CATALOG OF CIVIL SOCIETY ASSISTANCE TO STATES PARTIES

In Support of Article X of The Biological & Toxin Weapons Convention

DECEMBER 2019

PROJECT DESCRIPTION

We are pleased to present the first of what we intend to become an annual catalog of civil society assistance programs, to highlight contributions to the BWC and States Parties, informing interested parties of civil society's contributions to enhance biological safety and security. By providing a uniform product, we hope State Parties will be able to easily identify programs, experts and organizations. In addition to organization and project descriptions, the information provided in this catalog includes points of contact for each program to facilitate stronger connections between civil society and State Parties in need of assistance.

This catalog is compiled by Georgetown University Center for Global Health Science and Security and The Henry L. Stimson Center. Material contained in this catalogue will be also included in the Stimson Center's UNSC Resolution 1540 Assistance Support Initiative (ASI) Database, available at https://1540assistance.stimson.org/assist-programs/

Catalog compiled by:

GEORGETOWN UNIVERSITY
Georgetown University Medical Center
Center for Global Health Science and Security

STIMSON 30 years

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Geneva Centre for Security Policy (GCSP)

Type of organization: Academia; Think Tank; Research Institute

Organization description: The GCSP is an international foundation serving a global community of individuals and organizations. whose activity is to provide executive education, offer dialogue, and conduct research on all aspects of national, international, and human security to officials from governments (civilian and military) as well as international civil servants and representatives from private NGOs or companies. The GCSP mission is to advance peace, security and international cooperation. The GCSP provides the knowledge, skills and network for effective and inclusive decision-making.

Project Name: Capacity Building on the Biological Weapons Convention (BWC)

Project Type: Biological Weapons Nonproliferation; Biosafety/Biosecurity; Outreach/awareness-raising; Development of laws/regulations/guidelines; Preparedness/response (outbreak); Preparedness/response (CBRN); Conference/Workshop; Knowledge sharing; Legislative/Regulatory; Network development/outreach

Geographical focus: Worldwide

Project description: Regular awareness raising or training workshops, meetings and exercises on biosecurity for the diplomatic, NGO community and officials based in Geneva or taking part in BWC Intersessional Meetings.

Funding/Implementing Partner: Various funders (Switzerland, Canada, Japan...); BWC Implementation Support Unit (ISU) as implementing partner

Project Status: Several completed.

Point of Contact:
Marc Finaud, Head of Arms Proliferation
m.finaud@gcsp.ch

Organization location: Geneva, Switzerland

For more information please visit: www.gcsp.ch

The Future of Humanity Institute
University of Oxford

Type of organization: Research Institute

Organization description: The Future of Humanity Institute (FHI) is a multidisciplinary research institute based within the University of Oxford. FHI's mission is to shed light on crucial considerations that might shape humanity's long-term future, including high-consequence risks posed by deliberate biological events. As one of the four FHI core focus areas, the FHI biosecurity research group works with partners and institutions around the world to reduce biological risks. FHI conducts cutting-edge research on the impacts of advanced biotechnology and regularly advises policymakers. FHI researchers have consulted with the US President's Council on Bioethics, the US National Academy of Sciences, the Global Risk Register, the UK Synthetic Biology Leadership Council and the World Health Organization and regularly contributes to the Biological Weapons Convention Meeting of States Parties and Meeting of Experts as a Non-Governmental Organization.

Project Name: Powerful actor, high impact bio-threats; Workshop on the UK Biosecurity Strategy for Emerging Infectious Disease and Bioweapons; Research projects into information hazards in biotechnology, biosecurity risk assessment and modelling biological risk chains; State actor risk; Policy for genetically engineered pathogen attribution

Project Types: Biosafety/Biosecurity; Conference/Workshop; Conference/Workshop Outreach/awareness-raising; Verification

Geographical focus: Worldwide

Project description: High impact bio-threats have the potential for global catastrophic, population-wide consequences and urgent actions on a global scale are needed to mitigate the consequences posed by them. From 7-9 November 2018, 42 senior policy leaders and scientific and technical experts in science, engineering, bio-defense and bio-security, science policy, public health, infectious diseases, and catastrophic risks gathered at Wilton Park to consider powerful actor, high impact bio-threats. For the purpose of the meeting co-led by FHI, the Johns Hopkins Center for Health Security the Nuclear Threat Initiative, and Wilton Park, high impact bio-threats were considered to be deliberate or accidental biological events with population-wide consequences – including deliberate development and use of biological weapons. FHI has also engaged with the 2019 UK Parliamentary inquiry into emerging infectious diseases and bioweapons and has various ongoing research projects on deliberate biological risk assessment and topics relevant to the BWC and BW nonproliferation.

Funding Partners/Implementing Partners: : Open Philanthropy Project; European Research Council Horizon 2020/ Johns Hopkins Center for Health Security; Nuclear Threat Initiative; Wilton Park

Project Status: Completed; Active; Ongoing

Point of Contact:
Dr. Cassidy Nelson, Research Scholar & Biosecurity Research Affiliate,
cassidy.nelson@gtc.ox.ac.uk

Organization location: Oxford, United Kingdom
For more information please visit: https://www.fhi.ox.ac.uk/

The Verification Research, Training and Information Centre (VERTIC)

Type of organization: Think Tank; Implementer

Organization description: VERTIC (the Verification Research, Training and Information Centre) is an independent, non-profit making charitable organization. Established in 1986, VERTIC supports the development, implementation and verification of international agreements as well as initiatives in related areas. VERTIC provides this support through research and analysis, assistance and training, dissemination of information, and interaction with the governmental, diplomatic, technical, scientific and non-governmental communities. VERTIC's work focuses on the development and application of monitoring, reporting, review, verification and compliance mechanisms, and on national implementation measures.

Project Name: National Implementation Measures (NIM) Programme

Project Types: Biological Weapons Nonproliferation; Biosafety/Biosecurity; Other Health Security; Chemical Weapons Nonproliferation; Chemical Security; Technical Training; Outreach/awareness-raising; Development of laws/regulations/guidelines; Train the Trainer; Knowledge sharing; Legislative/Regulatory

Geographical focus: Worldwide

Project description: VERTIC's *National Implementation Measures (NIM) Programme*, established in 2008, advises States on national implementation of the obligations in international instruments, including the Biological and Toxin Weapons Convention, the Chemical Weapons Convention and UN Security Council Resolution 1540. The NIM Programme's cost-free legislative advice and assistance to States consists of: raising awareness of implementation obligations; undertaking comprehensive analysis (legislation surveys) of a State's existing laws and regulations; providing assistance in the drafting of new legislation during workshops in capitals; reviewing and commenting on existing draft legislation; providing legislative drafting tools for States' information and use; supplying examples of legislation in force; and providing examples of different approaches to CBRN regulation.

Funding/Implementing Partners: European Union CBRN Centres of Excellence; Ministry of Foreign Affairs of Norway

Project Status: Available; ongoing [subject to funding]

Point of Contact:
Sonia Drobysz, Programme Director for National Implementation
sonia.drobysz@vertic.org

Organization location: London, United Kingdom

For more information please visit: www.vertic.org

Johns Hopkins Center for Health Security

Type of organization: Academia; Think Tank; Research Institute

Organization description: The Johns Hopkins Center for Health Security works to protect people's health from epidemics and disasters and ensure that communities are resilient to major health and biosecurity threats. The center examine show scientific and technological innovations can strengthen health security by studying the policies, organizations, systems, and tools to prevent and respond to outbreaks and public health crises. The center strives to advance policies and practice to address a range of biosecurity risks, including the global rise in emerging infectious diseases, a continued risk of pandemic influenza, major natural disasters, our dependence on vulnerable infrastructure, communicable disease outbreaks and epidemics, and the potential for biological, chemical, or nuclear accidents or deliberate threats.

Project Name(s): Southeast Asia Multilateral Biosecurity Dialogue; Global Forum on Scientific Advances Important to the BWC; BWC Strengthening and Assurance; Attribution and Forensics in the Event of a Biological Attack; Novel Approaches to Vaccine Development; Strengthen International Organizational and Technical Capacity for Attribution of Deliberate Biological Threats; Boosting NATO Resilience to Biological Attacks; Improving Security Through International Biosafety Norms

Project Types: Biological Weapons Nonproliferation ; Biosafety/Biosecurity ; Other Health Security ; Development of laws/regulations/guidelines; Preparedness/response (outbreak) ; Development of resources/tools/references ; Preparedness/response (CBRN) ; Disease surveillance ; Conference/Workshop ; Knowledge sharing ; Outreach/awareness-raising ; Diagnostic, sampling, or other field equipment ; Legislative/Regulatory ; Network development/outreach ; Export Control/Border Security ; Site-specific equipment/facility improvements ; Verification

Geographical focus: Worldwide

Project description(s): *The Southeast Asia Multilateral Biosecurity Dialogue* addresses the broad scope of biosecurity threats in Southeast Asia and the U.S, including naturally occurring infectious diseases; novel, emerging, re-emerging pathogens with pandemic potential; the deliberate or accidental misuse of biological materials; misinformation during public health emergencies; and the benefits and risks associated with rapidly advancing biotechnology, including dual-use research and capabilities. *The Global Forum on Scientific Advances Important to the BWC* addresses rapidly emerging advancements in biology and biotechnology and their impact on bioweapons nonproliferation policy. The Forum facilitates engagement between States Parties and scientists with the aim of (1) informing delegations of current/emerging capabilities and risks associated with advanced biology and biotechnology and (2) raising awareness of and support for the BWC and bioweapons nonproliferation norms among the scientific community. The *BWC Strengthening and Assurance* project aims at better understanding the activities and information that States Parties would find beneficial to increasing their assurance that others are adhering to their BWC obligations. Other projects include: Attribution and Forensics in the Event of a Biological Attack; Novel Approaches to Vaccine Development; Strengthen International Organizational and Technical Capacity for Attribution of Deliberate Biological Threats; Boosting NATO Resilience to Biological Attacks; and Improving Security Through International Biosafety Norms.

Funding Partners: US Department of Defense; Open Philanthropy Project
Project Status: Available; Active; Ongoing
Point of Contact: Anita Cicero, Deputy Director, acicero@jhu.edu ; Dr. Gigi Gronvall, Senior Scholar, ggronvall@jhu.edu ; Matthew P. Shearer, Senior Analyst, mshearer@jhu.edu

Organization location: Baltimore, Maryland, USA
For more information please visit: http://www.centerforhealthsecurity.org

Biodefense Graduate Program at George Mason University

Type of organization: Academia

Organization description: George Mason University's Biodefense Graduate Program at the Schar School of Policy and Government offers graduate certificates and MS and PhD degrees. The program is designed to bridge the gap between science and policy by providing students with the knowledge and analytic skills to assess the risks posed by natural and man-made biological threats and to develop strategies for reducing these risks to national and international security.

Project Name(s): Pandemics, Bioterrorism, and Global Health Security Workshop

Project Types: Biological Weapons Nonproliferation; Biosafety/Biosecurity; Other Health Security; Preparedness/response (outbreak); Preparedness/response (CBRN); Disease surveillance; Conference/Workshop; Knowledge sharing; Network development/outreach

Geographical focus: Worldwide

Project description(s): Threats to global health security continue to evolve due to the changing nature of conflict, advances in science and technology, globalization, and the growing threat posed by emerging infectious diseases and pandemics. Pandemics, Bioterrorism and Global Health Security: From Anthrax to Zika is a three and a half-day workshop, non-credit summer workshop designed to introduce participants to the challenges facing the world at the intersection of national security, public health, and the life sciences. The workshop faculty are internationally recognized experts from the government, private sector, and academia who have been extensively involved with research and policy-making on public health, biodefense, and national security issues. The workshop is organized by the Biodefense Graduate Program at the Schar School of Policy and Government and is held at the Schar School's campus in Arlington, Virginia every July.

Funding/Implementing Partners: N/A

Project Status: On going

Point of Contact: Gregory Koblentz, Director of the Biodefense Graduate Program
gkoblent@gmu.edu

Organization location: Arlington, VA USA

For more information please visit: https://schar.gmu.edu/biodefense-programs

Research Group for Biological Arms Control
Hamburg University

Type of organization: Academia; Research Institute

Organization description: The Research Group for Biological Arms Control at the University of Hamburg aims to contribute, through innovative research and outreach activities, to the universal prevention of biological weapons development, production and use. The focus of activities is twofold: firstly, the Research Group contributes to preventing the erosion of the universal bioweapons prohibition by opposing norm-harming activities; secondly, it develops new concepts and instruments for monitoring bioweapon relevant activities and for verifying and enforcing compliance with the norm against bioweapons. Past projects include monitoring trade in biological dual-use items and open source information in biological arms control. Since 2017 HRG is embedded in a research environment at ZNF with a broader interest in the understanding of security related biological risks, including natural occurrences.

Project Name(s): BioWeapons Monitor; HRG Trade Monitor

Project Types: Biological Weapons Nonproliferation; Export Control/Border Security; Outreach/awareness-raising; Knowledge sharing

Geographical focus: Worldwide

Project description(s): *The Bioweapons Monitor* is a follow –up to the previous format of the BWPP's BioWeapons monitor. Five issues, covering the years 2010-2014 were published as country studies in a classical format. The new format is a database containing information with relevance for the implementation of the Biological and Toxin Weapons Convention (BWC), including the obligation for peaceful technical cooperation under article X. Users can search the information end gross or by applying analytical selectors. More than that, users are invited to contribute additional information to the monitor. Not updated since 2017. *The HRG Trade Monitor* can be used to visualize the global trade of biological culture media. It uses data from the declarations for imports and exports by national customs authorities. In order to identify the quantity of trade of biological culture media, it refers to the portion of the national customs declaration where the description of items is enumerated based on the classification system within the World Customs Organization's Harmonized System (HS). This website uses data gathered under code 382100: "Prepared culture media for the development of micro-organisms", which encompasses simple bulk media for mass production that are traded in large amounts for low prices to media for the development of specific strains that are traded in small amounts for high prices (not covered is Agar, HS 130231). The aforementioned data that is being used for this website is publicly available from the COMTRADE database of the UN Statistics Division. Not updated since 2016.

Funding/Implementing Partners: German Foreign Office / BioWeapons Prevention Project (BWPP)

Project Status: Available (contributions that would allow updating are most welcome)

Point of Contact: Dr. Gunnar Jeremias
gunnar.jeremias@uni-hamburg.de

Organization location: Hamburg, Germany

For more information please visit: http://www.biological-arms-control.org/

King's College London

Type of organization: Academia

Organization description: Established in 1829, King's College London is a public research university located in London, United Kingdom. King's strategic vision 2029 lays out the university's strategy to make the world a better place. Kint's strategic priorities are to: educate to inspire and improve; research to inform and innovate; serve to shape and transform; deliver a civic university at the heart of London; and provide an international community that serves the world.

Project Name(s): Biological disarmament and non-proliferation; Emerging technologies, governance, & responsible innovation; Trust & transparency in biodefence; Biopreparedness, simulations & field exercises; Intelligence & biological threat assessment

Project Types: Biological Weapons Nonproliferation; Biosafety/Biosecurity; Export Control/Border Security; Preparedness/response (outbreak); Preparedness/response (CBRN); Conference/Workshop; Legislative/Regulatory; Network development/outreach; Outreach/awareness-raising; Development of resources/tools/references; Investigations; Knowledge sharing; Confidence-Building; Other: Peer Review

Geographical focus: Worldwide

Project description: Our research is theoretically driven, empirically informed and policy-relevant. It draws on a range of methods from participant observation, interviews and documentary analysis, to archival research, database searches and statistical analysis. King's is committed to rigorous and responsible research that contributes to addressing the significant social, political and security challenges of developments in the life sciences. Responding to these challenges rarely involve simple, reductive or straightforward answers; and King's embraces interdisciplinary perspectives and learning, as well as collaborative research.

Funding Partners: Various academic and non-academic funding sources

Project Status: Available, ongoing, completed

Point of Contact:
Dr Filippa Lentzos, Senior Research Fellow
Department of War Studies, and Department of Global Health & Social Medicine
Filippa.Lentzos@kcl.ac.uk

Organization location: London, United Kingdom

For more information please visit:
www.kcl.ac.uk/warstudies
https://www.kcl.ac.uk/csss
www.kcl.ac.uk/ghsm
https://www.kcl.ac.uk/research/conflict-health-research-group

The Henry L. Stimson Center

Type of organization: Think Tank

Organization description: The Stimson Center is a nonpartisan policy research center working to protect people, preserve the planet, and promote security & prosperity. Stimson's award-winning research serves as a roadmap to address borderless threats through concerted action. The Center's formula is simple: they gather the brightest people to think beyond soundbites, create solutions, and make those solutions a reality. They follow the credo of one of history's leading statesmen, Henry L. Stimson, in taking "pragmatic steps toward ideal objectives". They are practical in their approach and independent in their analysis. Their innovative ideas change the world.

Project Name: 1540 Assistance Support Initiative

Project Types: Knowledge sharing; CBRN Assistance

Geographical focus: Worldwide

Project description: States worldwide struggle to implement effectively the obligations of United Nations Security Council Resolution 1540 and other international nonproliferation treaties and commitments. As a result, States, international governmental and non-governmental organizations have offered to help States implement these obligations. However, matching requests and offers has proven to be very difficult. During Phase I of this project, the ASI team created a public, searchable database of assistance programs and projects that combat the proliferation of chemical, biological, radiological and nuclear weapons and their means of delivery. This database serves as a single source of valuable information for States interested in receiving or providing assistance. To visit the database, please click on the link: https://1540assistance.stimson.org/.

Funding Partners: Global Affairs Canada

Project Status: Ongoing

Point of Contact:
Dr. Richard T. Cupitt, Senior Fellow and Director
Partnerships in Proliferation Prevention
rcupitt@stimson.org

Organization location: Washington, DC, USA

For more information please visit: https://www.stimson.org

The Center for Global Health Science & Security
Georgetown University

Type of organization: Academia, Research Institute

Organization description: The Center for Global Health Science and Security at Georgetown University conducts rigorous and original research, and translates it into knowledge products that support decision-makers worldwide build sustainable capacities to prevent, detect, and respond to public health emergencies, as well as other emerging public health threats.

Project Name(s): Responding to Deliberate Biological Events; Data Sharing in Public Health Emergencies; Health Security Support in the MENA region; Cross Border Disease Surveillance; Disease in Conflict; Georgetown Infectious Disease Atlas (GIDA); Georgetown Outbreak Activity Library; Multisectoral collaboration for biosecurity; UNSGM; International Law Impact and Infectious Disease (ILIAID) Consortium; One Health Systems Assessment for Priority Zoonoses (OH-SAPZ)

Project Types: Biological Weapons Non-Proliferation; Biosafety/Biosecurity; Other Health Security; Preparedness/Response (Outbreak); Preparedness/Response (CRBN); Conference/Workshop; Legislative/Regulatory; Network Development/Outreach; Site-specific equipment/facility improvements; Collaborative Research Projects; Needs Assessment/Planning; Develop of Resources/Tools/References; Laboratory; Knowledge Sharing

Geographical focus: Worldwide

Project description(s): The *Responding to Deliberate Biological Events* project provides decisions-makers with the necessary tools to better understand what a response to a deliberate biological event could entail. These tools include: the Stakeholders in a Deliberate Biological Event (DBE) tool which describes how a deliberate biological outbreak might unfold, including the stakeholders who would be involved in identifying, responding to, and recovering from the event; tabletop exercises to test questions of governance in response to DBEs; and the Georgetown Outbreak Activity Library (GOAL), which is an online platform that maps all activities and stakeholders involved in a response. The center also identified best practices and provided guidance to State Parties for requesting assistance and operationalizing Article VII of the BWC. The *Data Sharing in Public Health Emergencies* project engages with experts in infectious diseases, ethics, and law to discuss how multidisciplinary research can advance our understandings of the changing role of the material transfer agreement in infectious disease research. The *Georgetown Infectious Disease Atlas (GIDA)* is a tracking dashboard that allows decision-makers to better understand the funding landscape in global health security by mapping the flow of committed and disbursed funds. The *International Law Impact and Infectious Disease (ILIAID) Consortium* brings together legal and governance experts to examine the benefits and barriers of international law to responding to emerging and reemerging infectious disease outbreaks. Supporting countries in implementing One Health, the Center has developed the *One Health Systems Assessment for Priority Zoonoses (OH-SAPZ) Methodology*. Additionally, the Center has projects focused on operational and implementation research questions related to sustainable health systems strengthening, emphasizing the prevention, management, and control of infectious diseases in countries affected by conflict, as well as multisectoral engagements to support health security and biosecurity. The Center also supports undergraduate and graduate degree programs, including masters and doctoral work in global infectious diseases, biothreats, science policy, and international affairs.

Funding Partners: Open Philanthropy; Various U.S. Government Agencies
Project Status: Active, ongoing, available
Point of Contact: Dr. Rebecca Katz - Rebecca.Katz@georgetown.edu
Organization location: Washington, D.C, USA
For more information please visit: https://ghss.georgetown.edu/

International Federation of Biosafety Associations (IFBA)

Type of organization: Professional Association

Organization description: The International Federation of Biosafety Associations (IFBA) is a global community of 46 national and regional biosafety associations working to enhance sustainable implementation of the Global Health Security Agenda's Action Package Prevent 3, UN Security Council Resolution 1540, the Biological Weapons Convention, and other health security initiatives. The IFBA is a member of the Alliance for Health Security Cooperation and strongly supports the notion that gaps, and challenges identified through evaluations of national biosecurity capacities should be appropriately addressed through multi-sectoral and multi-stakeholder cooperation.

Project Name(s): IFBA Professional Certification; IFBA Global Mentorship Program

Project Types: Biosafety/Biosecurity

Geographical focus: Worldwide

Project description(s): The *IFBA's certification program* is the only internationally recognized program to certify the competency of individuals in biorisk management and a variety of related technical disciplines. Examinations are delivered to candidates worldwide and in multiple languages, in the following disciplines: biorisk management; biological waste management; biocontainment facility design, operations & maintenance; biosafety cabinet selection, installation and safe use; and biosecurity. The *IFBA Global Mentorship Program* was successfully launched in the ASEAN and other regions to support and sustain the international biosafety and biosecurity community. The program pairs experienced IFBA Certified Professionals with scientists from around the world to discuss and explore topics related to biosafety and biosecurity. A new set of topics are introduced each month including risk-based biosafety solutions, sustainable laboratories, intersectional equity, gender-based interventions and other relevant subject material. In addition to increasing the number of certified professional worldwide, one of the goals of the program is to unite and engage individuals in discussion on key subjects, including biological non-proliferation and the Biological Weapons Convention. Ultimately the collaboration among IFBA's mentor/mentee network of individuals will exemplify positive attitudes towards biological non-proliferation and the biological risk management practices which may naturally follow.

Funding/Implementing Partner: N/A

Project Status: Available; Ongoing

Point of Contact:
IFBA Secretariat
secretariat@internationalbiosafety.org

Organization location: Ottawa, Canada

For more information please visit: www.internationalbiosafety.org

The British Medical Journal (BMJ)

Type of organization: Private Sector

Organization description: The BMJ is a global healthcare knowledge provider with a vision of a healthier world. BMJ started over 180 years ago as a medical journal. Today, BMJ is a global brand with a worldwide audience. Through its journals, events, medical education and clinical decision support tools, the BMJ shares knowledge, evidence and expertise, to improve health outcomes. BMJ has an extensive network of external clinical advisors, experts, authors and over 4, 000 international peer-reviewers. BMJ publishes content in 14 languages, has loyal users in over 150 countries, and partner with more than 8,000 institutions worldwide. BMJ is a values-driven organization and these values drive everything they. BMJ transparent, open and trusted and in known for being an independent, courageous and unbiased organization. These values enable to facilitate international cooperation and collaboration.

Project Name: Clinical Decision Support Training Initiative

Project Type: Biosafety/Biosecurity; Outreach/awareness-raising; Preparedness/response (outbreak); Preparedness/response (CBRN); Knowledge sharing

Geographical focus: Worldwide

Project description: Health professionals are the first line of defense when it comes to detecting infectious diseases. A robust and resilient health system will be better prepared to manage outbreaks whilst at the same time continuing to maintain core healthcare functions. *The Clinical Decision Support Training Initiative* is BMJ's flagship global health program. It supports biosurveillance and builds health system capacity and resilience through workforce development. The initiative equips healthcare professionals with BMJ's evidence-based resources, BMJ Best Practice (a clinical decision support tool, available online and offline via an app) and BMJ Learning (a multimedia learning platform), to improve their ability to detect, diagnose and manage infectious diseases as well as non-communicable diseases. The Initiative currently operates in 7 countries (Georgia, Ukraine, Azerbaijan, Vietnam, Iraq, Jordan, and Kazakhstan), with content translated into Russian, Azeri, Vietnamese, Ukrainian, and Georgian. To date, BMJ has trained over 12 500 primary care and infectious disease doctors across 1000 medical institutions. BMJ has the ability to scale this program to other countries and translate our evidence-based resources into other languages.

Project Status: Available; Active; Ongoing

Funding partners: DTRA, World Bank, Ministries of Health

Point of Contact:
Mitali Wroczynski, Head of Strategic Partnerships
Global Health & Global Health Security, BMJ, BMA House, Tavistock Square, London, WC1H 9JR
mwroczynski@bmj.com

Organization location: London, United Kingdom (HQ)
For more information please visit https://www.bmj.com/company/

Center for Biodefense and Global Infectious Diseases

Type of organization: Non-Governmental Organization

Organization description: The Center for Biodefense and Global Infectious Diseases is a non-governmental organization focused on developing biological defense tactics, as well as biological preparedness and response activities against high-risk biological threats for the benefit of the global health security. Our activities involve basic, clinical and applied research to promote an effective and rapid response against emergent high-risk biological threats. Cooperative research to reduce biological global threats in collaboration with a broad range research partners is required. Developing strong international alliances which foster an appropriate multi-national response against biological threats as part of an international defense strategy to ensure global health security is our priority and long-term goal.

Project Name(s): Provision of specialized training to enhance first response capacities against high-risk biological threats in Latin America and the Caribbean; Development of biodefense capabilities as part of national defense strategy against high-risk biological threats in Mexico; Zoonotic diseases-based surveillance of medical importance in public global health

Project Types: Biological Weapons Nonproliferation; Biosafety/Biosecurity; Technical Training; Collaborative research projects; Diagnostic, sampling, or other field equipment; Preparedness/response (outbreak); Development of resources/tools/references; Preparedness/response (CBRN); Disease surveillance; Investigation; Train the Trainer; Knowledge sharing; Network development/outreach; Conference/Workshop

Geographical focus: Latin America; Caribbean; Sub-Saharan Africa; Europe and North America

Project description(s): The aim of the *Provision of Specialized Training* project is providing bio risk management training to first responder entities to achieve an effective response against biological threats, such as emergent pandemics, acts of bioterrorism or the use of bioweapons. The aim of the *Development of Biodefence Capabilities* project is to design and develop potential therapeutics against RG4 agents or unknown pathogens in less than 3 months through advanced technology, such as aptamers, gene editing systems and nanotechnology. The long-term goal is developing effective therapeutics to be deployed to first responder Mexican entities and Latin American countries with limited response capacity. The aim of the *Zoonotic Diseases-based Surveillance* project is to explore the presence of bacterial and viral zoonotic diseases in Mexico, such as anthrax, plague, brucella, filovirus in wild bats, dengue, zika, and others, in human and animal populations, as well as determining the genetic variability correlation with the current climate changes and human factors on the clinical progression of the diseases. Other projects include: Capacity Building for Identifying Bioterrorism-Related Agents in Biological Materials in Mexico.

Funding/Implementing Partners: various funding partners / various implementing partners including the Regional Laboratory for Animal Health and the General Prosecutor Office of Colima State in Colima

Project Status: Active

Point of Contact: Uriel L. Lemus, PhD, President
ulemus@cebgid.org

Organization location: Colima, Mexico

For more information please visit: www.cebgid.org

Reaching Critical Will (RCW) of the Women's International League for Peace and Freedom (WILPF)

Type of organization: Non-governmental organization

Organization description: WILPF is the oldest women's peace organization in the world, founded in The Hague in 1915. WILPF founded Reaching Critical Will (RCW) in 1999 to lead the organization's analysis and advocacy for disarmament, the reduction of global military spending and militarism, and the investigation of gendered aspects of the impact of weapons and of disarmament processes. RCW seeks to achieve disarmament, challenge militarism, and confront gender discrimination through monitoring and reporting on international forums such as the United Nations and other meetings of governments, as well as through research, policy analysis, advocacy, and collaboration with international civil society campaigns.

Project Name: Reaching Critical Will (RCW)

Project Type: Gender

Geographical focus: N/A

Project description: *RCW* has loosely monitored meetings of the Biological Weapons Convention (BWC) over the years, and has at times published summary reports on its website, such as here or here. RCW's expertise relevant to biological weapons lies in its gender analysis of disarmament and arms control processes. This means we can advise on gender diversity, the gendered impacts of biological weapons, how predominant gender norms pose challenges to the prevention and use of biological weapons, and similar issues.

Funding Partners: N/A

Project Status: N/A

Point of Contact:
Katrin Geyer
katrin.geyer@wilpf.org

Organization location: Geneva, Switzerland & New York, NY, USA

For more information please visit: www.reachingcriticalwill.org

Parliamentarians for Global Action (PGA)

Type of organization: Other - a non-profit, non-partisan international network of committed legislators

Organization description: Parliamentarians for Global Action (PGA), a non-profit, non-partisan international network of committed legislators, informs and mobilizes parliamentarians in all regions of the world to advocate for human rights and the rule of law, democracy, human security, non-discrimination, and gender equality.

Project Name: GA Global Parliamentary Campaign to Promote Universality and Implementation of the Biological Weapons Convention and Implementation of UN Security Council Resolution 1540 (2004)

Project Type: Biological Weapons Nonproliferation; Biosafety/Biosecurity; Chemical Weapons Nonproliferation; Conference/Workshop; Knowledge sharing; Legislative/Regulatory; Network development/outreach; Technical Training for Parliamentarians Outreach/awareness-raising for Parliamentarians

Geographical focus: Worldwide; Africa; Latin America; Caribbean; Southeast Asia/Asia-Pacific; South Asia; Middle East

Project description: PGA has launched its new Global Parliamentary Campaign to Promote Universality and Implementation of the Biological Weapons Convention aiming at marshaling global parliamentary support for a strong, effective and universal BWC.

Project Status: Active

Point of Contact:
Peter A. Barcroft
peter.barcroft@pgaction.org

Organization location: The Hague, The Netherlands and New York, USA

For more information please visit: www.pgaction.org/ips/bwc.html

Nuclear Threat Initiative (NTI)

Type of organization: Other: Non-governmental organization

Organization description: The Nuclear Threat Initiative works to protect our lives, environment, and quality of life now and for future generations. We work to prevent catastrophic attacks with weapons of mass destruction and disruption (WMDD)—nuclear, biological, radiological, chemical, and cyber.

Project Name(s): Countering Global Catastrophic Biological Risks; the NTI Global Biosecurity Dialogue; the Biosecurity Innovation and Risk Reduction Initiative; the Global Health Security Index

Project Types: Biological Weapons Nonproliferation; Biosafety/Biosecurity; Preparedness/response (CBRN); Knowledge sharing; Network development/outreach; Conference/Workshop; Outreach/awareness-raising; Development of resources/tools/references

Geographical focus: Worldwide

Project description(s): NTI's *Countering Global Catastrophic Biological Risks (GCBRs)* portfolio identifies innovative approaches for reducing biological risks with population-wide consequences; facilitates commitments and actions to bolster international norms against the development and use of biological weapons and to deter powerful actors from pursuing these weapons; develops new approaches to strengthening the Biological Weapons Convention; and fosters greater interaction between biosecurity policymakers and the global catastrophic risk reduction community. *The Global Biosecurity Dialogue (GBD)* is an international cross-sectoral platform to elicit and track concrete new actions to advance international biosecurity and biosafety capacity. The GBD catalyzes regional approaches to achieve tangible, measurable, sustainable outcomes and system change, such as the African Union/Africa CDC Initiative to Strengthen Biosecurity and Biosafety. The GBD also provides a sustained impetus to identify barriers, and assist countries in taking new, aligned and collective actions to achieve internationally accepted biosecurity and biosafety targets. *The Biosecurity Innovation and Risk Reduction Initiative* catalyzes new incentives for researchers, funders, technology investors, publishers, insurers, philanthropies, and other stakeholders to identify and reduce biological risks associated with advances in technology. Initiative members work with global leaders to pilot new approaches to improve global biosecurity, enhance governance for new biological tools and technologies, and reduce the potential for deliberate or accidental misuse that could result in a high-consequence or catastrophic biological event. *The Global Health Security (GHS) Index* is the first comprehensive assessment and benchmarking of health security and related capabilities across the 195 countries that make up the States Parties to the International Health Regulations. The GHS Index is a joint project between NTI and the Johns Hopkins Center for Health Security, developed with The Economist Intelligence Unit. Over time, the GHS Index will spur measurable changes in national health security capacity and improve international capabilities to address infectious disease outbreaks that can lead to global epidemics and pandemics. (GHSIndex.org)

Funding/Implementing Partners: The Open Philanthropy Project, Global Affairs Canada's Weapons Threat Reduction Program, Bill & Melinda Gates Foundation, and the Robertson Foundation.

Point of Contact: Dr. Elizabeth (Beth) Cameron; cameron@nti.org

Organization location: Washington, D.C.
For more information please visit: https://www.nti.org/about/biosecurity/

Biosecu.re Ltd

Type of organization: Private Sector; Implementer; Consultant/Independent Contractor

Organization description: Biosecu.re works with the public, private and civil society sectors to help ensure we have resilient, safe and secure environments, frameworks and processes conducive to taking full advantage of biology as a manufacturing technology and supporting the bioeconomy. Biosecu.re supports the responsible conduct of science and innovation through the education and training of biological scientists via a range of media including in-situ training, online courses and gaming scenarios; and also through horizon-scanning awareness-raising of current and future biorisks.

Projects Name(s): Next Generation Biosecurity: 21st Century Biorisks; Biorisk Management & Biosecurity Professional Training; Biorisks: Public Communication Strategies & Campaigns

Projects Types: Biosafety/Biosecurity; Outreach/awareness-raising; Knowledge sharing; Network development/outreach; Biological Weapons Nonproliferation; Development of resources/tools/references; Train the Trainer; Preparedness/response (CBRN)

Geographical focus: Worldwide

Projects description(s): The *Next Generation Biosecurity: 21st Century Biorisks* project is a Massive Open Online Course (MOOC) directed towards university-level life science students and young professionals to educate and raise awareness of the potential biorisks, including dual-use research of concern, and how to mitigate them. The *Biorisk Management & Biosecurity Professional Training* project is a tailored on-site training to biorisk management and biosecurity professional international certification standard for laboratory staff at government, public and private biological facilities. The *Biorisks: Public Communication Strategies & Campaigns* project focuses on the development and implementation of biorisk communication strategies and campaigns directed towards multiple audiences

Funding/Implementing Partner: The *Next Generation Biosecurity: 21st Century Biorisks* project is funded by UK CPACC and implemented by the University of Bath

Project Status: Available; Ongoing; Active

Point of Contact:
Kathryn Millett, Director,
kathryn@biosecu.re,

Organization location: Cheltenham, UK

For more information please visit: http://biosecu.re/biosecure/index.html

Hazem Haddad
Jordan University of Science and Technology (JUST)

Type of organization: Consultant/independent expert/contractor; Academia; National Academy; Research Institute

Expert Biography: Hazem Haddad serves as the Head of Transcriptome, RNomics and Virology Unit, and as the Head of the Middle East and North Africa (MENA) Molecular Genomics and Biorisk Management Division in charge of training activity and infectious disease research, based out of the Jordan University of Science and Technology (JUST). Hazem Haddad provided biosafety and biosecurity support to the Broader Middle East and North Africa (BMENA) region in collaboration with various partners (USA National Laboratories, CRDF, DTRA, BEP, CDC, NAS, Gryphon Scientific and WHO). He was also involved in the response efforts to the Swine Flu H1N1 outbreak and Middle East Respiratory Syndrome Coronavirus (MERS-CoV) outbreak in Jordan. Haddad holds a Bachelor's degree in Biotechnology and Genetic Engineering and a Master's in Applied Biology /Human Genetic from the Jordan University of Science and Technology (Jordan) and an applied dual-use biosecurity education certificate from the University of Bradford.

Project Name: The laws of Genetic Engineering Practice Biotechnology

Project Type: Biological Weapons Nonproliferation; Biosafety/Biosecurity; Other Health Security; Export Control/Border Security; Technical Training; SOP development; Development of laws/regulations/guidelines; Diagnostic, sampling, or other field equipment; Preparedness/response (outbreak); Disease surveillance; Conference/Workshop; Investigation; Train the Trainer; Legislative/Regulatory; Network development/outreach

Geographical focus: Middle East & North Africa

Project description: Hazem Haddad was part of the committee supporting the Jordanian Ministry Health in the development of amendments to the law on Genetic Engineering Practice Biotechnology Issued under Articles 5, 6 (a), 7 and 72 (a) Of the Public Health Law No. 47 of 2008.

Project Status: Completed (start date: 2017-01-01; end date: 2019-01-08)

Funding and/or implementing partners: Ministry of Health and the Jordanian Society of Genetic Engineers

Point of Contact:
Hazem Haddad, Head of MENA Molecular Genomics and Biorisk Management Division,
hazem_haddad1981@yahoo.com,

Organization location: Irbid, Jordan

For more information please visit: http://www.just.edu.jo/Pages/Default.aspx

SvPrevention - Saskia Popescu

Type of organization: Consultant/Independent Contractor

Expert Biography: Dr. Popescu is an infection prevention epidemiologist with a focus on infectious disease preparedness in healthcare. Her research focuses on high-consequence pathogen response in critical infrastructure and global health security initiatives. Dr. Popescu also assesses healthcare vulnerability to special pathogens and communicable disease threats.

Project Name: Healthcare vulnerability to high-consequence pathogens

Project Type: Biosafety/Biosecurity; Other Health Security; Site-specific equipment/facility improvements; Needs Assessment/planning; Preparedness/response (outbreak); Development of resources/tools/references; Preparedness/response (CBRN); Disease surveillance; Train the Trainer

Geographical focus: Worldwide

Project description: Dr. Popescu assists healthcare facilities and infrastructure with their vulnerability to not only infectious diseases, but high-consequence diseases like Ebola virus disease. She just performed a gap analysis at a 5 hospital healthcare system in Phoenix, AZ, and is working with them to form a response subcommittee and prepare for potential patients with diseases like Ebola. Ultimately, Dr. Popescu helps healthcare facilities identify their risks for infectious disease threats, whether that be healthcare-associated infections, or special pathogens.

Project Status: Ongoing

Point of Contact:
Saskia Popescu, Sr. Infection Preventionist,
spopesc2@gmu.edu,

Organization location: Phoenix, AZ, USA

For more information please visit: https://svprevention.com

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For more information, please contact:

deliberatebio@georgetown.edu

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