Title	Disrupting DPRK Illicit Shipping Activities Through Actionable Open Source Intelligence
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Royal United Services Institute for Defence and Security Studies (RUSI)
Project Value	C\$2,089,325
Duration	2018-2021
Description	The project will address the absence of robust, actionable, open-source information on the DPRK's efforts to evade UN sanctions on its proliferation activities.

Project Title	Further support for the verification of the Joint Comprehensive Plan of Action with Iran by the IAEA
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$1,500,000
Duration	2018-2019
Description	This project will support the IAEA in monitoring and verifying the implementation of the JCPOA, to which approximately 25 different Member States contribute funding.

Project Title	IAEA DSRS management development and removal
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$9,649,824
Duration	2018-2022
Description	This project will help strengthen nuclear security in up to 12 countries by updating national inventories, develop regulations for the safe and secure storage of radioactive sources, and develop a strategy for the management of disused sealed radioactive sources (DSRS). The IAEA will also remove 35 DSRS in Chile and the Dominican Republic.

Project Title	IAEA Nuclear Security Fund: Nuclear Security of Material outside of Regulatory Control
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency
Project Value	C\$2,224,530
Duration	2016-2019
Description	Funding provided to the Material Outside of Regulatory Control (MORC) section of the IAEA's Nuclear Security division will be used to (1) support the development of nuclear security response capabilities in Latin America and the Caribbean; (2) convene radiological crime scene management workshops in ten countries across many regions; and (3) purchase equipment for the IAEA to deploy at the request of Member States to secure major public events (e.g. Olympic games, global conferences etc.)

Project Title	IISS outreach and research on Iran sanctions
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Institute for Strategic Studies (IISS)
Project Value	C\$149,658
Duration	2017-2018
Description	IISS outreach in Asia to raise awareness about Iran sanctions, and to conduct a research paper on the efficacy of the Procurement Channel mechanism and "snap-back" sanctions.

Project Title	IPNDV Secretariat
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	C\$175,000
Duration	2017-2018
Description	This project will provide funding support to the Nuclear Threat Initiative (NTI) to enable it to continue its work as the Secretariat of the International Partnership for Nuclear Disarmament Verification (IPNDV)

Project Title	Information sharing and capacity building to enhance UN sanctions on DPRK proliferation activities
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	CRDF Global
Project Value	C\$953,000
Duration	2018-2019
Description	This project will help build regional and international capacity to implement UN Security Council sanctions on the DPRK's proliferation activities. These activities include (1) training for private sector entities (e.g. banks) in China on risk management; (2) deploying open source monitoring and reporting on DPRK sanction evasion to the private sector; (3) translation of UN Security Council training materials into French; (4) training on DPRK sanctions implementation for legal experts in the Caribbean; and (5) training on best practices to prevent sanctions evasion by the DPRK for ship registry officials in the Pacific.

Project Title	International Atomic Energy Agency: Nuclear Security Fund (Information Management Division)
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$649,704
Duration	2016-2019
Description	Funds will be directed to the Information Management Section (INMA) of the IAEA's Nuclear Security division to (1) provide computer security training in Latin America and Southeast Asia; and (2) convene regional meetings in Latin America and Southeast Asia to promote more active voluntary reporting to the IAEA's Incident and Trafficking Database.

Project Title	International Atomic Energy Agency: Nuclear Security Fund (Info Mgmt./Coordinated Research Project)
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$943,740
Duration	2016-2019
Description	Funding to INMA/CRP will support the implementation of three research grants (and related experts meetings), with the objective of providing support for research activities that aim to improve computer security capabilities at nuclear facilities.

Project Title	International Atomic Energy Agency: Nuclear Security Fund (Program Development and International Cooperation Division)
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$850,222
Duration	2016-2019
Description	Funds will be directed to the Program Development and International Cooperation Section (PDIC) of the IAEA's Nuclear Security division to provide training, equipment, expert advice and other support to Nuclear Security Support Centres in many regions, including Latin America, Africa, and Central and Southeast Asia.

Project Title	International Atomic Energy Agency: Nuclear Security Fund (Security of Nuclear Materials & Facilities)
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$3,160,780
Duration	2016-2019
Description	Funds will be directed to the Nuclear Security of Materials and Facilities Section (MAFA) of the IAEA's Nuclear Security division to (1) build nuclear security regulatory infrastructure throughout Africa; (2) upgrade physical protection of a nuclear facility in Egypt; (3) convene 6 workshops on threat assessment for nuclear facilities in Latin America; (4) provide training for Latin American states on radiological material management; and (5) remove Canadian-origin disused sealed radioactive sources from Lebanon.

Project Title	Open source research on DPRK WMD production capacity
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	Verification, Research, Training and Information Centre (VERTIC)
Project Value	C\$4,642,670
Duration	2018-2022
Description	This project brings together the expertise of the Verification Research, Training and Information Centre (VERTIC), the James Martin Center for Nonproliferation Studies (CNS) and the Royal United Services Institute (RUSI) to conduct open source research into the DPRK's production capacity for weapons of mass destruction.

Project Title	Outreach and Support for the Fissile Material Cut-off Treaty Expert Preparatory Group
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	British American Security Information Council (BASIC)
Project Value	C\$21,309
Duration	2018-2019
Description	This project will support: 1) research to critically assess the successes and failures of the step-by-step approach to nuclear disarmament (including an FMCT); (2) produce a 20-page report based on the outcomes of this research; (3) produce a briefing paper on the report; and (4) hold briefings in five cities on the report.

Project Title	Renovation of the IAEA's Nuclear Applications Laboratories (ReNuAL)
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$2,300,000
Duration	2016-2018
Description	Funding will support the renovation of the IAEA's Nuclear Applications Laboratories (ReNuAL), which serve as technical facilities in support of Article IV of the Nuclear Non-Proliferation Treaty (NPT) and the UN Sustainable Development Goals (SDGs).

Project Title	Support for activities of the FMCT Preparatory Group
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), Ditchley Foundation
Project Value	C\$689,265.96
Duration	2017-2018
Description	This funding aims to support the activities of the Canada-led Fissile Material Cut-off Treaty (FMCT) Experts Preparatory.

Project Title	Support for IAEA monitoring and verification activities in the DPRK
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$2,000,000
Duration	2018-2020
Description	This project provides the IAEA with grant funds to undertake nuclear monitoring and verification activities in the DPRK.

Project Title	Support for INTERPOL's Radiological and Nuclear Terrorism Prevention Unit
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$746,962
Duration	2017-2019
Description	This initiative will provide funding to INTERPOL's Radiological and Nuclear Terrorism Prevention Unit (RNTPU), to help maintain an effective INTERPOL presence in the Global Partnership Working Group, the Global Initiative to Combat Nuclear Terrorism, and other key multilateral organizations.

Project Title	Support for INTERPOL's Radiological and Nuclear Terrorism Prevention Unit
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Criminal Police Organization (INTERPOL)
Project Value	C\$5,000,000
Duration	2018-2022
Description	This project will provide funding over a three-year period to INTERPOL's Radiological and Nuclear Terrorism Prevention Unit (RNTPU), to help support the implementation of nuclear security projects and help maintain an effective INTERPOL presence in the Global Partnership Working Group, the Global Initiative to Combat Nuclear Terrorism, and other key multilateral organizations.

Project Title	Supporting Implementation of the IAEA Code of Conduct on Safety and Security of Radiological Sources
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$699,780
Duration	2018-2020
Description	This project will support three international meetings of legal and technical experts on implementation of the IAEA's Code of Conduct dealing with the safety and security of radioactive sources. These meetings will be held at the IAEA in Vienna in 2018, 2019 and 2020.

Project Title	Supporting Multilateral Efforts to Enhance DPRK Sanctions Implementation
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	James Martin Center for Nonproliferation Studies (CNS)
Project Value	C\$353,700
Duration	2017-2018
Description	The Project will support Canada's ability to gain insight into potential breaches of the UN sanctions regime on North Korea by funding activities by the James Martin Center for Nonproliferation Studies to produce actionable information on illicit North Korean activities overseas based upon open-sourced information.

Project Title	US DoS capacity-building on implementing UNSC resolutions on DPRK proliferation
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	United States Department of State (DOS)
Project Value	C\$3,250,000
Duration	2017-2023
Description	This project will provide support to the US State Department’s Office for Cooperative Threat Reduction (CTR) to undertake capacity-building activities in partner countries to (a) assist in the full implementation of UN Security Council Resolutions (UNSRs) that address the DPRK proliferation threat; (b) strengthen efforts to implement proliferation financing measures to prevent the DPRK from financing their WMD programs; and (c) strengthen efforts to prevent the DPRK from financing their WMD programs through criminal networks.

Project Title	UNODC Strengthening Legal Frameworks Phase II
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	United Nations Office on Drugs and Crime (UNODC)
Project Value	C\$1,588,415
Duration	2018-2021
Description	This project will help strengthen the global fight against CBRN terrorism through raising awareness and promoting ratification and implementation of international legal frameworks related to nuclear security by addressing the need for: <ul style="list-style-type: none"> • Universalization of the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT), the Convention on the Physical Protection of Nuclear Material (CPPNM) and its Amendment (CPPNM/A); • Adequate incorporation of their criminalization requirements into national legislation; and • Capacity building of criminal justice officials and other relevant stakeholders on their implementation.

Project Title	Verification of the Joint Comprehensive Plan of Action with Iran by the IAEA
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	International Atomic Energy Agency (IAEA)
Project Value	C\$1,500,000
Duration	2017-2018
Description	This project will support IAEA in monitoring and verifying implementation of the Joint Comprehensive Plan of Action (JCPOA) by Iran.

Project Title	Enhancing the Security of IAEA Information Systems
Partner Country/Region	Global
Implementing Country	France
Collaborating Partner(s)	IAEA
Project Value	€300,000
Duration	2017/2018/2019
Description	France provided a financial support to the IAEA to implement its MTS Business Technology Strategic Plan, in particular for projects aimed at enhancing IT risk management and information security and avoiding any leak of sensitive information that could compromise nuclear security.

Project Title	Improving Radiological Source Security: Defining Baselines, Building Strategies, and Establishing Proactive Networks
Partner Country/Region	Global
Implementing Country	Finland, Ministry for Foreign Affairs, Unit for Arms Control
Collaborating Partner(s)	The Stimson Center, United States
Project Value	€100,000
Duration	2018
Description	A study and global outreach project that created a comprehensive database on laws and regulations of UN Members States addressing security of radioactive sources, including measures that criminalize illicit behavior; a database of laws and regulations related to controlling imports and exports of radioactive sources, including measures that criminalize illicit behavior; developed actionable recommendations that would advance source security and identifying partners for a global network working on nuclear security law.

Project Title	Support to the IAEA for advisory services
Partner Country/Region	Global
Implementing Country	France
Collaborating Partner(s)	IAEA
Project Value	€72,000
Duration	2018
Description	Funding of IPPAS mission in France in 2018 Participation of French experts in IPPAS missions

Project Title	International School on Nuclear Security
Partner Country/Region	Global
Implementing Country	Italy
Collaborating Partner(s)	IAEA
Project Value	€90,000
Duration	2018 (annual)
Description	The International School on Nuclear Security, jointly run by the IAEA and the International Centre for Theoretical Physics (ICTP) in Trieste, is designed for young professionals from developing countries, working at relevant institution in their home country. The school contributes to the development of a cadre professionals, in the national framework governing nuclear safety and security.

Project Title	UK Global Threat Reduction Programme
Partner Country/Region	Global
Implementing Country	United Kingdom
Collaborating Partner(s)	Various partner countries, US NNSA, US State, IAEA
Project Value	Approx. £7,000,000 per year
Duration	Multiple years
Description	<p>The UK's nuclear and radiological security assistance programme, the Global Threat Reduction Programme (GTRP) works both bi-laterally with partner countries and through partners to delivery programmes that improve the security of nuclear and radiological materials and to reduce the risk of such materials being obtained by non-state actors. The programme focuses on four thematic areas:</p> <ul style="list-style-type: none"> • The security of nuclear materials; • Security culture; • Counter nuclear smuggling and border security; • Radiological source security and the promotion of alternative technologies. <p>Programmes the UK supports mix both physical protection work and training and awareness raising. Sustainability is key part of the programme and projects should build capacity as well as providing security improvements. For example through the IAEA the UK funded the removal and repatriation of HEU from a research reactor in Nigeria (other partners supported security upgrades and conversion of the reactor to LEU). The</p>

	<p>UK's bilateral security culture programme runs several courses a year both in London and for countries and regions on the principle of material security (both physical protection and insider threat). These courses are for operators, regulators, relevant authorities, and academia. On border security the UK supports programmes managed by US NNSA to improve border security infrastructure and funds training activities conducted by INTERPOL. The UK supported the design and build of a storage facility for radiological sources in Ukraine, in close cooperation with Ukrainian partners. Alongside the storage facility a number of Global Partnership members, including France, Germany, Norway, Sweden, and US, coordinated and undertook related projects on radiological source security. In addition to this programme activity the UK provides support to countries to assist with the implementation of international conventions and regulations.</p>
--	--

Project Title	Countering DPRK Missile and Nuclear Program
Partner Country/Region	Global, including South-East Asia, Europe, the Middle East, Africa, and Latin America
Implementing Country	U.S. Department of State, Office of Cooperative Threat Reduction
Collaborating Institution(s) / Partner(s)	U.S. national laboratories, universities, research institutes and non-governmental organizations
Project Value	Approximately US\$13,000,000
Duration	Ongoing: started in 2017
Description	<p>ISN/CTR builds capacity in partner countries to counter DPRK proliferation activities and implement the relevant United Nations Security Council Resolutions. This engagement is global in scope, including Asia, Europe, the Middle East, Africa, and Latin America, but the focus is on states that have trade relations with the DPRK or may be a hub for shipping goods to or from the DPRK. For example, CTR activities focus on:</p> <ul style="list-style-type: none"> • Strengthen shipping sector programs and processes against DPRK abuse. • Counter DPRK Proliferation Financing. • Implement Sectoral Sanctions. • Counter DPRK Cyber Operations. • Reduce Bilateral Ties. • Generate Actionable Information from Open Sources.

Project Title	Global Nuclear Security Engagement Activities
Partner Country/Region	Global, including India, Egypt, South Africa, Jordan, UAE, Turkey, and Libya.
Implementing Country	U.S. Department of State, Office of Cooperative Threat Reduction
Collaborating Institution(s) / Partner(s)	U.S. national laboratories, universities, research institutes and non-governmental organizations
Project Value	Approximately US\$2,500,000
Duration	Ongoing: started in 2011.
Description	CTR partners with nuclear scientists, technicians, and engineers, security personnel, institutional trainers, and technical organization decision-makers to promote technical cooperation and enhance nuclear security best practices. CTR projects broadly fall into one of three categories, listed in no particular order: <ul style="list-style-type: none"> • Insider Threat Mitigation • Nuclear Security Culture in Practice • Countering Violent Extremism in the Nuclear Sector

Project Title	Extra-budgetary Contribution to the IAEA for Preparedness for verification tasks in the DPRK
Partner Country/Region	Multilateral
Implementing Country	Sweden through the Ministry for Foreign Affairs
Project Value	Contribution in 2018: SEK 3,000,000/€285,000
Duration	From 2018
Description	The contribution may be used to ensure the IAEA's readiness to assume tasks related to the future verification of the DPRK's nuclear program.

Project Title	Extra-budgetary contribution to the IAEA for verification tasks Connected to the JCPOA and UN Security Council Resolution 2231
Partner Country/Region	Multilateral
Implementing Country	Sweden through the Ministry for Foreign Affairs
Project Value	Contribution in 2018: SEK 3,000,000/€285,000
Duration	From 2018
Description	Unearmarked contribution to the voluntary fund for JCPOA verification.

Project Title	Extra-budgetary Contribution to the IAEA Nuclear Security Fund
Partner Country/Region	Multilateral
Implementing Country	Sweden through the Ministry for Foreign Affairs
Project Value	Contribution in 2018: SEK 2,000,000/€190,000
Duration	From 2018
Description	Unearmarked contribution to the Nuclear Security Fund.

Project Title	Material Management and Minimization (MMM) Program
Partner Country/Region	USA, Belgium, China, EU, France, Germany, IAEA, Italy, Japan, Kazakhstan, Nigeria,
Implementing Country	United States
Collaborating Institution(s) / Partner(s)	Partners involve specific research reactor institutes as well as government entities in each partner country and the IAEA.
Project Value	Approximately \$95,000,000 from the U.S., of which approximately \$17,500,000 was for international partner support
Duration	All projects are multi-year endeavors. Nigeria conversion was completed in November 2018 whereas all other projects are ongoing.
Description	MMM works with civilian facilities and government entities to convert research reactors from the use of HEU fuel to LEU fuel. This includes collaborating with European colleagues to develop and qualify a new high-density LEU fuel to support conversion of some of the remaining high-flux research reactors.

Project Title	Security of Radioactive Sources
Partner Country/Region	Various countries, including Indonesia
Implementing Country	France
Collaborating Partner(s)	IAEA
Project Value	€580,000
Duration	2017/2018/2019
Description	In the framework of its support plan to the IAEA, France supports projects to secure or repatriate disused radioactive sources in countries that requested support from the IAEA. 6 French experts also carried out a 5-day mission in Indonesia to evaluate options to secure disused radioactive sources. A similar mission happened for Malaysia.

MULTI-REGIONAL AND GLOBAL: CBRN & UNSCR 1540

Project Title	CBRN Capacity Building
Partner Country/Region	Africa, the Middle East and South-East Asia
Implementing Country	France
Project Value	€150,000
Duration	2018
Description	France provides trainings in partner countries or host trainees in French CBRN training centers to increase local capacities to face CBRN accidents or CBRN terrorism threats. More than 25 actions are accomplished every year under this program.

Project Title	Countering DPRK Proliferation
Partner Country/Region	Asia-Pacific and East and South Africa
Implementing Country	U.S. Export Control and Related Border Security (EXBS) Program
Collaborating Partner(s)	Multiple
Project Value	US\$7,000,000
Duration	Multiple Year
Description	<p>Summary: Through bilateral and regional programs in the Asia-Pacific and East and South Africa, EXBS is working to counter DPRK proliferation by building partner capacity to enforce U.S. and UN Security Council sanctions; devise strategic trade control frameworks; educate industry on compliance obligations; and strengthen enforcement at key land, maritime, and air ports of entry. EXBS will continue to work closely with partner nations and organizations to expand our counter-DPRK work in key regions of concern.</p> <ul style="list-style-type: none"> • Legal/Regulatory: EXBS is assisting governments with creating legal and regulatory strategic trade controls frameworks to equip them with the necessary domestic authorities to interdict activities of DPRK proliferation concern. The next engagement will be a workshop with Tanzania in November 2018. • Licensing: EXBS is actively working to enhance the capability of licensing, customs, and other enforcement officials to screen parties to trade transactions against DPRK sanctions lists. • Enforcement: EXBS will conduct a series of scenario-based exercises in 2019 to identify any gaps in the policies and procedures that partner countries have in place to counter the transit and transshipment of controlled commodities and materials. The exercises will focus on Asian, Middle Eastern, and European countries. EXBS will also host a regional workshop in Africa in February 2019 to raise awareness on sanctions enforcement, and will conduct sanctions awareness workshops with Morocco in Spring 2019. EXBS is providing additional funding to the UNODC Container Control Program, with a focus on countering the DPRK WMD supply chain. More broadly, EXBS is also working more to integrate DPRK proliferation screening criteria into targeting and risk management profiles at port control units. • Industry Outreach: EXBS will conduct industry outreach with exporters, brokers, and freight-forwarders to raise awareness of DPRK sanctions and facilitate industry compliance. Workshops with Kenya and South Africa will be held in 2019, while a separate effort to create a strategic trade controls “toolkit” that can be disseminated to industry is ongoing.

Project Title	UNSCR 1540 Assistance Support Initiative
Partner Country/Region	Global
Implementing Country	Canada - Weapons Threat Reduction Program Global Affairs Canada
Collaborating Partner(s)	The Stimson Center
Project Value	US\$560,000 (~C\$745,222.92)
Duration	2018-2020
Description	The Assistance Support Initiative (ASI) aims to help States build their capacity to make more effective UNSCR 1540-related assistance requests, including the creation of a public, searchable database of relevant assistance programs and projects. This database serves as a single source of valuable information for States interested in obtaining assistance on the programs offered by States, international government organizations, and non-governmental entities. In addition to program and project descriptions, the data provides points of contact for each program to facilitate stronger connections between assistance providers and those in need of assistance.

Project Title	Strengthening the Global Fight against CBRN Terrorism through the Ratification and Implementation of International Legal Frameworks
Partner Country/Region	Global
Implementing Country	Canada – Weapons Threat Reduction Program Global Affairs Canada
Collaborating Institution(s) / Partner(s)	United Nations Office on Drugs and Crime (UNODC)
Project Value	C\$508,000
Duration	2017-2019
Description	This project will support capacity building activities of UNODC directed at promoting the global need for the ratification of, and increased adherence to, the international legal framework against CBRN terrorism and its legislative implementation.

Project Title	Global Material Security (GMS) Program
Partner Country/Region	Asia (Middle East)
Implementing Country	United States
Project Value	US\$6,700,000
Duration	2018
Description	Work with partners worldwide to build sustainable capacity to secure nuclear and radioactive materials and to deter, detect, and investigate the trafficking of those materials.

Appendix I

Expenditure Summary of WMD Threat Reduction Activities of Global Partnership Member Countries (2018)

Region	Approx CAD	Approx GBP	Approx EUR	Approx USD
Africa	146,724,821	92,069,275	102,059,784	116,324,286
Americas	68,363,973	39,874,064	44,297,201	50,382,971
Asia	405,299,918	236,002,358	261,671,737	298,211,975
Europe	143,906,059	86,660,781	96,079,431	109,496,769
Middle East	108,278,388	62,101,967	69,636,571	79,363,174
Multi Regional / Global	599,578,055	349,404,340	385,329,654	439,149,241
TOTAL	1,472,151,214	866,112,785	959,074,378	1,092,928,416