University of Nebraska Medical Center

DigitalCommons@UNMC

Spring 5-7-2016

Establishment of Comprehensive Training Center in Tajikistan

Umeda Sadykova
University of Nebraska Medical Center

Tell us how you used this information in this *short survey*.

Follow this and additional works at: https://digitalcommons.unmc.edu/etd

Part of the Other Public Health Commons

Establishment of Comprehensive Training Center in Tajikistan

by

Umeda Sadykova

A MASTER PAPER

Presented to the Faculty of
the Nebraska Graduate College
in Partial Fulfilment of the Requirements
for the Degree of Master of Science

Emergency Preparedness Program

Under the Supervision of Professor Meaker-Medcalf, Sharon J.

University of Nebraska Medical Center
Omaha, Nebraska

April, 2016

Advisory committee:

Meaker-Medcalf, Sharon J.,
Smith, Philip Welsch,
Cieslak, Theodore J.,

TABLE OF THE CONTENTS

LIST OF ABBREVIATIONS

ASPH	Association of Schools of Public Health
CDC	Centers for Disease Control and Prevention
CPHP	Centers for Public Health Preparedness
CoES	Committee of Emergency Situations and Civil Defense
DRS	Districts of Republic Subordination
EERI	Environmental Emergency Risk Index
GBAO	Gorno-Badakhshan Autonomous Oblast
GDP	Gross Domestic Product
IOM	Institute of Medicine
MOH	Ministry of Health
PAHPA	Pandemic and All-Hazards Preparedness Act
REACT	Rapid Emergency Assessment and Coordination Team
SCCPHP	South Central Center for Public Health Preparedness
UN	United Nations
UNDAC	United Nations Disaster Assessment and Coordination
UNDP	United Nations Development Programme
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNINEP	United Nations Environment Programm
WHO	World Health Organization

I.   Introduction

BACKGROUND

Tajikistan is a landlocked country with a population of over 8.2 million people in 2012. It shares borders with Afghanistan, China, Kyrgyzstan, Turkmenistan, and Uzbekistan. High mountains comprise 93% of its territory, leaving only about 7% of the land suitable for cultivation and other uses. (United Nations Development Programme [UNDP], 2012).

Tajikistan is the poorest country of the former Soviet republics and one of the poorest countries in the world (with 46.7% of the population living below the poverty line). The country ranks 122nd of 177 on the Human Development Index of the United Nations Development Program (UNDP), and has one of the lowest Gross Domestic Products (GDP) per capita among the 15 former Soviet republics. As the country still recovers from the consequences of a previous civil conflict (1992-1997), it also has coped with recurring disasters for over a decade, ranging from earthquakes, floods, drought, and landslides to crop infestation and outbreaks of disease, like cholera and measles (World Health Organizations [WHO] Regional Office for Europe, 2013). Tajikistan is, in particular, highly prone to natural disasters. The United Nations documented that the annual frequency of natural disasters affecting the country reaches between 100 to 200. Tajikistan Committee of Emergency Situations and Civil Defense (CoES) confirms that approximately 200 natural disasters occurred each year between 1997 and 2013. Among the natural hazards experienced are floods, mudflows, and landslides. Being located in area with high seismic activities, Tajikistan is very prone to earthquakes. These disasters have resulted in

significant harm to the livelihoods and the economy. This has acted as a brake to developmental outcomes (Tajikistan Inter-Agency Contingency Plan, 2015).

Source: Map № 3765 Rev. 11, October 2009, United Nations, United Nations Cartographic Section.

There are four administrative levels in the government structure in Tajikistan: Central (national) level, Regional level, District level, and the local community level. Tajikistan is divided into five regions: Sughd, Khatlon, Gorno-Badakhshan Autonomous Oblast (GBAO), and the Districts of Republic Subordination (DRS), and the capital of Dushanbe.

STATEMENT OF THE PROBLEM/CONTEXT

Since the collapse of the Soviet Union in 1992 the fragile emergency preparedness system has been hampered by the civil war and underfunding of all government systems. To overcome this problem, the government had to depend on international donors to fund its emergency preparedness plans, including manpower training, and response activities. Limited technical capacity of the government agencies is another factor making government dependent on non-government stakeholders for support. Both financial and technical support to the nation's preparedness plans have been provided by the international community since the country gained its independence in 1992. However, all of the United Nations (UN) and other non-governmental stakeholders which are main funders of development endeavors, are driven by their own mandates and missions. This had led to discrepancies between their training activities and those of the government's priorities. This environment has resulted in a pool of generally poorly trained emergency staff.

In 2006 the Government of Tajikistan requested the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) in Geneva to conduct a United Nations Disaster Assessment and Coordination (UNDAC) mission to Tajikistan. The mission's objective was to assess the national capacity to respond to large-scale natural and environmental emergencies potentially capable of overwhelming the existing coping mechanisms and would require additional international assistance.

The resulting assessment revealed that the national Committee of Emergency Situations (CoES) doesn't have the financial capacity to continue efficient efforts to strengthen the system without further assistance from UN agencies and the international

community. The UNDAC report highlighted limitations of current state of preparedness as well as its inability to cope with medium- to large-scale disasters. The response capacity in many districts of the country is almost "symbolic" in terms of logistics, contingency stocks, communication, and financial resources. The report also identified other key problems including:

1) Lack of preparedness and response capacity at the central and regional levels.

2) Relevant disaster response structures do not form a single streamlined system.

The report provided recommendations that included creating effective communication system between relevant ministries, improving supplies of appropriate equipment, and conducting up-to-date systematic training activities (UNDP Disaster Risk Management Programme, 2011).

Government personnel in charge of emergency management face many limiting factors including:

1) low salary wages.

2) obsolete emergency equipment.

3) lack of up-to-date and systematic training.

4) poor working conditions.

This has resulted in:

- Lack of qualified professional emergency staff who tend to prefer to work in other organizations which offer higher salaries and more privileges.

- High staff turnover due to seasonal labor migration to Russia.

This phenomenon is particularly relevant in remote districts which happen to be the same areas at higher risk of disasters (United Nations OCHA and UNDAC, 2006).

SIGNIFICANCE OF THE PROJECT

Two categories of hazards affect Tajikistan: geophysical (including landslides and earthquakes) and meteorological hazards (including flooding and mudslides). The Committee of Emergency Situations (CoES) reports the following as most frequent natural hazards: avalanches, mudflows, small- to medium-scale earthquakes, landslides and rock falls, and floods. Among other minor hazards are rock galls, hail, heavy snowfall, and high ground water. An average of 1,500 families (approximately 7,500 persons) suffer the consequences of small- to medium-scale emergencies every year (Tajikistan Inter-Agency Contingency Plan, 2015) in Tajikistan.

Number and types of main disasters (1997-2013)
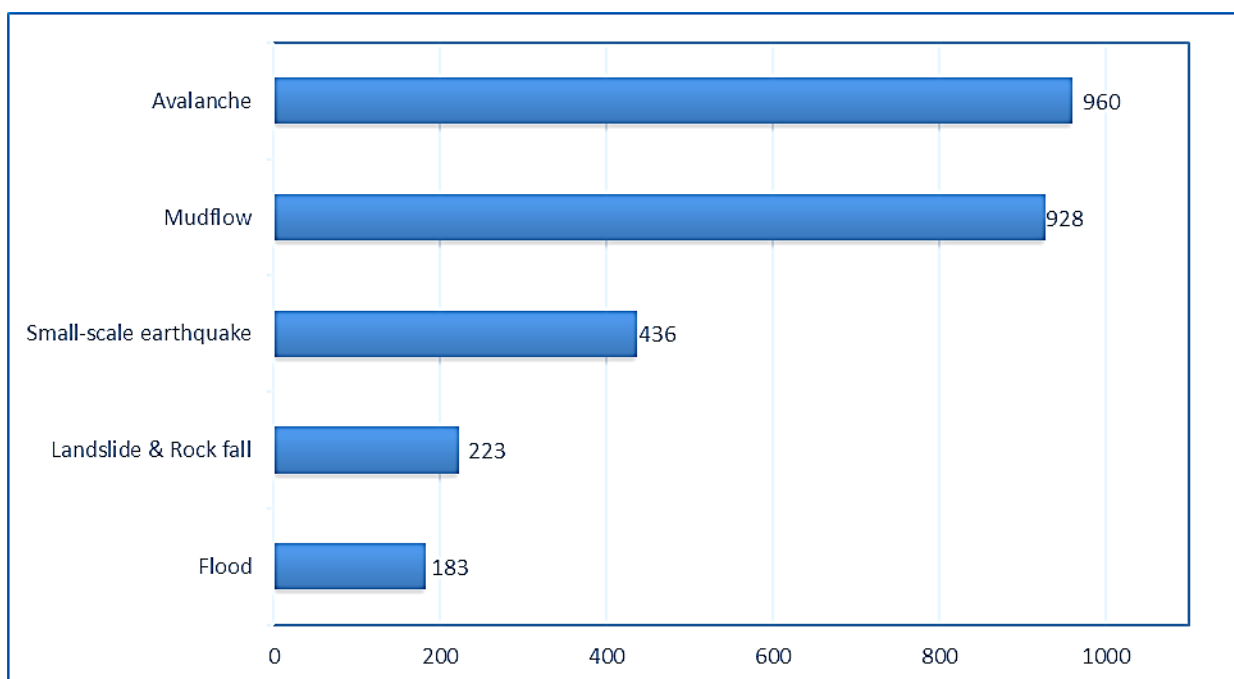
Source: CoES Report, 2014

All natural hazards have a seasonal nature, happening mainly from early spring until mid-summer. These hazards result in relatively few deaths, but they can have a

significant impact on the civic infrastructure, peoples' livelihoods, and family assets. (Tajikistan Inter-Agency Contingency Plan, 2014-2015, 2015 May).

Communicable diseases still represent a major cause of morbidity in Tajikistan, with significant social and economic burdens. Clean water supplies and sewage infrastructure, as well as specific infection control measures such as mosquito control and immunization, are not reliably available to all. Levels of waterborne diseases are high, as the water supply often is not safe and less than 10% of the population is actually connected to a sewage system. In summer occasional cases of malaria occur in Khatlon oblast (region) and in the south of Gorno-Badakhshan Autonomous Oblast (WHO Regional Office for Europe, 2013).

Other important infectious disease risks include respiratory infections, diarrheal diseases, and other zoonotic diseases including brucellosis, leishmaniosis, and leptospirosis. In 2009 Tajikistan experienced an outbreak of influenza H1N1. In 2013 anthrax virus spread in the northern regions of Tajikistan: eight cases were confirmed and one person died (WHO Regional Office for Europe, 2013).

An outbreak of poliomyelitis (polio) occurred in the country in 2010. This was the first polio outbreak since Tajikistan was certified polio-free in the year of 2000. The situation pointed out lessons and indicated areas that still needed attention. For instance, the delay by the Ministry of Health (MoH) admitting that there was an outbreak affected the type of response possible by the health workers. Consequently, the number of cases grew out of proportion of the ability to respond effectively. It revealed a weak institutional capacity in early detection, mobilization, and management of infectious disease outbreaks, as well as management of crisis communication. It demonstrated a need to modify

institutional perceptions about outbreak reporting, plus it indicated a lack of secured funding in cases of outbreaks and epidemics (WHO Regional Office for Europe, 2013).

In addition to the above hazards, there are long-term hazards, like drought and extreme cold weather. In 2008, both of these types of hazards had a combined effect on the population — 2 million people were affected by cold in the winter and 800,000 people faced consequences of drought in the fall of the same year (Tajikistan Inter-Agency Contingency Plan, 2015).

Some slow-onset hazards affecting Tajikistan are: economic and financial crises (due to high poverty rate), other epidemics, instability- and conflict-related hazards (due to the long border shared with Afghanistan), long-term disputes with downstream Central Asian countries regarding the use of water resources, and ethnic conflicts with Kyrgyzstan (Tajikistan Inter-Agency Contingency Plan, 2015).

The United Nations Environment Program (UNEP) and Office for the Coordination of Humanitarian Affairs (OCHA) consider Tajikistan as one of 30 countries with the highest Environmental Emergency Risk Index (EERI) in the world. The potential environmental hazards include "dam failures, hazardous industrial and biological waste, unplanned chemical releases, transport accidents, and accidents affecting gasoline, fuel and heating pipelines, or life support systems." (Tajikistan Inter-Agency Contingency Plan, 2015).

A successful and efficient response to emergency situations depends on the capacity, skills, and prior training the responders have already acquired. The current situation in Tajikistan includes an urgent need to establish a comprehensive training center to bring to

the following positive changes to contribute to the improvement of emergency preparedness and response system as a whole:

- Establish the lead role of government in training activities (deciding who, when and on what areas should training focus on). Although officially the government chairs the Rapid Emergency Assessment and Coordination Team (REACT) committee, its actual decision-making role remains limited. This is due to the limited technical and financial capacity of government to take on a higher role in leadership.

- Coordinate all training activities, and avoiding duplication/overlap of training activities. The different emergency situations in the past two decades revealed clear disintegration in coordinating their emergency response efforts. This reflects a lack among different stakeholders on pre-emergency and continuous collaboration on the number, scope, and geographic location of their training activities. International agencies — the main sponsors — decide on these issues, very often in isolation from other agencies. Concentrating trainings in one location will enable the government to better coordinate these activities at the central level.

- Address the country's existing and future needs to build its capacity for managing different types of emergency situations. Again, very often the agenda/curriculum of trainings is driven by the mandate of the external sponsoring agency or agencies. Although multiple attempts were made to link the actual needs of the country and the donors' missions, the current lack of knowledge and skills prove that there is serious inconsistency between these two.

This project will review, evaluate, and update existing training modules and will adjust them to be compatible with international evidence-based standards. Standardizing training

activities to the specific requirements of Tajikistan will incorporate materials and methods that are tailored to the appropriate level, frequency, and context for Tajikistan.

So far, no substantial effort has been applied to evaluate the effectiveness of the country's training activities. A proposed evaluation model will be used as an instrument in documenting the real impact of project:

- Establish/revise existing emergency preparedness competencies among public health and emergency professionals. There are neither core emergency preparedness nor public health competencies established in Tajikistan. This project will draw renewed attention to developing these.

- Exercises will be a part of training activities. Various exercise scenarios will be planned to validate the training of target populations and test the effectiveness of plans. So far training activities are treated separately from exercise activities, with no correlation between them. The proposed training center will offer training that complements the targeted exercises and the emergency operations plans.

- Pool and leverage existing financial resources as well as help to raise additional funding for training activities. Systematized and coordinated training activities will facilitate efficient distribution of available funding sources coming from various donors and sponsors.

- Identify those stakeholders who are focused on training activities — their comparative advantages, training activities in which they are specifically interested, current and future financial resources, and their short- and long-term plans. This will help to establish closer partnerships and cooperation between interested parties.

- Create a current inventory (both technical and geographical) of people recently trained in the past three years.

- Enhance certification among targeted professionals. Until now certification of training participants was limited to issuing a certificate of attendance, with no data on who, when, and on what they were trained for. This step will help to create a detailed inventory of trained professional in different regions and districts.

- In Tajikistan emergency management plans are set forth, written, and disseminated by the central government to the peripheral levels (regional and district). There is little understanding about how these plans are translated into exercise needs. One of the project's objectives will be linking these plans with the actual exercise needs. Training participants will be equipped with the knowledge how to test their plans.This will significantly enable emergency and public health professionals to critically revise and edit their existing emergency management plans and link it with actual exercise requirements.

This project may create a forum for all Central Asian countries to better collaborate and start sharing experiences and lessons learned. The current information at hand on the other four Central Asian countries did not confirm the existence of training centers in any of them.

Volunteering is poorly coordinated and offered on an *ad hoc* basis, where those who want to help just walk in and offer their support. Volunteers are neither trained nor organized. Although it is a good part of local culture, volunteering should be better organized. This proposed project could include training of volunteers, documentation of their training, and development of volunteer networks, at least at the regional levels.

In addition to training activities, training centers will serve as a resource center, offering books, printed and online publications. Furthermore, it can serve as a venue for the necessary meetings, conferences, or round tables, including regular/quarterly REACT meetings.

II. Literature Review

An environmental scan was conducted through a peer-reviewed literature search of PubMed, Google Scholar, Cochrane databases, and an open internet search for training center websites. The landscape of literature search was conducted by combining the search terms "training" "center" "training needs" "capacity building" "emergency management" "Tajikistan" and "developing countries." All searches were conducted from September 2015 to April 2016. Screening by titles narrowed the search and led to the articles and reports regarding training programs which are used in this paper.

Literature specific to the analysis of overall training activities and training needs in Tajikistan was very limited. To ensure a proper source of information specific to the context of Tajikistan, some key emergency stakeholders (both national and international) were contacted with the request to share their internal reports. The reports and strategic documents that they provided were used in the introduction section and to complement the literature review part of this paper. Available reports mainly focus on a narrowed analysis of trainings reflecting specific mandates and missions of evaluating agencies. Gaps were identified since none of them aimed for a holistic view of the overall training activities in Tajikistan. The understanding and linkages between different training activities is often not well developed, although humanitarian organizations, donors, and relevant government agencies actively collaborate through the mechanism provided by the Rapid Emergency Assessment and Coordination Team (REACT) Team. To overcome the limited studies about Tajikistan and to focus on a rapidly growing effort in this field, the literature reviewed for this study focused on the US.

The National Disaster Risk Management Strategy for 2010-2015 revealed significant shortfalls in terms of capacity building and training activities in Tajikistan. The main shortfalls come from the fact that training activities are mainly focused on professionals at the central level, leaving peripheral levels (regional and district) of the country — which are the most vulnerable to emergencies — untrained or poorly trained. Inadequate funding for preparedness training leads to the lack of a systematic approach for integrated training activities as well as to the *ad hoc,* chaotic nature of trainings. Thus, training activities, although foreseen in the National Emergency Plans, are not fully/adequately implemented. A lack of resources serves as a significant challenge to agencies that need to seek emergency preparedness training.

There are neither existing networks nor educational activities for volunteers in Tajikistan. Although volunteers are often involved during disasters, they are usually untrained and/or unexperienced people (Government of the Republic of Tajikistan, 2010).

Despite the fact that the USA has relatively short history with emergency preparedness, however, major strides were taken in this field. The rise of public health/preparedness workforce development in the United States went through several milestones. In 1988, the Institute of Medicine (IOM) report *The Future of Public Health* came out with the criticism of workforce and preparation. All stakeholders including schools of public health, employers, federal agencies, and professional groups were urged to contribute to solving this problem. In 1999, the Centers for Disease Control and Prevention (CDC) established a Task Force on Public Health Workforce Development. From 1988 to 2002 there was a substantial progress made in competency and content requirements for the public health workforce. The Third Annual Public Health Workforce

Development meeting was held on January, 2003 in Atlanta which aimed to review the national priorities for the strengthening of public health/preparedness workforce. The major emphasis was made on determining priorities in competency development, issues of certification and credentialing, and identifying research priorities in public health workforce development (Litchveld & Cioffi, 2003).

Richmond et al. further described on the progress made in public health workforce development in the United States. While providing and overview on how public health preparedness training evolved over time, the article outlines specific area of programming for enhancing the knowledge, skills, and attitudes of the current and future development of public health workforce. Following creation of Task Force on Public Health Workforce Development in 1999, CDC has established four Centers for Public Health Preparedness (CPHP) in 2000. Within the next five years, the number of CPHP centers had grown to 27. Since their establishment, CPHP centers had greatly responded to the growing needs for education and technical expertise among public health and preparedness practitioners. In 2010, CPHP centers were transformed into 14 Preparedness and Emergency Response Learning Centers (PERLCs) funded by the CDC. Established PERLCs became responsible for:

- Provision of competency-based training activities to public health officials at state, local and tribal levels.
- Address non-public health partners' needs who are involved in emergency management by providing specialized trainings, exercises, and aspects of their work which are not addressed through competency-based curricula.

- Build national capacity through active collaboration and disseminating resources through extensive PERLCs network .

A network of PERLC centers became a well-developed national learning system bringing together academia and practice. This well-functioning network contributed to better performance at the individual, organizational and community levels, thus improving overall national health security in the United States (Richmond et al. 2014).

The need for common, comprehensive, and systematized evaluation of the effectiveness of training with respect to increasing training related knowledge and performance has been long recognized in many publications. One of the early reports which addressed this issue was prepared by Sarpy at el. in 2003. The report describes the experience of South Central Center for Public Health Preparedness (SCCPHP) which established evaluation process for assessing the effectiveness of their training program. The SCCPHP is a collaboration between the schools of public health at Tulane University and the University of Alabama Birmingham, and also the state health departments in the states of Alabama, Arkansas, Louisiana, and Mississippi. SCCPHP evaluation process is based on academic literature to date and Kirkpatrick's logical steps for evaluating training that have been already used to assess other occupational training programs.

The evaluation process established at SCCPHP specifically focused on information on course presentation, students' learning and performance, as well as the impact of the training on enhancing the preparedness of the public health workforce. The report by Sarpy et al. highlights the evaluation process established at SCCPHP including detailed descriptions of the four types of evaluation, the processes linked with developing and conducting each type, and the consequences of adopting this framework. Kirkpatrick's

evaluation framework includes four levels: 1) trainees' reactions, 2) knowledge gained and skills improved, 3) behavior changed, and 4) results or impact. The outcome of Kirkpatrick evaluation process can contribute to the better training activities, specifically to revising training objectives, modifying training delivery and better organizational factors such as coordination and communication. Kirkpatrick's evaluation framework enabled SCCPHP develop common method for evaluating effectiveness of competency-based trainings in several ways.

Level 1: evaluation provides with the generic or common evaluation framework. Survey forms and procedures can be used and applied across different work settings and various geographic locations. Authors believe that SCCPHP evaluation framework is a significant step in making training program evaluations more standardized and systematized.

Level 2: important feature of this framework is in its ability to gather information on the trainees' perception of training – if it is useful and relevant to their job. The results from this level can assist in modifying training delivery methods.

Level 3: this evaluation was also useful in providing responses from different training participants: trainees, instructors, co-workers, and supervisors. Collection of information from multiple sources makes feedback process more reliable and results in getting recommendations addressing different perspectives of all training participants.

Level 4: framework enables collection of both quantitative and qualitative information (Sarpy at el., 2003)

The latest publication describing application of Kirkpatrick evaluation framework is made by Hites et al. in 2014. The article describes recent project undertaken by the Preparedness and Emergency Response Learning Centers (PERLC) which aimed to facilitate standardized evaluation of public health preparedness and response trainings across the United States. In order to identify evaluation criteria for each level of Kirkpatrick's evaluation framework 4 evaluation working groups were established. The specific objectives of the project intended to address the following needs:

1) conduct center-level and program-level evaluation within PERLC network (14 centers);

2) determine standardized training evaluation methods;

3) disseminate positive lessons learned within the PERLC network.

The PERLC evaluation working groups successfully developed and tested survey methods and instruments for each of the 4 levels of Kirkpatrick's training evaluation framework. Evaluators identified the limitations, barriers, and challenges as well as came up with the guiding principles and programmatic considerations for each level of Kirkpatrick's evaluation framework. The PERLC evaluators also proposed a set of recommendations that can be used by evaluators of preparedness and emergency response training program evaluation (Hites et al, 2014).

Gebbei et al., described another issue which was attracting particular attention of public health agencies since early 2000. Along with the development of public health and preparedness workforce there was a clear need to clarify what knowledge, skills and attitudes a public health professional should gain as a part of their training activities. Authors presented the newly developed core competencies which public health workforce

should have, as well as described some of the implications of these competencies on practice, research and education. Following the Pandemic and All-Hazards Preparedness Act (PAHPA) in December 2006, the Centers for Disease Control and Prevention requested the Association of Schools of Public Health (ASPH) to develop the Public Health Preparedness and Response Core Competency Model.

The model serves as a framework for many activities intended to improve community emergency preparedness, mitigation, timely response, as well as short- and long-term recovery processes. Core Competency Model should inform and guide policy makers, planners, federal agencies, academia, trainers, evaluators and researchers in their everyday work. Gebbie and colleagueset al. believe that Core Competency Model will greatly contribute to the better-prepared and thus competent public health preparedness workforce. However, they recommend to revisit Core Competency Model and if needed to make improvements to it (Gebbie et al., 2013).

Public Health Preparedness and Response Competency Map
(Model Version 1.0 – December 14, 2010)

Performance Goal: Proficiently perform assigned prevention, preparedness, response, and recovery role(s) in accordance with established national, state, and local health security and public health policies, laws, and systems.

1. Model Leadership

1.1 Solve problems under emergency conditions.

1.2 Manage behaviors associated with emotional responses in self and others.

1.3 Facilitate collaboration with internal and external emergency response partners.

1.4 Maintain situational awareness.

1.5 Demonstrate respect for all persons and cultures.

1.6 Act within the scope of one's legal authority.

2. Communicate and Manage Information

2.1 Manage information related to an emergency.

2.2 Use principles of crisis and risk communication.

2.3 Report information potentially relevant to the identification and control of an emergency through the chain of command.

2.4 Collect data according to protocol.

2.5 Manage the recording and/or transcription of data according to protocol.

3. Plan for and Improve Practice

3.1 Contribute expertise to a community hazard vulnerability analysis (HVA).

3.2 Contribute expertise to the development of emergency plans.

3.3 Participate in improving the organization's capacities (Including, but not limited to programs, plans, policies, laws, and workforce training).

3.4 Refer matters outside of one's scope of legal authority through the chain of command.

4. Protect Worker Health and Safety

4.1 Maintain personal/family emergency preparedness plans.

4.2 Employ protective behaviors according to changing conditions, personal limitations, and threats.

4.3 Report unresolved threats to physical and mental health through the chain of command.

Foundational public health competencies

Generic health security or emergency core competencies

Position-specific or professional competencies

Public Health Preparedness and Response Competency Map (December 14, 2010).

III. Project Design

Overall goal of the project: To establish a comprehensive training center in Tajikistan.

Specific objectives of the project:

1. Identify existing, or even just *perceived*, training needs and gaps;

2. Determine the highest priority emergency preparedness and response competencies;

3. Develop training a curriculum for public health and emergency professionals;

4. Conduct training activities *and exercises* among targeted professionals and volunteers;

5. Evaluate program impact, in short- and long-term perspectives.

Key (tentative) deliverables are:

- Current training needs are identified;

- Priority emergency management competencies are determined;

- The comprehensive training curriculum is developed;

- Training and exercise activities are conducted among professionals;

- The program is evaluated, the pooled lessons learned and recommendations for future training and funding are identified.

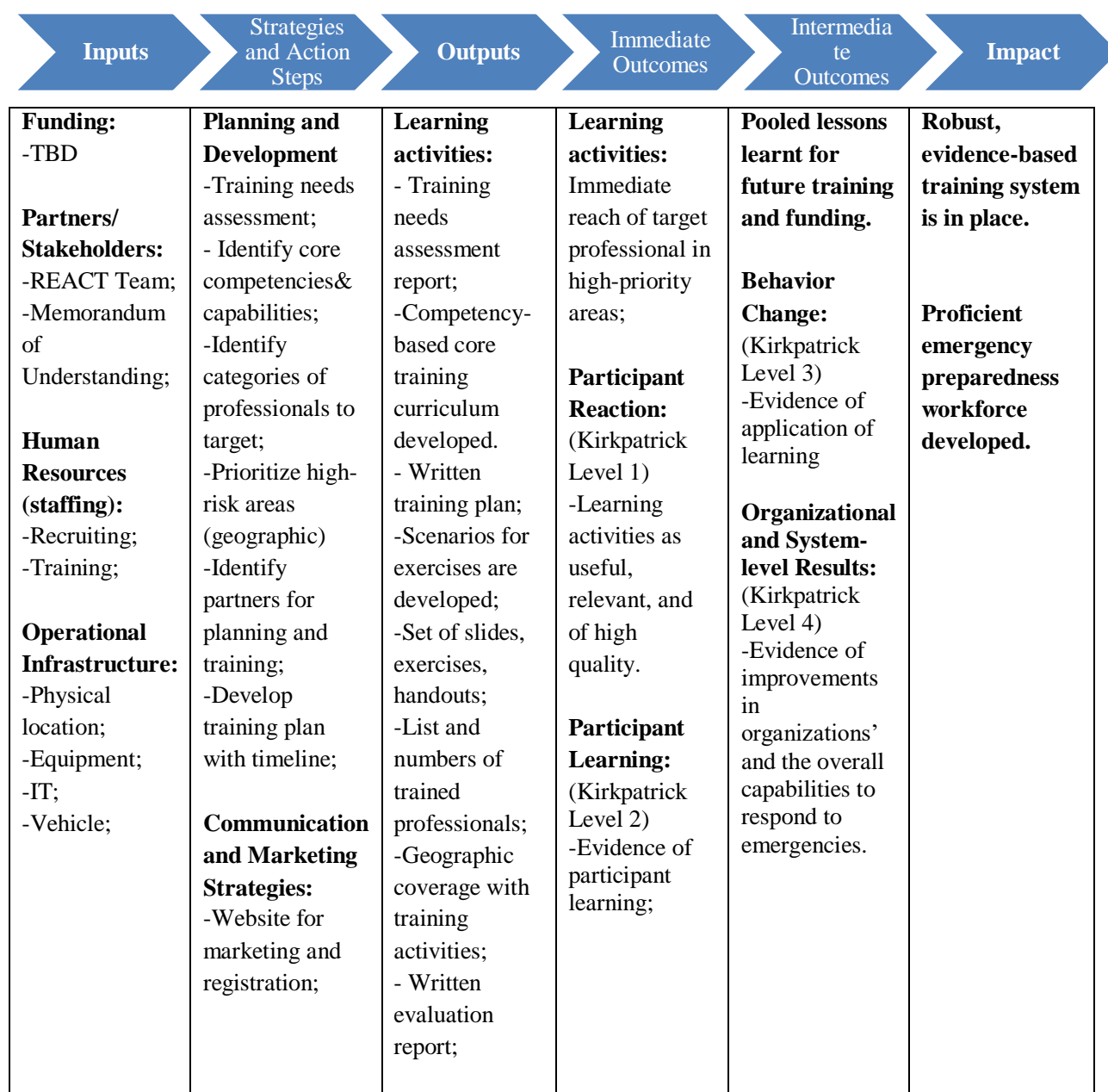Establishment of the training center will aid Tajikistan to meet the current needs for emergency preparedness management. The proposed project will not create another vertical program or duplicate ongoing training activities but instead, is intended to systematize all learning activities to be effective and maximize impact, as well as to ensure systematic monitoring and evaluation. By identifying perceived gaps in emergency

management trainings, this project will identify specific areas to draw renewed attention to training activities and capacity building, and thus will contribute to the strengthening of emergency management in Tajikistan.

A series of sequential milestones are proposed in the following Project Logic Model:

Project Logic Model (adapted from the National Training Strategy, 2009)

Inputs	Strategies and Action Steps	Outputs	Immediate Outcomes	Intermediate Outcomes	Impact
Funding: -TBD **Partners/ Stakeholders:** -REACT Team; -Memorandum of Understanding; **Human Resources (staffing):** -Recruiting; -Training; **Operational Infrastructure:** -Physical location; -Equipment; -IT; -Vehicle;	**Planning and Development** -Training needs assessment; - Identify core competencies& capabilities; -Identify categories of professionals to target; -Prioritize high-risk areas (geographic) -Identify partners for planning and training; -Develop training plan with timeline; **Communication and Marketing Strategies:** -Website for marketing and registration;	**Learning activities:** - Training needs assessment report; -Competency-based core training curriculum developed. - Written training plan; -Scenarios for exercises are developed; -Set of slides, exercises, handouts; -List and numbers of trained professionals; -Geographic coverage with training activities; - Written evaluation report;	**Learning activities:** Immediate reach of target professional in high-priority areas; **Participant Reaction:** (Kirkpatrick Level 1) -Learning activities as useful, relevant, and of high quality. **Participant Learning:** (Kirkpatrick Level 2) -Evidence of participant learning;	**Pooled lessons learnt for future training and funding.** **Behavior Change:** (Kirkpatrick Level 3) -Evidence of application of learning **Organizational and System-level Results:** (Kirkpatrick Level 4) -Evidence of improvements in organizations' and the overall capabilities to respond to emergencies.	**Robust, evidence-based training system is in place.** **Proficient emergency preparedness workforce developed.**

	Content Development Resources: -UNMC Center for Preparedness Education; - Develop competency-based training curriculum; Training& Exercises -Learning activities including exercises based on preparedness and response core capabilities; Evaluation/ Improvement Process: -Evaluation of training activities (pre- and post-training); - Improvement; -Strategic Planning;				

Ablah, Tinius, & Konda, 2009.

A. *Inputs*

Funding:

Funding for the proposed project will be sought both from the government of Tajikistan and from international emergency stakeholders. The funding can come from a single organization or as pooled funding from several partners. The commitment of the

government of Tajikistan to the overall project funding can be in kind, in the form of materials, equipment, services, or human resources.

Partnerships/Stakeholders:

REACT Team

The Rapid Emergency Assessment and Coordination Team (REACT) is the main coordinating structure and partnership for disaster management in Tajikistan. It was established in 2001 by the UN Office for the Coordination of Humanitarian Affairs (OCHA). Since 2003 it has been chaired by the Committee of Emergency Situations and Civil Defense (CoES) of the Government of Tajikistan.

Different organizations like UN-agencies, non-governmental organizations and government entities actively involved in disaster risk management activities in Tajikistan that signs the Memorandum of Understanding (MoU) is considered a member of REACT. Since the establishment of REACT the major emergency management strategies and frameworks were developed and approved, such as the National Disaster Risk Management Strategy, National Platform for Disaster Risk Reduction, Recovery Framework, etc. The National Platform provides a government structure for planning and coordinating risk reduction and provides an additional entry point for dialogue regarding emergency management among REACT partners.

Goal and Objectives of REACT:

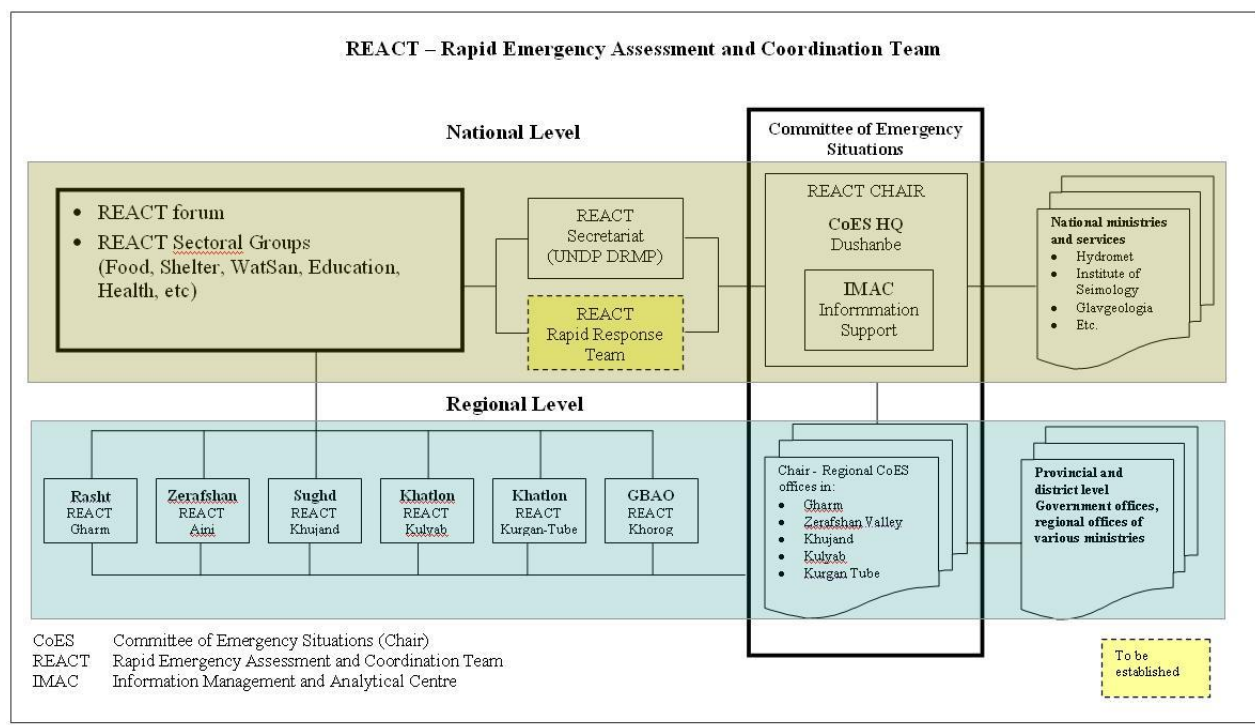The main goal of REACT is to reduce the impact of disasters on the population of Tajikistan.

The specific objectives of REACT include:

- Promoting effective risk reduction, disaster preparedness, disaster response, and disaster recovery.

- Supporting the coordination and collaboration of humanitarian actors, international organizations, and the Government of Tajikistan.

- Providing a platform for collaborative planning of risk reduction, preparedness, and response and recovery activities.

- Providing a platform for the transparent exchange of information, joint planning of operations on disaster risk reduction, preparedness, and response and recovery.

- Providing a forum for open discussion of policy and practical issues related to the purpose of REACT.

Structure of REACT:

REACT is represented at the National and six Regional levels; it also has its focal points at the District level. There are five REACT Sectoral Groups: Food, Shelter, Water and Sanitation, Education, and Health.

Structure of the Disaster Risk Management Partnership in Tajikistan

REACT – Rapid Emergency Assessment and Coordination Team

National Level

Committee of Emergency Situations

- REACT forum
- REACT Sectoral Groups (Food, Shelter, WatSan, Education, Health, etc)

REACT Secretariat (UNDP DRMP)

REACT Rapid Response Team

REACT CHAIR

CoES HQ Dushanbe

IMAC Information Support

National ministries and services
- Hydromet
- Institute of Seimology
- Glavgeologia
- Etc.

Regional Level

| Rasht REACT Gharm | Zerafshan REACT Aini | Sughd REACT Khujand | Khatlon REACT Kulyab | Khatlon REACT Kurgan-Tube | GBAO REACT Khorog |

Chair - Regional CoES offices in:
- Gharm
- Zerafshan Valley
- Khujand
- Kulyab
- Kurgan Tube

Provincial and district level Government offices, regional offices of various ministries

CoES   Committee of Emergency Situations (Chair)
REACT   Rapid Emergency Assessment and Coordination Team
IMAC   Information Management and Analytical Centre

To be established

Source:http://www.untj.net/index.php?option=com_phocadownload&view=category&id=129:react-strategic-documents&Itemid=746&lang=en

<u>Memorandum of Understanding / Technical Working Group</u>

The REACT Team is believed to be the best forum and platform to create a partnership for the establishment of a training center (or centers) in Tajikistan. Each member organization of REACT Team has its own comparative advantages (financial, technical, programmatic, etc.) which can be potentially used for the benefit of the proposed project. The following strategies will be undertaken:

- The project proposal will be introduced/presented at the REACT meeting to attract those agencies which are directly involved in emergency preparedness and related

learning activities. Practical comments, inputs, and recommendations will be considered in adjusting the project plan.

- General and specific MoUs will be developed and signed between all interested parties. MoUs will define roles, responsibilities, and programmatic commitments for the project planning, implementation, and evaluation.

When needed, REACT members may establish technical working groups on specific topics on a temporary or a permanent basis. Members of the Technical Working Group (TWG) are comprised of REACT members and when needs rise, may also include individuals or organizations which are not part of the REACT. The Chair of the TWG is designated by REACT members based on mutual agreement. TWG should regularly report to the REACT Team on ongoing activities and consult with the general membership before taking decisions on the respective topic. REACT members interested in proposed projects can form the TWG which will be providing technical and operational inputs throughout the project planning and implementation. The Terms of Reference (ToR) of TWG will be related to the ToR of the international technical assistance (UNMC Center for Preparedness Education) (Rapid Emergency Assessment & Coordination Team [REACT], 2013).

Human Resources (staffing):

Recruitment

International technical assistance will be sought in establishing this center (tentative ToR is provided in Annex) in order to ensure the high quality of project implementation. An institutional contract will be established with UNMC Center for Preparedness Education (pre-agreement for collaboration has been already obtained). The technical expertise will be provided throughout the different phases of the project planning,

implementation, and evaluation. The ToR of the institutional contract will include the overall oversight of project implementation, revision and development of training materials, as well as training of master trainers. The employer (fiscal agent) will be an agency which will take over the cost of this consultancy. Payments for consultancy will be broken down into lump sum amounts associated with the achievement of agreed milestones. Institutional consultancy will be provided both at a distance as well as through in-country site visits. Overall budget of this consultancy will include technical assistance and travel expenses (visas, airfare, daily allowances). Visa arrangements will be made by the employer.

Local staffing (tentative ToR for each position is to be developed) – Local staff will be recruited through "head hunting" through the REACT team, as well as advertisement through different media means (TV, radio, newspapers (local and national), social media, etc.). All other possible means will be explored to ensure competitive recruitment.

Required (or desired) pre-existing skills (communication, presentation, drive for results), experience (at least 3-5 years in the required position), values (integrity, commitment), and educational needs (undergraduate and/or master degree) will be identified. The following local staffing is proposed:

- Project manager, full-time.

- Technical manager, full-time.

- Project assistant/secretary, full-time.

- Financial assistant, part-time.

- Logistics assistant, part-time.

- Master Trainers (Their numbers will depend on availability and number of potential professionals).

The employer of local staff will be the Committee of Emergency Situations and Civil Defense (CoES) of the Government of Tajikistan. In-country travel logistics of local staff will be covered by the employer.

Training

The UNMC Center for Preparedness Education will:

o Develop of content of training materials for training of Master Trainers based on actual needs;

o Conduct Training of Master Trainers;

o Provide ongoing technical assistance.

In addition to technical aspects, training participants will be trained on presentation skills and professional development skills, such as time management, organizational skills, and leadership.

Operational Infrastructure:

Physical location

Location of the training center should be identified in consultation with the stakeholders. The capital city, Dushanbe, would be the best geographic location for the training center. The Committee of Emergency Situations and Civil Defense of Tajikistan could allocate premises as a part of their funding contribution. If needed, refurbishment should be included in the overall budget. The minimum requirement of this physical space should consist of at least 2 administrative offices, 3-4 well equipped classrooms, and a storage room.

If premises cannot be provided by the government of Tajikistan, then the rent of appropriate premises should be considered. However, this would not be the most cost-effective location.

Equipment

For the proper functioning of training center certain equipment will be needed:

- Educational equipment – projectors, lap tops, screen, flip charts, easels, etc.

- Operational equipment – office furniture (such as desks, shelves, chairs), phones, computers, scanner/fax/photocopy.

All the equipment should be inventoried and be replaced upon need (this can be classified as miscellaneous expenses in the budget).

IT support

Establishment of a training center will require an information technology (IT) support specifically for creating a website. The website will:

- Provide detailed information on training center and is readily available for public;

- Serve as marketing mechanism/strategy;

- Provide links to online registration;

- House a database for all participants (separate from registration software)

- Also have the capacity to serve as a learning management system, where online courses can be accessed and transcripts maintained

Transportation and Daily Allowance

To get educators to remote training locations, a suitable means of transportation would be necessary. Ideally, transport should be procured, otherwise it can be rented (however, this option wouldn't be the most cost-effective). Donation of a vehicle by any

of the stakeholders could be an option, too. Another option is to consider paying participants the transportation cost to get to the training center. If participants travel to the training center at the central level, they will be provided with daily allowance at the rate of training location.

Language

The official language in Tajikistan is Tajik. Russian language is considered a second language in the country. People mainly speak in both languages; however, some people may speak either Tajik or Russian. The majority of people do not speak English. Communication among and with the training center will be done on several levels: To ensure proper communication both verbal and written, as well as delivery of training materials, certified translation services will be continuously provided.

B. *Strategies and Action Steps*

Planning and Development

Training needs assessment

At the core of any effective training program is identification of who needs to be trained and regarding what. "Training needs assessment (TNA) is defined as:
The method of determining if a training need exists and, if it does, what training is required to fill the gap. The gap between the present status and desired status may indicate problems that in turn can be translated into a training need" (Cambodian Ministry of Interior and Japan International Cooperation Agency, n. d.).

The results of this assessment can be used by public health planners and partners to develop and implement emergency preparedness and response training plans.
Training needs assessment (TNA) activities will include:

1) Analysis of previous training activities.

2) Analysis of existing, competency-based training courses that are already available.

Survey methods

The Training Needs Assessment (TNA) can be formal, such as using survey and interview techniques, or informal, such as asking questions of those involved. Data about the Training Needs Assessment will be collected and analyzed for future planning purposes. Different data collection methods will be used to collect quantitative and qualitative data.

The following data collection methods are proposed to be used in TNA:

- Survey (questionnaire);

- Semi-structured interview;

- Review of existing documents: reports, national strategic documents, job descriptions etc.;

- Focus group discussions;

The purpose of the Training Needs Assessment is to address questions such as why, who, how, what, and when.

- *Why:* Why conduct the training, to tie the performance deficiency to a working need, and assure the benefits of conducting the training are greater than the problem being caused by the performance deficiency. Conduct two types of analysis to answer this question: (1) needs versus wants analysis and (2) feasibility analysis.

- *Who:* Who is involved in the training, involving appropriate parties to solve the deficiency. Conduct a target population analysis to learn as much as possible about

those involved in the deficiency and how to customize a training program to capture their interest.

- *How:* How can the performance deficiency be fixed: training can fix performance deficiency or suggest other remediation if training is not appropriate? Conduct a performance analysis to identify what skill deficiency is to be fixed by a training activities.

- *What:* What is the best way to perform their respective job responsibilities: is there a better or preferred way to do a task to get the best results? Are job performance standards set by an organization? Are there governmental regulations to consider when completing the task in a required manner? Conduct a task analysis to identify the best way to perform depending on the job descriptions.

- *When:* When will training take place: the best timing to deliver training because attendance at training can be impacted by work cycles, holidays, etc. Conduct a contextual analysis to answer logistics questions ((Cambodian Ministry of Interior and Japan International Cooperation Agency, n. d).

The proposed project will focus on conducting competency-based needs assessment.

Competency-based needs assessment has the following purposes:

- Identifies key competencies for better job performance.

- Assists in development of core competency model.

- Identifies incompetence as well as a set of skills, knowledge, attitudes and behaviors that should be avoided for better performance.

The Public Health Preparedness and Response Competency Model (Annex1) developed in 2010 outlines competencies of middle level public health workers who should be able "to perform proficiently their assigned prevention, preparedness, response, and recovery role(s) in accordance with established national, state, and local health security and public health policies, laws and systems" (Gebbie et al. 2013))

The proposed Training Needs Assessment into five steps:

Step 1. Identify problem needs:

- Determine organizational context (policy, goal, roles, responsibilities)

- Perform gap analysis

- Set objectives

Step 2. Determine design of needs analysis:

- Determine target groups to be trained, interviewees, methods, schedule

Step 3. Collect data:

- Conduct interviews

- Administer questionnaires and surveys

- Review documents on existing trainings (observe people at work)

Step 4. Analyze data:

- Conduct quantitative and qualitative analyses

- Draw findings, conclusions and recommendations on training contents

- Write up the report

Step 5. Provide feedback:

- Make a presentation on needs assessment findings

- Determine the next steps for training preparation (Ablah, Tinius, & Konda, 2009)

Content Development Resources

UNMC Center for Preparedness Education will assist with the development of competency-based training curricula. The content of training materials will be developed based on:

- Training needs assessment;

- Identified (priority) core competencies and capabilities.

UNMC Center for Preparedness Education will assist with the development of effective training curricula, which will:

- fit the specific hazards, geographic locations, available human resource capacities, and local resources

- provide an all-hazards approach

- be competency-based

- be discipline and audience specific

- integrate long-term evaluation

- be ongoing and institutionalized

- offer additional resources for learning

- include exercises

- be available in various efficient methods

  (Ablah, Tinius, & Konda, 2009)

Given the nature of adult learning and the retention of training materials, activities should not be limited to one-time event: refresher courses will be offered upon results of evaluation.

Training alone cannot ensure competency. Therefore, other learning activities such as exercises will be conducted based on a developed competency model.

Time frame

The initial project duration is proposed to be 5 years. Based on the results of project appraisal, the duration would be extended through additional funding. Project activities will be conducted in sequential steps, and at some time points activities may be overlapping.

Tentative timetable for the project:

Planned Activities	2016		2017				2018				2019				2020				2021			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Fund- raising																						
Partnerships																						
Human resources (staffing):																						
- Recruitment																						
- Training																						
Building operational infrastructure																						
Training needs assessment																						
Planning:																						
- Identify core competencies& capabilities																						
- Identify categories of professionals to target																						
- Determine priority districts for training activities																						
- Develop training plan with timeline																						
Communication and Marketing																						
Content Development Resources: - Develop competency-based training curriculum																						
Training of Master Trainers																						
Training & Exercises																						
Strategic Planning																						
Evaluation of training activities																						

Evaluation

The Centers for Disease Control and Prevention (CDC) proposed using Donald Kirkpatrick's training evaluation model for the evaluation of Emergency Response Learning Centers in the United States (Hites, Sass, D'Ambrosio, et al., 2014).

Kirkpatrick's 4-level evaluation model is intended to measure the following components of training programs:

Level 1: Trainees' reaction – measures how trainees feel about training program.

Level 2: Learning – measures knowledge gained, skills improved, and attitudes changed. This level is usually evaluated by pre- and post-testing of training participants.

Level 3: Behavior changed – measures self-reported change and supervisor observations of change.

Level 4: Results or impact – measures organizational changes as a result of training activities.

Training System Model (Adapted from the South Central Center for Public Health Preparedness (SCCPHP))
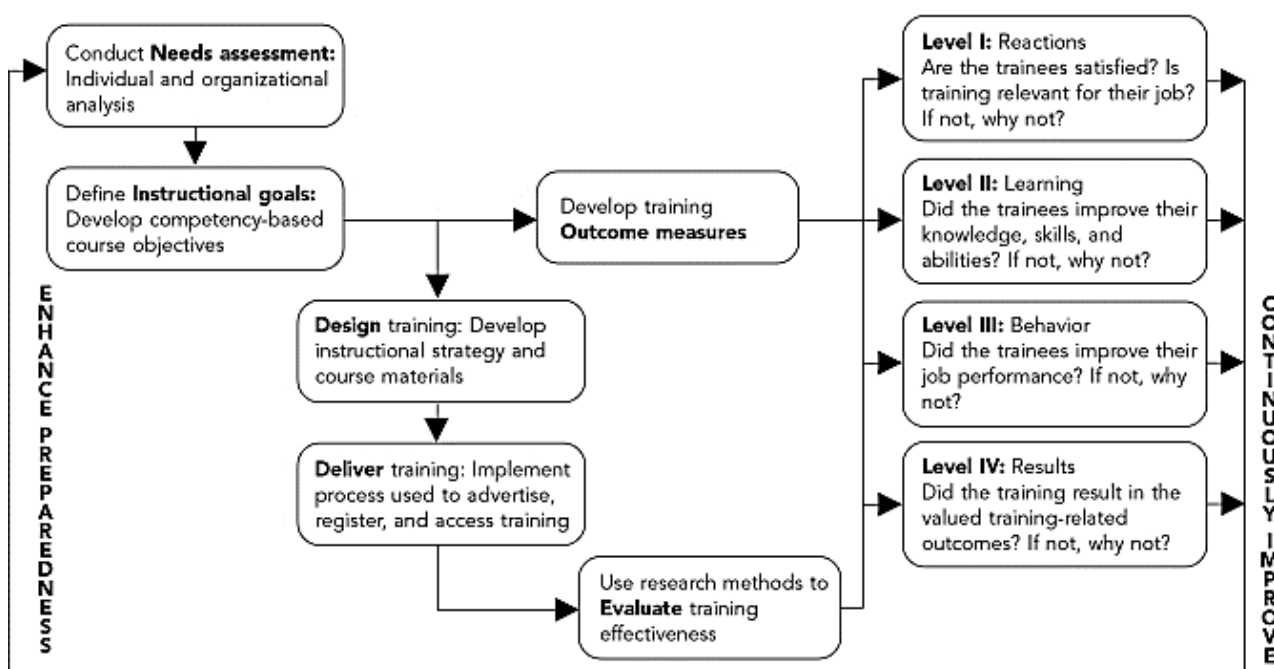
Sarpy, Chauvin, Hites, et al., 2005.

Improvement

It is important to show the project developments and the impact it had on overall competency level of participants. To do so, the following activities are proposed:

✓ track how and why the project has evolved

✓ document project progress, inputs and outputs, and success stories

✓ collect information about partnerships

✓ demonstrate evaluation improvement

Strategic Planning

Strategic planning will be done for a 3-5 year period and revisited annually as a means to ensure the plan is on target.

Limitations and Challenges

Project implementation may face the following limitations or challenges:

1. Ideally the funding of the project should be secured for 5-years period. Nevertheless, concerns exist about the possibility of securing funding for all 5 years period at the onset of the project. This can be attributed to the substantial budget needed for the project, especially for the first year of implementation. The funding of the initial year of project will be the costliest because of capital expenditures (building, office and training equipment, printing materials). To ensure uninterrupted project commencement it is important to secure full funding for the first year. Funding for consecutive years can be raised at the end of each year for the next year. This will ensure financial continuity of the project over the proposed 5–year time.

2. Finding potential candidates who are able to assume Master Trainer's role may pose a challenge. An advanced search should start well before project implementation.

3. The emergency management system in Tajikistan doesn't have an Incident Command System. In addition, Tajikistan is a post-soviet country which has its own specifics, ones very different from the U.S. context. In the past consultants who were never exposed to the Central and Eastern Europe and the Commonwealth of Independent States (CEE/CIS) region faced problems understanding those particularities. Therefore, UNMC Center for Preparedness Education staff members assigned to provide technical assistance will work with local training leadership to adapt the concepts of command and control to the context of the region. Descriptive documents related to the context of Tajikistan, other Central

Asian countries, as well as the CEE/CIS region will be review in partnership with all training consultants.

4. A language barrier may be a limitation to the effective communication between the English-speaking and the Tajik or Russian speaking project participants.

5. Tajikistan is cotton-producing country which means that in certain times in the fall (cotton harvest) no training activities may be done.

6. There is a high turnover among the Tajikistan government employees, including emergency staff. The majority of former employees leave to go to Russia for a seasonal labor migration (which begins approximately in February-March and ends in September-October).

7. There can be in-country travel restrictions to some regions/districts due to the cold season. This should be considered during planning of trainings in these regions/districts by giving them a priority during warmer seasons.

8. During the cold season there are shortages of electric power. Electricity will be supplied only a few hours a day, except in the capital city of Dushanbe, which has a 24 hour power supply. The limited power supply may impede training activities in some/many regions and districts.

C. *Output level*

At the output level a number of documents will be developed and finalized:

- Training needs assessment reports;

- Competency-based core training curriculum;

- Written training plan;

- Scenarios for exercises;

- Sets of slides, exercises, and handouts;

- Lists and numbers of trained professionals;

- Geographic coverage with training activities;

- Written evaluation report with recommendations.

Immediately from the onset of project design special emphasis will be placed on documenting project progress, outputs, and outcomes by collecting project-related information, success stories, challenges, and shortfalls, as well as information about partnerships and technical assistance that was provided. The information will be collected systematically and will provide inputs for donor reporting, etc.

IV. Conclusion

In a country like Tajikistan, where nature is unforgiving and the resources are scarce, the need for a robust emergency preparedness system cannot be stated enough. Significant human and economic losses will continue to occur if Tajikistan continues with the current limited human capacity among different levels of professionals involved in emergency responses. Our proposed project is the first step in a long way to transform, remodel, and develop capacity building efforts in emergency management, structures and functions. The project aims to establish a center of excellence for emergency preparedness education and training based on the most up to date international standards and best practices from countries and organizations that are heavily involved in this field. The multi-pronged approach will require extensive collaboration with the local government as well as with the international and national organizations. As much as the project implementation is not anticipated to go without challenges, however, it is hoped that if the project succeeds in its initial phase, the consecutive stages will build upon initial success. Although the project is expected to impact emergency management in general, it's supposed to have major impact on capacity building among emergency staff. This is an investment in the most valuable and scarce resource in our region, the human element. The anticipated social and economic gains from establishing a growing network of professionals who can run training programs, update training curricula, be able to use sophisticated emergency tools, and respond promptly and effectively to disasters are enormous.

The establishment of a comprehensive training center in Tajikistan is going to be a unique endeavor in the region. The success of this project may encourage other post-Soviet countries in the region to follow this example. This could enable the comprehensive

training center in Tajikistan to assume a leadership role and initiate a regional emergency preparedness network.

The collaboration with other countries will enrich the training and education curricula as well as contribute to the exchange of experiences and lessons learned. It is also believed that well-functioning training center will attract donors' investments who are willing to channel their funding through such sustainable system.

Annex 1:

<div align="center">

TERMS OF REFERENCE (TENTATIVE)
Support the Establishment of Comprehensive Training Center –
International Consultancy (Institutional)

</div>

Location: Dushanbe, Tajikistan
Travel: Yes (international)
Duration of Contract: 1 year (to be renewed on annual basis)

Background: National disaster profile
Purpose:
Main Responsibilities and Tasks:
Location:
Time frame: 365 Days
Start Date: **End Date:**
Key Deliverables:

Deliverables /Task	Days (Estimated # of days)	Deadline

MINIMUM QUALIFICATIONS AND COMPETENCIES OF EXPERTS

- At least 10 years of progressively responsible professional experience in emergency management and/or development, including at least 5 years of academic experience in design, implementation, evaluation of training activities and exercises;
- Familiarity with programmatic issues surrounding capacity building;
- Experience in project design, implementation and evaluation/impact analysis;
- Knowledge of institutional mandates, policies and guidelines related to disaster management;
- Knowledge of the institutions of the UN system;
- Knowledge of Sphere Guidelines;
- Extensive professional experience in Europe and Central Asia would be a strong asset;
- Proven strong analytical and communication skills, excellent writing skills.
- Good knowledge of the international emergency preparedness and response system.

Applications must include:

- Cover letter on behalf of institution,
- CV and P-11 forms of every expert involved in consultancy.

Availability and daily/monthly rate (in US$) to undertake the terms of reference above should be indicated.

Annex 2. Operational definitions:

Competency is an observable behavior supported by specific knowledge, skills, and attitudes. Each competency has a specific result or output.

Gap Analysis identifies the difference between current performance and the desired performance.

Needs Assessment is a process of gathering of information about a specific work need that can be resolved by training. The types of needs assessment include performance analysis, target population analysis, sorting training needs and wants, job analysis, and task analysis.

Target Population is an individual or group involved in a needs assessment or training program.

Training Needs Assessment is a method of determining if a training need exists and, if it does, what training is required to fill the gap.

Cambodian Ministry of Interior and Japan International Cooperation Agency (n. d.).

References

Ablah, E., Tinius, A. M., & Konda, K. (2009). The National Training Strategy for Emergency Preparedness: Collective Lessons Learned. *Journal of Public Health Management and Practice,* March Supplement, S31–S35.

Cambodian Ministry of Interior and Japan International Cooperation Agency. (n. d.). Project on Improvement of Local Administration in Cambodia (PILAC): Manual on Training Needs Assessment.

Childers, W., Alperin, M., & Miner, K. R. (2005). Emergency Preparedness in Georgia: An Assessment of Public Health Training Needs. *American Journal of Health Education, 36*, 287-294.

Gebbie, K. M., Weist, E. M., McElligott, J. E., Biesiadecki, L. A., Gotsch, A. R., Keck, C. W., et al. (2013). Implications of Preparedness and Response Core Competencies for Public Health. *Journal of Public Health Management and Practice, 19*, 224–230. DOI: 10.1097/PHH.0b013e318254cc72

Government of the Republic of Tajikistan. (2010 Mar). National Disaster Risk Management Strategy for 2010-2015, Republic of Tajikistan (Unofficial Translation). 1-33.

Hites, L. S., Sass, M. M., D'Ambrosio, L., Brown, L. M., Wendelboe, A. M., Peters, K. E., et al. (2014). The Preparedness and Emergency Response Learning Centers: Advancing Standardized Evaluation of Public Health Preparedness and Response Trainings. *Journal of Public Health Management and Practice, 20,* S17–S23. DOI: 10.1097/PHH.0000000000000066

Lichtveld M.Y., & Cioffi J.P., (2003), Public Health Workforce Development: Progress, Challenges, and Opportunities. Journal of Public Health Management and Practice, 9(6), 443-450

Markenson, D., & Westphal, R. G. (2005). Public Health Preparedness Training: Resources Are There. *Journal of Public Health Management and Practice*, November Supplement, S1–S3.

Nazli, N. N. N. N., Sipon, S., & Radzi, H. M. (2014). Analysis of Training Needs in Disaster Preparedness. *Procedia – Social and Behavioral Sciences, 140,* 576-580. DOI: 10.1016/j.sbspro.2014.04.473

Rapid Emergency Assessment & Coordination Team (REACT), Tajikistan. (2013 Dec). REACT Statement of Common Understanding, Revised. 1-6.

Richmond, A. L., Sobelson, R. K., & Cioffi, J. P. (2014). Preparedness and Emergency Response Learning Centers: Supporting the Workforce for National Health Security. *Journal of Public Health Management and Practice*, *20*, S7–S16. DOI: 10.1097/PHH.0000000000000107

Rottman, S. J., Shoaf, K. I., & Dorian, A. (2005). Development of a Training Curriculum for Public Health Preparedness. *Journal of Public Health Management and Practice,* November Supplement, S128–S131.

Sarpy, S. A., Chauvin, S. W., & Anderson, A. C. (2003). Evaluation of the effectiveness of the South Central Center for public health preparedness training. *Public Health Reports, 118,* 568-572.

Sarpy, S. A., Chauvin, S. W., Hites, L. S., Santacaterina, M. L., Capper, S., Cuccia, M., et al. (2005). The South Central Center for Public Health Preparedness Training System Model: A Comprehensive Approach. *Public Health Reports, 12*, Supplement 1, 52-58.

Tajikistan Inter-Agency Contingency Plan, 2014-2015. (2015 May). 1-25.

United Nations Development Programme (UNDP). (2012). About Tajikistan. Retrieved at http://www.tj.undp.org/content/tajikistan/en/home/countryinfo/

United Nations Development Programme Disaster Risk Management Programme. (2011 Nov). Final Report: "Support of the National Disaster Response Capacity in Tajikistan." 1-27.

United Nations Development Programme Disaster Risk Management Programme and Swiss Agency for Development & Cooperation. (n. d.). Capacity Building for Disaster Risk Management in Tajikistan.

United Nations Office for Coordination of Humanitarian Affairs (OCHA) and United Nations Disaster Assessment & Coordination (UNDAC). (2006 May). Mission Disaster Response Preparedness in Tajikistan. 1-60.

World Health Organization Regional Office for Europe. (2013 Sep). Assessment of health-system crisis preparedness – Tajikistan. Copenhagen, Denmark: Publications, WHO Regional Office for Europe.