



FACT SHEET

The Cooperative Biological Engagement Program (CBEP) - Iraq

Over the course of 25 months (January 1, 2014 - January 31, 2016) and in cooperation with CH2M, University Research Co., LLC (URC) implemented the Defense Threat Reduction Agency's Cooperative Biological Engagement Program (CBEP). URC assisted the Government of Iraq address obligations assumed by signing the United Nations National Security Council Resolution 1540 (2004), binding States to adopt legislation to prevent the proliferation of nuclear, chemical, and biological weapons, and their means of delivery, and establish appropriate domestic controls over related materials to prevent their illicit trafficking.

CBEP focuses on biological agents and seeks to enhance clinical, laboratory, and epidemiological safety and security by providing education and training, particularly on especially dangerous pathogens (EDPs). CBEP also considers member obligations under the World Health Organization's International Health Regulations, designed to enhance national, regional, and global public health security and require State Parties to have or develop

minimum core public health capacities to detect, assess, notify, and respond to public health threats.

CBEP has three main objectives in Iraq:

- ◆ To identify and address gaps in human and animal public health systems;
- ◆ Enhance Biosafety and Biosecurity (BS&S) standards and procedures;
- ◆ Strengthen the ability of human and animal public health laboratories to detect, diagnose, and report outbreaks of infectious disease, especially those associated with EDPs, in accordance with the World Health Organization's International Health Regulations and World Organization for Animal Health guidelines.

Geographic Coverage

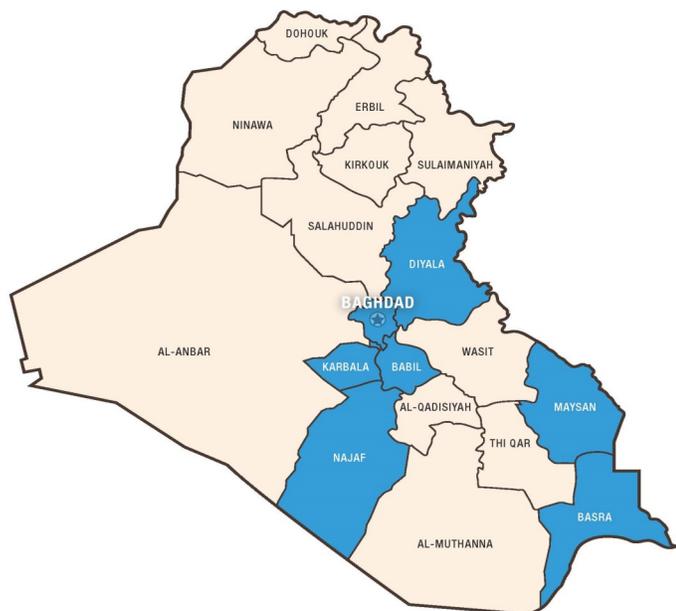
Laboratories in seven provinces in central and southern Iraq, including **Baghdad, Diyala, Babil, Karbala, Najaf, Basra and Maysan** were selected in coordination with the Iraqi National Monitoring Authority (INMA) and the Ministry of Science and Technology (MoST) (Figure 1).

Key Achievements

Baseline Assessment

Surveys were conducted in the seven select provinces to collect information on the current status of Iraqi labs as related to biosafety, biosecurity, and biological research. The survey targeted public health labs, two private labs within each province, and two major hospital labs in addition to the central veterinary lab in each province. Eight labs from within the water and environment department at MoST were included in the survey. In addition, the survey includes interviews with stakeholders at different levels within these facilities and ministries. The survey teams assessed 38 labs out of the targeted 43 labs distributed

Figure 1: Geographic Coverage



DISCLAIMER

This project is funded by Defense Threat Reduction Agency (DTRA) and implemented by CH2M with University Research Co., LLC (URC) as a subcontractor providing in-country support. The author's views expressed in this publication do not necessarily reflect the views of DTRA or the United States Government.



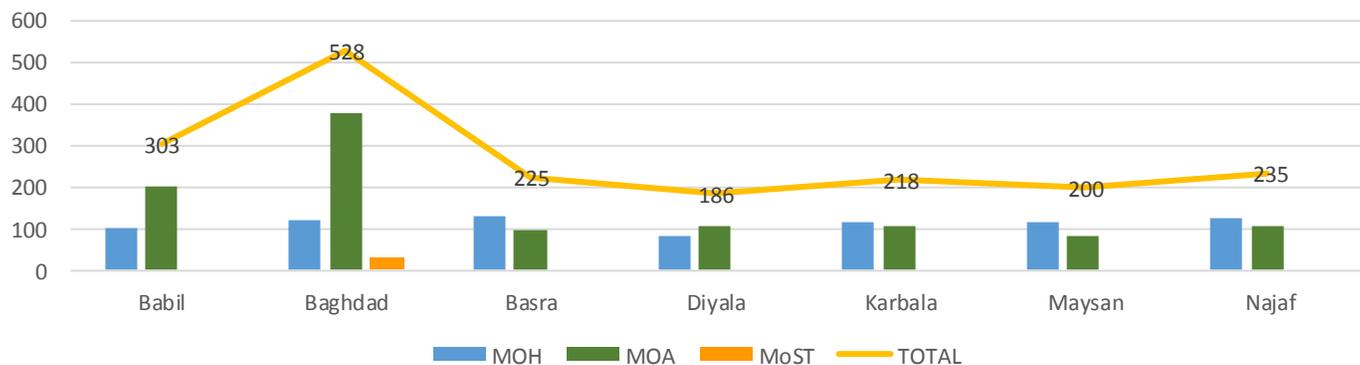
SOP Booklet disseminated to public and veterinary health laboratories

among 8 MoST labs, 7 public health labs, 12 private labs, and 11 hospital labs. More than 50 people and stakeholders were interviewed.

Standard Operating Procedures

CBEP Iraq, in close coordination with INMA, MOH, MOA and MoST, convened a series of meetings to review and update all the national standard operating procedures (SOPs) of biorisk lab operations applied in the public and private health labs in accordance WHO and USG approved protocols and guidelines. CBEP finalized the national SOPs related to sample transportation and shipping; personal protective equipment; biological safety cabinets; laboratory spill response; valuable biological inventory management; waste handling and disposal; autoclave: operations and maintenance.

Figure 2: Staff trained in CBEP-targeted provinces



CBEP coordinated with relevant ministries to prepare and print the SOPs and distribute them to targeted laboratories. In addition, CBEP developed and distributed educational brochures and folders to increase awareness and knowledge of laboratory workers.

Sample Transport System

In addition to the SOPs, CBEP prepared a biological security measures and safety standards booklet in English and Arabic to distribute to relevant health institutions to increase enforcement of BS&S measures during sample transport procedures. The booklet is designed to ensure the protection of workers and the community from potential hazards when transferring infectious disease samples within the province and the central laboratories in Baghdad.

CBEP secured 640 sample transport containers in accordance with international standards. Of these, 384 (60%) were supplied to MOH institutions and 256 (40%) to MOA institutions to tighten control on the pathological process of transferring samples between health institutions in accordance with WHO health regulations IHR 2005 and IATA regulations.

Rapid Upgrades and Laboratory Equipment

Based on the salient findings and the significant gaps revealed by the baseline survey, CBEP began critical modifications and interior repairs in five of the existing lab units of MoST where work is conducted on EDPs in order to correct deficiencies in the physical structure that represent an impending biosecurity risk. CBEP upgrades include: refurbishing floors, replacing doors, adding keyed locks, replacing laboratory tables and benches, and installing HVAC units in the Bacteria, Fungi, Organic, Inorganic and Decontamination lab units. Similar to the upgrade process, CBEP procured and installed specific equipment based on the

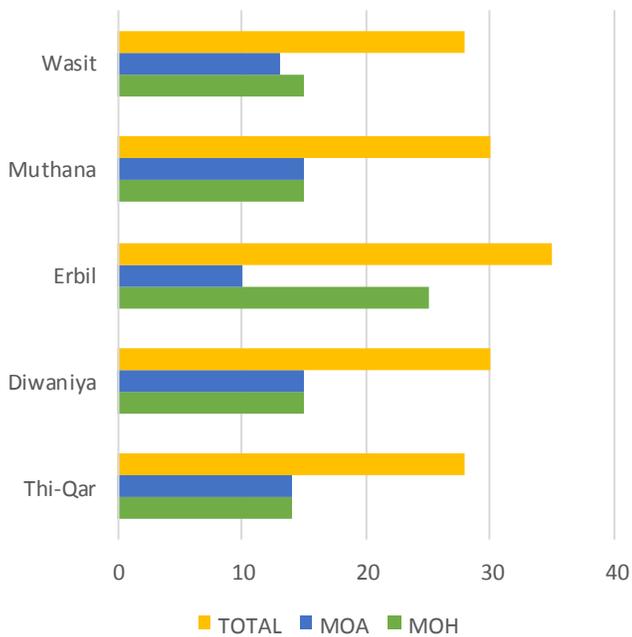


Figure 3: Staff trained in non-CBEP provinces

needs identified in the baseline surveys and in coordination with MoST leadership.

CBEP, in coordination with the MOA, provided four laboratory units in the Central Veterinary Lab (CVL) with modern equipment and supplies to ensure rapid completion of laboratory analysis and improve health services provided to citizens. CBEP conducted rapid upgrades of the CVL's Virology, Bacteriology Brucellosis and Tuberculosis, and Specimen Reception units.

Equipment supplied to the Central Veterinary Lab



In addition to MoST and MOA rapid upgrades, CBEP procured and supplied the CPHL with urgently needed lab supplies and consumables.

Training Courses

CBEP began conducting training activities in the seven provinces on November 23, 2014 with aims to improve BS&S capacity among public health and veterinary laboratory workers through clinical trainings to diagnose pathogens, laboratory methodology trainings and outbreak investigation and analysis through epidemiology trainings. Specifically, by helping lab workers to gain awareness of infectious biological materials and associated hazards, as well as safe and secure methods of sample transportation and waste management.

To date, CBEP has trained over 2,008 laboratory workers and 38 master trainers from the seven targeted provinces (Figure 2) and five non-targeted provinces (Figure 3).

- ◆ Clinical medicine training focuses on improving health practitioners' ability to detect and diagnose priority pathogens and phylogenetically-related species and subspecies in both the human and animal sectors. Priority for training is given to members of the outbreak Rapid Response Teams and practitioners in endemic and/or sporadic areas for priority pathogens.
- ◆ Veterinary medicine training includes both field and response veterinarians and focuses on those veterinarians and



Central Veterinary Laboratory staff trained by CBEP Iraq

technicians from the CVL.

- ◆ Epidemiology training includes basic epidemiology, outbreak investigations, analytic epidemiology, and study design for epidemiologists in the public and private healthcare systems in Iraq.
- ◆ Laboratory diagnostics training includes bacteriology, serology, and molecular diagnostics of pathogen detection and also focuses on diagnostic development and quality control. Priority for training is given to those personnel from MoH's Central Public Health Laboratory (CPHL) and the National Communicable Disease Control Center (NCDCC).
- ◆ BS&S training includes practical and theoretical aspects of internationally-accepted BS&S standards and procedures, including waste management and sample transport.

Unified Disease Surveillance System

In order to update the context of the surveillance of infectious disease and to unify strategies in effect on the spread of infectious diseases, CBEP worked in coordination with the INMA, MOH, MOA, MoST, and the Kurdistan Regional Government (KRG) to form a surveillance technical advisory group (TAG).

The TAG, through joint meetings and alongside international experts, prepared a strategy for an updated unified surveillance system in Iraq. The strategy streamlines and fuses existing protocols and surveillance systems to ensure an efficient and effective strategy for improved detection and prevention of infectious diseases.

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