Asian Development Bank

Knowledge and Support Technical Assistance (KSTA) 6535 REG: Addressing Health Threats in the Central Asia Regional Economic Cooperation Countries and the Caucasus

Compilation of Health Security Trainings and Training Institutes in the Central Asia Regional Economic Cooperation (CAREC) Region

Draft Version

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Supported by consortium partners:

(i) GOPA Worldwide Consultants
(ii) Mediconsult
(iii) SSIL

Contents

I. Introduction

1. This "Compilation of health security related trainings and training institutes in the CAREC region" was developed as part of the Knowledge and Support Technical Assistance (KSTA) 6535 supported by the Asian Development Bank (ADB)— to address health threats in the Central Asia Regional Economic Cooperation Countries and the Caucasus.

2. The repository is one of various tools which has been generated under the technical assistance (TA) to enhance Health Security and Health Systems Strengthening in this region. It is also an important milestone and a priority activity under pillar 1 of the CAREC Health Strategy 2030 and part of the CAREC Regional Investment Framework.[1]

II. Design and Methodology

A. Design

3. The compilation covers training programs related to health security offered by different entities[2] based in CAREC countries as well as training offered by international organizations. These training programs are under the focus areas and targeted efforts of the International Health Regulations (IHR) (2005) in developing the core competencies to identify, respond to and control public health threats and potential public health emergencies of international concern around the world.

B. Methodology

4. For compiling the information, the consultant team under a consortium led by GOPA allowed a multi-pronged approach:

(i) Desk research was done to get an overview on the scope of health security related trainings;
(ii) Interviews were conducted with development partners to learn about the current gaps in trainings options as well as to ask for their contribution to the repository,[3] contribution in designing a questionnaire to map all current activities as well as contribution in filling out the questionnaire;
(iii) A questionnaire (see Annex 1) was designed for collecting information;
(iv) National consultants from CAREC countries[4] were informed about the questionnaire and asked to assess the situation based on the questionnaire[5] in their respective countries by reaching out to their network; and
(v) The repository was compiled, and information analyzed.

C. Content of Repository

5. The comprised information can continually be updated to show the latest available training programs and materials.

6. The current repository includes the following information:

[1] ADB. CAREC Regional Investment Framework for Health 2022–2027. Manila. Unpublished.
[2] For example, university departments, public health centers or specific research centers based in CAREC countries.
[3] For compiling the repository, the team of consultants conducted interviews with representatives from World Health Organization (WHO), Centers for Disease Prevention and Control (CDC), International Organization for Migration (IOM) and Food and Agriculture Organization of the United Nations (FAO) between January and March 2023.
[4] With exception from Pakistan.
[5] National consultants were given time to assess the situation in their respective country between 2–24 March 2023.

(i) Main institutes/departments/organizations offering trainings, including type of entity, contact details and year of establishment;
(ii) Scope of IHR-related health security trainings;
(iii) Standardization of trainings;
(iv) Reach of trainings (worldwide and/or in CAREC only);
(v) Target audience;
(vi) Qualification required for enrollment in trainings (eligibility, minimum requirement for enrollment);
(vii) Voluntary or mandatory enrollment in trainings;
(viii) Mode of the trainings (on-site, blended, online);
(ix) Language in which the training is offered;
(x) Length of training and mode of certificate received afterwards;
(xi) Quality assurance mechanisms (accreditation of institute; evaluation of training etc.);
(xii) Existence of any other repository in the country; and
(xiii) Additional comments section.

D. Rapid Access to the Compilation

7. In using the repository, the following options are given to the reader:
(i) Filtering the different headers to display trainings in different categories (for example by country, by mode of training, length of training etc.);
(ii) Alternatively, through analysis of the qualitative data presented, the reader could gain a better understanding of the availability of different types of trainings and where there could be potential to strengthen the available trainings in certain countries or the region as a whole; and
(iii) Moreover, due to the inclusion of contact details of the respective institutes, readers can contact said institutes to further inquire about offered trainings.

III. Preliminary Results and Next Steps

8. The current repository is a first approach to map existing health security related trainings, including clinical trainings reinforcing health security, in CAREC countries. Given the short timeframe of collecting information remotely and within CAREC countries and filling out the comprehensive questionnaire, some information was not accessible or might not be complete.

A. Preliminary Results

9. However, first analysis of the data received allows some preliminary conclusions:
(i) Overall, there is a large training offer across institutions (and sectors) which shows great potential and wealth in offers;
(ii) Most of the training programs in CAREC countries are offered either in Russian or in the local language, only limited trainings are offered in English;
(iii) Health security related trainings offered by international organizations (Centers for Disease Control and Prevention (CDC), International Organization for Migration (IOM), World Health Organization (WHO) or Food and Agriculture Organization of the United Nations (FAO) are not offered in all CAREC countries;
(iv) Some health security related trainings were only offered during the peak season of the COVID-19 pandemic, thus, sustainability is not guaranteed;
(v) In some CAREC countries, trainings are offered by long-standing, government-owned well established organizations or institutes. Accreditation is mostly done by a national body, not by international bodies. Global comparability might be limited; and

(vi) Hardly any of the training institutes and/or organizations are aware of an existing repository allowing a comprehensive overview on existing trainings related to health security.

10. The following table lists the most common gaps mentioned during the interviews and assessed within CAREC countries:

Common Health Security Training Gaps[a]

No.	Gap	Recommendations for improvement
1.	Lack of training infrastructure and coordination (i.e., among partner organizations like WHO, CDC, ECDC, IOM, FAO, National Public Health Institutes)	Assist local public health entity or MOH to create an online training platform with access to the training courses, which will be offered by international organizations, such as WHO, CDC, etc.; monitor and assist to keep platform up to date in the future
2.	Not enough trainings offered in some areas (food safety/One Health)	WHO to offer more One Health related trainings in Azerbaijan
3.	Language barriers	Trainings should be in all languages (English, Russian and country language)
4.	IT Infrastructure	More resources for website and/or IT in general
5.	Lack of repository on trainings available in the region/globally	Make the newly established repository on health security related training programs in the region available through CAREC Health Cooperation site and dissemination through development partners active in the CAREC region
6.	Lack of sustainability of existing repositories	While there is no influence on existing repositories the new one should be jointly updated and disseminated by CAREC WGH members and development partners who are offering trainings in the region. Ownership important for sustainability
7.	Lack of sustainability of trainings	Development partners to create awareness among CAREC governments on the importance of health security related trainings for the region
8.	Lack of funding options for trainings	Explore public-private partnerships between government-run training institutes and private ones
9.	Lack of international accreditation of training institute	Disseminate information on international standards; try to move towards international standards; invite accredited institutions, standards agencies, audit company and/or expert to pass accreditation
10.	Poor training facility	Increased government support; incentivize public-private-partnerships for upgrading of facilities
11.	Poor skills of trainers; skilled trainers tend to leave government institutions	Increase salary
12.	High turnover of staff at government facilities hampers sustainability of health security trainings	Increase salary, create incentives, explore public-private-partnerships

CAREC = Central Asia Regional Economic Cooperation, CDC= Centers for Disease Control and Prevention, ECDC= European Centers for Disease Prevention and Control, FAO= Food and Agriculture Organization of the United Nations, IOM= International Organization for Migration, IT = information technology, MOH = Ministry of Health, WGH = working group on heath, WHO= World Health Organization.

[a] List of institutions surveyed included in Annex IV.

Source: Authors.

B. Next Steps

11. To make use of the preliminary results gathered in the repository and take the content to a next level, the following steps are recommended in a timely manner:

(i) Share the results with CAREC countries to verify/update results;
(ii) Share the results with CAREC WGH members for endorsement;
(iii) Share the results with all development partners who contributed to the repository;
(iv) Discuss and jointly decide on next steps.

12. Additionally, in the long-term, since there is no existing training repository, it is suggested that this newly created repository continues to be maintained and further developed into a regional tool, which could be managed by the CAREC WGH. It could be developed into an online repository to inform countries, individuals, DPs etc. about available trainings. The hope is that this would greatly enhance the awareness regarding trainings and also decrease potential barriers to accessing such information. It could even lead to sharing of best practices and other forms of knowledge exchange within the region and to the establishment of a regional center.

Annex I: Template Questionnaire

Questionnaire for mapping of training institutes and materials on health security in CAREC countries and beyond

Background and instructions for data collection:

A. To identify and list the training providers that deliver trainings in line with WHO's Health Security Learning Platform in the context of the International Health Regulations (IHR 2005), you can consult online sources, health organizations like WHO, CDC, Ministries of Health, National Public Health Institutes as well as national stakeholders working in the field of health-related trainings.
B. For conducting an interview with the respective institute, describe to respondents that the Asian Development Bank (ADB) intends to gather information on the current landscape of international health regulation training providers, including, but not limited to the types of programs offered, the language in which the trainings are offered, and the quality assurance mechanisms, if any.
C. The information gathered will result in developing a repository of systematically captured, organized and categorized trainings and training materials relevant for achieving health security in the CAREC region.

<table>
<tr><th>#</th><th>Questions</th><th>Answers</th></tr>
<tr><td>1</td><td>What is the name of the training institute/organization?</td><td></td></tr>
<tr><td>2</td><td>What type of institution/organization is it?
(e. g., Government, Development Partner, Private sector, Academia)</td><td><table><tr><td>Govt</td><td>Develop Partner</td><td>Private Sector</td><td>Academia (Uni/Research)</td></tr><tr><td></td><td></td><td></td><td></td></tr></table></td></tr>
<tr><td>3</td><td>When was the training institute established? Since when is the organization offering the training?</td><td></td></tr>
<tr><td>4</td><td colspan="2">Address and contact details of institute/organization
Telephone
Email
Block
street
city
state/province
postal code/zip code
country
Homepage</td></tr>
</table>

5a	Which trainings in line with the International Health Regulations (IHR 2005) OR necessary for achieving health security does the institute/organization offer? * (Please tick as many options as applicable, when an option is not listed, add your answer under "others") *Source: https://extranet.who.int/hslp/training/blocks/whoihrop/index.php; https://openwho.org/	☐TEC1 National legislation, policy and financing ☐TEC2 IHR coordination, communication and advocacy ☐TEC3 Antimicrobial resistance ☐TEC4 Zoonotic diseases/One Health ☐TEC5 Food safety ☐TEC6 Biosafety and biosecurity ☐TEC7 Immunization ☐TEC8 National laboratory system ☐TEC9 Surveillance ☐TEC10 Reporting ☐TEC11 Human resources ☐TEC12 Emergency preparedness ☐TEC13 Emergency response operations ☐TEC14 Linking public health and security authorities ☐TEC15 Medical countermeasures and personnel deployment ☐TEC16 Risk communication ☐TEC17 Points of Entry ☐TEC18 Chemical events ☐TEC19 Radiation emergencies ☐TEC20 IHR Monitoring and Evaluation framework – Advanced (others) ☐**Others** (f. e., IPC, Intensive Care Treatment and Clinical Management of patients with infectious diseases etc.):
5b	Are the trainings the institute/organization offers standardized? * *Following a similar, evidence-based approach	☐YES ☐NO
5c	Are the trainings offered worldwide?	☐YES (specify geographic scope): ☐No (specify, where in CAREC the trainings are offered):
6a	Who is the target audience for IHR-related trainings? (e.g., health professionals,	☐Public health professionals: This includes epidemiologists, medical officers, public health nurses, and other health professionals.

	public health officials, government officials, etc.) (Please tick as many options as applicable, when an option is not listed, add your answer under “others”)	☐Health administrators and policymakers: This includes government officials, health policy experts, and other leaders who make decisions related to health systems ☐ Laboratory personnel ☐Health emergency responders: This includes emergency medical technicians, paramedics, and other first responders. ☐ Clinical specialists (doctors, nurses, technical assistants, etc.) ☐Non-governmental organizations (NGOs)Students in public health or related fields. ☐Other professionals involved in international health activities:
6b	Who is eligible for the training?	☐Health professionals working for the government ☐All health professionals ☐Other (please specify):
7	What is the minimum qualification required to enroll in IHR-related training programs at the institute/organization? (Please tick as many options as applicable, when an option is not listed, add your answer under “others”)	Basic IHR training: No specific qualifications required to enroll in basic IHR training. ☐Intermediate IHR training: Participants may be required to have completed basic IHR training or have some experience in public health or a related field. ☐Advanced IHR training: Participants may be required to have completed intermediate IHR training or have extensive experience in public health or a related field. ☐Continuing education and professional development: No specific qualifications may be required to enroll in continuing education and professional development programs. ☐Others:
8	Are the trainings mandatory (as part of Continuous Medical Education/Professional Development Program) OR are they taken voluntarily?	☐Mandatory classes (please add some information) ☐Voluntary classes

9	What is the duration of the training programs? (Please tick as many options as applicable, when an option is not listed, add your answer under “others”)	☐Few hours ☐One day to 5 days ☐One week to three weeks ☐One month to three months ☐Six months and more ☐One year ☐Two years ☐Others:
10	In which mode are the trainings delivered? (e.g., in-person, online, blended, etc.) (Please tick as many options as applicable, when an option is not listed, add your answer under “others”)	☐In-person training: This type of training involves gathering the target audience in a physical location for face-to-face training. ☐Online training: This type of training can be delivered via online platforms such as webinars, e-learning modules, or virtual classrooms. ☐Blended learning: This type of training combines in-person and online training to create a hybrid learning experience. ☐Distance learning: This type of training is designed for participants who are located in remote or hard-to-reach areas and cannot attend in-person training. Distance learning can be delivered via mail, radio, TV, or the internet. ☐On-the-job training: This type of training involves providing hands-on training to participants in their actual work environment. Others: ---------
11	In which languages are the trainings offered? (Please tick as many options as applicable, when an option is not listed, add your answer under “others”)	☐ English ☐Russian ☐Other languages (please specify):
12	What is the type of certificate received by the trainees?	
13 a	**Quality assurance mechanisms:** How is the quality of training programs at the institute/organization assured? (Please tick as many options as applicable, when an	☐Accreditation by a professional organization: f. e., World Health Organization (WHO), the International Association of Public Health Institutes (IANPHI) ☐Accreditation by a national or regional accrediting body: Some IHR-related training programs may be accredited by a national or regional accrediting body, such as a ministry of health, a regulatory agency, or a professional association.

	option is not listed, add your answer under “others”)	☐Certification by a professional organization: Some IHR-related training programs may offer certification by a professional organization, such as the International Society for Infectious Diseases (ISID), the International Federation of Infection Control (IFIC). ☐Others:
13 b	Quality assurance mechanisms: How are the training programs kept updated and relevant? (Please tick as many options as applicable, when an option is not listed, add your answer under “others”)	☐Regular review and revision: Training programs can be regularly reviewed and revised by the training provider (self-review) ☐Feedback and evaluation: Training providers can gather feedback from participant and evaluate data. ☐Collaboration and partnership: Training providers can collaborate with other organizations, such as public health agencies, academic institutions. ☐Others:
14	Is there any repository of training options available in the country of origin of the institute/organization?	☐YES: please add name and link to repository ☐NO: no repository available ☐Others:
15	Comments: (please add gaps in health security related trainings, if any, and how they could be solved):	

Annex II: Existing Repositories in the Field of Trainings in Health

*Section categorization based on desk research and information provided by IOM, CDC, WHO Europe, FAO

#	Name of repository	Latest update	Who collected the information	Link to repository
I				https://onehealthworkforceacademies.org/about-one-health/; https://onehealthworkforceacademies.org/training-material/
II				https://courses.healthsystemsglobal.org/
III				https://med.und.edu/education-training/education-resources/repository.html
IV			WHO	https://extranet.who.int/hslp/training/
V			CDC	https://www.cdc.gov/globalhealth/healthprotection/errb/training/index.html
VI			ECDC	https://www.ecdc.europa.eu/en/training
VII				https://www.tephinet.org/
VIII			CDC	https://www.cdc.gov/globalhealth/countries/central-asia/default.htm
IX				https://www.gcsp.ch/courses/global-health-security-virtual-learning-journey-2023
X			FAO	https://elearning.fao.org/

CDC= Centers for Disease Control and Prevention, ECDC= European Centers for Disease Prevention and Control, FAO= Food and Agriculture Organization of the United Nations, IOM= International Organization for Migration, WHO= World Health Organization

Annex III: Summary of Information on IHR Training Providers in the CAREC Region[1]

Azerbaijan

1. The *Azerbaijan Institute of Food Safety* is a government institution established in 2018 to ensure food safety and improve public health. It offers training programs in TEC3 Antimicrobial resistance, TEC4 Zoonotic diseases/One Health, TEC5 Food safety, TEC6 Biosafety and biosecurity, and TEC8 National laboratory system. The training is open to public health professionals, laboratory personnel, non-governmental organizations, and students in public health or related fields. The training can be delivered through in-person, online, and distance learning and is available in English, Russian, and Azerbaijani. The institute issues an attendance certificate and is accredited by a national or regional accrediting body.

2. *Khazar University* is an academic institution in Azerbaijan that offers undergraduate courses in TEC4 Zoonotic diseases/One Health. The training is mandatory for undergraduate students and is delivered through in-person training. The language of instruction is Azerbaijani, and the university issues a completion certificate. The training is not accredited by any national or regional accrediting body, and no repository is available.

3. The *Public Health and Reforms Center* is a government institution established in 2021 to improve public health in Azerbaijan. It offers training programs in TEC3 Antimicrobial resistance, TEC7 Immunization, TEC11 Human resources, and TEC12 Emergency preparedness. The training is open to public health professionals, particularly those working for the government, and is delivered through in-person training. The language of instruction is Azerbaijani, and the center issues a certificate of attendance. The training is not accredited by any national or regional accrediting body, and no repository is available.

4. The *WHO Country Office* in Azerbaijan is a partner in developing training programs related to public health. In July 2021, as part of the EU-funded Solidarity for Health Initiative project, it launched the first course in Azerbaijani on the OpenWHO platform – Leadership and programme management in Infection Prevention and Control (IPC) – to support hospital IPC committees. The training is intended to improve the situation with IPC in health facilities by providing committee members with necessary knowledge and skills on project management, quality improvement strategies, multimodal strategies, and stakeholder engagement. No information is provided on who can participate, the duration of the training, the language of instruction, accreditation, or evaluation.

Georgia

5. *BACAC, or Biosafety Association for Central Asia and Caucasus*, is an organization that provides training and education related to biosafety, biosecurity, and zoonotic diseases in Central Asia and Caucasus countries, including Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, Azerbaijan, Georgia, Turkmenistan, Afghanistan, and Mongolia. They work with public health professionals, laboratory personnel, NGOs, and students in public health or related fields. BACAC offers in-person training in English, Russian, and other languages and provides a certificate of participation upon completion. They collaborate with other organizations and have received support from international donors and organizations, including Global Partnership Programme, Global Affairs Canada, DTRA, US Department of Defense, Ministry of Defense of United Kingdom,

[1] Based on questionnaires filled out by national consultants and additional desk research.

International Science and Technology Center (ISTC), and STCU. The main topics of BACAC's work in Tajikistan are laboratory biosafety and biosecurity.

Kazakhstan

6. *CDC Central Asia* offers a range of IHR-related training programs in Kazakhstan and other Central Asian countries. These programs cover various topics, including zoonotic diseases, biosafety, biosecurity, antimicrobial resistance, laboratory systems, surveillance, emergency preparedness, and more. The target audience includes health administrators and policymakers, public health professionals, and laboratory personnel. The training programs are voluntary and may last from one day to three weeks. The delivery methods include in-person training, blended learning, and on-the-job training. Participants may receive a certificate of completion or advanced education. No repository is available.

7. *The German Biosecurity Programme* is a joint initiative of several German organizations, including GIZ, RKI, BNITM, FLI, and IMB. It provides IHR-related training programs in Kazakhstan and other countries, including Morocco, Sudan, and Tunisia. The program focuses on biosafety and biosecurity and targets public health professionals, health administrators and policymakers, and laboratory personnel. The training programs are voluntary and may last for six months or more. The delivery methods include in-person training and blended learning. Participants may receive a certificate of advanced training. The program offers certification by professional organizations, such as ISID and IFIC. Feedback and evaluation, as well as collaboration and partnership with other organizations, are part of the program.

8. *ICAP is part of the Columbia Mailman School of Public Health* and has been providing IHR-related training programs in Kazakhstan since 2022. It offers Advanced Infection Prevention and Control (IPC) certification training for practicing epidemiologists. The target audience includes public health professionals working for the government. The training program is voluntary and may last from one week to three weeks. The delivery method is blended learning, combining in-person and online training. Participants may receive an advanced IPC certification.

9. *ISTC (International Science and Technology Center)* is a government-funded organization based in Astana, Kazakhstan, that offers training programs related to biosafety and biosecurity, emergency preparedness, and other related fields. The target audience includes public health professionals, health administrators, and policymakers. The training programs are voluntary and can be conducted in-person and can last from one day to five days. Participants may be required to have completed intermediate IHR training or have extensive experience in public health or a related field. ISTC collaborates with other organizations, such as public health agencies and academic institutions, but does not have a repository available.

10. *SPCSEE (Scientific-practical center of sanitary-epidemiological expertise)* is a government-funded organization based in Almaty, Kazakhstan, that offers training programs related to biosafety and biosecurity, immunization, national laboratory system, surveillance, and other related fields. The target audience includes public health professionals and laboratory personnel. The training programs are voluntary and can be conducted in a blended learning format, combining in-person and online training, and can last from one week to three weeks. No specific qualifications are required to enroll in continuing education and professional development programs. The organization offers a certificate of advanced education, and the training programs are accredited by a national or regional accrediting body. There is no repository available.

11. *UNICEF* as a development partner offers training programs related to immunization and emergency preparedness. The target audience includes public health professionals in Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, and Turkmenistan. The training programs are voluntary and can be conducted in person or online. UNICEF collaborates with other organizations, such as public health agencies, to provide training programs.

Kyrgyzstan

12. *The National Public Health Institute of the Ministry of KR in Kyrgyzstan* provides professional educational training programs on epidemiology and hygiene. The training programs offered are TEC3 Antimicrobial resistance, TEC4 Zoonotic diseases/One Health, and TEC9 Surveillance. The training is open to all health professionals and is voluntary, with a duration of one to three weeks. The training is conducted in-person and is accredited by a national or regional accrediting body. The institute has a repository of training materials at the Depositaries of the Ministry of Science and Education of KR.

13. *The US CDC, KR*, based in Kyrgyzstan, provides a wide range of training programs on IHR coordination, communication and advocacy, antimicrobial resistance, food safety, immunization, national laboratory system, surveillance, emergency preparedness, emergency response operations, risk communication, and points of entry. The training is open to public health professionals, laboratory personnel, and health emergency responders working for the government. The duration of the training ranges from one to three weeks, and it is conducted in a blended learning format. The training is accredited by a professional organization. The institute has a repository of training materials for internal use only.

14. *The Public Association for Biosafety and Strengthening Biosecurity and the National Reference Laboratory for TB*, based in Kyrgyzstan, provide IPC training to lab staff personnel in all regions of the country. The duration of training is a few hours and is conducted in-person. A certificate of completion is provided, and the training program/curricula was developed by national partners. There is no repository of training materials available for this institute.

Mongolia

15. The *NCPH* was established in 1968 and is located in the Bayanzurkh district, Ulaanbaatar, Mongolia. Its main activities include IHR coordination, communication and advocacy, and training in areas such as antimicrobial resistance, zoonotic diseases, food safety, biosafety and biosecurity, immunization, national laboratory system, surveillance, emergency preparedness, emergency response operations, risk communication, points of entry, chemical events, and radiation emergencies. The NCPH conducts IPC training, and its training programs are mandatory for public health care facility workers during emergency situations such as the COVID-19 pandemic. The training programs are offered in-person, online, and on-the-job. The training is mainly offered to public health professionals, health administrators and policymakers, and health emergency responders.

16. The *NCCD* was established in 2001 and is located in the Bayanzurkh district, Ulaanbaatar, Mongolia. Its main activities include training in areas such as antimicrobial resistance, biosafety and biosecurity, immunization, national laboratory system, surveillance, emergency preparedness, emergency response operations, risk communication, points of entry, and IHR monitoring and evaluation framework. The NCCD provides postgraduate and residency training on communicable diseases for medical doctors and nurses, field epidemiology training programs, and short-term on-the-job training on communicable diseases, clinical skill development, IPC, risk communication, emergency preparedness and response, surveillance, and laboratory. The NCCD conducts annual international scientific conferences for the TB and STI/HIV/AIDS departments.

The training is mainly offered to public health professionals, laboratory personnel, health emergency responders, and clinical specialists. The training programs are offered to both public and private health care workers, and there are different types of training levels, such as basic, intermediate, and advanced IHR training. The postgraduate/residency study and certain short-term training programs have specific requirements.

17. *The World Health Organization (WHO) representative office* in Mongolia, which has been providing technical assistance to the Government of Mongolia on health security since 1962. They offer international training on health security to Mongolian public health professionals, health administrators and policymakers, laboratory personnel, health emergency responders, clinical specialists, NGOs, and students in public health or related fields. The training includes topics such as national legislation, policy and financing, IHR coordination, communication and advocacy, antimicrobial resistance, zoonotic diseases/One Health, food safety, biosafety and biosecurity, immunization, national laboratory system, surveillance, reporting, human resources, emergency preparedness and response operations, linking public health and security authorities, medical countermeasures and personnel deployment, risk communication, Points of Entry, chemical events, radiation emergencies, and IHR monitoring and evaluation framework. The training can be mandatory or voluntary, and it can be in-person, online, blended, distance or on-the-job. The language used is Mongolian, and a certificate of attendance is provided.

18. *The National Center for Zoonotic Disease (NCZD)* in Mongolia, which was established in 1950. They provide IPC training and laboratory training to laboratory staff working in their branch offices in 15 provinces in relation to the introduction of a new Molecular biological diagnostic tool. The NCZD conducts annual international conferences in Mongolia every 2 years on zoonotic disease control among a few of the CAREC countries including Russia (Irkutsk), Kazakhstan, and People's Republic of China (CDC). They also conduct postgraduate residency training for healthcare workers (HCWs) and hygiene and sanitation training for private sectors including private HCWs and private companies that operate on hygiene and sanitation. The training includes topics such as antimicrobial resistance, zoonotic diseases/One Health, biosafety and biosecurity, surveillance, emergency preparedness and response operations, and Points of Entry. The target audience includes public health professionals, laboratory personnel, NGOs, and students in public health or related fields. The training can be in-person, and the language used is not specified. Accreditation by a professional organization is not specified.

People's Republic of China (PRC)

19. The *Medical Science Academy* is a government organization established in 1956. It offers training in various areas related to public health, such as national legislation, emergency preparedness, and food safety. The training is available to different types of health professionals, including epidemiologists, medical officers, and health emergency responders. The training can be delivered through different modes, including in-person, online, and blended learning. While not all training leads to certification, some do, and the "train the trainer" system in PRC allows certificates issued by eligible organizers.

20. The *China CDC* is also a government organization established in 2002. Like the Medical Science Academy, it offers training in various areas related to public health, such as emergency response operations, risk communication, and national laboratory systems. The training is available to different types of health professionals, and it can be delivered through different modes. The requirements to access training are similar to the Medical Science Academy, where participants must be health professionals or officers in the sector, and to receive higher level training certification, one must complete lower-level training.

21. The *NHC Capacity Building and Continuing Education Center and the International Health Exchange and Cooperation Center* are two Chinese government organizations that provide training and education in various areas of public health. These areas include national legislation, policy, and financing; IHR coordination, communication, and advocacy; antimicrobial resistance; zoonotic diseases/One Health; food safety; biosafety and biosecurity; immunization; national laboratory system; surveillance; reporting; human resources; emergency preparedness and response operations; linking public health and security authorities; medical countermeasures and personnel deployment; risk communication; points of entry; chemical events; radiation emergencies; and IHR monitoring and evaluation framework - advanced.

22. The target audience for these training programs includes public health professionals such as epidemiologists, medical officers, and public health nurses, health administrators and policymakers, laboratory personnel, health emergency responders, clinical specialists, NGOs, and students in public health or related fields. The training programs are available in-person, online, or as a blended learning experience, and range from a few hours to one year in duration.

23. To receive a certificate for higher level training, participants must have completed the lower-level training. While some trainings provide certificates, not all do, and some are mandatory while others are voluntary. Accreditation is available through the "train the trainer" system in PRC, and training programs can be regularly reviewed and revised based on feedback from participants and evaluation data. However, there is no repository available for these programs.

Russia

24. The *Russian Anti-Plague Institute "Microbe"* is a government institution founded in 1918 and located in Saratov, Russia. Their website is microbe.ru. The institute offers training in several technical areas related to the International Health Regulations, including zoonotic diseases/One Health, biosafety and biosecurity, national laboratory systems, emergency response operations, and risk communication. The target audience for their training includes public health professionals, health emergency responders, and health professionals working for the government in countries such as Mongolia, Kazakhstan, Armenia, Azerbaijan, Belarus, Kyrgyzstan, Tajikistan, and Uzbekistan. The training can be provided in-person or on-the-job and may range from one day to five days. The language of instruction is Russian, and participants receive a certificate of participation upon completion.

25. The institute collaborates with other organizations, such as the Republican Center for Combating Quarantine Diseases in Tajikistan and is supported by Rospotrebnadzor and the CIS Health Cooperation Council.

Tajikistan

26. The *Tajik Research Institute of Preventive Medicine* is a government institute established in 1933 in Tajikistan. Their focus is laboratory biosafety and biosecurity, particularly in the field of public health. The target audience for their training programs includes public health professionals, laboratory personnel, and government health professionals. Participants in their intermediate IHR training may be required to have some experience in public health or a related field. Their training programs are delivered in-person, ranging from one day to five days, and are conducted in the Russian language. Upon completion, participants receive a certificate of course completion. The institute does not have a repository for training materials, but they do offer feedback and evaluation for their training programs. Their training programs are accredited by a national or regional accrediting body.

27. *The International Organization for Migration (IOM)* in Tajikistan offers training for public health professionals, including epidemiologists, medical officers, public health nurses, and others, working for the government. The training is conducted as part of the regional project "Enhancing health and border management In Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan to respond to COVID-19 and other communicable diseases", with financial support from the US Centers for Disease Control and Prevention (CDC). The training covers topics such as national legislation, policy and financing, risk communication, and points of entry. Participants may be required to have completed basic IHR training or have some experience in public health or a related field. The training is conducted in-person and may last from one day to five days. Participants receive a certificate of attendance, but there is no repository available for further certification. The training was provided once to 18 health workers of the epidemiology service of Dushanbe, of the sanitary and quarantine points of the cross-border checks, and health workers of the primary health care of the cross-border communities from the Districts of the Republican Subordination, Khatlon and Sogd Oblasts.

28. *The Agency of Nuclear and Radiation Safety in Tajikistan* focuses on national legislation, policy, and financing related to chemical and radiation emergencies, and offers intermediate IHR training for professionals involved in international health activities. The training is provided through in-person and on-the-job methods and is available in Russian and Tajik languages. The agency collaborates with the International Atomic Energy Agency (IAEA) and training programs are created with the support of donors.

29. *The International Science and Technology Center in Tajikistan* provides training in various areas related to IHR, including biosafety and biosecurity, emergency preparedness, and radiation emergencies. The training is offered to public health professionals, health administrators and policymakers, laboratory personnel, and health emergency responders. The training is available in English, Russian, and Tajik languages, and is provided through in-person and on-the-job methods. The center collaborates with other organizations and may offer certification through professional organizations. However, there is no repository available for training materials.

30. *The Agency of Nuclear and Radiation Safety* focuses on national legislation, policy and financing, emergency response operations, and chemical and radiation emergencies. They offer intermediate IHR training in-person and on-the-job training in Tajik, and they are accredited by the International Atomic Energy Agency (IAEA). The International Science and Technology Center focuses on IHR coordination, communication, and advocacy, biosafety and biosecurity, laboratory systems, emergency preparedness, and chemical and radiation emergencies. They offer intermediate IHR training in-person in English, Russian, and Tajik and are accredited by national or regional accrediting bodies and professional organizations such as the International Society for Infectious Diseases. They collaborate with other organizations, such as public health agencies and academic institutions, but do not have a repository available. Both organizations work with IAEA on training programs and support from donors.

Turkmenistan

31. The International Education, Training and Research Center and the Center for Public Health and Nutrition of the State Sanitary Epidemiological Services are two government-run training centers in Turkmenistan that provide similar education and training in various fields related to health, including emergency response operations, laboratory diagnostics, food safety, immunization, and biosafety. Both centers offer training to health professionals, government officials, and other leaders involved in decision-making related to health systems. The training programs at these centers include in-person training, on-the-job training, and voluntary classes that can last from one day to several months. The training providers regularly review and revise

their programs based on participant feedback and evaluation. While the International Education, Training and Research Center does not offer any accreditation, the Center for Public Health and Nutrition is accredited by professional organizations such as the World Health Organization and the International Association of Public Health Institutes. Private medical companies also provide some on-the-job training and educational seminars in collaboration with these training centers.

32. *The Center for the Prevention of Especially Dangerous Infectious Diseases in Turkmenistan* provides training and professional development programs for public health professionals, laboratory personnel, clinical specialists, and veterinarians. They offer training in food safety, biosafety and biosecurity, immunization, national laboratory system, surveillance, and emergency response operations. The training can be voluntary or mandatory and can range from one day to three months, with in-person and blended learning options available.

33. The *State Medical University of Turkmenistan* named after Myrat Garryev also offers training in the national laboratory system for students in public health or related fields, with similar training options available. Both organizations regularly review and revise their training programs and gather feedback from participants.

34. The Center for the Prevention of Especially Dangerous Infectious Diseases has no repository available, while the State Medical University of Turkmenistan named after Myrat Garryev has a repository with accredited training programs.

Uzbekistan

35. The One Health Approach is run by the World Bank in collaboration with the State Veterinary and Animal Husbandry Committee of Uzbekistan. This project aims to address various issues such as antimicrobial resistance, zoonotic diseases, food safety, biosafety and biosecurity, immunization, and emergency preparedness and response. The project targets different professionals, including public health professionals, health administrators and policymakers, laboratory personnel, health emergency responders, clinical specialists, NGOs, and students in public health or related fields. The training program is open to everyone and can be taken in-person, online, blended, or through distance learning. The program is mainly taught in English and Russian but can also be taught in Uzbek. Upon completion, participants can receive international certificates, and the program may have accreditation or certification by professional organizations.

36. *The Academy of Emergency Situation Ministry,* formerly known as the Institute of Fire Protection under the Ministry of Internal Affairs of Uzbekistan, covers various topics related to International Health Regulations (IHR), such as national legislation, policy and financing, IHR coordination, communication and advocacy, antimicrobial resistance, zoonotic diseases, food safety, biosafety and biosecurity, immunization, national laboratory system, surveillance, human resources, emergency preparedness and response, linking public health and security authorities, medical countermeasures and personnel deployment, risk communication, Points of Entry, chemical events, radiation emergencies, and IHR monitoring and evaluation framework. The project targets public health professionals, health administrators and policymakers, laboratory personnel, health emergency responders, clinical specialists, NGOs, and students in public health or related fields. The training program can be taken in-person or online and has collaborations with Pakistan and Turkey. The language of instruction is not specified. Participants can receive international certificates upon completion, and the program may have accreditation or certification by professional organizations.

CDC Central Asia

37. *The Central Asia Field Epidemiology Training Program (FETP CAR*) is a training program for public health professionals and laboratory personnel in Kazakhstan, Kyrgyzstan, Tajikistan, Uzbekistan, and Turkmenistan. The program covers topics such as zoonotic diseases, food safety, biosafety and biosecurity, national laboratory systems, surveillance, and reporting. The program offers two levels of training: *FETP Frontline*, which is a one to three-month training program, and *FETP Advance*, which is a two-year program that includes a master's degree.

38. Training can be delivered through in-person, online, or on-the-job methods. Participants may be required to have completed basic or intermediate International Health Regulations (IHR) training or have extensive experience in public health. The program is regularly reviewed and revised and may be accredited or offer certification by a professional organization. FETP CAR was established in 2003 and is run regionally from Almaty. Kazakhstan and Kyrgyzstan have been active in the program since its initiation, and as of 2021, all countries are actively involved except for Turkmenistan. In 2019, CDC partnered with the Asfendiyarov Kazakh National Medical University to implement the advanced FETP in a university setting and offer a master's degree to advanced FETP residents completing program requirements. In 2021, the basic (Frontline) program was initiated in Uzbekistan and Tajikistan, with additional Frontline programs planned for Kyrgyzstan and Kazakhstan.

Annex IV. List of Institutions Surveyed

#	Name of Institution
1	Azerbaijan Institute of Food Safety
2	Public Health and Reforms Center, Azerbaijan;
3	Khazar University, Azerbaijan
4	WHO Country Office, Azerbaijan
5	Biosafety Association for Central Asia and Caucasus, Georgia
6	National Center for Disease Control, under leadership of MOH, Georgia
7	National Food Agency, under the leadership of the Ministry of Environmental Protection and Agriculture, Georgia
8	Emergency Coordination and Urgent Assistance Center, Georgia
9	ICAP, part of Columbia Mailman School of Public Health/Kazakhstan
10	Center for Disease Control, Central Asia, Kazakhstan
11	GIZ, Kazakhstan (The German Biosecurity Program)
12	IOM, Kazakhstan
13	ISTC/International Science and Technology Center, Kazakhstan
14	SPCSEE/Scientific-practical Center of sanitary-epidemiological expertise, Kazakhstan
15	UNICEF, Kazakhstan
16	WHO, Kazakhstan
17	FETP CAR/Central Asia Field Epidemiology Training Program, Kazakhstan
18	National Public Health Institute of the Ministry of Kyrgyz Republic
19	US CDC, Kyrgyz Republic
20	Kyrgyz State Medical Institute for continuous medical education and in-service training
21	Public Association for Biosafety and Strengthening Biosecurity & Natural Reference Laboratory for TB, Kyrgyz Republic
22	National Center for Public Health, Mongolia
23	NCCD/National Center for Communicable Diseases, Mongolia
24	Mongolian Red Cross Society, Mongolia
25	WHO office, Mongolia
26	NCZD/National Center for Zoonotic Disease, Mongolia
27	CHD/Center for Health Development, Mongolia
28	NHC/Medical Science Academy, China
29	CDC, China
30	Health HR Development Center, China
31	NHC Capacity Building and Continuing Education Center, China
32	IHECC/International Health Exchange and Cooperation Center, China
33	Tajik Training Centers of the Border Force Troops of the National Security of the RT, Tajikistan
34	Tajik Epidemiology Department of the Institute for Post Diploma Preparation of the medical workers, Tajikistan
35	Faculty in Public Health of the Tajik State National University, Tajikistan
36	Tajik Research Institute of Preventive Medicine, Tajikistan
37	IOM, Tajikistan

38	International Science and Technology Center, Tajikistan
39	International Training, Education and Research Center of Turkmenistan
40	Center for Public Health and Nutrition of the State Sanitary Epidemiological Services Turkmenistan
41	Center for the prevention of especially dangerous infectious diseases, Turkmenistan
42	State Medical University of Turkmenistan named after Myrat
43	State Veterinary and Animal Husbandry Committee (Worldbank Project One Health), Uzbekistan
44	Academy of Emergency Situation, Uzbekistan
45	Microbe/Federal Science State-Funded Institution, Russia
46	US CDC
47	WHO Geneva
48	FAO Regional Office for Europe and Central Asia
49	IOM Central Asia