



EVALUATION REPORT

USAID TB CONTROL PROGRAM

Program Final Performance Assessment
(Central Asia)

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August 2019

DISCLAIMER

This report was developed at the request of the United States Agency for International Development Tuberculosis Control program in the Central Asia. It was prepared by Nikita Afanasyev and Marina Kulikova, independent consultants.

The views expressed in the report are those of the authors and do not necessarily reflect the opinion of the United States Agency for International Development or the United States Government.

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Treatment
CHC	Community Health Committee
CHL	Center for Healthy Lifestyle
CoE	Center of Excellence
CSO	Civil Society Organization
CSW	Commercial Sex Worker
DOT	Directly Observed Treatment
DR-TB	Drug-Resistant Tuberculosis
DS-TB	Drug-Susceptible Tuberculosis
DST	Drug Susceptibility Testing
ET	Evaluation Team
E-TB Register	Electronic TB Register
HIV	Human Immunodeficiency Virus
HR	Human Resources
IC	Infection Control
IOM	International Organization for Migration
KNCV	KNCV Tuberculosis Foundation
LED	Light-Emitting Diode
LPA	Line Probe Essay
MCH	Mother and Child Health
MDR-TB	Multidrug-Resistant Tuberculosis
MDT	Multidisciplinary Team
M&E	Monitoring and Evaluation
MIS	Management Information System
MoH	Ministry of Health
MSF	Médecins Sans Frontières
NCTLTS	National Center for Tuberculosis, Lung diseases and Thoracic Surgery
NGO	Non Governmental Organization
NTP	National Tuberculosis Program
OpenMRS	Open Medical Record System
PH	Project Hope
PHC	Primary Healthcare
PIO	Public International Organization

PLWH	People Living With HIV
PMDT	Programmatic Management of Drug-resistant Tuberculosis
PS	Patient School
PSG	Patient Support Groups
PWID	People Who Inject Drugs
RRTB	Rifampicin Resistant Tuberculosis
RTBC	Republican Tuberculosis Center
QMS	Quality Management System
QuanTB	Quantification and Cost Estimation Tool
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
SLD	Second-line TB Drugs
SOP	Standard Operating Procedure
TA	Technical Assistance
TB	Tuberculosis
TBCP	USAID TB control program implemented by PH in Tajikistan and Uzbekistan
TGF	The Global Fund
TWG	Thematic Working Group
USAID	United States Agency for International Development
USG	United States Government
VOT	Video supported treatment
WB	The World Bank
WHO	World Health Organization
XDR-TB	Extensively Drug-Resistant Tuberculosis

Since September 2014, a consortium of partners led by Project HOPE – People-to-People Health Foundation, Inc., USA (Project HOPE) has implemented a five-year United States Agency for International Development (USAID) TB Control Program in two countries of Central Asia, namely Tajikistan and Uzbekistan, with the total funding of \$24 M. The program ends on August 31, 2019.

Uzbekistan and Tajikistan are among WHO European Region's high-priority countries for TB control. Both countries have high TB and drug-resistant TB (DR-TB) rates. According to WHO estimates of TB burden, in Uzbekistan there were 23,000 new cases in 2017, or 73 cases per 100,000 population; in Tajikistan there were 7,500 new cases of TB in 2017, or 85 per 100,000 population. Both countries are on the WHO 30 high MDR-TB burden countries list. Uzbekistan is among top 20 by estimated absolute number of MDR-TB cases, and Tajikistan is among additional 10 by estimated rate per 100,000 population and with a minimum number of 1,000 MDR-TB cases per year.

USAID TB control program catalyzed significant and probably irreversible positive changes in TB control program in Tajikistan and all systems that are involved in TB-related efforts.

The goal of the program was to support the governments and NTPs in Tajikistan and Uzbekistan to reduce the burden of TB and the development of drug-resistant TB by ensuring more effective and more accessible TB diagnosis and treatment for all, including vulnerable populations. Objectives of the program were:

1. More equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations
2. Laboratory services provide more timely, quality TB and MDR-TB diagnosis
3. Patient centered system for TB and MDR-TB implemented widely across the region
4. Enhanced enabling environment promoting TB services that meet international standards
5. Human and institutional capacity of health system to manage TB and MDR-TB services strengthened
6. Coordination and linkage of TB with other health sectors and CSOs improved
7. TB service providers and managers using electronic TB MIS and using quality data for evidence-based decision making at all levels.

The program objectives for both countries were similar.

All program activities were effective combinations of internationally recognized approaches to TB prevention and control and locally generated solutions for their introduction.

The program was implemented in three regions (oblasts) of Tajikistan – Sughd, Rasht and Khatlon, and seven oblasts of Uzbekistan – Bukhara, Navoi, Khorezm, Kashkadarya, and since 2018 - Andijan, Fergana, Jizzakh.

The evaluation of the program was requested to assess the TBCP against its stated outcomes and outputs as of the end of the final Program year (Year 5). The assessment should have determined if the project achieved its objectives; which components worked well and which did not, which components faced challenges during implementation; how these challenges were addressed; how sustainable the changes are; remaining gaps that would need to be addressed

in any potential subsequent projects as well as lessons learned. The assessment findings will provide information for decision making on approaches and scope for future projects.

The evaluation team (ET) assigned to fulfil this task included Dr. Nikita Afanasyev (Team Leader) and Dr. Marina Kulikova (TB Technical Specialist). A period of implementation was from July 1 to August 31, 2019, including field visits to Tajikistan and Uzbekistan from July 28 to August 10, 2019.

In the process of implementation, ET utilized mixed-methods evaluation approach that includes personal (key informant) interviews (PI) with host country health officials and professionals, patients, CSOs representatives and other clients, group interviews (GI) and discussions, and direct observations. ET also reviewed and analyzed the available health statistics and publications from both countries, as well as WHO and WB database in regard to TB control in Uzbekistan and Tajikistan.

In both countries ET interviewed a variety of respondents from different groups of clients and stakeholders: practitioners, representatives of the civil society, rayon and oblast governments, public health and NTP managers, patients. All interviewees highly valued the contribution of USAID TB Control program in the national efforts to combat TB. The available project progress reports reviewed by ET prior to field visits, and information obtained during evaluation trip suggest that all TB control program activities were implemented in full and with the appropriate quality. The goal and objectives of USAID TB Control program in Tajikistan and Uzbekistan were successfully reached.

The goal and objectives of USAID TB Control program in Tajikistan and Uzbekistan were successfully reached.

In few cases the projected indicator values were not fully achieved. However, analysis of the causes for underachievement suggests that it was not determined by any errors in implementation of respective program activities.

USAID TB control program catalyzed significant and probably irreversible positive changes in TB control program in Tajikistan and all systems that are involved in TB-related efforts. The political commitment to TB control of the Tajikistan Government and local authorities in past few years obviously strengthened. TBCP stimulated the increase of national budget investments in TB control over the five year period and subsequent increases of local TB control-related funding, which matches the WHO End TB Strategy, the United States Government Global TB Strategy and USAID Global Accelerator to End Tuberculosis agendas and creates a basis of the further sustainability of the introduced improvements and innovative changes. Over the life of the program, TBCP in Tajikistan developed a lot of deliverables such as reports, presentations, publications, training materials, conference hand-outs, public information and education materials and so on. In total, TBCP in Tajikistan produced 28 policy documents which cover all aspects of TB control. TBCP provided a wide range of training courses for health professionals and non-medical providers to increase human resources capacity to deliver quality TB-related services to population, including vulnerable groups. With assistance of the program, the Republic Center of Excellence (CoE) was established at the Machiton TB Hospital - Republic Center for TB, Pulmonology and Thoracic Surgery (NCTLTS). TBCP provided equipment and furniture to 7 TB facilities, including 2 at the central

In few cases the projected indicator values were not fully achieved. However, analysis of causes for underachievement suggests that it is not determined by any errors in implementation of respective program activities.

level (NCTLTS and RTBC) and 5 in administrative regions, and covered expenditures to ensure the internet access for the period of the emergence of new centers of training and communications thus establishing a system of telemedicine in country. The National CoE on TB conducts seminars for health providers (jointly with the Post Graduate Medical Institute) and students from the Tajik Medical University, organizes online DR-TB consilia to review difficult MDR/XDR-TB cases, and provides technical recommendations. The model and experience of the Center was replicated in Uzbekistan. A laboratory quality management system (QMS) developed and introduced with TBCP technical assistance is deployed at 30 microscopic and 2 bacteriological laboratories in pilot oblasts. The system

allows assuring quality of TB laboratory testing thus advancing TB diagnostic. With USAID support, TB laboratory network was significantly improved and strengthened thus forming a robust ground for timely and correct diagnostic of TB and DR TB and successful execution of treatment regimens, including short treatment regimens, to improve treatment results. One of key TBCP achievements is that all 32 supported TB laboratories meet international quality standards. An electronic system of TB cases registering Open MRS (E-TB Register) supported

by the program is fully operational in TB facilities and all 82 established access points are in use. The system is a very convenient and helpful instrument for monitoring and analysis of TB detection, treatment and programmatic management. Since one of the primary tasks of TBCP was improvement of provision of TB care to vulnerable groups of population, TBCP established Community Health Committees (CHC) as an effective mechanism of community outreach that serves two basic inter-related goals: strengthening TB awareness and decreasing TB-associated stigma, and improvement of timely TB detection, referral to TB/health facilities, and ensuring treatment compliance. CHC is very instrumental in working with vulnerable groups of population, such as migrants. CHC mechanism contributed to strengthening and further institutionalization of patient-centered approach in TB control and increasing of civil society involvement in combatting socially sound diseases. In addition, since the majority of CHC activists are women the development of CHC mechanism contributed to empowerment of women in the society. Thanks to the program, many women got an opportunity to increase their visibility and role in the community and ensure they are part of solutions to address and prevent socially important disease and disease-associated stigma and discrimination. Other direct benefit for women was that CHC (and CSO) involvement helped to detect 2,769 TB patients among women, 99.9% of whom started TB treatment. In total, 143 CHCs are established in pilot regions, all of them currently operational and working under overall coordination of regional Centers of Healthy Lifestyle. CHC mechanism is a good example of locally generated solutions in accordance with USAID Global Accelerator to End Tuberculosis.

With USAID support, TB laboratory network was significantly improved and strengthened thus forming a robust ground for timely and correct diagnostic of TB and DR TB.

The representatives of the central government, NTP managers, practitioners, representatives of civil society groups and international partners highly valued USAID TB Control program contribution to the national efforts to combat TB in Uzbekistan. The USAID TB control program promoted or further developed a number of positive valuable modifications of TB control program in Uzbekistan and other systems that are involved in TB-related activities. The political commitment to TB control of the Uzbekistan leaders and local authorities over past few years was consistently high. On 13 February 2019, the President of Uzbekistan issued a Decree #4191 “On measures on improvement of the system of provision of specialized phthisiatric and pulmonology care”, which directly prescribes introduction of the out-patient TB treatment along with provision of psycho-social support, VOT and short treatment regimens into practice in 2019. It is noteworthy that USAID is mentioned as a partner in implementation of that task. It means that USAID-supported strategic approach is institutionalized in the country at the highest possible level that is obvious and outstanding success of the program which may not be overestimated. Over the life of the program, TBCP in Uzbekistan produced a number of documents such as reports, presentations, publications, training materials, conference materials, public information and education materials and so on, including six policy documents which are endorsed by the government. Three guidelines were amended to accommodate international standards of TB diagnostic and care, one national TB regulation amended to reflect international standards for outpatient treatment of TB. All those materials contributed to improvement of different aspects of TB control program and to the certain extent provide the ground for the sustainability of the program-introduced methods and approaches. TBCP established the laboratory quality management system, an international standard of the quality laboratory performance, at 50 laboratories in pilot regions thus strengthened laboratory diagnostic of TB. At the end of the Program 45 out of 50 supported TB laboratories meet international quality standards. TBCP established a system of telemedicine in Uzbekistan which is based on the network of Centers for innovative distance learning and monitoring. The leading center is located at the National Center of Phthisiatry and Pulmonology – Center of Excellence (Tashkent); others are opened at regional TB facilities (Andijan, Jizzakh, Fergana, Bukhara, Khorezm, Kashkadarya, Navoi). Currently the network consists of 8 centers. The centers are used for on-line trainings, remote consilia and for consultations on difficult TB cases. The National Center is responsible for diagnostic of XDR TB cases. Telemedicine techniques are very instrumental in making the process effective and less expensive than transportation of patients for diagnostic or duty travels of highly qualified specialists for provision of training or consultations. The program has improved drug management at the central and oblast levels. TB pharmaceutical management Quan TB software is used in 105 facilities of the program regions. For strengthening the provision of TB care and support to vulnerable groups of population the program implemented two coherent activities – development and institutionalization of new structures which may serve as

a mechanism for delivery of services (Multidisciplinary Teams (MDTs)), and education of people who are working for those structures. Being established on initiative and with technical assistance of TBCP, and endorsed by MoH, MDTs in turn became a school for volunteers in country. MDTs made involvement in the fight against socially sound diseases attractive and respected activity thus contributing to the development of the civil society. MDTs were actively working with makhallas (the community level structure of state governance) to deliver correct TB-related messages to population in communities to reduce and prevent stigma and discrimination, detect people with suspected TB symptoms and provide assistance to TB patients on out-patient treatment. The work in some cases was legalized through signing specific memorandums between MDTs (TB facility) and heads of a makhalla (rais).

In design and implementation of the program activities, TBCP applied a systemic approach to the improvement of TB control activities in Tajikistan and Uzbekistan. In particular, the following mechanisms were employed to strengthen various components of NTP and TB care provision:

- Strengthening political commitment – regular meetings and communication with the MoH and local governments officials, provision of support to participation of NTP managers in international events, working with mass-media, reporting on innovative models development;
- Capacity building – trainings and re-trainings, including those for non-medical staff, CoEs, OpenMRS, QuanTB;
- Strengthening regulatory base – technical assistance in development and modification of various regulatory and normative documents and guidelines, advocacy activities;
- Community engagement (detection of new cases, increasing TB care demand, including vulnerable populations) – CHCs, MDTs, NGOs, working with mass-media;
- Service delivery – training of health professionals and para-medical workers, observation tours, telemedicine (consilia, on-line trainings, and consultations), laboratory quality management system (QMS), CHCs and MDTs, direct technical assistance;
- Care and support – CHCs, patient schools, patient support groups, advocacy in local governments;
- Reporting, planning and forecast (MIS) – OpenMRS, QuanTB, trainings, direct technical assistance.

All program activities were effective combinations of internationally-recognized approaches to TB prevention and control (e.g., patient-centered approach) and locally generated solutions for their introduction (e.g., CHCs, MDTs).

The program was managed by capable and dedicated teams of professionals who were able to establish and maintain the appropriate working relationships with national and international partners and demonstrated due level of flexibility, responsibility and responsiveness.

The sustainability of introduced techniques is a bit worrisome in both countries. Even superficial review of the government allocations on health sphere demonstrates insufficient readiness of both visited countries to take more substantial financial responsibility. Both countries require continuation of technical assistance and financial support to TB control efforts at least within next 5 years.

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Based on analysis of TBCP accomplishments and remaining TB-related challenges, the following basic recommendations may be provided:

Tajikistan:

- Roll-out of experience and models from TBCP pilot sites to other regions with peer education;
- Assistance in expansion of CHC network nation-wide;
- Create the human resources development strategy;
- Compile a brochure (compendium) that includes all regulatory and guiding documents developed with TA of TBCP and probably other international partners;

- Develop a training program for high level NTP managers and professors from medical education facilities;
- Involvement of health professionals from the regions other than target areas in monitoring missions;
- Consider technical assistance to build in-country capacity for WHO prequalification process of TB drugs production.

Uzbekistan:

- Further analysis of results accomplished and planning activities that would promote political commitment of other oblasts to implement similar approaches to TB control;
- Expansion of MDT network county-wide;
- Provision of further technical assistance to NTP in implementation of Presidential Decree;
- Initiate establishing of working group on patient-centered approach at the central level;
- Provide technical assistance to MoH and NTP in developing a strategy of smooth transition to self-reliance.

General:

- Continue provision of assistance in TB control efforts;
- In light of possible gradual decrease of external assistance to develop a “roadmap” for replacement of outgoing components by respective national contributions;
- Perform operational researches to provide scientific evidence on cost-effectiveness and efficiency of introduced techniques;
- Revision and further development of activities focused on labor migrants in order to broaden the access to care for them;
- Continue at the same or increased level the program component aimed at collaboration with mass-media;
- Select for implementation of next activity a group who has proven qualification and ability to deal with local realities and difficulties. All required and possible measures should be undertaken to avoid turnover of key program staff over the life of the program;
- Involve young TB professionals (for example, residents from medical universities) in both countries to work as volunteers or interns with the program team.

Since September 2014, Project HOPE – People-to-People Health Foundation, Inc., USA (Project HOPE) has implemented a five-year United States Agency for International Development (USAID) TB Control Program with the total funding of \$24 M in two countries of Central Asia, namely Tajikistan and Uzbekistan. The program ends on August 31, 2019.

The goal of the program was to support the governments and NTPs in Tajikistan and Uzbekistan to reduce the burden of TB and the development of drug-resistant TB by ensuring more effective and more accessible TB diagnosis and treatment for all, including vulnerable populations. The Program focused on vulnerable groups of population including prisoners, ex-prisoners, migrants, women, people who inject drugs, and people living with HIV infection. The Program supported national TB prevention and control programs in Tajikistan and Uzbekistan thus contributing to the World Health Organization's End TB Strategy and the United States Government Global Tuberculosis Strategy (2015 – 2019) goals. The program objectives for both countries were similar.

Objectives of the program were:

1. More equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations
2. Laboratory services provide more timely, quality TB and MDR-TB diagnosis
3. Patient centered system for TB and MDR-TB implemented widely across the region
4. Enhanced enabling environment promoting TB services that meet international standards
5. Human and institutional capacity of health system to manage TB and MDR-TB services strengthened
6. Coordination and linkage of TB with other health sectors and CSOs improved
7. TB service providers and managers using electronic TB MIS and using quality data for evidence-based decision making at all levels.

Three areas of TB control were considered as priorities:

1. Human resources development at facility and community levels for effective managing of TB and MDR-TB;
2. Improvement of service delivery by focusing on quality laboratory services, and strengthening of a patient-centered approach as a key-stone for success of transition to outpatient care;
3. Improving policy development, advocacy and data use to support TB control improvements and ensure their sustainability.

The program was implemented in three regions (oblasts) of Tajikistan – Sughd, Rasht and Khatlon, and seven oblasts of Uzbekistan – Bukhara, Navoi, Khorezm, Kashkadarya, and since 2018 additionally in Andijan, Fergana, Jizzakh.

The evaluation of the program was requested by USAID to assess the TBCP against its stated outcomes and outputs as of the end of the final Program year (Year 5). The primary task for the assessment was to determine if the project is achieving its objectives; which components worked well and which did not, which components faced challenges during implementation; how these challenges were addressed; how sustainable the changes are; remaining gaps that will need to be addressed in any potential subsequent projects as well as lessons learned. The assessment findings will provide information for decision making on approaches and scope for future projects.

The following questions for the assessment were suggested in line with the assessment tasks and avenues of the program activities, grouped by topics:

- I. Project results
 - I.1. To what extent did the project achieve the anticipated final results?
 - I.2. To what extent has the project strengthened TB systems?
 - I.3. What systems were to expand access to TB diagnostic, treatment, and care services – focusing on vulnerable populations in each country?
 - I.3.1. How were systems around human resources and capacity strengthened?

- I.3.2. How were policies, regulations and procedures strengthened?
 - I.3.3. How sustainable will project results be? Consider the extent to which the Project considered sustainability in its implementation and choice of strategies.
 2. Fidelity to the implementation of the project plan
 - 2.1. To what extent did the project implement the work- planned activities?
 - 2.2. Which activities were not implemented (or partially implemented) and why were these activities not implemented?
 - 2.3. In what ways did any change in planned activities affect overall outcomes and results?
 3. Consortium partner relationships
 - 3.1. How effective was the coordination between and within the project partnerships?
 - 3.2. What mechanisms ensured coherence and exclusion of duplication?
 4. Relationship with key stakeholders
 - 4.1. How has the project worked with the specific governments?
 - 4.2. What mechanisms have been used to coordinate planning, implementation, evaluation and reporting of results with NTPs and other relevant government units?
 - 4.3. In what ways did the project accommodate any differences in systems and context in the two countries?
 - 4.4. What challenges presented themselves in the coordination and/or relationship with the different government players?
 - 4.5. How did the project address those challenges?
 - 4.6. How lessons have been learned from this project on how to work with the governments in both countries?
 5. Community engagement and capacity building, including CSOs
 - 5.1. How has the project coordinated with communities including CSOs serving vulnerable populations?
 - 5.2. What impact has community engagement had on linking clients to care? Also, explore ways in which community engagement may have failed to improve linkage to care?
 - 5.3. What could have been improved in how the project worked with community stakeholders?
 6. NTP capacity building
 - 6.1. How has the project developed capacity of the NTP?
 - 6.1.1. What activities were conducted to enhance capacity?
 - 6.1.2. Examine capacity in policies, regulations and procedures.
 - 6.1.3. What challenges were observed in building NTP capacity and how were these challenges resolved?
 - 6.1.4. What are the key capacity issues that future projects would have to address?
 7. Recommendations
 - 7.1. What Recommendations do you make for future programming?
 - 7.2. Examples of innovative approaches that were developed and applied?

The team assigned to carry out current evaluation of the program included:

- Nikita Afanasyev, TB and public health consultant (Team leader)
- Marina Kulikova, TB consultant

The program assessment included the following activities:

1. Desk review of available reports and documentation, including:
 - a. Documents of the program
 - b. Data sources of World Health Organization, the Global Fund to Fight AIDS, TB and Malaria and other relevant sources
2. Preparation of plans and questionnaires for site visits
3. Travel to Tajikistan and Uzbekistan. Site visits, meeting and discussions with TBEP, clients and stakeholders
4. Analysis of the information obtained
5. Writing of draft report

A previous assessment (mid-term evaluation) was conducted in September 2017. Observations, conclusions and recommendations of the mid-term evaluation were taken into account while preparing the subject report.

ET utilized mixed-methods evaluation approach that includes personal (key informant) interviews (PI) with TBCP implementing teams, host country government officials , public health managers and professionals, patients, representatives of civil society groups, employees of international organizations and other clients, group interviews (GI), free discussions and direct observations. ET reviewed and analyzed available health statistics and publications from both countries, as well as WHO database in regard to TB control in Uzbekistan and Tajikistan. ET reviewed available USAID documents, TBCP progress reports and reports of other organizations regarding TB control in both countries and international assistance provided in this area of public health to national governments.

A field trip to Tajikistan and Uzbekistan was conducted from July 28 to August 10, 2019. The list of key persons met and interviewed included in Annex 3. Trips itineraries included in Annex 4.

Debriefing for USAID Mission to Central Asia and TBCP in Tajikistan took place on August 2, 2019 via phone. Upon USAID request, ET compiled and submitted debriefing paper to USAID on August 5 through TBCP office in Tajikistan.

ET conducted the interim briefing for USAID Country office in Uzbekistan on August 8, 2019.

Table 1. Evaluation questions, methods and limitations

EVALUATION RUBRIC/QUESTION	EVALUATION METHOD	DATA SOURCE	LIMITATIONS
I. PROJECT RESULTS			
I.1. To what extent did the project achieve the anticipated final results?	PI, GI, analysis of reports and data	Discussions, observations, documents	Opinions of interviewees may be biased
I.2. To what extent has the project strengthened TB systems?	PI, GI, analysis of reports and data	Discussions, observations, documents	Extraction of TBCP contribution is difficult due to number of development programs
I.3. What systems were to expand access to TB diagnostic, treatment, and care services – focusing on vulnerable populations in each country?	PI, GI, analysis of reports and data	Discussions, observations, documents	All developed systems are somehow focused on vulnerable populations
I.3.1. How were systems around human resources and capacity strengthened?	PI, GI, analysis of reports and data	Observations, documents	All relevant information may not be available
I.3.2. How were policies, regulations and procedures strengthened?	PI, GI, analysis of reports	Discussions, documents	Difficult to define how those documents followed county-wide

1.3.3. How sustainable will project results be? Consider the extent to which the Project considered sustainability in its implementation and choice of strategies.	PI, analysis of reports and data	Discussions, documents	Sustainability to great extent depends on factors beyond program
2. FIDELITY TO THE IMPLEMENTATION OF THE PROJECT PLAN			
2.1. To what extent did the project implement the work- planned activities?	PI, GI, analysis of reports	Discussions, documents	Implementation of all planned activities may not necessarily result in reaching projected indicators value
2.2. Which activities were not implemented (or partially implemented) and why were these activities not implemented?	PI, GI, analysis of reports and data	Discussions, observations, documents	
2.3. In what ways did any change in planned activities affect overall outcomes and results?	PI, analysis of reports and data	Discussions, documents	Opinions of interviewees may be biased. All relevant data may not be available
3. CONSORTIUM PARTNER RELATIONSHIPS			
3.1. How effective was the coordination between and within the project partnerships?	PI, GI, observations	Discussions, observations, documents	Opinions of interviewees may be biased
3.2. What mechanisms ensured coherence and exclusion of duplication?	PI, GI, analysis of reports	Discussions, documents	
4. RELATIONSHIP WITH KEY STAKEHOLDERS			
4.1. How has the project worked with the specific governments?	PI, GI, analysis of reports	Discussions, documents	Opinions of interviewees may be biased

4.2. What mechanisms have been used to coordinate planning, implementation, evaluation and reporting of results with NTPs and other relevant government units?	PI, GI, analysis of reports	Discussions, documents	
4.3. In what ways did the project accommodate any differences in systems and context in the two countries?	PI, GI	Discussions	
4.4. What challenges presented themselves in the coordination and/or relationship with the different government players?	PI, GI	Discussions	Opinions of interviewees may be biased
4.5. How did the project address those challenges?	PI, GI, analysis of reports	Discussions, documents	
4.6. How lessons have been learned from this project on how to work with the governments in both countries?	PI, GI	Discussions	Opinions of interviewees may be biased
5. COMMUNITY ENGAGEMENT AND CAPACITY BUILDING, INCLUDING CSOS			
5.1. How has the project coordinated with communities including CSOs serving vulnerable populations?	PI, GI, analysis of reports	Discussions, documents	
5.2. What impact has community engagement had on linking clients to care? Also, explore ways in which community engagement may have failed to improve linkage to care?	PI, GI, analysis of reports	Discussions, documents	All relevant data may not be available
5.3. What could have been improved in how the project worked with community stakeholders?	PI, GI	Discussions	
6. NTP CAPACITY BUILDING			

6.1. How has the project developed capacity of the NTP?	PI, GI, analysis of observations, reports and data	Discussions, observations, documents	Extraction of TBCP contribution is difficult due to number of development programs
6.1.1. What activities were conducted to enhance capacity?	PI, GI, analysis of observations, reports and data	Discussions, observations, documents	
6.1.2. Examine capacity in policies, regulations and procedures.			
6.1.3. What challenges were observed in building NTP capacity and how were these challenges resolved?	GI, PI	Discussions, observations	Opinions of interviewees may be biased
6.1.4. What are the key capacity issues that future projects would have to address?	Analysis of reports and data	Documents, observations	
7. RECOMMENDATIONS			
7.1. What Recommendations do you make for future programming?	Analytical review of all available information	Discussions, observations, documents	Part of information may be biased and inaccurate
7.2. Examples of innovative approaches that were developed and applied?	Analysis of observations and reports	Observations, documents	Innovations may have limited application

BACKGROUND. EPIDEMIOLOGY, TB CONTROL, INTERNATIONAL AND USAID ASSISTANCE

Tajikistan and Uzbekistan are among the WHO European Region's high-priority countries for TB control. Both countries have high TB and drug-resistant TB (DR-TB) rates. According to WHO estimates of TB burden, in Uzbekistan there were 23,000 new cases in 2017, or 73 cases per 100,000 population; in Tajikistan there were 7,500 new cases of TB in 2017, or 85 per 100,000 population. Both countries are on the WHO 30 high MDR-TB burden countries list. Uzbekistan is among top 20 by estimated absolute number of MDR-TB cases, and Tajikistan is among additional ten by estimated rate per 100,000 population and with a minimum number of 1,000 MDR-TB cases per year. More information about TB spread and anti-TB measures is provided in Annex I.

USG assistance to Tajikistan and Uzbekistan in prevention of TB spread started back in 1997. The evaluated USAID program was launched in 2014 initially in three oblasts of Tajikistan and four oblasts in Uzbekistan. In 2018, TBCP in Uzbekistan rolled-out to three additional regions in response to the government request.

The program was focused primarily on introduction of innovative evidence-based and WHO-recommended methods tailored to the country context with specific emphasis on vulnerable populations – women, migrants, PLHIV, PWID, prisoners and ex-prisoners and based on patient-centered approach. Another area of special attention was strengthening of national response to increasing numbers of DR TB cases and TB/HIV co-infection, including technical assistance in policy and strategy development and building NTP capacity to manage this response.

Implementation of the Program integrated various partners with relevant experience, including International Organization for Migration (IOM), AIDS Foundation East-West (AFEW), KNCV Tuberculosis Foundation, local NGOs as sub-awardees, and closely interacted with other agencies providing support to NTPs and national authorities, especially Global Fund and other USG-supported partner projects, e.g. Challenge TB.

In both countries cooperation with another USAID project – Challenge TB formed a solid basis for amplification of results through complementary efforts in pilot regions. Challenge TB is a project implemented in 26 countries by international consortium led by the Dutch TB Foundation KNCV. In Tajikistan KNCV is present; in Uzbekistan WHO implements the project as a member of the consortium. As an example of collaboration, the laboratory equipment supplied under Challenge TB project to TBCP pilot regions is used by local TB service providers who are trained by TBCP; laboratory performance quality assurance system is introduced and supported by TBCP.

It's worth to mention that any large procurement component under TBCP was not initially envisioned. However, upon request of NTP in Uzbekistan, the program purchased laboratory and other equipment for a number of TB facilities which caused certain changes in mid-term planning and implementation of the program.

The program closely collaborated with the Global Fund projects in both countries. TGF projects are responsible for procurement of equipment, supplies, anti-TB drugs and in some cases drugs for management of adverse reactions, and coverage of other expenditures. Currently TGF grant program in Tajikistan with the total funding of \$14,119 thousand is in the middle of its implementation. The completion of the project is planned for 2021. In Uzbekistan, TGF project with the total funding of \$17 million is also coming to the end. Currently it looks premature to discuss continuation of TGF assistance but creates a demand to elaborate effective measures leading to sustainability and increased domestic financing of TB control efforts, including innovations introduced with technical assistance and financial support of international funding and technical agencies.

On March 25, 2019, USAID and MoH of Uzbekistan signed the Memorandum of Understanding to strengthen bilateral cooperation to stop TB and DR-TB spread in the country. The appearance of this document confirms, among other, a strong political commitment of the Uzbekistan government to TB control.

In terms of public health financing, two countries differ significantly. According to WHO, per capita health expenditures in Tajikistan is US\$206.51 (PPP, 2016), while in Uzbekistan twice higher - US\$416.90 (PPP, 2016). Yet, both figures are far from the sufficient level.

Given limited financial capacities of both countries and, respectively, public health systems, the program suggested more cost-effective methods of TB diagnostic and treatment, especially in regard to patients from vulnerable groups of population.

FINDINGS AND OBSERVATIONS

Observations and information obtained as a result of field trips to both countries and review of available documents and materials are provided below in the format of replies to the assessment questions.

TAJIKISTAN

I. Project results

I.1. To what extent did the project achieve the anticipated final results?

During field visits ET interviewed a variety of respondents from different groups of clients and stakeholders: practitioners, representatives of civil society groups and partner agencies, rayon and oblast governments, public health and NTP managers, patients. All interviewees highly valued the contribution of USAID TB Control program in the national efforts to combat TB. The available project progress reports reviewed by ET prior to the visit to Tajikistan, and information obtained during evaluation trip suggest that all TB control program activities were implemented in full and with the appropriate quality.

In particular, based on review of and discussions on the program performance indicators and analysis of available information, the goal of the program to support the governments and NTPs in Tajikistan and Uzbekistan to reduce the burden of TB and the development of drug-resistant TB by ensuring more effective and more accessible TB diagnosis and treatment for all, including vulnerable populations, was reached. The targets for all 3 goal-level indicators (1) *Percentage of bacteriologically confirmed TB cases successfully treated (cured plus treatment completed) among the bacteriologically confirmed TB cases registered for treatment during a specified period in pilot areas*; 2) *Number of bacteriologically confirmed, drug resistant TB cases (RRTB and MDR-TB) notified in pilot areas*; 3) *Number of MDR-TB cases who initiate second line treatment in pilot areas*) were achieved with about 95% of completion. The target for the indicator *Percentage of bacteriologically confirmed TB cases successfully treated (cured plus treatment completed) among the bacteriologically confirmed TB cases registered for treatment during a specified period in pilot areas* exceeded the projected level.

For tracking the performance under Objective 1: *More equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations* 7 performance indicators were used:

- I.1 Number of TB cases (all forms) notified among vulnerable populations (PLWH, PWID, prisoners/ex-prisoners, migrants) in pilot area through program referral;
- I.2 Number of TB cases (all forms) notified among women in pilot area;
- I.3 Number of TB cases (all forms) notified among vulnerable populations (PLWH, PWID, prisoners/ex-prisoners, migrants) in pilot area through program referral who started TB treatment;
- I.4 Number of TB cases (all forms) notified among women in pilot area who started TB treatment;
- I.5 Percentage of released prisoners in pilot areas continuing treatment in civil sector;
- I.6 Percentage of referred vulnerable population that were tested for TB;
- I.7 Number of vulnerable population reached by all types of project activities.

The targets for indicators 5 and 6 were overreached. The targets for indicators 2, 4, 7 were reached with more than 90%. The targets for indicators 1 and 3 were moderately achieved (both exceeded 75%). Moderate achievement of these indicators was caused by delay in launching of local CSO activities. Under the Program strategy, CSO engagement was planned for Year 1. However, due to certain contract limitations CSO engagement was postponed until Year 4, when the respective changes in TBCEP funding mechanism allowed provision of small grants to CSOs. So the program was not able to cover such vulnerable groups as PLHIV and PWID in years 1 – 3,

as initially planned. Although activities focused on migrants, prisoners and ex-prisoners were performed by IOM, CHC and AFEW, the coverage was not full in years 1 – 3 as well. Accordingly, the related indicators (1 and 3) for the Program Years 1-3 were underachieved. However, with the start of activities with vulnerable groups (PWID, PLHIV, migrants, prisoners/ex-prisoners) by six CSOs in Year 4, the targets were achieved in coverage, TB detection and treatment initiation, thus proving the effectiveness of the Program's original strategy. Another potential reason of underachievement could be just epidemiology regardless of the Program interventions.

Objective 2 of the Program: *Laboratory services provide more timely, quality TB and MDR-TB diagnosis* was completely accomplished and two related indicators (1) Percentage of laboratories in pilot areas successfully implementing quality management systems, and (2) Number of laboratories in pilot areas started implementation of quality management systems) reached the projected levels.

For tracking the performance on Objective 3 of the Program: *Patient centered system for TB and MDR-TB implemented widely across the region* four performance indicators were used:

- 3.1 Percentage of patients successfully treated in out-patient treatment for drug-susceptible TB in pilot areas;
- 3.2 Percentage of patients successfully treated in out-patient treatment for MDR-TB in pilot areas;
- 3.3 Percentage of MDR-TB cases managed in outpatient settings;
- 3.4 Percentage of drug-susceptible TB cases managed in outpatient settings.

Targets for indicators 1 and 3 were successfully completed with about 95% in average or higher. The target for indicator 2 is moderately achieved. In 2016 (last reported year), 115 MDR-TB cases on outpatient treatment were registered, among whom 74 (64%) had successfully completed treatment. The low treatment success rate among the 2016 cohort of MDR-TB patients in TBCP sites consistent with the overall country rate of 65% (NTP data) but represents a significant improvement from the 49.5% treatment success rate reported for the 2014 cohort. Three patients are still on treatment and it is expected that in case of successful completion of treatment the actual result will increase.

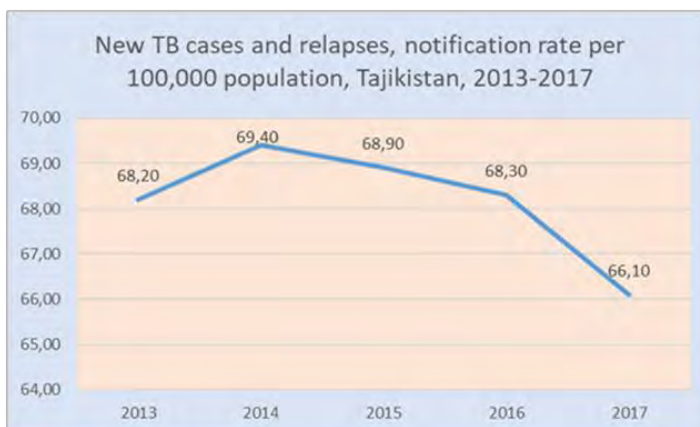
All targets for the performance indicators on Objective 4: *Enhanced enabling environment promoting TB services that meet international standards* were achieved and overachieved:

- 4.1 Number of developed and revised by program policies and guidelines that are officially approved/endorsed by government – full completion;
- 4.2 Number of National TB regulations (i.e. executive orders), policies revised to comprehensively adhere to international standards for outpatient treatment of TB and MDR-TB – more than 150% completion
- 4.3 Number of revised policies and guidelines to comprehensively adhere to international standards for diagnosis and case management of TB and MDR-TB – full completion

All targets for the performance indicators on Objective 5: *Human and institutional capacity of health systems to manage TB and MDR-TB services strengthened* were also achieved or overachieved:

- 5.1 Percentage of health providers trained in different aspects of TB control scoring $\geq 85\%$ on post- test – more than 100% completion;
- 5.2 Percentage of non-health providers trained in different aspects of TB control scoring $\geq 85\%$ on post-test – more than 100%;

Figure 1. New TB cases and relapses, notification rate per 100,000 population, Tajikistan, 2013 - 2017



Source: Global tuberculosis report 2018. Geneva: World Health Organization; 2018. www.who.int/tb/data

- 5.3 Percentage of TB facilities in pilot areas implementing priority IC measures - 100% completion;
- 5.4 Number of health providers trained in different aspects of TB control - more than 100% completion;
- 5.5 Number of non-health providers trained in different aspects of TB control - more than 100% completion;
- 5.6. Number of individuals trained in any component of the WHO Stop TB Strategy with USG funding – more than 100% completion.

Targets for indicators on Objective 6: *Coordination and linkage of TB with other health sectors and CSOs increased* were also achieved or overachieved:

- 6.1 Percentage of TB patients who had an HIV test result recorded in the TB register - full completion;
- 6.2 Percentage of HIV positive patients who were screened for TB in HIV care or treatment settings – more than 100%;

Targets for indicators on Objective 7: *TB service providers and managers using electronic TB MIS and using quality data for evidence-based decision making at all levels* were achieved and overachieved as well:

- 7.1 Number of TB facilities using electronic TB MIS system according to WHO standards - more than 120% completion;
- 7.2 Percentage of TB facilities conducting a data quality assessment in the past 12 months – 100% completion.

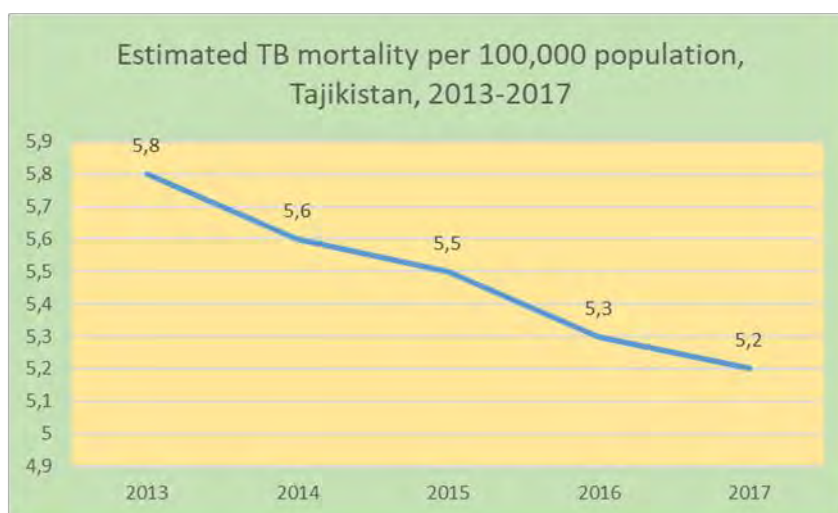
Thus, the achieved rates of indicators also suggest that the goal and all objectives of the program were successfully accomplished.

1.2. To what extent has the project strengthened TB systems?

Based on opinions expressed by responders from the state authorities, the USAID TB control program catalyzed significant and probably irreversible positive changes in TB control program in Tajikistan and all systems that are involved in TB-related efforts. The political commitment to TB control of the Tajikistan Government and local authorities over past few years obviously increased. For example, in order to avoid catastrophic costs and loss of income associated with TB, the government provides various forms of support to TB patients and their families, including food stuffs, 50% discount of electricity

supply, cash payments, tax exemptions, plots of land for the agriculture, depending on capacities of local authorities. Based on information that ET obtained from NTP and the oblast level officials, USAID TB Control program catalyzed a certain increase of national budget investments in TB control over the five year period and subsequent increases of local TB control-related funding, which matches USAID Global Accelerator to End Tuberculosis agenda and creates a basis for the further sustainability of the introduced improvements and innovative changes. The national government has made a decision on up to 100% increase of wages in TB control program which would make TB area more attractive for young professionals. In 2018, the central government

Figure 2. Estimated TB mortality per 100,000 population, Tajikistan, 2013 - 2017



Source: Global tuberculosis report 2018. Geneva: World Health Organization; 2018. www.who.int/tb/data

allocated 3.3 M somoni (about \$375,000) for procurement of first-line drugs, and in 2019 the budget allocations for this purpose are planned at 3.7 M somoni. For Tajikistan it is a significant amount. The government performed renovation of a number of TB facilities, and has funded 5 times increase of allocations for meals for patients.

All ET responders emphasized the importance of TB-related training provided by the Program to various groups of medical and para-medical staff. The Program-arranged trainings are not just professionally useful for health workers but also contributed to their occupational upgrading and promotion. Based on received information, practitioners trained by TBCP in turn organized on-the-job training for their colleagues. ET interviewee from NTP stressed that new training modules developed under the Program are used in the course of under- and post-graduate education and trainings of TB specialists and general practitioners. In the long run, this may serve as a ground for sustainability of advanced approaches to TB spread prevention and control introduced by TBCP. A proportion of TB professionals who participated in the trainings provided by the Program, is reaching 100% in pilot regions. Important, that the selection of training topics was made in consultations with NTP and based on practical needs of health professionals, e.g. discussion on updates in WHO recommendations or rational and proper use of provided laboratory equipment. All TBCP-arranged trainings were institutionalized, participants received credits (hours) upon successful completion of each training session which is required for confirmation of professional grade or upgrading of health specialists.

In addition to TB professionals, TBCP provided trainings for family physicians (general practitioners), nurses and doctors from other fields of public health in order to deliver the basic knowledge and skills required for better detection and provision of care to TB patients, infection control and other areas. The total number of medical workers trained is 4,405 and 2,166 of para-medical staff. 85.5% of trained scored 85% and more on the post-test.

With assistance of the Program, the Republic Center of Excellence (CoE) was established at the Machiton TB Hospital - Republic Center for TB, Pulmonology and Thoracic Surgery. The National CoE on TB conducts seminars for health providers (jointly with the Post Graduate Medical Institute) and students from the Tajik Medical University, organizes online DR-TB *consilia* to review difficult MDR/XDR-TB cases, and provides recommendations. The Center serves as a knowledge hub not just for Tajikistan but also for bordering countries. More than 4,000 students from Tajik State Medical University, about 450 doctors from Postgraduate Medical Institute and more than 1,400 nurses participated in CoE-based trainings on various TB-related topics. The model and experience of the Center was replicated in Uzbekistan.

Another mechanism deployed by TBCP was the regular monitoring missions to pilot regions. Monitoring teams consisted of representatives of NTP and TBCP team. Those missions were designed not just to control the program implementation but primarily to provide on-site technical assistance to local specialists. In addition to that, TBCP organized observation tours for TB doctors from one pilot site to another as an option to support the exchange of experience and professional discussion.

In light of a rule established in Tajikistan that M/XDR TB diagnosis and respective prescription of treatment regimens are made at the central level, it is difficult to overestimate the importance of TBCP-introduced system of telemedicine. TBCP provided equipment and furniture to 7 TB facilities, including 2 at the central level (NCTLTS and RTBC) and 5 in the administrative regions, and covered expenditures related to provision of the internet access for the period of the emergence of new centers of training and communications. Telemedicine has become a ground for the successful and effective functioning of *consilia*, on-line trainings and remote consultations on difficult TB cases. All of them are operational.

A laboratory quality management system (QMS) developed and introduced with TBCP technical assistance is deployed at 30 microscopic and 2 bacteriological laboratories in pilot oblasts. The system allows assuring quality of TB laboratory testing thus improving TB diagnostic and monitoring. The respective trainings of laboratory technicians were provided as well. The introduced innovations were supported by development and distribution among laboratories the Quality Management System Workbook. With USAID support, TB laboratory network was significantly improved and strengthened thus forming a robust ground for timely and correct diagnostic of TB and DR TB and successful monitoring of execution of treatment regimens, including short treatment regimens, to improve treatment results. One of key TBCP achievements is that 100% (all 32) supported TB laboratories meet international quality standards.

Molecular genetic methods for TB detection and MDR TB diagnostic are widely used. While equipment was provided under TGF program, TBCP performed trainings of laboratory personnel on its correct usage, interpretation of results and other related topics. Together with introduction of laboratory QMS, it allowed to bring the level of laboratory TB diagnostic to the international WHO-recommended standards of performance.

Based on on-site observations, an electronic system of TB cases registering Open MRS (E-TB Register) supported by the Program is fully operational in TB facilities and properly used. National E-TB register includes 1 Republic Level Control Point at RTBC that is intended to generate national TB reports, 5 Oblast level Control points, and 76 District Level Entry Points. A number of interviewees emphasized that the system is very convenient and helpful for monitoring and analysis of TB detection, treatment and management. More, Open MRS may be considered as an effective tool for all levels of the health care system for registering and reporting TB cases in accordance with WHO recommendations. Open MRS helps to monitor and manage drugs availability and rational use of medicines. Second line TB pharmaceuticals are currently available at all health facilities in the regions.

1.3. What systems were to expand access to TB diagnostic, treatment, and care services – focusing on vulnerable populations in each country?

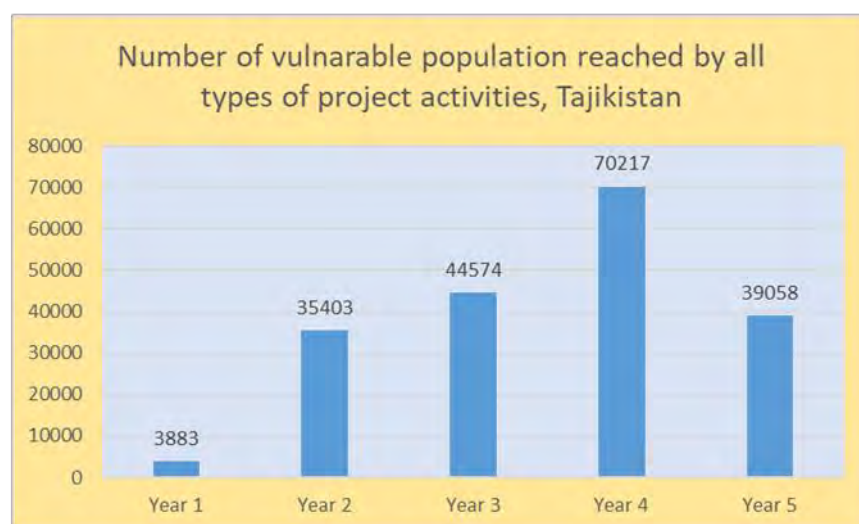
1.3.1. How were systems around human resources and capacity strengthened?

One of the primary tasks of TBCP was improvement of provision of TB care to vulnerable groups of population. For this purpose the program paid a specific attention to two inter-related activities – development and institutionalization of new structures or provision of support to existing organizations which may serve as a mechanism for delivery of services (CHC, CSO) and capacity building of people who are working for those structures. Another point was to reward members of those groups for their achievements to additionally strengthen the motivation.

Along with an extensive training program for health professionals, TBCP conducted a series of trainings for CHC members and activists providing them with the updated knowledge of TB-related issues and methods of working in the communities. In many cases CHC members received small enablers for their work which could be in a form of certificates of honor from the local authorities. Being established on initiative and with technical assistance of TBCP, and institutionalized by executive orders of local governments, CHC in turn created a demand on volunteerism in country since CHCs themselves could not cover all people in communities who needed a certain support. CHCs made public involvement in combatting diseases attractive and respected activity thus strengthening the civil society development. NTP received a strong and active supporter and assistant who contributed to increasing effectiveness of anti-TB work.

CHC and CSO involvement helped TBCP to reach more than 870,000 people from vulnerable groups and general population, to detect 1,524 new TB cases, and to assure 99% of detected patients started TB treatment.

Figure 3. PITT indicator 1.7, Tajikistan



1.3.2. How were policies, regulations and procedures strengthened?

With TBCP technical assistance, policies and regulations were updated in accordance to WHO recommendations and in line with WHO End TB Strategy. NTP representatives emphasized that the existed regulatory documents required comprehensive update in accordance with the evidence-based, internationally recognized approach and standards. TBCP was always very instrumental in this process, and NTP still needs support to continue improvement of national guidelines and other relevant documents.

Over the life of the program, TBCP in Tajikistan produced a lot of deliverables such as reports, presentations, publications, training materials, conference hand-outs, public information and education materials and so on. Among them the policy documents are the most important. Ten of them were endorsed by the government, six guidelines amended to reflect international standards for TB diagnosis and care, ten National TB regulations amended to reflect international standards for outpatient treatment of TB. In total, TBCP in Tajikistan produced 28 policy documents which cover all aspects of TB control in the country:

1. Accurate TB data collection and analysis - *National Plan of Monitoring and Evaluation of the National Strategic Plan for Population's Protection from Tuberculosis in the Republic of Tajikistan for 2015-2020 (revision); National Plan on E-TB Register (OpenMRS) Introduction in Tajikistan; OpenMRS Data Quality Assessment Tool; SOP on the Mechanism of Improvement of TB Data R&R within the Prison System and Between The Penitentiary and Civil Sectors*
2. Quality TB laboratory performance – *Quality Management System Workbook; Regulation on Transportation of Biological Materials (e.g. Sputum)*
3. TB diagnostic - *Revised Diagnostic Algorithm; Revision of the Diagnostics Algorithm Based on the Latest WHO Recommendations*
4. Patient-centered approach - *Effective and Efficient TB Service Delivery System for the Republic of Tajikistan: A Roadmap Towards Outpatient Model of Care ; Revised Palliative Care Guideline with a Focus on Ambulatory (Home-Based) Care in One Region; Patient oriented protocol with a focus on psychosocial support developed and roll-out plan updated to improve access to patient centered TB care; TB Guideline for PHC Employees; Standard Operating Procedure (SOP) "The Role of Primary Health Care Service in the Management of TB in Children"; SOP on Management of TB in Children in Outpatient Level*
5. TB education - *The National TB Training Center of Excellence, Tajikistan: 2016 - 2019 Development Plan*
6. Community Engagement in TB Services - *National Strategy for Community Engagement in TB Services in Tajikistan*
7. Engaging Private Health Care Sector in TB Control - *Operational Guidance and Action Plan for Engaging Private Health Care Sector in TB Control Activities in Tajikistan*
8. TB in Penitentiary Facilities - *Guideline for TB Control in Penitentiary Facilities in the Republic of Tajikistan*
9. TB/HIV - *TB/HIV Guideline; Action Plan (based on existing Strategic Plan by 2020) to Strengthen Collaboration between Two Vertical TB and HIV/AIDS Services*
10. TB case management - *Checklist for Participatory Clinical Audit ; Protocol of Operational Research on Assessing Unfavorable Treatment Outcomes among MDR-TB Patients; National Guidelines on TB, DR-TB, and TB/HIV Prevention, Diagnosis and Treatment Based on the Latest WHO Recommendations ; Report on Human Resources Needs Assessment at TB Centers; Human Resources TB Guideline*
11. Migrants - *Report on Rapid Situational Analysis of Access by Migrants and Members of Their Families to Comprehensive TB, MDR-TB and TB/HIV Services in Tajikistan*
12. Infection control - *Sanitary Norms and Rules on Organization of TB facilities*

All these documents form a solid normative base for different aspects of TB control program and to the certain extent provide the ground for sustainability of the program-introduced methods and approaches.

Currently TB treatment and care-related national guidelines and SOPs in Tajikistan are basically consistent with WHO recommendations, although sometimes require minor updates as international standards are changing rapidly in accordance with the appearance of innovations and scientific evidence on effectiveness of particular methods of diagnostic and treatment.

Important, that unlike years ago the majority of NTP managers support patient-centered approach and out-patient forms of treatment in particular. However, the existing system of health financing prevents the broad expansion of this approach. Having that, the further efforts towards elimination of normative and regulatory barriers in this area are required to make this approach sustainable, effective and usable nation-wide.

TBCP initiated a dialogue between the civil and penitentiary sectors in regards to TB and TB/HIV prevention and control. Currently cooperation between two sectors is well-established.

Coordination between TB and HIV services is well-established as well. For example, by the end of the Program, 99% of HIV-positive patients screened for TB in HIV centers (77% in 2014), 96% of TB patients have HIV test results (compares 91% in 2014).

I.3.3. How sustainable will project results be? Consider the extent to which the Project considered sustainability in its implementation and choice of strategies.

The sustainability of developed approaches and models depends on perspectives of health managers and medical professionals, and ability of the government to provide financial and political support, which often means re-alignments of the budget and respective changes in the country results framework, and the country context. TBCP made every effort to ensure the long-standing sustainability of the program-assisted models, providing techniques and equipment that require minimal expenditures for their functioning. This crucial program component was executed through three inter-related types of activities: professional training and education of health staff and community activists, advocacy and assistance in development of the regulatory base and demonstration of expediency, cost-effectiveness and efficiency of suggested innovations.

For example, CHC mechanism looks sustainable since this mechanism is strongly legally supported by both central and local governments, and recognized by the population and health professionals. Its effectiveness is proven by statistics of new TB cases detected, improved treatment compliance. This mechanism may be the best option to achieve all strata of rural populations with the correct health message and ensure their timely refer to the health provider in case of any symptoms suspicious to TB. Local governments are ready to allocate the required and relatively moderate funds to support CHC. The ambulatory care approach will likely continue to expand also since it is more cost-effective than any hospital-based care and in presence of CHC may be performed practically anywhere.

Telemedicine techniques, which usefulness is obvious for the proper diagnostic and treatment of TB patients, especially difficult and drug-resistance cases, and continuous training, would be sustainable in case of allocation of very modest funds at the local level to ensure the internet access and the proper maintenance of equipment provided by TBCP to TB facilities in pilot regions. Another option would be to perform negotiations with the internet providers to get reduced prices for the access of TB facilities.

In terms of supported laboratory methods of molecular diagnostic (GeneXpert, Hain), the potential self-reliance looks less optimistic. For example, currently the government does not have funds to purchase GeneXpert cartridges and other required consumables, and pay for the proper maintenance of this technology. It is difficult to conclude if sufficient funds will be available in the near future, given the economic status of the country and other public health priorities (e.g., MCH, non-specific lung diseases). However, it is appropriate to mention that the equipment which is currently placed at TB facilities was procured under TGF and other projects and TBCP was responsible primarily for the respective training of personnel and in some cases for maintenance of equipment.

Currently the Tajikistan Government is preparing a plan for transition to self-reliance and sustainable development after graduation of international donors (a code name, the full official name of the document is not available). The draft document includes measures which the national government is going to undertake between 2019 and 2025 to ensure the smooth transition to self-sustainability in the field of prevention of TB and HIV spread. The document includes such elements as updating of normative and legislative acts, human resource capacity building, de-stigmatization and human rights, development of monitoring and surveillance, OpenMRS, drug procurement and optimization of ART and anti-TB treatment and others. It's worth to note that the international partners are mentioned as responsible co-implementers. It means that the country expect international assistance in its transition to self-reliance and domestic funding of TB-related activities.

2. Fidelity to the implementation of the project plan

2.1. To what extent did the project implement the work- planned activities?

According to the available information and opinions of NTP managers, all components of the program workplan were implemented with required quality and professionalism. It is necessary to stress that the program workplans

were discussed with NTP and respective national and international partners, as required, to ensure their timely and entire implementation.

2.2. Which activities were not implemented (or partially implemented) and why were these activities not implemented?

Although all planned activities were implemented, in three cases the actual results were slightly lower than projected. The first one is a number of TB cases (all forms) notified among vulnerable populations (PLWH, PWID, prisoners/ex-prisoners, migrants) in pilot area through program referral. The second is a number of TB cases (all forms) notified among vulnerable populations (PLWH, PWID, prisoners/ex-prisoners, migrants) in pilot area through program referral who started TB treatment. The third is percentage of patients successfully treated in out-patient treatment for MDR-TB in pilot areas. Difficulties in implementation of activities focused on vulnerable groups of population were caused by delayed involvement of CSOs in outreach work. In turn, this caused revision of CHC activities with the emphasis to outreach towards women and migrants. Nevertheless, the program target to put on treatment 96% of all TB cases diagnosed through the Program referral system was overachieved (99%). A number of those patients did not complete their treatment so far.

2.3. In what ways did any change in planned activities affect overall outcomes and results?

Two notable changes in planned activities occurred during implementation of the Program. The first one was made after the first year of implementation when CSW were excluded from a list of vulnerable groups of population to be covered by the project. The initial assumption that this group may be epidemiologically important in terms of TB spread did not get any confirmation. There are no reasons to think that this change affected overall results and outcomes. The second one was made at the end of the third year of implementation when contractual conditions were modified to make possible provision of sub-awards to CSOs for working with vulnerable groups, e.g., PWID, PLHIV, prisoners, ex-prisoners and migrants. With the start of activities by six CSOs in Year 4, the Program targets were achieved in coverage, TB detection and treatment initiation, proving the correctness of the Program's original strategy.

3. Consortium partner relationships

3.1. How effective was the coordination between and within the project partnerships?

TBCP established the appropriate coordination between TB partners using different platforms - Coordination Council on TB under the Ministry of Health (currently does not exist), NTP Coordinating Council, TGF CCM, thematic working groups, regional health coordinating councils at the oblast and rayon levels, bi-lateral meetings and communications with NTP managers and representatives of local authorities. Representatives of international assistance agencies also participated on the meetings thus having an opportunity to discuss collaboration between those agencies and NTP. Representatives of international organizations and technical agencies emphasized the highest level of understanding and cooperation between TBCP and their partner organizations.

3.2. What mechanisms ensured coherence and exclusion of duplication?

Unlike in other countries, WHO does not play a coordinating role in provision of TB-related international assistance in Tajikistan. TBCP systematically met with representatives of other international technical programs and agencies (Challenge TB, MSF, TGF and others) and discussed areas of collaboration and sharing of responsibilities not just to avoid duplication but also to ensure mutually reinforcing character of assistance provided. For example, while GeneXpert machines were provided to TBCP pilot regions under TGF and Challenge TB projects, TBCP arranged respective trainings for laboratory personnel to ensure effective and correct use of this technology.

4. Relationship with key stakeholders

4.1. How has the project worked with the specific governments?

TBCP closely collaborated with the central and local governments. TBCP team managed to establish very effective working relationships with NTP and local authorities at the oblast level in the spirit of trust and collaboration. At the central level, representatives of the program team participated in regular meetings of the Coordinating Council which includes all relevant stakeholders, and in the meetings of thematic working groups, for example, on laboratory issues. At the oblast level, TBCP participated in the meetings of local coordinating bodies thus having an opportunity to discuss implementation of the program activities in particular region and all region-specific points and concerns related to various areas of work and collaboration with local health authorities and facilities. In addition, TBCP team representatives arranged meetings with local governments in case of necessity to discuss specific issues.

4.2. What mechanisms have been used to coordinate planning, implementation, evaluation and reporting of results with NTPs and other relevant government units?

As stated above, TBCP was working through existing mechanisms of coordination, for example, coordinating councils, and maintaining direct dialogue with local health and government officials beyond more formal procedures. The program workplan was developed in collaboration with NTP and approved by MoH. Intermediate results of the Program implementation were repeatedly reported to and discussed with NTP and MoH.

4.3. In what ways did the project accommodate any differences in systems and context in the two countries?

All program interventions were designed in accordance with the country context. For example, the patient-centered approach in Tajikistan was implemented through CHCs, local and international NGOs (AFEW) and PIO (IOM) while in Uzbekistan another model was applied – multi-disciplinary teams (MDT). In Tajikistan the program worked with penitentiary sector while in Uzbekistan this component was not implemented. In Tajikistan TBCP introduced OpenMRS (E-TB Register), in Uzbekistan – QuanTB pharmaceutical management program, and conducted the procurement of laboratory equipment and supplies thus tailoring the program interventions to local needs, rules, regulations and requests of the host country officials. The extensive TBCP technical assistance in development of regulatory and normative documents was fully based on existing national legislation which serves as a keystone for appropriate deployment and sustainability of suggested methods and procedures. For example, given the size of the country and actual availability of highly qualified personnel, diagnostic of M/XDR TB and the prescription of respective treatment regimens in Tajikistan are made at the central level most often through on-line consilia.

4.4. What challenges presented themselves in the coordination and/or relationship with the different government players?

Although ET was repeatedly assured that no serious challenges in coordination between different government authorities and TBCP occurred, we may assume that the certain difficulties could appear due to fiscal and organizational rules of functioning of the government authorities. During the field work ET observed full support and welcoming of international TB programs in country, especially USAID TB control Program, by government players at all levels – national, regional and district. ET didn't observe any difficulties for TBCP team in coordination or relationships with government officials. The only challenge that could be mentioned is the ability of the government to sustain those innovations introduced by international programs that require further administrative and financial support of NTP and the government. Government officials whom ET met are willing to take responsibility and cover expenses related to innovations but, due to the country economic status, couldn't promise or guarantee prompt and consistent changes in TB control financing.

4.5. How did the project address those challenges?

Firstly, TBCP managed to establish the appropriate level of trust and mutual understanding with the government. Secondly, as it was emphasized by a number of officials, there was a clear vision that the goal of the program is to help, and not to criticize or intervene in the internal procedures of the government authorities.

4.6. How lessons have been learned from this project on how to work with the governments in both countries?

In this regard the following points could be noted:

1. The importance to create a program team of professionals and managers who are trusted by and known (at least, some of them) for the government authorities.
 2. Focusing on provision of assistance, avoiding any criticism and neglecting of the written or unwritten rules and regulations.
 3. Taking into account the real picture, including epidemiology, capacities of the health system and health program managers as well as locally generated solutions.
 4. Careful coordination and cooperation with other stakeholders and partners, avoiding unnecessary competition and duplication of efforts.
 5. Careful and weighted approach to the program design and selection of conditions and limitations in the funding mechanism taking into account the epidemiology and the country context.
5. Community engagement and capacity building, including CSOs

5.1. How has the project coordinated with communities including CSOs serving vulnerable populations?

Many responders specifically mentioned Community Health Committees (CHC) as an effective mechanism of community outreach that serves two basic inter-related goals: strengthening TB awareness and decreasing TB-associated stigma, and improvement of timely TB detection, referral to TB/health facilities, and ensuring treatment compliance. CHC is very instrumental in working with vulnerable groups of population, such as migrants or women. CHC mechanism contributed to strengthening and further institutionalization of patient-centered approach in TB control and civil society involvement in combatting socially sound diseases. In addition, the development of CHC mechanism, probably unexpectedly, contributed to empowerment of women in the society since the majority of CHC activists are women. Thanks to the Program, many women got an opportunity to increase their visibility and role in their communities and ensure they are part of solutions to address and prevent socially important disease and disease-associated stigma and discrimination. Other direct benefit for women was that CHC (and CSO) involvement helped to detect 2,769 TB patients among women, 99.9% of whom started TB treatment. Local authorities are willing to use CHC mechanism in addressing other health threats, like maternal and neonatal mortality. Thus, this mechanism is designed and working both in patient-oriented and gender-sensitive manners. In total, 143 CHCs are established in pilot regions, all of them currently operational and working under overall coordination of regional Centers of Healthy Lifestyle. CHC mechanism is a good example of locally generated solutions in accordance with the USAID Global Accelerator to End Tuberculosis, although they were created earlier.

As a result of CHC activities, in those regions where this system is actively working, increased TB vigilance and quality TB care demand among vulnerable populations was observed, and reportedly stigmatization of such patients decreased in their communities and families. It is fully applicable to labor migrants who are returning to their places of residence from countries of temporary employment, primarily Russian Federation and other countries. This group is under special attention of CHC.

Another mechanism which was used by TBCP to cover hard-to-reach populations is the provision of support to local NGOs (CSOs) who are working with prisoners, ex-prisoners, PWID and PLHIV. Due to conditions of and limitations in the funding mechanism this work that requires provision of small subawards to public voluntary organizations started almost 4 years after the launch of the Program and continued just within less than 1.5 years. The effectiveness of CSO involvement in outreach work with specific populations is illustrated by the fact that in 2018 NGOs helped to detect 65 new TB and TB/HIV cases just in one oblast. Unfortunately, neither central nor local governments are planning to financially support such activities in the near future. Without external support the momentum may be irrevocably lost.

5.2. What impact has community engagement had on linking clients to care? Also, explore ways in which community engagement may have failed to improve linkage to care?

The community engagement through CHC is playing a significant role in the referral of people with suspicious symptoms to health facilities. About 38.5 thousand people with presumptive TB symptoms were referred to health

facilities for TB testing. Thus, community engagement, in addition to timely TB detection, contributed to two inter-related tasks – increasing TB awareness and vigilance and decreasing TB-associated stigma and fear to be diagnosed.

5.3. What could have been improved in how the project worked with community stakeholders?

TBCP undertook a lot of efforts to establish and develop a system of CHC. All of them are institutionalized by the acts of local authorities and well-recognized by the population. In the future it may be useful to work more extensively with volunteers since CHC members sometimes cannot cover the entire population of their communities.

6. NTP capacity building

6.1. How has the project developed capacity of the NTP?

6.1.1. What activities were conducted to enhance capacity?

TBCP improved capacity of NTP primarily by providing trainings for different specialists and direct technical assistance through consultations and targeted workshops, and introduction of innovative tools (e.g. telemedicine) and proficiency management and improving structures, like the Center of Excellence (CoE) on TB at the Machiton TB Hospital. The Center is currently serving as the most advanced knowledge hub not just for Tajikistan, but also Uzbekistan and reportedly Kyrgyzstan.

The program provided technical assistance in preparing various normative and regulatory documents in accordance with the latest WHO recommendations and international best practices, including TB/HIV and pediatric TB.

TBCP pioneered introduction of telemedicine in Tajikistan. Currently this advanced technology which is theoretically very cost effective especially in light of the centralized TB diagnostic and prescription responsibilities, is widely used to performing *consilia*, individual consultations on difficult TB cases and on-line trainings for health professionals. Notable, that over last 5 years the Machiton CoE performed 230 *consilia* on most difficult TB cases. Continuation of this technique requires either increased appropriate financial allocations to cover the internet services or negotiations with the internet providers on reduced prices for health facilities (ideally free of or symbolic charge for the public health sector).

With introduction of OpenMRS technique, NTP received a valuable management information tool to collect, monitor and analyze TB epidemiology data and treatment outcomes, as well as the usage of pharmaceuticals and make decisions based on reliable and comprehensive information.

TBCP arranged an observation tour to WHO Collaborating Center in Riga, Latvia, for NTP managers. The tour was highly estimated by former participants.

TBCP arranged a number of national events, such as National Workshop Patient-Centered Approaches in Tuberculosis Care, where national and international experts had an opportunity to meet each other and exchange opinions on various innovative methods in TB control.

6.1.2. Examine capacity in policies, regulations and procedures.

The Program made a valuable contribution to development of TB-related regulatory base. ET interviewees repeatedly expressed their appreciation of the Program efforts aimed at improvement of guidelines, recommendations and other documents that are currently used country-wide by all TB control facilities and family physicians. All regulatory documents that developed with assistance of TBCP are based on existing national legislation, the latest WHO recommendations and best practices from other sites and countries. Along with that, it is difficult to state to what extent those documents are easily accessible and known for all the staff of TB control and other health facilities.

6.1.3. What challenges were observed in building NTP capacity and how were these challenges resolved?

In collaboration with NTP the Program team demonstrated in-depth knowledge of the country context and realities, diplomacy and timely provision of required information to decision makers. That allowed avoiding serious challenges in implementation of the Program activities related to NTP capacity building. Along with that, the lack of staff (50% deficit of health workers in the civilian sector and about 70% in penitentiary sector TB service) and high turnover of specialists created a demand in repeated trainings of personnel. Motivation for young doctors to enter TB service is minimal due to low salaries (young specialists get about US\$50 per month), and occupational hazard. A related challenge was a high turnover of medical personnel. The extensive training component of the program helped to partially overcome those issues. Certain difficulties were caused by the predominance of other priorities for NTP managers and requirements of existing regulations, for example, state funding of TB facilities based of their bed capacity.

6.1.4. What are the key capacity issues that future projects would have to address?

WHO recommendations and the scientific evidence are changing rapidly. It would be useful to create a course of systematic re-training of NTP managers, professors from medical universities and other high-level professionals in TB control-related issues, at least, PMDT. The personnel turnover and retaining of specialists has to be addressed as well.

7. Recommendations

7.1. What recommendations do you make for future programming?

Based on information obtained on-site, analysis of the available sources the following recommendations for the future programming could be provided:

1. Given the current status of national economy, availability of numerous public health threats (e.g., mother and child mortality, non-specific lung diseases) and high level of TB rates, the country and NTP definitely require external technical support in TB control efforts and provision of assistance in procurement of relevant equipment, and supplies specifically. The current trends in TB epidemiology create the very guarded optimism but do not look irreversible so far in case of insufficient anti-TB measures. Having that, the further international assistance may be critical for strengthening sustainability of achieved positive developments.
2. It looks reasonable to devote next steps to the further analysis of results accomplished and replication of successful models nation-wide with involvement of professionals from current pilot oblasts for peer education and techniques transfer.
3. In light of the international support graduation, it is recommended to provide technical assistance in the development of a strategy document on steady transition to self-reliance and self-sufficiency based on economic realities and capacities of governments at all levels. In this regard it makes sense to involve a well-recognized international expert in health economics for provision of assistance at the national level related to the rational resource allocation and setting of priorities.
4. Given the obvious success of the approach, a network of CHC should be expanded nation-wide to cover all communities, groups of population and settlements. Respective funds should be allocated in the budget of a future activity, if anticipated.
5. Currently, with the donor support, country uses the approach for TB diagnostic which is fully in line with WHO recommendations, but as of today doubtfully affordable for a low-income country as Tajikistan without permanent external assistance. Having in mind the future sustainability and long-standing effectiveness, there might be a need to consider if the current layout of equipment is optimal and, if necessary, develop suggestions for the further optimization of TB laboratory diagnostic process nation-wide.
6. It is suggested to provide technical assistance in compiling human resource development strategy - when, how many, what type, retaining, motivation, qualification etc., including a program of training and re-training of medical, para-medical staff and other relevant cadres.

7. The anticipated results (level of the program performance indicators) may be provided in the future program with the confidence intervals and other relevant assumptions given that the certain epidemiology factors lay beyond the program capacities and having in mind the distinction between the assistance program role and NTP responsibilities.
8. In regulatory sphere, it is recommended to compile a brochure that includes all regulatory and guiding documents developed with TA of TBCP and probably other international partners and printing of a required number of copies for distribution among all health service providers across country to make sure that they are having a source of information on all stages and components of TB control.
9. It is suggested to create a training program for high level NTP managers and professors. It would be a useful tool to update the knowledge and skills of those who should understand in-depth all TB control-related innovations and deliver respective messages to under- and post-graduate students as well as to government officials, public and representatives of mass-media. In light of shifting the ownership of all advanced developments to local top level professionals such training would serve for strengthening pre-requisites of sustainability and self-reliance. For this purpose to invite well-known and respected international experts and experts from other countries of the region where a certain methodology is well-developed and of proven effectiveness.
10. Performing a number of operational research is recommended to confirm scientific evidence of cost-effectiveness and efficiency of introduced techniques for advocacy efforts on sustainable and increased funding of advanced TB control methods (e.g., out-patient treatment, community involvement vs purely medical staff activities and others) and/or realignment of TB budget (elimination of bed-based funding and reallocation of resources).
11. In terms of monitoring missions, consider involvement of health professionals from the regions other than target areas in order to intensify information and knowledge exchange without additional costly efforts. Explore all options for sustainable funding of monitoring missions.
12. Labor migration. Potential revision of activities focused on this significant group of population in order to broader access to care for them. It makes sense to initiate bilateral or three-lateral agreements with countries of destination and employment and provide the respective technical assistance.
13. Since it is reportedly planned to start domestic manufacturing of anti-TB pharmaceuticals, USAID may consider supporting technical assistance to build in-country capacity for the WHO prequalification process regarding TB drugs.

7.2. Examples of innovative approaches that were developed and applied?

The most valuable innovative approach is the establishing of CHCs which demonstrated their effectiveness in working with communities and vulnerable groups of patients, and as a tool of the civil society development in the gender-sensitive manner.

Another innovative approach in Tajikistan context is a system of telemedicine and on-line consilia. This approach makes possible the correct diagnosis and treatment of difficult forms of TB, including DR ones, and increase involvement of highly-qualified professionals in the process of TB care country-wide that together with on-line training sessions contributes to the strengthening of professional skills and knowledge of TB practitioners in all TB facilities.

OpenMRS as a MIS increased capacities of NTP in making well-grounded decisions on allocation and rational use of resources thus providing a room for improvement of anti-TB measures nation-wide and identifying deficiencies and challenges within the system.

I. Project results

I.1. To what extent did the project achieve the anticipated final results?

During the visit to Uzbekistan, ET interviewed a variety of respondents from different groups of clients and stakeholders: representatives of the central government, NTP and facility managers, practitioners, representatives of civil society groups and WHO. All interviewees highly valued USAID TB Control program contribution to the national anti-TB efforts. The available project progress reports reviewed by ET prior to the visit to Uzbekistan, and information obtained during evaluation trip suggest that the goal and objectives of USAID TB Control program in Uzbekistan were successfully reached and all TB control program activities were implemented (except one, please see discussion below) with the appropriate quality.

In particular, the target for the goal-level indicator (1) *Percentage of bacteriologically confirmed TB cases successfully treated (cured plus treatment completed) among the bacteriologically confirmed TB cases registered for treatment during a specified period in pilot areas* exceeded the projected level. The target for the goal-level indicator (2) *Number of bacteriologically confirmed, drug resistant TB cases (RRTB and MDR-TB) notified in pilot areas* was achieved with about 95% of completion. Although the target for the goal-level indicator (3) *Number of MDR-TB cases who initiate second line treatment in pilot areas* was moderately achieved (86% of completion), the reported 1,788 MDR-TB patients who initiated SLD treatment represent 97.3% of 1,836 MDR-TB cases registered in the Program regions during the same period.

For tracking the performance under Objective 1: *More equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations* 7 performance indicators were used:

- I.1 Number of TB cases (all forms) notified among vulnerable populations (PLWH, PWID, prisoners/ex-prisoners, migrants) in pilot area through program referral;
- I.2 Number of TB cases (all forms) notified among women in pilot area;
- I.3 Number of TB cases (all forms) notified among vulnerable populations (PLWH, PWID, prisoners/ex-prisoners, migrants) in pilot area through program referral who started TB treatment;
- I.4 Number of TB cases (all forms) notified among women in pilot area who started TB treatment;
- I.5 N/A;
- I.6 Percentage of referred vulnerable population that were tested for TB;
- I.7 Number of vulnerable population reached by all types of project activities.

The targets for indicators 1, 2, 3, 4 and 7 were exceeded. The target for indicator 6 was reached with about 100% of completion. So, the Objective 1: *More equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations* was completely accomplished.

Objective 2 of the Program: *Laboratory services provide more timely, quality TB and MDR-TB diagnosis* was completely accomplished and 2 related indicators (1) *Percentage of laboratories in pilot areas successfully implementing quality management systems*, and (2) *Number of laboratories in pilot areas started implementation of quality management systems* reached the projected levels.

For tracking the performance on Objective 3 of the program: *Patient centered system for TB and MDR-TB implemented widely across the region* 4 performance indicators were used:

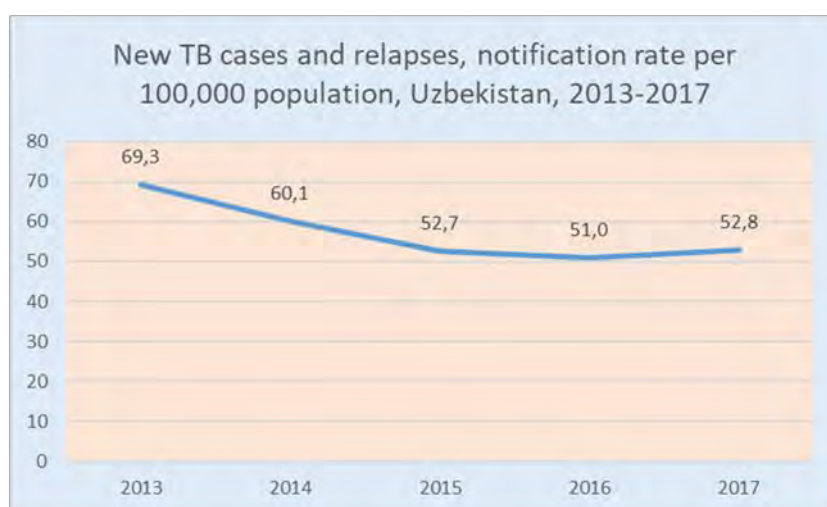
- 3.1 Percentage of patients successfully treated in out-patient treatment for drug-susceptible TB in pilot areas;
- 3.2 Percentage of patients successfully treated in out-patient treatment for MDR-TB in pilot areas;
- 3.3 Percentage of MDR-TB cases managed in outpatient settings;
- 3.4 Percentage of drug-susceptible TB cases managed in outpatient settings.

The target for indicator 1 was successfully completed with about 100% of projected level. A target for indicator 2 was moderately achieved, indicators 3 and 4 were underachieved (9% and 19% of completion accordingly). Overall in Program pilot areas only 6% of drug-susceptible and 3% of MDR-TB cases were managed in outpatient settings. The target for both groups was 30%. There are two main reasons for underachievement on these indicators: 1) excessive hospital bed capacity for TB patients and the imperative to fully utilize this capacity because underutilized capacity leads to budget cuts; 2) according to the existing MoH's Executive Order#383 (currently under revision) all smear-positive TB patients must be treated at hospital. The reason for underachievement on indicator 2 most likely linked to a very low number (23) of patients with MDR-TB treated in out-patient settings. That's probably a very small sample to be quoting percentages out of it.

All targets for the performance indicators on Objective 4: *Enhanced enabling environment promoting TB services that meet international standards* were achieved and overachieved:

- 4.1 Number of developed and revised by program policies and guidelines that are officially approved/endorsed by government – 150% completion;
- 4.2 Number of national TB regulations (i.e. executive orders), policies revised to comprehensively adhere to international standards for outpatient treatment of TB and MDR-TB – fully achieved;
- 4.3 Number of revised policies and guidelines to comprehensively adhere to international standards for diagnosis and case management of TB and MDR-TB – fully achieved;

Figure 4. New TB cases and relapses, notification rate per 100,000 population, Uzbekistan, 2013 - 2017



Source: Global tuberculosis report 2018. Geneva: World Health Organization; 2018. www.who.int/tb/data

All targets for the performance indicators on Objective 5: *Human and institutional capacity of health systems to manage TB and MDR-TB services strengthened* were overachieved, with exception of indicator 3 (moderately achieved):

- 5.1 Percentage of health providers trained in different aspects of TB control scoring $\geq 85\%$ on post- test – more than 100% completion;
- 5.2 Percentage of non-health providers trained in different aspects of TB control scoring $\geq 85\%$ on post- test – more than 100% completion;
- 5.3 Percentage of TB facilities in pilot areas implementing priority IC measures – more than 80% completion;
- 5.4 Number of health providers trained in different aspects of TB control - more than 100% completion;
- 5.5 Number of non-health providers trained in different aspects of TB control - more than 100% completion;
- 5.6 Number of individuals trained in any component of the WHO Stop TB Strategy with USG funding – more than 100% completion.

As for moderate achievement on indicator 3, during the five years 40 TB facilities in four program regions were regularly assessed in accordance with the Infection Control (IC) scored checklist developed by the Program. According to the final (Year 5) assessment results, 25 (against Year 5 target of 30) TB facilities out of 40 had scored $\geq 75\%$ on the IC checklist, and are considered to have successfully implemented priority IC measures. Analysis of the assessment results and monitoring of IC in all TB facilities was completed and appropriate interventions were planned and implemented to address the identified issues and weaknesses.

Targets for indicators on Objective 6: *Coordination and linkage of TB with other health sectors and CSOs increased* were overachieved:

6.1 Percentage of TB patients who had an HIV test result recorded in the TB register – more than 100% completion;

6.2 Percentage of HIV positive patients who were screened for TB in HIV care or treatment settings – more than 100% completion.

Thus, the achieved rates of indicators suggest that all objectives of the program were successfully accomplished with exception of Objective 3 of the program: *Patient centered system for TB and MDR-TB implemented widely across the region* with regard to TB cases managed in out-patient settings.

However, on 13 February 2019 the President of Uzbekistan issued a Decree #4191 “On measures on improvement of the system of provision of specialized phthisiatric and pulmonology care”, which directly prescribes introduction of the out-patient TB treatment along with provision of psycho-social support, VOT and short treatment regimens in 2019. USAID is mentioned as a partner in implementation of that task. It means that this USAID-supported strategic approach is institutionalized in the country at the highest possible level. Even in absence of a planned number of patients on ambulatory treatment in TBCP records, it’s an obvious and outstanding success of the Program that may not be overestimated.

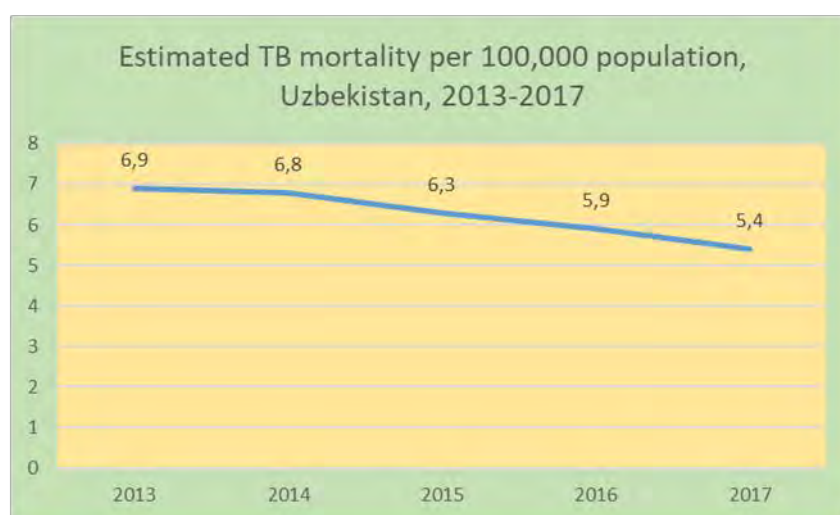
TB treatment success rates in the Program sites for bacteriologically-confirmed DS TB cases increased from 80.8 percent (2014 cohort) to 88.6 percent (2017 cohort), while for DR TB treatment success rates increased to almost 68 percent in 2016 cohort from 62.5 percent in 2014 cohort. Such positive trends illustrate the correctness and proper execution of the program strategies and approaches.

As a result of successful implementation of the Program activities, in 2018 the Government of Uzbekistan requested to expand TBCP interventions to 3 new oblasts (Andijan, Fergana, and Jizzakh) so that by completion of the program the Program covered a half of the country regions.

1.2. To what extent has the project strengthened TB systems?

The USAID TB control program promoted or further developed a number of positive and valuable modifications of TB control program in Uzbekistan and other systems that are involved in TB-related activities. After adoption in 2011 the five-year program on TB control, the political commitment to **TB control of the Uzbekistan Government and local authorities remaining consistently high**. For example, the government provided financial resources for renovation or refurbishment of TB facilities in order to create more comfortable working conditions for the personnel, wards for patients and appropriate layout of laboratories. The government initiated introduction of changes in the current health legislation to facilitate implementation of Presidential Decree #4191. Reportedly, the respective legislative documents will be adopted in October 2019. The government is planning to provide budget allocations in 2020 for purchasing of 20% of all required SLDs.

Figure 5. Estimated TB mortality per 100,000 population, Uzbekistan, 2013 - 2017



Source: Global tuberculosis report 2018. Geneva: World Health Organization; 2018. www.who.int/tb/data

Representatives of MoH and NTP specifically emphasized the importance of TBCP's human resources capacity building efforts. Those activities included training seminars and workshops, and direct technical assistance on-site. The Program provided a series of TB-related training for various types of health workers and para-medical staff on different components of TB diagnostic, treatment and care, community involvement in TB control, and specific trainings for mass-media. In total, 4,558 people participated in the training activities arranged by TBCP, including 3,244 health practitioners and 604 of para-medical staff. 82% of trained health professionals and 86% of trained para-medical staff scored 85% and more on the post-test. By 2018, about 90% of specialists involved in TB control activities have passed various training courses, including nurses and all heads of wards. Training of doctors under TBCP is included in the system of medical certification and obtaining professional category. Reportedly, TBCP training modules became parts of the curricula of under- and post-graduate courses at the medical education facilities.

TBCP established the laboratory quality management system, which is the international standard of quality laboratory performance, at 50 laboratories in pilot regions thus strengthening laboratory diagnostic of TB. At the end of the Program 45 out of 50 supported TB laboratories met international quality standards. TBCP also facilitated introduction of rapid molecular diagnostic techniques (GeneXpert MTB/RIF) for detection of TB cases and identification of drug resistance, and provided rapid Line Probe Assay (LPA) equipment for oblast TB laboratories in Andijan and Jizzakh. TBCP established sputum transportation systems in Bukhara and Khorezm oblasts in order to guarantee timely delivery of specimens to the laboratory. International laboratory experts worked with their Uzbekistan colleagues thus transferring professional skills and knowledge. For example, a specialist from supranational laboratory in Gauting, Germany, provided hands-on training for laboratory staff in Bukhara. The Program organized a visit of specialists from Uzbekistan to participate in international training on GeneXpert diagnostics methods performed by Cepheid Company in Toulouse, France.

TBCP established a system of telemedicine in Uzbekistan which is based on the network of Centers for innovative distance learning and monitoring. The leading center is located at the National Center of Phtisiatry and Pulmonology – Center of Excellence (Tashkent); others are opened at regional TB facilities (Andijan, Jizzakh, Fergana, Bukhara, Khorezm, Kashkadarya, Navoi). Currently the network of centers consists of 8 units. The centers are used for on-line trainings, remote consilia and for consultations on difficult TB cases. As the National Center is responsible for diagnostic of XDR TB cases, this important procedure is performed on-line. Telemedicine techniques are very instrumental in making the process effective and less expensive than transportation of patients for diagnostic or duty travels of highly qualified specialists to the regions for provision of training or consultations. All required equipment for the centers was provided by TBCP.

The Program has improved drug management at the central and oblast levels. TB pharmaceutical management software Quan TB provided under a different program but supported by TBCP through training and technical assistance for the proper use, is operational in visited facilities and highly estimated by local TB program managers as a very convenient and easy-to-use tool for rational planning and use of TB drugs. Quan TB is used in 105 facilities of the program regions.

TBCP improved coordination between TB control and HIV services in prevention and treatment of TB/HIV co-infection. With technical assistance and advocacy of the Program MoH developed and issued an executive order on prevention of HIV infection and provision of care to HIV-infected people, which is consistent with WHO recommendations. By the end of TBCP, 100% patients with HIV are screened for TB in HIV centers (97% in 2014), 73% of TB patients have HIV test result (64% in 2014).

1.3. What systems were to expand access to TB diagnostic, treatment, and care services – focusing on vulnerable populations in each country?

1.3.1. How were systems around human resources and capacity strengthened?

One of the main aims of TBCP was strengthening the provision of TB care and support to vulnerable groups of population. For this purpose the Program implemented two coherent activities – development and institutionalization of new structures which may serve as a mechanism for delivery of services (MDTs, PSGs), and education of people who are working for those structures. TBCP also ensured financial support to MDT members.

TBCP conducted a series of training courses for MDT members and activists providing them with the updated knowledge of TB-related issues and methods of working in the communities. In total, TBCP arranged trainings for 604 non-clinicians, including MDT workers. MDT members received small funds to cover their job-related expenditures (for, example, transportation costs), compensation and enablers for their work. Being established on initiative and with technical assistance of TBCP, and endorsed by local TB services, MDTs in turn became a school for volunteers in country. MDTs made involvement in the fight against socially sound diseases attractive and respected activity thus contributing to the development of civil society.

1.3.2. How were policies, regulations and procedures strengthened?

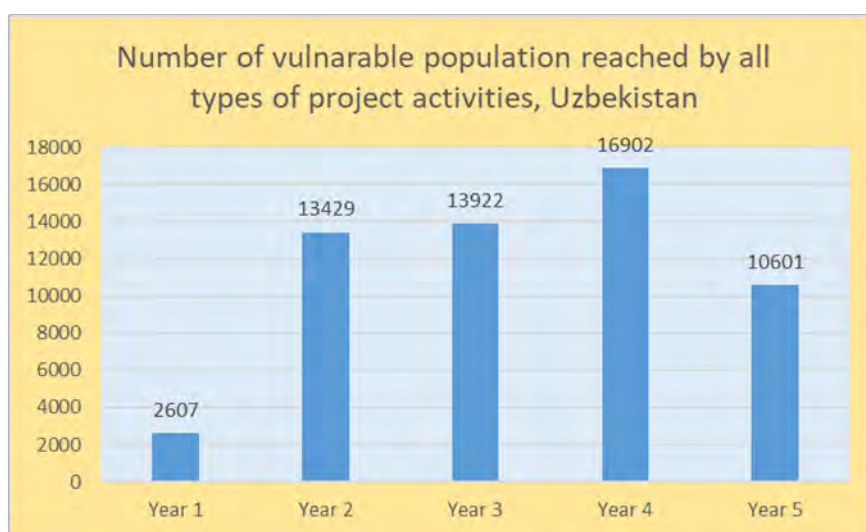
With TBCP technical assistance, national policies and regulations were updated in accordance to WHO recommendations and in line with the WHO End TB Strategy. NTP representatives emphasized that the normative documents require systematic update and improvement in accordance with the rapidly changing internationally recognized approaches and standards. TBCP was always very helpful in this process providing technical assistance to NTP in updating national recommendations and operational guidelines.

Over five years of the program, TBCP produced in Uzbekistan many materials and documents such as reports, presentations, publications, training curricula, information and education materials and so on. Among them policy and strategy documents are the most important. In Uzbekistan TBCP produced seven policy documents. Six produced policies and guidelines are endorsed by the Government, three guidelines amended to accommodate international standards for TB diagnostic and care, one national TB regulation amended to reflect international standards for outpatient treatment of TB. The produced guiding documents cover the following aspects of TB control in the country:

1. Multidisciplinary approach to TB control:

Manual for Multidisciplinary Team (MDT) Specialists – developed to enhance knowledge of MDT team members and specialists from various healthcare facilities (TB and HIV services) how to improve TB prevention, detection and adherence to treatment among vulnerable populations;
Guideline on Community Engagement in Support of Patients during TB Treatment, Including the Monitoring and Evaluation (M&E) plan (ENGAGE-TB) – provide

Figure 6. PITT indicator 1.7, Uzbekistan



recommendations on engagement of NGOs and other civil society institutions (CSIs) in TB control services delivery by strengthening collaboration between NTPs and organizations dealing with social issues, in accordance with the WHO ENGAGE-TB approach;

Comprehensive TB/MDR-TB and TB/HIV Treatment Guideline for Nurses – strengthening the knowledge of PHC nurses in outpatient TB/MDR-TB and TB/HIV treatment models;

Manual for Nurses on Psychological Support to Promote Patient Treatment Adherence – developed to provide TB nurses with understanding of early detection of psychological and mental disorders in TB/MDR-TB and TB/HIV patients and provision of psychological support to ensure appropriate treatment adherence of patients. These guideline and manual for nurses were included by WHO/Uzbekistan into on-line course curricula for TB professionals.

Comprehensive Treatment of Tuberculosis in Uzbekistan: the Role and Responsibilities of the General Practitioner - Guidelines for General Practitioners – describes a uniform approach for timely detection and effective outpatient treatment of TB/MDR- TB and TB/HIV patients at PHC facilities.

2. Quality TB laboratory performance

Manual “Quality Management System (QMS) in TB Laboratory Diagnostics in the Republic of Uzbekistan” – describes measures to improve the quality of laboratory diagnostics in the Republic of Uzbekistan.

3. Coverage of TB issues in Mass Media

Guideline for Journalists on Coverage TB Issues in Mass Media – contains recommendations on the accurate reporting on TB in the media in ways that will be reciprocated by the public.

All those publications contribute to the improvement of different aspects of TB control program and to the certain extent provide the basis for sustainability of the program-introduced methods and approaches.

Important that unlike years ago the majority of NTP managers support patient-centered approach and out-patient forms of treatment in particular. However, the existing system of health financing prevents the broad expansion of this approach. Having that out-patient approach is endorsed by the Presidential Decree, further efforts towards elimination of normative and regulatory barriers in this area are required to make this approach sustainable, effective and usable nation-wide.

1.3.3. How sustainable will project results be? Consider the extent to which the Project considered sustainability in its implementation and choice of strategies.

The sustainability of approaches and models developed by TBCP in Uzbekistan depends to the great extent on political will and commitment, and ability of the government to provide financial and political support in the future. TBCP made every effort to ensure the long-standing sustainability of the program-assisted models, providing techniques and equipment that require minimal or moderate expenditures for their proper functioning. This crucial program component was executed through three inter-related types of activities: professional training and education of health personnel and para-medical staff, advocacy and assistance in development of the regulatory base and demonstration of expediency, cost-effectiveness and efficiency of introduced innovations.

Along with that, based on discussions with NTP representatives, the sustainability of different models look variable.

The Presidential Decree #4191 created a strategic path for MoH, NTP and other relevant services in terms of TB control development in Uzbekistan. Obviously, the Government will allocate a certain amount of money for the proper implementation of the Presidential Decree and anticipated subsequent legislative and normative acts.

In light of those definitely positive developments, TBCP-developed and suggested models like telemedicine technique with remote trainings and consilia, laboratory QMS, patients schools and patients support groups, monitoring of drug management with QuanTB, and further development of the out-patient treatment look fully sustainable.

Sustainability of MDT model is not obvious. On one hand, provision of psychological support to TB patients is determined by the Presidential Decree. On the other hand, potential sources of funding for MDT's activities are unclear in absence of external support.

In terms of introduced laboratory methods of molecular diagnostic (GeneXpert, Hain), potential self-reliance and sustainability looks not very optimistic. It appeared that currently the government does not have funds at all to purchase GeneXpert cartridges and other required consumables, and to pay for the proper maintenance of this technology. It is difficult to forecast whether sufficient funds will be available in the near future to support these methods, given the economic status of the country. However, it is appropriate to mention that the equipment was supplied primarily under other international projects and TBCP was responsible primarily for the respective training of the personnel and only in some cases for procurement and maintenance of equipment. It's probably worth to mention that ET interviewees said that the LED microscopy could be a cheaper and effective alternative for detection of new TB cases. Unfortunately, LED microscopes are not provided at the sufficient number of pieces to place them in all facilities involved in TB control, if required.

2. Fidelity to the implementation of the project plan

2.1. To what extent did the project implement the work- planned activities?

According to the available information and opinions of MoH officials and NTP managers, all program components were implemented as required. Analysis of the program performance indicators shows that the planned levels were achieved in most cases. Moreover, the program managed to enroll three new regions without negative influence to other components and sites.

It is worth to mention that TBCP workplans were discussed with NTP to ensure their consistency with the national priorities, and subsequently approved by MoH. The plans were also discussed with respective national and international partners, if required, to avoid duplication and guarantee their timely and entire implementation.

2.2. Which activities were not implemented (or partially implemented) and why were these activities not implemented?

Almost all planned activities were implemented with exception of one activity – ambulatory treatment of TB patients. There are two main reasons for insufficient results accomplished under this program component: 1) the excessive hospital bed capacity for TB patients and the imperative to fully utilize this capacity because underutilized bed capacity potentially leads to budget cuts; 2) a requirement of the existing MoH's Executive Order #383 (currently under revision) that all smear-positive TB patients must be treated at hospital. These causes are beyond the program authority. However, the Presidential Decree #4191 requirement to introduce ambulatory treatment nation-wide in 2019 provides a clear sign that the method is fully accepted and is taken as a part the national TB control strategy. NTP manager assured ET that this decision to the great extent was made due to TBCP advocacy and information activities. So, despite unreached number of TB patients treated on ambulatory basis, the success of this program component in terms of national strategic objectives setting is obvious.

2.3. In what ways did any change in planned activities affect overall outcomes and results?

The most notable change in planned activities occurred in 2018 with enrollment of three additional oblasts with limited scope of activities in the program. This decision caused realignment of the program budget for both countries of TBCP implementation and additional workload for the program team primary related to procurement of equipment unplanned earlier. TBCP managed to execute all additional tasks without visible influence to overall outcomes and results of the program.

3. Consortium partner relationships

3.1. How effective was the coordination between and within the project partnerships?

TBCP performed coordination between TB partners through participation in thematic working groups (e.g., laboratory), TB partners meetings at WHO and direct bi- or multi-lateral consultations with the national and international partners. WHO highly valued coordination of activities with TBCP. While ET did not meet other international agencies working in Uzbekistan, no reasons exist to believe that coordination between partners was insufficient.

3.2. What mechanisms ensured coherence and exclusion of duplication?

In Uzbekistan WHO is playing a coordinating role in TB-related international assistance. Every quarter WHO conducts TB partners meeting where partners discuss all aspects of inter-related efforts and issues, monitoring visit, accomplishments and deficiencies. TBCP actively participated in those meetings.

WHO is the implementing organization of USAID Challenge TB project in Uzbekistan. Since TBCP and Challenge TB worked closely in introducing new methods of laboratory diagnostic and other components of TB control, TBCP and WHO met as frequently as required to discuss joint activities, coordinate plans and agree on sharing of responsibilities.

4. Relationship with key stakeholders

4.1. How has the project worked with the specific governments?

TBCP worked with MoH and other central government agencies through direct communications with responsible officers and participation in thematic working groups. At the oblast level, the program representatives met with local officials to discuss particular areas of collaboration. Such a way of interaction with the government was caused by certain limitations that existed in the country until recently.

TBCP established productive collaboration with makhallas. Makhalla funds provided financial support to TB patients and their families. MDTs, in turn, worked with makhallas in some cases under special agreements, for example, to get in contact with returning labor migrants to assure their timely visit to health facilities for TB and HIV testing.

4.2. What mechanisms have been used to coordinate planning, implementation, evaluation and reporting of results with NTPs and other relevant government units?

The primary mechanism used was the regular meetings with the government officials to discuss relevant topics. All TBCP workplans, level of efforts, anticipated results and even the program management were discussed and approved by NTP and MoH. For example, in accordance with USAID decision made in response to NTP request, the program performed procurement of laboratory equipment and supplies for the pilot oblast TB dispensaries. As mentioned above, on USAID decision and in response to the host government request, TBCP expanded its activities to three additional oblasts in 2018 which required the budget realignment and caused additional workload to TBCP team.

All TBCP monitoring missions to the regions were conducted in cooperation with NTP. NTP representatives took part in all meeting and discussions with local TB program managers, together with TBCP evaluated the program progress, provided recommendations. Such interaction appears to be an effective way to promote and support innovations on behalf of the national authorities, engaging the political authorities/administrations of the USAID-supported sites to back the program recommendations, and make sure that all activities are implemented as planned.

4.3. In what ways did the project accommodate any differences in systems and context in the two countries?

All program interventions were designed and implemented in accordance with the country context. For example, the people- and patient-centered approach in Uzbekistan was mainly introduced through multi-disciplinary teams (MDT). The extensive TBCP technical assistance in the development of regulatory and normative documents was fully based on existing national legislation which serves as a keystone for appropriate deployment and sustainability of suggested methods and procedures. In light of existing limitations in access to epidemiology data, TBCP did not introduce comprehensive TB recording and reporting system.

4.4. What challenges presented themselves in the coordination and/or relationship with the different government players?

Based on on-site discussions, certain challenges in the relationship with NTP could appear due to excessive involvement of NTP management in the internal program management procedures, including staffing, on the top of a necessary and sufficient condition of reaching consensus on specific interventions essence, magnitude and anticipated results.

In terms of coordination and relationship with MoH, it looks like TBCP established effective business-like dialogue with respective officials. Along with that, serious challenges occurred due to limitations in information accessibility and dissemination that existed until recent time.

At the oblast level, TBCP cooperation with heads of TB facilities looks excellent, trustful and friendly. It remained unclear to what extent the program was seeking approval of the planned activities on the local government side. Given the vertical command structure of the country governance, it could be less critical in case of provision of a clear message from the central level.

4.5. How did the project address those challenges?

Firstly, TBCP managed to establish the appropriate level of mutual understanding with the government and NTP. Secondly, as it was emphasized by a number of officials, there was a clear vision that the goal of the program is to help, and not to criticize or intervene in the internal procedures of the government authorities. Thirdly, the program was very receptive and responsive to NTP and MoH requests, even in terms of changing of the earlier agreed plans.

4.6. How lessons have been learned from this project on how to work with the governments in both countries?

In this regard the following points could be noted:

1. The importance to create a program team of professionals and managers who are trusted by and known (at least, some of them) for the government authorities.
2. Focusing on provision of assistance, avoiding any criticism and neglecting of the written or unwritten rules and regulations.
3. Keeping in mind the real picture, including epidemiology, capacities of the health system and health program managers.
4. Careful coordination and cooperation with other stakeholders and partners, avoiding unnecessary competition and duplication of efforts.
5. Careful and weighted approach to design of the program and selection of conditions and limitations of the funding mechanism taking into account the epidemiology and the country context.
6. Availability of clear agreements regarding monitoring and evaluation of the program, including the borders of access to epidemiology and other relevant data.

5. Community engagement and capacity building, including CSOs

5.1. How has the project coordinated with communities including CSOs serving vulnerable populations?

Taking into account the country context, TBCP established a network of multi-disciplinary teams (MDT) in the pilot oblasts, 16 patient schools (PS) at in-patient TB facilities and 98 patient support groups (PSG) at out-patient facilities. PS and PSG were designed to retain patients on treatment through provision of correct TB-related information, including nature of disease, effectiveness of treatment, potential adverse events and other, and psychological support to their clients when required. A total number of individuals who received support from these structures are more than 50,000.

Each MDT consists of TB and HIV specialists, a psychologist, a nurse and 5-7 outreach workers. This mechanism was specifically designed to cover hard-to-reach and vulnerable groups of population, such as labor migrants, PWID, PLHIV, ex-prisoners. MDT networks were created in Bukhara, Navoi, Kashkadarya and Khorezm oblasts and worked under overall coordination of the local TB dispensary. A total number of clients that were reached by MDTs in all pilot regions were about 55 thousand. MDTs were actively working with makhallas to deliver correct TB-related messages to population at the community level to reduce and prevent stigma and discrimination, detect people with suspected TB symptoms and provide assistance to TB patients on out-patient treatment. The work in some cases was legalized through signing specific memorandums between MDTs (TB facility) and heads of a makhalla (rais).

ET does not have sufficient information to make definitive conclusions in regard to collaboration between TBCP and local CSOs.

- 5.2. What impact has community engagement had on linking clients to care? Also, explore ways in which community engagement may have failed to improve linkage to care?

TBCP in cooperation with local TB programs developed a voucher referral system for TB suspects that were identified by MDT members. The system demonstrated the due effectiveness. A total number of people who were referred by MDTs to TB facilities for testing were 43.2 thousand, 37 thousand were tested and 309 new TB cases detected among vulnerable populations over the life of the Program. 98% of those patients started TB treatment. Besides, the Program contributed in detection of 6,378 TB patients among women, 99.6% of them started TB treatment. MDTs demonstrated their high effectiveness in detection of new TB cases among vulnerable groups. MDTs model is an excellent example of locally generated solutions in accordance with USAID Global Accelerator to End Tuberculosis.

- 5.3. What could have been improved in how the project worked with community stakeholders?

TBCP made every effort to involve communities in TB control-related activities through MDTs, health fairs and appropriate publications in mass-media. Unfortunately, with completion of TBCP the future of MDTs is unclear, despite a very positive feedback from NTP. Probably, it could have been useful to intensify a dialogue with local authorities on allocation of small funding to support MDTs after completion of the program or explore more opportunities to get sponsors' support to this public health activity.

6. NTP capacity building

- 6.1. How has the project developed capacity of the NTP?

- 6.1.1. What activities were conducted to enhance capacity?

TBCP activities focused on enhancing NTP capacity included:

1. Trainings of TB control facilities staff, other practitioners, nurses and para-medical staff;
2. Technical assistance in updating of TB control regulatory and normative documents, endorsed by respective government authorities;
3. Establishing of the Center of Excellence at the Research Center of Phthisiology and Pulmonology in Tashkent and 7 centers in pilot oblasts, which are serving for training, technical assistance and supervision purposes;
4. Support to QuanTB drug management and forecasting software usage;
5. Introduction and proper functioning of laboratory QMS;
6. Support to conduct of monitoring mission to the regions;
7. Support to participation of NTP representatives in the international professional forums and observation tours.

In addition to TB professionals, TBCP provided trainings for health professionals of various specialties in order to provide the basic knowledge and skills required for better detection and provision of care to TB patients, infection control and other areas.

TBCP supported systematic monitoring visits to target oblasts performed jointly with representatives of the National Center of Phthisiology and Pulmonology. Along with monitoring, assessment and supervision purposes, such visits were used for technical assistance and on-the-job training of health professionals.

TBCP arranged observation tours to CoE in Dushanbe, Tajikistan, to Rutgers University Global TB Institute and State of New York Department of Health TB Center, United States, to Arkhangelsk, Russian Federation and other sites where mid- and higher level NTP managers could observe the practical application of innovative approaches and learn from their colleagues about the experience of work.

Almost two years ago the national government has made a decision to replace chief doctors of the oblast TB dispensaries by young TB professionals from central TB institutions and move “old” facility managers to the rayon level. The decision appeared to be effective method to “transfuse a new blood” to TB control activities nationwide. In terms of TBCP, newcomers demonstrated the higher level of receptiveness and responsiveness to the suggested innovations and facilitated introduction of TBCP-developed tools and methods. For example, ET was informed that chief doctors participated in person in TBCP’s training sessions to get the first-hand information even when those trainings were designed for the lower level professionals. Thus, TBCP training helped to increase technical and management capacity of newly assigned NTP managers in the regions.

6.1.2. Examine capacity in policies, regulations and procedures.

The program made a valuable contribution to the development of TB-related regulatory base. ET interviewees repeatedly expressed their appreciation of the program efforts aimed at improvement of guidelines, recommendations and other documents that are currently used country-wide by all TB control facilities and family physicians. All regulatory documents that developed with assistance of TBCP are based on existing national legislation, the latest WHO recommendations and best practices from other sites and countries. Along with that, it is difficult to state to what extent those documents are easily accessible and known for all the staff of TB and other health facilities.

6.1.3. What challenges were observed in building NTP capacity and how were these challenges resolved?

During implementation of the program, NTP faced a number of challenges caused by the country legislation, rules and regulations. It was always difficult until recent time to receive a reliable information on TB epidemiology and effectiveness of the health system response to TB spread which somewhat impeded the planning of activities. Due to existed restrictive approach to the release of health statistics information, rigidity was demonstrated to introduction of those MIS that may allow comprehensive access to national TB data. TBCP focused on expansion and maintenance of QuanTB database, introduced under another USAID activity (SIAPS) which is less obviously TB data-focused technique.

The reassignment of all chief doctors of TB dispensaries in pilot oblasts 2 years ago required additional TBCP efforts to ensure the proper orientation and understanding of newcomers on the program objectives, activities and intermediate results.

A lack of professionals and staff turnover is an issue in Uzbekistan. It dictates the necessity to perform additional training and re-training courses in order to maintain the required level of quality performance. TBCP through its extensive training component managed to overcome this challenge and secure skills and knowledge of TB cadre at the appropriate level.

In general, in-depth knowledge of the country context and realities, flexibility, timely provision of required information to decision makers, along with responsiveness and receptiveness to NTP manager’s requests helped TBCP team to neutralize serious challenges in implementation of the program activities related to NTP capacity building.

6.1.4. What are the key capacity issues that future projects would have to address?

At the current moment it is unclear whether all managers of TB facilities who were engaged almost two years ago are going to continue their current assignments which are two-years long. In case a number of them will be replaced, it is reasonable to plan a special training course for the new comers. Besides, such training may be a good option to provide information on updated international approaches and recommendations to all mid- and high level NTP managers.

7. Recommendations

7.1. What recommendations do you make for future programming?

Based on information obtained on-site, analysis of the available sources the following recommendations for the future programming could be provided:

1. Given the current status of national economy and high level of TB rates, the country and NTP definitely require external technical and financial support to TB control efforts, and provision of assistance in procurement of relevant equipment and supplies. The current trends in TB epidemiology create the very guarded optimism but do not look irreversible so far in case of insufficient anti-TB measures. Having that, the further international assistance may be critical for strengthening sustainability of achieved positive developments.
2. It looks reasonable to devote the next steps to the further analysis of results accomplished and to plan activities that would promote political commitment of other oblasts to implement similar approaches to TB control, including potential oblast funding for observation visits to the selected demonstration sites, and collaboration to support trainings of local staff. Expansion should be rapid and require minimum external resources given that the aim is dissemination of the experience. The involvement of professionals from current pilot oblasts should be planned for peer education and techniques transfer.
3. MDT networks as an effective model of outreach work with vulnerable groups should be replicated across country; defining of potential sources of funding is required for transition to full self-sustainability of this approach.
4. It is suggested to develop further the targeted interventions focused on labor migrants as a vulnerable group with specific needs, related to their pre- and post-travel examination, provision of psychological support to them and their families.
5. Given that in Decree of the President of Uzbekistan #4191 of 13 February 2019, Attachment I, point 17, USAID is mentioned as a partner in introduction of ambulatory treatment and short regimens, it may be useful to plan provision of further technical assistance to NTP in implementation of this task. It would be useful to perform in collaboration with the National TB center an operational research focused on getting scientific evidence of effectiveness and efficiency of ambulatory treatment and short regimens in the country context.
6. Since patient-centered approach is a key element and ideology of the program that should be preserved, it makes sense to initiate establishing of a working group on patient-centered approach at the central level to discuss and coordinate all relevant activities country-wide, facilitate dissemination of experience, develop and submit suggestions to the government on potential ways of implementation of provisions of the Presidential Decree #4191.
7. Taking into account that international assistance in TB control may not be maintained at the same level for indefinitely long period of time, to propose to the government and, in case of agreement, provide technical assistance to MoH and NTP in developing a strategy of smooth transition to self-reliance upon graduation and completion of the external support to anti-TB measures.

7.2 Examples of innovative approaches that were developed and applied?

The most successful models that were developed and applied in Uzbekistan under TBCP are MDTs and a system of telemedicine (CoE and centers in the oblasts).

Built in the local context, MDT network as an effective mechanism of reaching vulnerable groups of population should be replication in entire country. In the future, it may be used not just to support TB control activities but also other public health priorities. Reportedly, it is moderately expensive mechanism but provision of support to its proper functioning is primarily the role of local governments.

The system of telemedicine which includes CoE at the National TB center and centers in the oblasts is an illustrative example of a cost-effective methodology that allows to remotely providing technical assistance and training for health professionals and helping to monitor on-site medical activities. In presence of equipment provided by TBCP, the system requires from minimal to moderate financial and administrative support. However, in few years the equipment will require replacement. This point should be considered by NTP managers with assistance of the future program.

ET observed implementation of VOT in one of visited oblasts. At the current moment it's a bit premature to conclude about effectiveness and success of this technique. However, since it became a part of the Presidential

Decree #4191, the approach has good prospects for further expansion. Given that WHO requires more evidence on the effectiveness of this method in middle and low income countries, TBCP Uzbekistan experience may contribute to the global database on application of innovative methods of TB control.

CONCLUSIONS

In general, TBCP implemented all planned activities with appropriate quality and reached the targets in both countries. In terms of performance indicators, the program accomplishments in two countries are summarized in Table 2. Explanations and ET vision on underachieved indicators value are provided above.

Table 2: Program performance indicators life of program (LOP) results analysis - Summary Table

Indicator	Tajikistan	Uzbekistan
GOAL: Ensure more effective and more accessible TB diagnosis and treatment for all, including vulnerable populations, so as to reduce the burden of TB and the development of drug resistant tuberculosis (DR-TB) in Central Asia.	achieved	achieved
1. Percentage of bacteriologically confirmed TB cases successfully treated (cured plus treatment completed) among the bacteriologically confirmed TB cases registered for treatment during a specified period in pilot areas	achieved	achieved
2. Number of bacteriologically confirmed, drug resistant TB cases (RR-TB and MDR-TB) notified in pilot areas	achieved	achieved
3. Number of MDR-TB cases who initiate second line treatment in pilot areas	achieved	moderately achieved
Objective 1: More equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations Internal Environment	achieved	achieved
1.1 Number of TB cases (all forms) notified among vulnerable populations (PLWH, PWID, prisoners/exprisoners, migrants) in pilot area through program referral	moderately achieved	achieved
1.2 Number of TB cases (all forms) notified among women in pilot area	achieved	achieved
1.3 Number of TB cases (all forms) notified among vulnerable populations (PLWH, PWID, prisoners/exprisoners, migrants) in pilot area through program referral who started TB treatment	moderately achieved	achieved
1.4 Number of TB cases (all forms) notified among women in pilot area who started TB treatment	achieved	achieved
1.5 Percentage of released prisoners in pilot areas continuing treatment in civil sector	achieved	n/a
1.6 Percentage of referred vulnerable population that were tested for TB	achieved	achieved

1.7 Number of vulnerable population reached by all types of project activities	achieved	achieved
Objective 2: Laboratory services provide more timely, quality TB and MDR-TB diagnosis	achieved	achieved
2.1 Percentage of laboratories in pilot areas successfully implementing quality management systems	achieved	achieved
2.2 Number of laboratories in pilot areas started implementation of quality management systems	achieved	achieved
Objective 3: Patient centered system for TB and MDR-TB implemented widely across the region	achieved	moderately achieved
3.1 Percentage of patients successfully treated in out-patient treatment for drug-susceptible TB in pilot areas	achieved	achieved
3.2 Percentage of patients successfully treated in out-patient treatment for MDR-TB in pilot areas	moderately achieved	moderately achieved
3.3 Percentage of MDR-TB cases managed in outpatient settings	achieved	underachieved
3.4. Percentage of drug-susceptible TB cases managed in outpatient settings	achieved	underachieved
Objective 4: Enhanced enabling environment promoting TB services that meet international standards	achieved	achieved
4.1 Number of developed and revised by program policies and guidelines that are officially approved/endorsed by government	achieved	achieved
4.2 Number of National TB regulations (i.e. Prikaz), policies revised to comprehensively adhere to international standards for outpatient treatment of TB and MDR-TB	achieved	achieved
4.3 Number of revised policies and guidelines to comprehensively adhere to international standards for diagnosis and case management of TB and MDR-TB, DM	achieved	achieved
Objective 5: Human and institutional capacity of health systems to manage TB and MDR-TB services strengthened	achieved	achieved
5.1 Percentage of health providers trained in different aspects of TB control scoring $\geq 85\%$ on post test	achieved	achieved

5.2 Percentage of nonhealth providers trained in different aspects of TB control scoring ≥85% on post test	achieved	achieved
5.3 Percentage of TB facilities in pilot areas implementing priority IC measures	achieved	moderately achieved
5.4 Number of health providers trained in different aspects of TB control	achieved	achieved
5.5 Number of non-health providers trained in different aspects of TB control	achieved	achieved
5.6 Number of individuals trained in any component of the WHO Stop TB Strategy with USG funding	achieved	achieved
Objective 6: Coordination and linkage of TB with other health sectors and CSOs increased	achieved	achieved
6.1 Percentage of TB patients who had an HIV test result recorded in the TB register	achieved	achieved
6.2 Percentage of HIV positive patients who were screened for TB in HIV care or treatment settings	achieved	achieved
Objective 7: TB service providers and managers using electronic TB MIS and using quality data for evidence-based decision making at all levels	achieved	n/a
7.1 Number of TB facilities using electronic TB MIS system according to WHO standards	achieved	n/a
7.2 Percentage of TB facilities conducting a data quality assessment in the past 12 months	achieved	n/a

-  - Achieved (90 and higher percentage of achievement)
-  - moderately achieved (more than 75% achieved)
-  - underachieved

In terms of underachievement of indicators value under PITT 3.3 and 3.4 in Uzbekistan, ET does not look at this as a drawback. A possibility of out-patient treatment depends on many factors that often lay beyond the international assistance program authority. The most critical of those factors are local legislative requirement and fiscal regulations, along with others. It is difficult to expect that the host country professionals are ready to go for non-compliance, especially in absence of clear signal from the central level. However, the appearance of Presidential Decree #4191 with a clear guidance to introduce out-patient treatment of TB nation-wide in collaboration with USAID may be considered as a documented success of TBCP in promotion of this innovative approach, and this is

an outstanding accomplishment that is more important than a number of patients on ambulatory treatment at the current moment.

In design and implementation of the Program activities, TBCP applied a systemic approach to the improvement of TB control activities in Tajikistan and Uzbekistan. In particular, the following mechanisms were employed to strengthen various components of NTP and TB care provision:

- Strengthening political commitment – regular meetings and communication with the MoH and local governments officials, provision of support to participation of NTP managers in international events, working with mass-media, reporting on innovative models development;
- Capacity building – trainings and re-trainings, including those for non-medical staff, CoEs, OpenMRS, QuanTB;
- Strengthening regulatory base – technical assistance in development and modification of various regulatory and normative documents and guidelines, advocacy activities;
- Community engagement (detection of new cases, increasing TB care demand, including vulnerable populations) – CHCs, MDTs, NGOs, working with mass-media;
- Service delivery – training of health professionals and para-medical workers, observation tours, telemedicine (consiliums, on-line trainings, consultations), laboratory quality management system (QMS), CHCs and MDTs, direct technical assistance;
- Care and support – CHCs, patient schools, patient support groups, advocacy in local governments;
- Reporting, planning and forecast (MIS) – OpenMRS, QuanTB, trainings, direct technical assistance.

All program activities were effective combinations of internationally-recognized approaches to TB prevention and control (e.g., patient-centered approach) and locally generated solutions for their introduction (e.g., CHCs, MDTs).

The Program performed a series of trainings and advocacy events organized by TBCP and focused on involvement of mass-media in TB control-related area, and increasing of interest of mass-media to this socially important topic thus mitigating stigma and raising public awareness and vigilance in regard to TB. ET interlocutors pointed out the increased number and quality of TB-related publications. As a result, the conspiracy of silence around TB based primarily on ignorance and fear is broken in both countries. This achievement is highly valued by the local counterparts. Other international assistance programs working in countries did not pay much attention to this component.

The appearance of Presidential Decree #4191 with a clear guidance to introduce out-patient treatment of TB nation-wide in collaboration with USAID may be considered as a documented success of TBCP.

Patient support groups and patient schools functioning at out-patient and in-patient facilities, respectively, and supported by TBCP contributed to increased treatment compliance and correct understanding of TB and peculiarities of treatment by patients and their families. These mechanisms are known and utilized with varied success in many countries. Given the country context, it was absolutely correct decision to support them in Uzbekistan and Tajikistan.

With assistance of the program a number of international events were organized in the Central Asia region. For example, International Conferences on Integrated TB Control held in Almaty, Kazakhstan (2016), Bishkek, the Kyrgyz Republic (2017), Dushanbe, Tajikistan (2018), and Nur-Sultan, Kazakhstan (2019), or Regional High-Level Meetings on Cross-Border TB Control and Care in the Central Asian Region in Astana, Kazakhstan in 2015, 2016, 2017, and 2018, and others. Such forums provide an excellent opportunity to exchange opinion and ideas, develop joint documents and learn what and how could be made given the specifics of the region. Participation of the government and NTP representative is a part of activities focused on strengthening political commitment, capacity building and increasing public awareness on TB-related topics.

The program was managed by capable and dedicated teams of professionals who were able to establish and maintain the appropriate working relationships with national and international partners and demonstrated due level of flexibility, responsibility and responsiveness.

The sustainability of introduced techniques is a bit worrisome in both countries. Since ET visited TB CP sites after completion of the program, NTP representatives repeatedly expressed their concerns about continuation of work at the same level without support of the program. For example, the head of MDT in one of visited oblasts openly stressed that all activities are currently suspended due to absence of any funds. It is unclear if upon completion of TGF grant projects and closure of other programs of assistance NTPs will be able to purchase cartridges for GeneXpert MTB/RIF machines and other required supplies, and pharmaceuticals for treatment of DR-TB. Even superficial review of the government allocations in health sphere demonstrates insufficient readiness of both visited countries to take more substantial financial responsibility. Another issue is shortcomings in staffing and high turnover of health professionals and other qualified personnel that makes questionable further development of introduced innovative approaches in absence of refresher training. In light of growing number of M/XDR TB cases and TB/HIV co-infection it is becoming even more critical for sustaining accomplished results in timely detection, quality diagnostic, adequate and successful treatment and provision of required care to TB patients, especially from vulnerable and socially disadvantaged groups of population.

USAID TB Control program in Tajikistan and Uzbekistan implemented by Project HOPE was a valuable contribution to achieving national priorities and strategic targets in prevention of TB spread in both countries.

Thus, it is justifiably to make a conclusion that both countries require continuation of technical assistance and financial support to TB control efforts at least within next 5 years. In addition, it could be reasonable to provide technical assistance in the development of transition to self-reliance strategy based on economic, social and demographic realities.

NTP managers in both countries emphasized the importance of continuity between the finished program and potential new activity. Due to the country contexts, in both Tajikistan and Uzbekistan a new team may require up to two years just to get the appropriate and required understanding on how to work in the local environment while delays in the program implementation may cause negative developments. NTP managers stressed that they would prefer to continue cooperation with a group who has proven qualification and ability to deal with local realities.

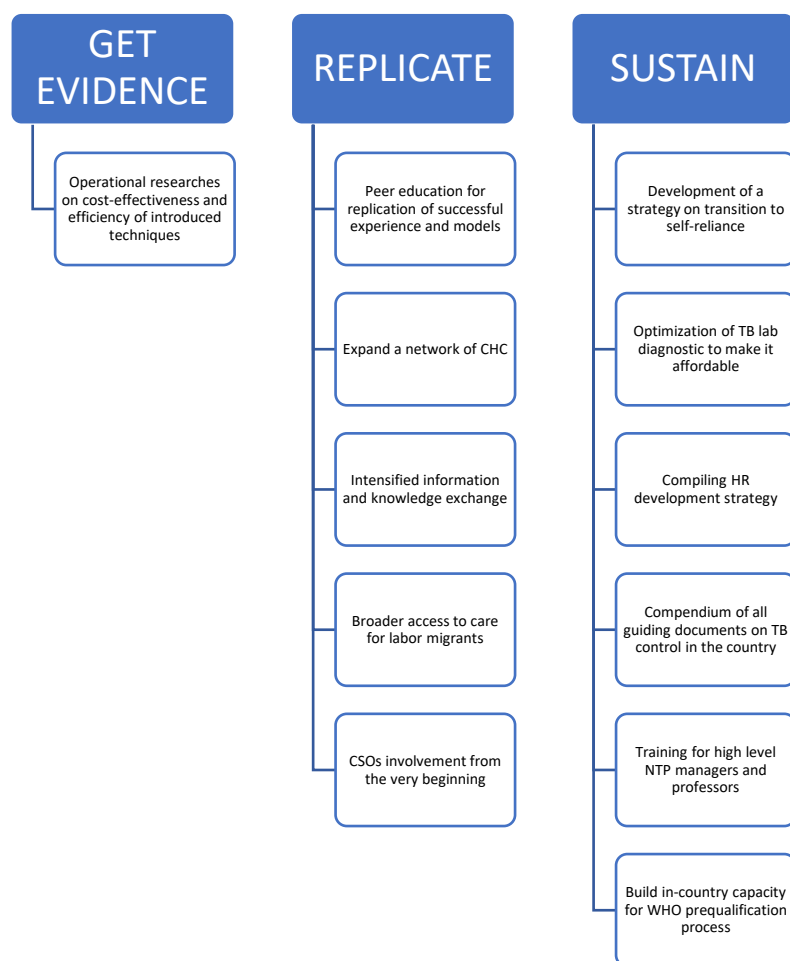
To conclude, the USAID TB Control program in Tajikistan and Uzbekistan implemented by Project HOPE was a valuable contribution to achieving national priorities and strategic targets in prevention of TB spread in both countries. The program was a practical execution and effective application of the United States Government Global TB Strategy and valuable contribution to implementation of the WHO End TB Strategy.

RECOMMENDATIONS

Recommendations provided below are based on conclusions made by ET upon analysis of information obtained from the review of available documentation, during meetings and interviews, and direct observations on-site. Recommendations are addressed to USAID for the future programming.

RECOMMENDATIONS FOR TAJIKISTAN

Figure 7. Basic recommendations for future programming: Tajikistan

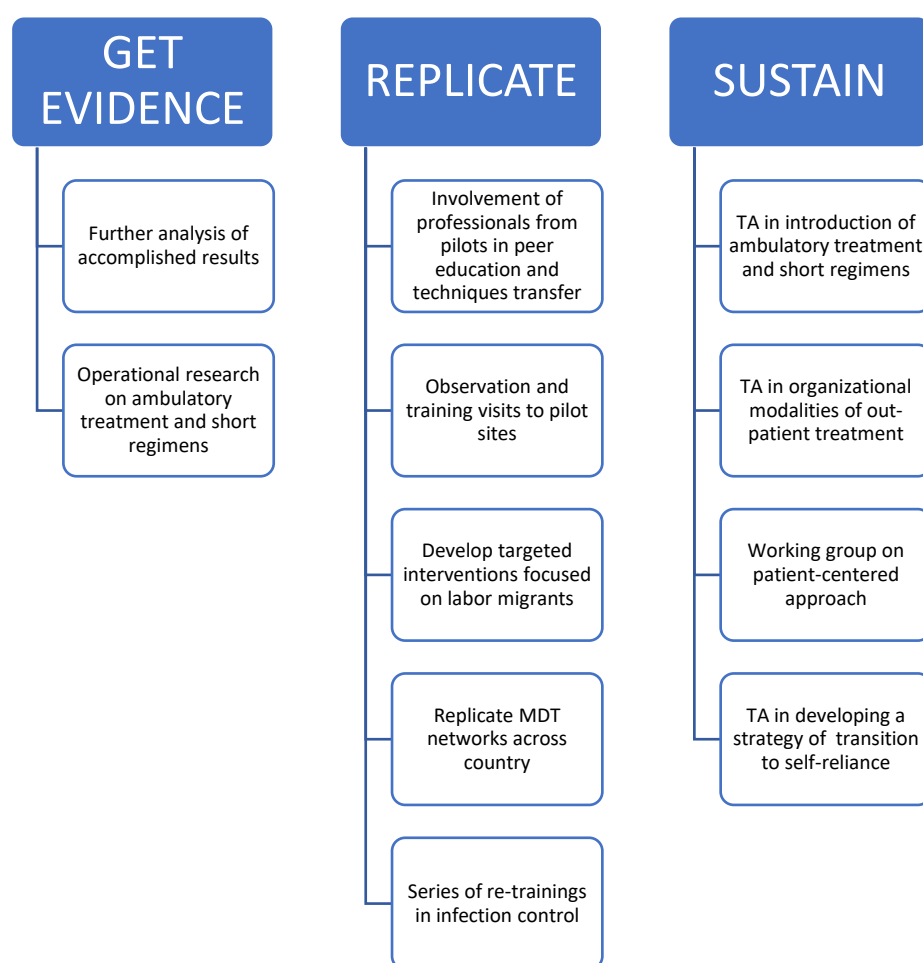


1. It looks reasonable to devote the next steps to the further analysis of results accomplished and replication of successful experience and models nation-wide with involvement of professionals from current pilot sites for provision of peer education and techniques transfer.
2. It is suggested to perform a number of operational researches to provide scientific evidence on cost-effectiveness and efficiency of introduced techniques for advocacy efforts aimed at sustainable and increased funding of TB control methods (e.g., out-patient treatment, community involvement vs purely medical staff activities, and others) and/or realignment of TB budget (elimination of bed-based funding and reallocation of resources).
3. In light of the international assistance graduation, it is recommended to provide technical assistance in the development of a strategy document on steady transition to self-reliance and self-sufficiency based on economic realities and capacities of the government at all levels. In this regard it makes sense to involve a well-recognized international expert in health economics for

provision of assistance at the national level related to the rational resource allocation and setting of priorities.

4. Given the obvious success of the approach, a network of CHC should be expanded nation-wide to cover all communities, groups of population and settlements. Respective moderate funds should be allocated in the budget of future activity, if anticipated.
5. It is suggested to plan the involvement of CSOs in implementation of a future program, if anticipated, from the very beginning for the proper and comprehensive coverage of vulnerable populations to ensure timely and full achievement of all objectives related to successful treatment of patients from those groups.
6. Currently, with the donor support, country uses the approach for TB diagnostic which is fully in line with WHO recommendations, but as of today doubtfully affordable for such a low-income country as Tajikistan without permanent external assistance. Having in mind the future sustainability and long-standing effectiveness, there might be a need to consider if the current layout of equipment is optimal and, if necessary, develop suggestions for the further optimization of TB laboratory diagnostic process nation-wide.
7. It is suggested to provide technical assistance in compiling human resource development strategy - when, number, location, specialties, retaining, motivation, qualification etc., including training and re-training of medical, para-medical and other relevant cadres.
8. In regulatory sphere, it is recommended to compile a brochure (compendium) that includes all regulatory and guiding documents developed with TA of TBCP and probably other international partners and printing a required number of copies for distribution among all health service providers across country to make sure that they are having a source of information regarding all stages and components of TB control.
9. It is suggested to create a training program for high level NTP managers and professors. It would be a useful tool to update the knowledge and skills of those who should understand in-depth all TB control-related innovations, have a strategic vision and deliver respective messages to under- and post-graduate students as well as to the government officials, public and representatives of mass-media. In light of shifting the ownership of all advanced developments to national top level professionals that would strengthen pre-requisites for sustainability and self-reliance. For this purpose to invite well-known and respected international experts and professionals from other countries of the region if a certain methodology is well-developed and of proven effectiveness their countries of origin.
10. In regard to monitoring missions, it is recommended to consider the involvement of health professionals from the regions other than target areas in order to intensify information and knowledge exchange. Continue to provide funding for monitoring missions with gradual decrease.
11. Labor migrants. Potential revision of activities focused on this significant group of population in order to broaden the access to care for them. It makes sense to initiate bilateral or three-lateral agreements with countries of destination and employment and provide the respective technical assistance.
12. Reportedly, it is planned to start domestic manufacturing of anti-TB pharmaceuticals in Tajikistan. USAID may consider supporting technical assistance to build in-country capacity for the WHO prequalification process of TB drugs production.

Figure 8. Basic recommendations for future programming: Uzbekistan



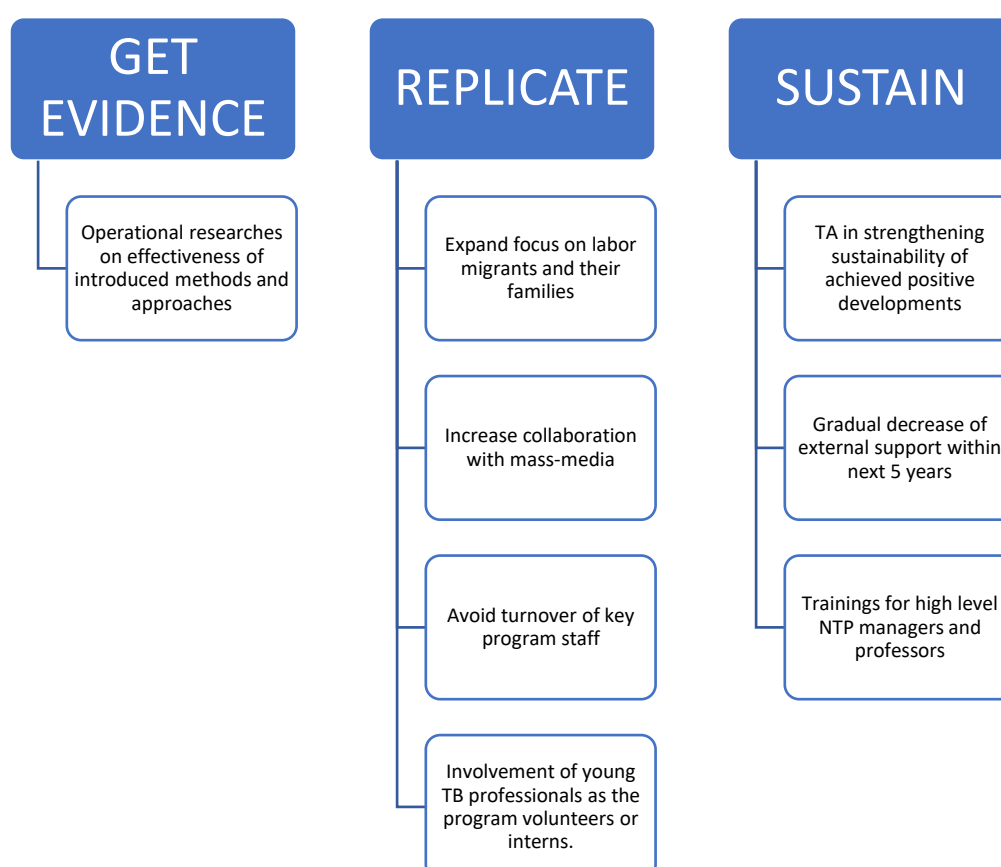
1. It looks reasonable to devote next steps to the further analysis of results accomplished and to plan activities that would promote political commitment of other oblasts authorities to implement similar approaches to TB control, including potential oblast budget funding for observation visits to the selected demonstration sites, and collaboration to support training visits. The involvement of professionals from current pilot oblasts should be planned for peer education and techniques transfer.
2. MDT networks as an effective model of outreach work with vulnerable groups should be replicated across country; defining of potential host country sources of funding is required for transition to full self-sustainability of this approach.
3. It is suggested to develop further the targeted interventions focused on labor migrants as a vulnerable group with specific needs, primarily related to their pre- and post-travel examination, provision of psychological support to them and their families.
4. Given that in Decree of the President of Uzbekistan #4191 of 13 February 2019, Attachment 1, point 17, USAID is mentioned as a partner in introduction of ambulatory treatment and short regimens, it may be useful to plan the provision of further technical assistance to NTP in implementation of this task. To perform in collaboration with the National TB center an

operational research focused on getting scientific evidence of effectiveness and efficiency of ambulatory treatment and short regimens in the country context.

5. Since patient-centered approach is a key element and ideology of the program that should be preserved, it makes sense to initiate establishing of a working group on patient-centered approach at the central level to discuss and coordinate all relevant activities country-wide, share responsibilities among potential partners, facilitate dissemination of experience, develop and submit suggestions to the government on potential ways of implementation of the Presidential Decree #4191 provisions.
6. To reach the targets in the area of out-patient treatment, it would be reasonable to plan, along with the operational research, provision of direct technical assistance to local TB programs in organizational modalities of this method by an expert (experts) who possesses the required competence.
7. The next activity should include a series of re-trainings in infection control measures. IC measure should be regularly evaluated in all TB facilities, especially those involved in treatment of M/XDR-TB cases. If required, a specific plan for implementation of IC measures may be developed for a particular facility.
8. Taking into account that international assistance in TB control may not be maintained at the same level for indefinitely long period of time, to propose to the government and, in case of reaching agreement, provide technical assistance to MoH and NTP in developing a strategy of smooth transition to self-reliance upon graduation and completion of the external support to anti-TB measures.

RECOMMENDATIONS FOR BOTH COUNTRIES

Figure 9. Basic recommendations for future programming: both countries



1. Given the current status of national economies and high level of TB rates, both countries and NTPs definitely require external technical and financial support to TB control efforts, and provision of assistance in procurement of relevant equipment and supplies. The current trends in TB epidemiology create the very guarded optimism but do not look irreversible so far in case of insufficient anti-TB measures. Having that, the further international assistance may be critical for strengthening sustainability of achieved positive developments.
2. Both countries require continuation of technical assistance for the next 5 years in order to support national NTPs during the period of transition to self-reliance and sustainability. It makes sense to consider a possibility of gradual decrease of external assistance during those five years with incremental replacement of outgoing components by respective national contributions. A specific “road map” may be developed for this purpose with technical assistance of the next program.
3. It is suggested to pay more attention to labor migrants and their families in both countries. On one hand, this group appeared to be a notable source of the disease both in country of permanent residence and country of destination/employment. On the other hand, these people may be better motivated in the fast and effective recovery thus being more compliant to treatment.
4. Performing operational researches would be helpful in both countries. Such researches may provide scientific evidence of effectiveness of all introduced methods and approaches in the country context. Historically in CIS countries scientific confirmation is valued by the government officials. That may help to promote faster institutionalization and legalization of innovations.
5. It makes sense to arrange a training session on PMDT and related topics for high level NTP managers and professors of medical education facilities from both countries. Usually these professionals think that they are well aware of all innovations and WHO recommendations but the reality shows that it is not necessarily so. Given the nature of the audience on such training, it is necessary to invite internationally recognized specialists with appropriate knowledge of the region to provide lectures and facilitate discussions in a format acceptable for participants. Such training may be organized at CoE at Machiton hospital, Tajikistan.
6. A program component aimed at collaboration with mass-media should be continued at the same level or increased. This is an effective way to deliver correct message on TB to the population, reduce stigma, discrimination of TB patients and disseminate information of best practices in a format suitable and understandable for unprepared audience and as a result increase TB vigilance and demand in quality TB services. The program reached outstanding progress in this activity which should not be lost.
7. A new program team should include program managers with the required strategic vision and professionals with in-depth knowledge of the countries’ context, results and experience of the previous activities, as well as lessons learned. All required and possible measures should be undertaken to avoid turnover of key program staff over the life of the program.
8. The future program team may invite, upon agreement with NTPs, a few young TB professionals (for example, residents from medical universities) in both countries to work as volunteers or interns for several weeks or months as a part of the program team. This could be an interesting and professionally important experience for young people, and obviously would make the program-introduced approaches better known among professionals and students. In addition, it would be a contribution to public health training of the national cadre.

ANNEX I. COUNTRY CONTEXT

TAJIKISTAN CONTEXT

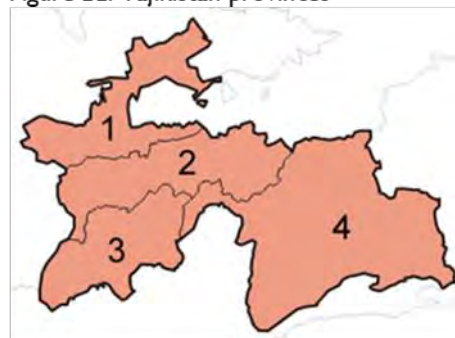
Tajikistan is a landlocked, mountainous country in Central Asia with a population of 9.1 million and with gross national income per capita at \$1,010, based on 2018 worldwide development indicators compiled by the World Bank. Tajikistan is the only low-income country in the Europe and the Commonwealth of Independent States region, according to World Bank country data. Tajikistan has an area of 141,400 sq. km. It is the smallest nation in Central Asia by area. Tajikistan is bordered by Afghanistan to the south, Uzbekistan to the west, Kyrgyzstan to the north, and China to the east. Mountains cover more than 90% of the country. Barely 7% of the country's land is arable. Tajikistan possesses vast water resources stored in glaciers, lakes and underground sources.

Figure 10. Map of Tajikistan



Source: Wikipedia

Figure 11. Tajikistan provinces



Source: Wikipedia

Recovery from the devastating social and economic consequences of civil war and the start of reforms led to steady, though unequal, growth over the past decades averaging 7% annually, according to World Bank country data for 2018. Poverty headcount ratio at \$1.9 a day declined from 54% in 1999 to approximately 5% in 2018, according to the World Bank country data. Enrolment and completion of primary education are near universal with good gender parity, and the under-5 mortality rate more than halved between 2000 and 2017. Despite these impressive results, Tajikistan still faces a number of challenges.

Tajikistan is particularly vulnerable to external shocks and regional economic crises, and remittances contributed 29% to GDP in 2018, according to World Bank estimates.

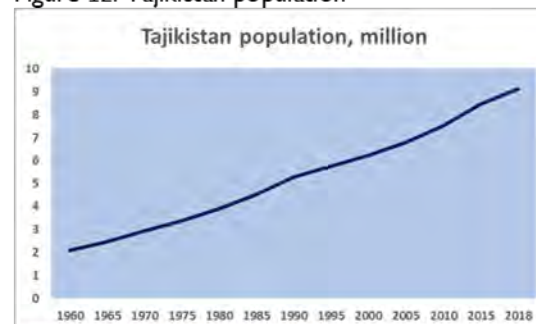
Poverty remains widespread in rural areas, especially in the Khatlon oblast and Gorno-Badakhshan Autonomous Oblast. Rural population continue to be disadvantaged as a result of limited access to health, education, safe water, energy and other public services, owing to obsolete infrastructure and poor maintenance.

Gender inequality also exist. According to the Agency of Statistic under the President of Tajikistan, the proportion of women in paid jobs in the fields of labor not related to agriculture is 39.7% for 2017. In 2017 female wage in the real sector represents only 59.6% of male wage.

There are the province (oblast) of Sughd (1), Khatlon oblast (3), the Autonomous Oblast of Gorno-Badakhshan (4), and the Region of Republican Subordination (2) in Tajikistan.

The primary sources of income in Tajikistan are aluminium production, cotton growing and remittances from migrant workers. Cotton accounts for 60% of agricultural output, supporting 75% of the rural population, and using 45% of irrigated arable land. The aluminium industry is represented by the state-owned Tajik Aluminum Company – the biggest aluminium plant in Central Asia and one of the biggest in the world.

Figure 12. Tajikistan population



Source: Worldwide development indicators
<https://databank.worldbank.org>

Unemployment, HIV/AIDS and tuberculosis (TB) are also factors of exclusion and vulnerability for men and women, particularly in rural areas.

Despite the progress achieved in the fight against TB in Tajikistan and the subsequent consistent decline in mortality and incidence during the last decade, TB still poses a significant public health threat.

Tajikistan is among the WHO European Region's high-priority countries for TB control. Tajikistan has high TB and drug-resistant TB (DR-TB) rates. According to WHO estimates of TB burden, in Tajikistan there were 7,500 new cases of TB in 2017, or 85 per 100,000 population. Tajikistan is on the WHO 30 high MDR-TB burden countries list based on estimated rate per 100,000 population and with a minimum number of 1,000 MDR-TB cases per year.

There were an estimated 460 TB deaths in 2017 among human immunodeficiency virus (HIV)-negative people in Tajikistan and equivalent to 5.2 deaths per 100,000 population (range 3.9-6.7).

In 2017, there were an estimated 940 (range 870-1000) cases of rifampicin-resistant and multidrug-resistant TB (RR/MDR-TB) among notified pulmonary cases in Tajikistan. The proportion of RR/MDR-TB among new and previously treated TB cases in Tajikistan exceeds the global average, with 20% in new and 23% in previously treated cases compared to 3.5% and 18% respectively.

In 2017, 5,895 incident TB cases were notified, amounting to 79% of the estimated new and relapse cases in Tajikistan. The percentage of newly notified TB patients tested using WHO-recommended rapid diagnostic tests was 52% in 2017, overachieving the target of 30% in the Tuberculosis action plan for the WHO European Region 2016-2020. A total of 4,126 (70%) pulmonary cases were notified among incident TB cases, of which 68% were laboratory confirmed.

There are total 936 laboratory confirmed MDR/RR-TB cases and 279 laboratory confirmed Extensively drug-resistant TB (XDR-TB) cases in Tajikistan.

Of the new and relapse TB patients notified, 95% were screened for HIV. A total of 219 TB cases were detected with HIV-positive status, which is 4% of those tested. A total of 117 (53%) of HIV-positive cases are reported to have antiretroviral therapy (ART).

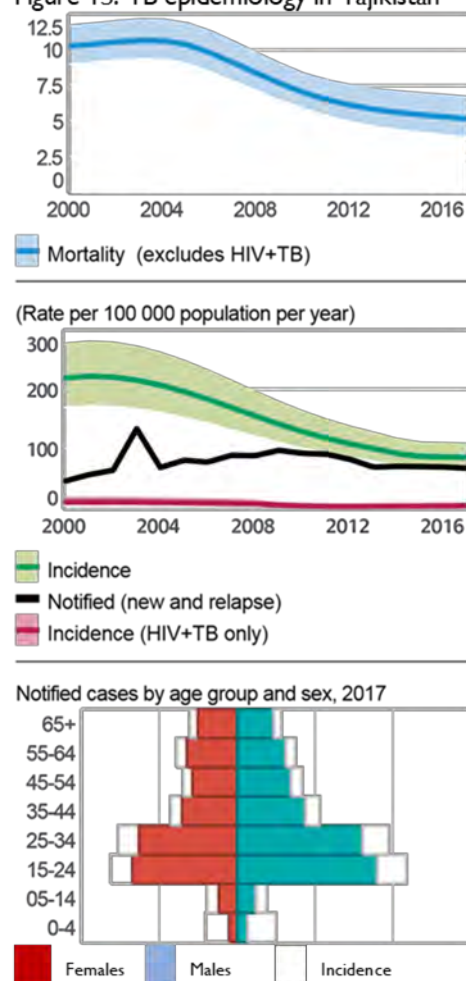
The treatment success rate in Tajikistan is 89% for the new and relapse cases registered in 2016, and 58% for the MDR/RR-TB cases started on second-line treatment in 2015.

As mentioned before, Tajikistan is exposed to a wide array of internal and external vulnerabilities, which are inter-linked and reinforce each other, thereby increasing the risk of complex, compound crisis situations. Addressing these vulnerabilities simultaneously is critical for strengthening the country's and its populations' resilience and for ensuring sustainability of development gains. Involvement of stakeholders and coherent efforts at the policy, institutional and individual levels will be essential for success. That is why international assistance remains an essential source of support for the country.

Sources:

1. Worldwide development indicators <https://databank.worldbank.org>
2. Wikipedia <https://en.wikipedia.org>
3. Agency of Statistic under the President of Tajikistan <https://stat.tj/en>
4. Tajikistan tuberculosis profile www.who.int/tb/data

Figure 13. TB epidemiology in Tajikistan



Source: Global tuberculosis report 2018.
www.who.int/tb/data

5. Tuberculosis surveillance and monitoring report in Europe 2019 <http://www.euro.who.int/en/health-topics/communicable-diseases/tuberculosis/publications/tuberculosis-surveillance-and-monitoring-report-in-europe-2019>

UZBEKISTAN CONTEXT

The Republic of Uzbekistan gained independence in 1991, after being part of the former Soviet Union since 1924, and it has begun its transition to a market economy. Uzbekistan is a presidential republic, and conducts presidential and parliamentary elections on a regular basis. The President of Uzbekistan is Shavkat Mirziyoyev.

Uzbekistan is a resource-rich, doubly-landlocked country, strategically located in the heart of Central Asia. Its population of about 32.96 million (preliminary information for 2018, according to the World Development Indicators database), approximately half of which lives in urban areas. Uzbekistan's population accounts for approximately 46% of Central Asia's population. In 2011 the World Bank re-classified Uzbekistan from a low-income to a lower middle-income nation.

Since the early 90s, Uzbekistan has pursued a cautious and gradual approach to economic reforms. The national trade regime is rigid, with extensive tariff and non-tariff barriers in place. According to the World Bank *Doing Business 2019* report, Uzbekistan has rank 76 on the Ease of doing business world ranking. Main economic policies have included active state interventions designed to achieve self-sufficiency in cereal and energy resources, import substitution, and the accumulation of foreign exchange reserves.

As of 2015, about 12.8% of people in Uzbekistan lived below the national poverty line, 75% of whom live in rural areas (ADB, Basic Statistics 2017). One of the most difficult challenges the country is facing is a lack of employment opportunities, and a high disparity in living standards between rural and urban areas. High unemployment and low wages have resulted in a mass labor migration to Russia and Kazakhstan, while remittances have accounted for about 10-12 percent of the nation's GDP between 2010 and 2013. Since 2013, remittances have continuously declined and their share in GDP has been halved.

Figure 15. Uzbekistan provinces



Source: Wikipedia

The Government of Uzbekistan recognizes that governance at central as well as local levels remains an area where further reforms are needed to improve participatory decision-making, transparency, and the openness of government bodies. Other pressing issues include the need to improve public awareness of and adherence to human rights principles, ensure access to justice for vulnerable groups, and promote gender equality.

Uzbekistan faces a number of environmental challenges compounded by the country's geography and climate, by its rapidly-increasing population, and by its economic activities including those that have damaged the nation's fragile ecosystems. Access to drinking water is a pressing issue, while the Aral Sea disaster has had a negative impact on regional economics, the environment, and the health and livelihoods of local populations.

Figure 14. Map of Uzbekistan, incorrectly including the former Aral Sea



Source: Wikipedia

In the last decade, Uzbekistan has achieved significant progress in reducing low income rates and tackling malnutrition. Official statistics indicates that the national poverty rate has decreased from 27.5% in 2001 to 12.8% in 2015. Social cohesion has been maintained through more equitable income distribution, the creation of employment opportunities with a specific focus on rural areas, and attention given to vulnerable populations.

Gender equality in primary and secondary education has been maintained, but the percentage of female students at higher education institutions remains disproportionately low at about 36%. The number of women in the Parliament of Uzbekistan has increased from 6% in 1994 to 16% in 2015.

Uzbekistan's under-5 mortality rate has decreased from 36 per 1,000 live births in 2010 to 23 in 2017.

The HIV/AIDS epidemic in Uzbekistan is still in its early stages, with a relatively low rate of infection – 0.3% of population ages 15-49 as of 2017. After rapid increase in 2000-2009, number of people newly diagnosed with HIV, has stabilized at the level of about 4,000 people.

As for tuberculosis, the peak level of TB morbidity and mortality occurred in 2002, and since then, the situation has improved: in 2002-2018 the incidence of tuberculosis decreased from 79.1 (per 100,000 population) to 42.9 (per 100,000 population); mortality decreased from 12.3 to 1.6 (per 100,000 population) accordingly.

Despite the progress achieved in the fight against TB in Uzbekistan and the subsequent consistent decline in mortality and incidence during the last decade, TB still poses a significant public health threat.

Uzbekistan is among the WHO European Region's high-priority countries for TB control. According to WHO estimates of TB burden, in Uzbekistan there were 23,000 new cases of TB in 2017, or 73 per 100,000 population.

There were an estimated 1,700 TB deaths in 2017 among HIV-negative people in Uzbekistan and equivalent to 5.4 deaths per 100,000 population (range 4.9-5.9).

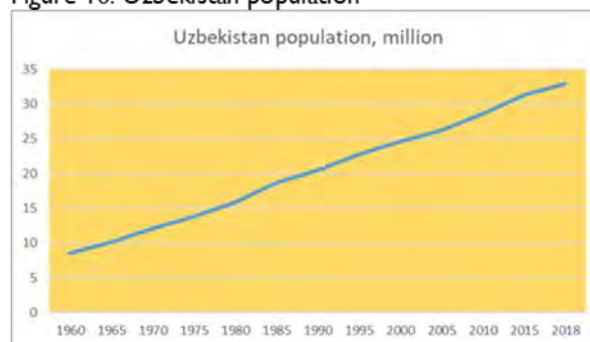
In 2017, 16,842 incident TB cases were notified, amounting to 73% of the estimated new and relapse cases in Uzbekistan. The percentage of newly notified TB patients tested using WHO-recommended rapid diagnostic tests was 67% in 2017, overachieving the target of 30% in the Tuberculosis action plan for the WHO European Region 2016-2020.

A total of 11,116 (66%) pulmonary cases were notified among incident TB cases, of which 51% were bacteriologically confirmed.

There are total 2,265 laboratory confirmed MDR/RR-TB cases and 285 laboratory confirmed Extensively drug-resistant TB (XDR-TB) cases in Uzbekistan.

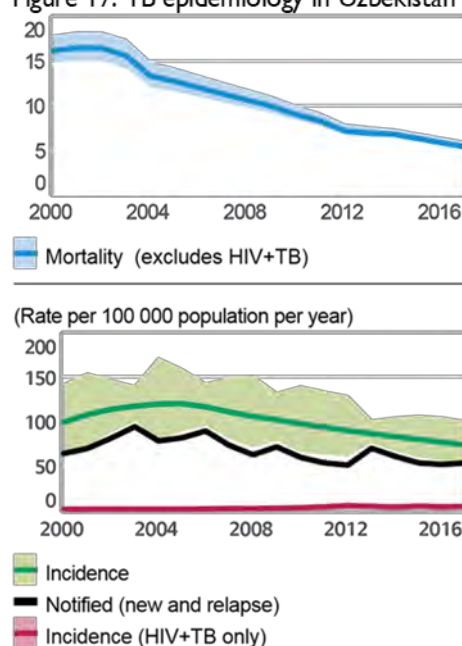
Of the new and relapse TB patients notified, 100% were screened for HIV. A total of 935 TB cases were detected with HIV-positive status, which is 6% of those tested. A total of 935 (100%) of HIV-positive cases are reported to have antiretroviral therapy (ART).

Figure 16. Uzbekistan population

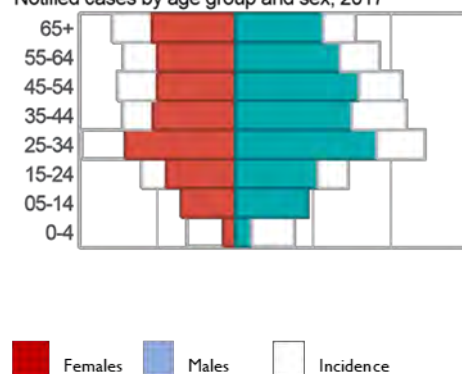


Source: Worldwide development indicators
<https://databank.worldbank.org>

Figure 17. TB epidemiology in Uzbekistan



Notified cases by age group and sex, 2017



Source: Global tuberculosis report 2018.
www.who.int/tb/data

The treatment success rate in Uzbekistan is 88% for the new and relapse cases registered in 2016, and 59% for the MDR/RR-TB cases started on second-line treatment in 2015.

As mentioned before, Uzbekistan is exposed to some internal and external vulnerabilities. Addressing these vulnerabilities simultaneously is critical for strengthening the country's and its populations' resilience and for ensuring sustainability of development gains. Involvement of stakeholders and coherent efforts at the policy, institutional and individual levels will be essential for success. That is why international assistance remains an essential source of support for the country.

Sources:

1. <http://www.uz.undp.org/content/uzbekistan/en/home/countryinfo/>
2. Worldwide development indicators <https://databank.worldbank.org>
3. https://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2019-report_web-version.pdf
4. Wikipedia <https://en.wikipedia.org>
5. <https://www.adb.org/sites/default/files/publication/298061/basic-statistics-2017.pdf>
6. <https://themag.uz/post/end-tb-uzbekistan-na-puti-likvidacii-tuberkuleza>
7. Uzbekistan tuberculosis profile www.who.int/tb/data
8. Tuberculosis surveillance and monitoring report in Europe 2019 <http://www.euro.who.int/en/health-topics/communicable-diseases/tuberculosis/publications/tuberculosis-surveillance-and-monitoring-report-in-europe-2019>

For collection of required information, ET used four basic instruments, namely (1) analysis of available health and TB statistics, TBCP progress reports, reports developed by other groups, WHO, TGF and WB databases and documents; (2) individual and group interviews; (4) group discussions; (4) direct observations on-site.

Prior to field visits, ET developed the lists of questions for interviewing of respondents at various sites, and performing focus group discussions in order to ensure that the approach used is universal and information obtained on the meetings with similar audiences in two countries is consistent and may be compared.

The following lists were developed for different meetings:

Questions for meetings/interviewing TBCP

1. The program is finished. Do you think that the program reached its goal? Are all objectives achieved? Are all anticipated results accomplished? Which results were not accomplished and why?
2. How did TBCP influence a system of anti-TB measures in country (e.g., early detection, proper diagnosis, treatment, prevention of TB)? Is the system working more effectively after 5 years of and due to TBCP activities? Which exactly components of TB control program became more effective?
3. Has TBCP make TB diagnostic and treatment more accessible for representatives of vulnerable groups (migrants, PWID, poor, prisoners and ex-prisoners, women) in your country? If yes, then in which ways accessibility of TB diagnosis and treatment improved? Which vulnerable groups were less covered? What was the reason?
4. To what extent the national normative base related to anti-TB measures (laws, executive orders, clinical recommendations, SOPs) was modified/improved over the life of the program? What is the main difference between the current and previously existed regulatory documents? Is the current regulatory base more effective and strong? Which modifications were not fully accomplished? What may require further improvement?
5. Were all planned activities implemented? Which activities were implemented just in part and why? Which activities were not implemented? Why it happened?
6. How did any changes in planned activities, if any, affect results of TBCP? If yes, then what was the influence?
7. How were relationships between the program and government authorities established? Which difficulties appeared? How they were resolved?
8. Please tell us about mechanisms or coordinating structures of joint planning, implementation, evaluation of and reporting on accomplishments established in cooperation with NTP and respective government authorities. How this work was arranged: was it a joint effort or acceptance (not acceptance) of TBCP/PH suggestions, and if so, who made a decision? What would you suggest to make in this regard in the future?
9. Did you experience any difficulties caused by coordination of activities between various government authorities, how they were fixed up? Was there any involvement of TBCP staff in such cases? Could you provide an example?
10. To what extent coordination among international partners was effective? What difficulties did you experience?
11. To what extent and how did TBCP work accommodate country and systemic peculiarities of health care delivery systems in country? Could you provide an example?

12. Which conclusions did you make in the process of the program implementation in regard to specificities of work with government authorities in country in general and on-site? Which points were probably not sufficiently taken into account during the program design but appeared in the process of implementation?
13. What strategic support was provided by TBCP to NTP? Which components do you consider as the most important? How did you work with education facilities? Were any program results used for development of curricula in medical universities and/or nursing schools?
14. Which difficulties occurred in collaboration in the process of NTP strengthening? How they were fixed up?
15. How did you manage relationships with mass media? What is in your opinion mass-media contribution to improvements in TB spread and control, and most importantly status of TB patients in the society?
16. Which results in your opinion will remain untouched after the program closure?
17. What do you think could be recommended for incorporation of future programs of cooperation and assistance in TB control? What should not be included and why?
18. What would be your advice to ET for their more effective work?

NTP Manager

1. The program is finished. Do you think that the program reached its goal? Are all objectives achieved? Are all anticipated results accomplished? Which results were not accomplished and why?
2. How did TBCP influence a system of anti-TB measures in country (e.g., early detection, proper diagnosis, treatment, prevention of TB)? Is the system working more effectively after 5 years of and due to TBCP activities? Which exactly components of TB control program became more effective?
3. Has TBCP made TB diagnostic and treatment more accessible for representatives of vulnerable groups (migrants, PWID, poor, prisoners and ex-prisoners, women) in your country? If yes, then in which ways accessibility of TB diagnosis and treatment improved? Which vulnerable groups were less covered? What was the reason?
4. How did any changes in planned activities, if any, affect results of TBCP? If yes, then what was the influence?
5. To what extent the national regulatory base related to anti-TB measures (laws, executive orders, clinical recommendations, SOPs) was modified/improved over the life of the program? What is the main difference between the current and previously existed regulatory documents? Is the current regulatory base more effective and strong? Which modifications were not fully accomplished? What may require further improvement?
6. How were relationships between the program and government officials established? Which difficulties appeared? How they were resolved?
7. Please tell us about mechanisms or coordinating structures of joint planning, implementation, evaluation of and reporting on accomplishments established in cooperation with NTP and respective government authorities. How this work was arranged: was it a joint effort or acceptance (not acceptance) of TBCP/PH or NTP suggestions, and if so, who made a decision? Did you take into consideration at that the perspective of work without financial, managerial or other types of assistance on collaborating agencies and donors side? Are you satisfied with those forms of cooperation? What would you suggest to do in this direction in the future?
8. To what extent and how did TBCP work accommodate country and systemic peculiarities of health care delivery systems in country? Could you provide an example?

9. What assistance was provided by TBCP to NTP? Which components were most important, in our opinion? Which events were performed? How did the program work with educational institutions? Were any program results used for development of curricula in medical universities and/or nursing schools? Is participation in TBCP training activities contribute to professional upgrade or other important for medical workers factors? If not, why? If yes, could you please provide an example? Are any research activities on analysis of TBCP implementation experience and development of TBCP components performed? What is your overall impression of TBCP influence to effectiveness and consistency of NTP activities? Are medical workers using information that they received through TBCP trainings in their routine activities? If the level of international cooperation declines, to what extent is it feasible that the proper functioning of introduced techniques will sustain? Who will ensure that (monitoring visits)?
10. Which regulatory and normative documents developed in cooperation with TBCP you may mention? Are they used on the regular basis in TB and other health facilities? Are requirements and recommendations provided in that documents followed?
11. What examples of approaches and recommendations developed in cooperation with TBCP and successfully employed you may provide? Which techniques appeared to be less effective, in your opinion, and require further correction?
12. What and in which ways civil society organizations provide influence to patients and general population, in particular in terms of timely seeking medical care and treatment compliance, decreasing of stigmatization, public health education? What motivate people to interact with these organizations and how did the program helped in that? Are there gender and other peculiarities? Who defines the groups for interaction? Is that work always consistent with peoples' needs?
13. How procurement, distribution and re-distribution, if necessary, of TB medicines are arranged?
14. What relationships with mass-media did the program manage to establish? What is in your opinion on mass-media's contribution to improvements in TB spread and control, and most importantly status of TB patients in the society?
15. Which components of NTP strengthening could be addressed in the future, if cooperative programs continue? What in your opinion could be recommended for the integration to potential future programs of cooperation in TB control and what is less important and why?

Questions for Oblast officials (Khukumat/Health Department)

1. How did TBCP influence a system of anti-TB measures in your region (e.g., early detection, proper diagnosis, treatment, prevention of TB)? Is the system working more effectively due to cooperation with TBCP? Which exactly components of TB control program became more effective?
2. Has TBCP made TB diagnostic and treatment more accessible for representatives of vulnerable groups (migrants, PHID, poor, prisoners and ex-prisoners, women) in your country? If yes, then in which ways accessibility of TB diagnosis and treatment improved? Which vulnerable groups were less covered? What was the reason?
3. How did any changes in planned activities, if any, affect results of TBCP? If yes, in which ways?
4. Please tell us about mechanisms or coordinating structures of joint planning, implementation, evaluation of and reporting on accomplishments established in cooperation with NTP and respective government authorities. How this work was arranged: was it a joint effort or acceptance (not acceptance) of TBCP/PH suggestions, and if so, who made a decision? Did you take into consideration at that the perspective of work without financial, managerial or other types of assistance on collaborating agencies and donors side? Are you satisfied with those forms of cooperation? What would you suggest to do in this direction in the future?

5. How were relationships between the program and various local authorities established? Which difficulties appeared? How they were resolved? Please provide an example.
6. What was a mechanism of TBCP interaction with the population and NGOs working with vulnerable group in your region? What is the interest of those NGOs in their work? Is there any support provided to those organizations and who provides the support? Who controls those NGOs and is it necessary? What assistance is provided by the local authorities? Please give an example(s).
7. What and in which ways civil society organizations provide influence to patients and general population, in particular in terms of timely seeking medical care and treatment compliance, decreasing of stigmatization, public health education? What motivate people to interact with these organizations and how did the program help in that? Are there gender and other peculiarities? Who defines the groups for interaction? Is that work always consistent with peoples' needs?
8. What in your opinion could be recommended for the integration to potential future programs of cooperation in TB control and what is less important and why?

Questions for Oblast/District TB control facility

1. Is participation in TBCP training activities contribute to professional upgrade or other important for medical workers factors? If not, why? If yes, could you please provide an example?
2. Are medical workers using information that they received through TBCP trainings in their routine activities? If yes, could you please provide an example?
3. Which regulatory and normative documents developed in cooperation with TBCP you may mention? Are they used on the regular basis in your facility? Are requirements and recommendations provided in that documents followed? Could you please show materials that are available at your facility? To what extent they are known and assessable for health professionals?
4. What changes in TB diagnostic and treatment occurred since the beginning of TBCP activities? What do you think about them? Could you please specifically describe improvements in laboratory performance?
5. What is your attitude to the expansion of out-patient model of treatment?
6. Which mechanisms are used for provision of psychosocial support to patients on treatment and their families?
7. What is the current status of drug supply? Did you get any TBCP assistance in drug procurement? What has improved in drug procurement and use over past 5 years?
8. How do you work with databases? What has improved in TB reporting during the period of TBCP work?
9. Are there any mechanisms of interaction between your facility, population and CSOs who are working with vulnerable groups? Are you interested in their work? What kind of support to those organizations is provided and by whom? Who controls them and whether is it necessary? What is the role of local authorities? What in your opinion is requiring further improvement and strengthening in this area?

Questions for national TB centers

1. What is the role of your center in TB control efforts in your country?
2. What was TBCP contribution in the development of your center? What assistance was provided by TBCP to your center? Which components of it do you consider most important? Which joint events and activities were conducted?

3. Did you experience any difficulties in cooperation with TBCP in development of your center? How those difficulties were resolved?
4. How were relationships between TBCP and your center shaped? Did any difficulties occur? How they were resolved?
5. How did TBCP influence a system of anti-TB measures in country (e.g., early detection, proper diagnosis, treatment, prevention of TB)? Is the system working more effectively after 5 years of and due to TBCP activities? Which exactly components of TB control program became more effective?
6. Has TBCP made TB diagnostic and treatment more accessible for representatives of vulnerable groups (migrants, PHID, poor, prisoners and ex-prisoners, women) in your country? If yes, then in which ways accessibility of TB diagnosis and treatment improved? Which vulnerable groups were less covered? What was the reason?
7. What was TBCP influence to health professionals involved in anti-TB work? Is their awareness of advanced approaches to diagnostic and treatment increased? If yes, in which particular areas? Did the new and useful skills appear? If yes, which? Has their capacity to deliver high quality care strengthened?
8. Is participation in TBCP training activities contribute to professional upgrade or other important for medical workers factors? If not, why? If yes, could you please provide an example?
9. Are medical workers using information that they received through TBCP trainings in their routine activities? If yes, could you please provide an example?
10. Please tell us about mechanisms or coordinating structures of joint planning, implementation, evaluation of and reporting on accomplishments established in cooperation with NTP and respective government authorities. How this work was arranged: was it a joint effort or acceptance (not acceptance) of TBCP/PH suggestions, and if so, who has made a final decision? Are you satisfied with those forms of cooperation? Did you take into consideration at that the perspective of work without financial, managerial or other types of assistance on collaborating agencies and donors side?
11. To what extent and how did TBCP work accommodate country and systemic peculiarities of health care delivery systems, and TB control service in particular, in country? Could you provide an example?
12. Which TBCP activities were specifically focused on the sphere of health education and training of professionals? Were any program results used for development of curricula in medical universities and/or nursing schools? Do you conduct research activities to analyze experience of introduction of TBCP components into practice (e.g., PhD thesis)? What is your overall impression of TBCP influence to effectiveness and systemic approach in TB control efforts? Are staff members of the center using knowledge and skills that they received on TBCP trainings in their routine activities? If the level of international cooperation declines, to what extent is it feasible that the proper functioning of introduced techniques will sustain? Who and how will ensure that (monitoring visits)?
13. To what extent the national regulatory base related to anti-TB measures (laws, executive orders, clinical recommendations, SOPs) was modified/improved over the life of the program? What is the main difference between the current and previously existed regulatory documents? Is the current regulatory base more effective and structured? Which modifications were not fully accomplished?
14. Which regulatory and normative documents developed in cooperation with TBCP you may mention? Are they used on the regular basis in your and other TB facilities? Are requirements and recommendations provided in that documents followed? Does your center undertake any measure to ensure compliance? Could you please show materials that are available at your facility? To what extent they are known and assessable for health professionals?
15. Which components of your center capacity strengthening could be addressed in the future, if cooperative programs continue?

Questions for PSG/CHC/CSO/Center of Healthy Lifestyle

1. What is the role of your organization in TB control efforts? Who initiated its establishing?
2. In your vision, what influence did TBCP provide to a system of anti-TB measures in your region (e.g., early detection, proper diagnosis, treatment, prevention of TB)? Is the system working more effectively due to cooperation with TBCP? Which exactly components of TB control program became more effective, in your opinion?
3. Has TBCP made TB diagnostic and treatment more accessible for representatives of vulnerable groups (migrants, PHID, poor, prisoners and ex-prisoners, women) in your country? If yes, then in which ways accessibility of TB diagnosis and treatment improved? Which vulnerable groups were less covered? What was the reason?
4. How did TBCP interact with your organization? Who provides support to your organization, what is the role of local authorities and TBCP? What is the interest and motivation of your organization to perform the job?
5. What and in which ways civil society organizations provide influence to patients and general population, in particular in terms of timely seeking medical care and treatment compliance, decreasing of stigmatization, public health education? What motivate people to interact with such organizations and how did the program help in that? Are there gender and other peculiarities? Who defines the groups for interaction? Is that work always consistent with peoples' needs?
6. What relationships with mass-media did you manage to establish with mass-media with TBCP support? What is in your opinion mass-media's contribution to improvements in TB spread and control, and most importantly status of TB patients in the society?
7. What is required further strengthening and improvement in this field (society involvement)?

Questions for MoH

1. What is the Ministry attitude towards cooperation under TBCP? Are you satisfied with cooperation and assistance delivered?
2. The program is finished. Do you think that the program reached its goal? Are all objectives achieved? Are all anticipated results accomplished? Which results were not accomplished and why?
3. How did TBCP influence a system of anti-TB measures in country (e.g., early detection, proper diagnosis, treatment, prevention of TB)? Is the system working more effectively after 5 years of and due to TBCP activities? Which exactly components of TB control program became more effective?
4. Has TBCP made TB diagnostic and treatment more accessible for representatives of vulnerable groups (migrants, PHID, poor, prisoners and ex-prisoners, women) in your country? If yes, then in which ways accessibility of TB diagnosis and treatment improved? Which vulnerable groups were less covered? What was the reason?
5. How did any changes in planned activities, if any, affect results of TBCP? If yes, then what was the influence?
6. To what extent the national regulatory base related to anti-TB measures (laws, executive orders, clinical recommendations, SOPs) was modified/improved over the life of the program? What is the main difference between the current and previously existed regulatory documents? Is the current regulatory base more effective and structured? Introduction of which modifications was not fully accomplished? What may require further improvement?

7. How were relationships between the program and the government authorities shaped? Which difficulties appeared how items on joint activities agreed upon were? What was the reaction of TBCP to suggestions and recommendations of the Ministry?
8. Please tell us about mechanisms or coordinating structures of joint planning, implementation, evaluation of and reporting on accomplishments established in cooperation with NTP and respective government authorities. How this work was arranged: was it a joint effort or acceptance (not acceptance) of TBCP/PH or NTP suggestions, and if so, who made a decision? Did you take into consideration at that the perspective of work without financial, managerial or other types of assistance on collaborating agencies and donors side? Are you satisfied with cooperation in this area? What would you suggest to do in this direction in the future?
9. To what extent and how did TBCP work accommodate country and systemic peculiarities of health care delivery systems in country?
10. What relationships with mass-media did the program manage to establish? What is in your opinion on mass-media's contribution to improvements in TB spread and control, and most importantly status of TB patients in the society?
11. What in your opinion require more attention? What would you deem reasonable to continue under international assistance programs? What is less important?

Questions for TB patients

1. When did the first signs of disease appear?
2. How long were you sick before starting treatment?
3. How many care providers did you see before having diagnosis or starting treatment?
4. How much money did you spend because of your disease before starting treatment?
5. Are you a member of a Patient School or Patient Support Group? If yes, please tell us more on what you are getting from Patient School / Patient Support Group.
6. Do you know the name of your disease for which you are treated?
7. Has a physician provided you with details on the reasons for your disease?
8. How long have you been treated so far?
9. Do you know what is the total duration of your treatment?
10. Who provide you the pills to treat your disease?
11. How many times are you taking your pills per week?
12. Do you receive any support during your treatment? If yes, what kind of support do you receive? Who provides it to you?
13. Did the health workers provide you with health education or information regarding your disease? If yes; what are the messages and information you received from them?
14. Have you missed any appointments at the clinic or lab? Yes/No
15. Were your family members requested to be checked for the disease you have? If yes; how many of the family members were checked? Who checked them? How were they checked? After checking, is anyone of your family members was provided drugs because of your disease? Please, explain.

16. What would you suggest improving the quality of TB services for you?
17. What would you suggest making it easier for you to receive TB Care?
18. Are you satisfied with the TB care you receive? (Yes/No)
19. What do you think needs to be improved?
20. Do you have any suggestions?

Questions for TB partners

1. The program is finished. What is your overall impression about TBCP? What are the main accomplishments of the program, in your opinion?
2. How did TBCP influence a system of anti-TB measures in country (e.g., early detection, proper diagnosis, treatment, prevention of TB)? Is the system working more effectively after 5 years of and due to TBCP activities? Which exactly components of TB control program became more effective, in your opinion?
3. To what extent the national regulatory base related to anti-TB measures (laws, executive orders, clinical recommendations, SOPs) was modified/improved over the life of the program? What is the main difference between the current and previously existed regulatory documents? Is the current regulatory base more effective and strong?
4. Do you know if any of program results were used for development of curricula in medical universities and/or nursing schools? Do you know if any research activities based on analysis of TBCP implementation experience and development of TBCP components performed? What is your overall impression of TBCP influence to effectiveness and consistency of NTP activities? Are medical workers using information that they received through TBCP trainings in their routine activities?
5. Has TBCP made TB diagnostic and treatment more accessible for representatives of vulnerable groups (migrants, PHID, poor, prisoners and ex-prisoners, women) in this country?
6. Are you satisfied with collaboration with TBCP?
7. How was cooperation between your organization/project and TBCP organized? Which mechanisms were used to avoid duplication of efforts and strengthen the complementary character of activities and TBCP, if applicable? How often did you meet with TBCP staff? How did you manage to share responsibilities in case of similarly focused activities? Did you undertake any joint efforts with TBCP in terms of working with the host government officials? Who led/coordinated international partners' activities/interaction in this country?
8. To what extent and how did TBCP accommodate country and systemic peculiarities of health care delivery systems in country? Could you provide an example?
9. What examples of approaches and recommendations developed by TBCP, maybe jointly with your organization/program, and successfully employed you may provide? Which techniques appeared to be less effective, in your opinion, and require further correction?
10. What in your opinion could be recommended for the integration to potential future programs of cooperation in TB control and what is less important and why?

ANNEX 3. LIST OF PERSONS MET

TAJIKISTAN

1	Rajabzoda A.	Director, Republican TB center
2	Zarkua N.	TB Adviser for NTP/Republican TB center
3	Sharipov F.	Director, National TB Hospital (Machiton)
4	Ikromov B.	Director CoE in the National TB Hospital (Machiton)
5	Azimi Z.	Deputy Chief of the Regional Khukumat, Sughd oblast
6	Khajibaev M.	Deputy Head, Regional Health Department, Sughd region
7	Madaminov D.	Director of the Regional TB Hospital (Degmoy)
8	Ruziev B.	Regional TB Hospital (Degmoy)
9	Otamurodov B.	Regional TB Hospital (Degmoy)
10	Sharipova Z.	TB laboratory, Regional TB Hospital (Degmoy)
11	Alieva Sh.	Open MRS specialist, Regional TB Hospital (Degmoy)
12	Rahimi D.	Deputy Head, Spitamen district
13	Rasulzoda I.	PHC manager, Spitamen district
14	Juraboev H.	Director, TB Center, Spitamen
15	Butaeva M.	Regional Center for Healthy Lifestyle, Khudjand
16	Sarbozova O	Director of Rayon's Center for Healthy Lifestyle, Spitamen
17	Shokirova G.	Community Health Committee coordinator, Spitamen district
18	Rakhmatullaeva N.	Community Health Committee coordinator, Spitamen district
19	Normatov E.	Community Health Committee coordinator, Spitamen district
20	Kenzhaev A.	Community Health Committee coordinator, Spitamen district
21	Tursunova O.	Community Health Committee coordinator, Spitamen district
22	Yuldasheva M.	Community Health Committee coordinator, Spitamen district
23	Kodirova G.	Community Health Committee coordinator, Spitamen district
24	Khaydarova H.	Community Health Committee coordinator, Spitamen district
25	Holmatova U.	Community Health Committee coordinator, Spitamen district
26	Tazonova M.	Community Health Committee coordinator, Spitamen district
27	Rakhimova M.	Community Health Committee coordinator, Spitamen district
28	Azimova Ch.	Community Health Committee coordinator, Spitamen district
29	Boboev M.	CSO "Iqboli Nek"
30	Sanginov A.	CSO "Amali Nek"
31	Kurbonov D.	PHC manager, Dangara district

32	Tumanov T.	Director, Regional Khatlon/Kulyb TB Center
33	Samadov T.	Center for Healthy Lifestyle, Dangara district
34	Mahmadaliev G.	Director of Rayon's TB Center, Dangara
35	Rakhimova N.	Community Health Committee coordinator, Dangara district
36	Pirova A.	Community Health Committee coordinator, Dangara district
37	Ismailova N.	Community Health Committee coordinator, Dangara district
38	Abdulloeva S.	Community Health Committee coordinator, Dangara district
39	Atoev E.	Community Health Committee coordinator, Dangara district
40	Mirzoev M.	Community Health Committee coordinator, Dangara district
41	Ibragimova A.	Community Health Committee coordinator, Dangara district
42	Ibrohimova B.	Community Health Committee coordinator, Dangara district
43	Zaripova S.	Community Health Committee coordinator, Dangara district
44	Norimov R.	Community Health Committee coordinator, Dangara district
45	Abdurakhmonova Sh.	TB Patient
46	Pirmahmadzoda B.	Director, City Tuberculosis Center, Dushanbe
47	Jonova B.	Republican Family Health Center, Dushanbe
48	Rakhmonov S.	Head of the PIU, The Global Fund
49	Chityan D.	Deputy Chief of Party, USAID TB Control Program
50	Ismoilova J.	Director, Project Hope Branch office in Tajikistan
51	Maxumova Z.	Country Director, TBCP, Tajikistan
52	Akhalaiva M.	Laboratory Adviser; Stop TB Partnership
53	Makhmudova M.	Country Director, KNCV, Tajikistan
54	Ziyoeva S.	KNCV/Tajikistan
55	Gay S.	Country Representative, MSF, Tajikistan
56	Everard M.	Acting WR, Head of WHO Country Office in Tajikistan
57	Saidova N.	Director of local NGO "Gender and Development"

1	Sharipov F.	Head, Health Care Management Department, MOH, Uzbekistan
2	Abdusamatova B.	Deputy Head, MCH Department, MOH, Uzbekistan
3	Parpieva N.	Director, National Center of Phthisiopulmonology (NCPh)
4	Safaev Kh.	Deputy Director, International Relations, NCPh
5	Mukhamedov Kh.	Chief Doctor, Navoi Oblast TB Dispensary
6	Kuvandikov Kh.	TB physician, Navoi Oblast TB Dispensary
7	Artikov N.	Infectious disease physician, Navoi Oblast TB Dispensary
8	Sanakulova M.	Psychologist, Navoi Oblast TB Dispensary
9	Fedeneva N.	Outreach worker, social support , Navoi Oblast TB Dispensary
10	Valshina T.	Outreach worker for IDUs, ex-prisoners, Navoi
11	Rakhimova L.	Outreach worker for IDUs, ex-prisoners, migrants, Navoi
12	Ilmuradova Y.	Nurse, Navoi Oblast TB Dispensary
13	Kostnitsyn R.	Former TB patient, volunteer, Navoi
14	Ryazanova N.	Volunteer, Navoi
15	Kabulov N.	Deputy Chief Doctor, treatment, Bukhara Oblast TB Dispensary
16	Rakhimov D.	Chief, care management unit, Bukhara Oblast TB Dispensary
17	Salaeva D.	TB physician, Bukhara Oblast TB Dispensary
18	Sheralieva L.	Senior laboratory technician, Bukhara Oblast TB Dispensary
19	Turaev B.	MDT, outreach worker for migrants, Bukhara
20	Saidov F.	MDT, outreach worker for migrants, Bukhara
21	Sharipov B.	MDT, outreach worker for IDUs, ex-prisoners, Bukhara
22	Ruzieva D.	MDT, outreach worker for migrants, Bukhara
23	Jumaev G.	Chief, MDR TB ward, Bukhara Oblast TB Dispensary
24	Hayatova D.	Nurse, Patient's school, Bukhara Oblast TB Dispensary
25	Nasritdinov F.	Chief Doctor, Andijan Oblast TB Dispensary
26	Halilov Zh.	Deputy Chief Doctor, Andijan Oblast TB Dispensary
27	Butabekov I.	Coordinator on drug management, Andijan Oblast TB Dispensary
28	Perevezentseva E.	Chief, MDR TB ward, Andijan Oblast TB Dispensary
29	Ahmedova Y.	Specialist on MDR/XDR TB register, Andijan Oblast TB Dispensary
30	Egamov M.	Specialist on informational work, Andijan Oblast TB Dispensary
31	Rakhimova S.	Chief nurse, Patient School coordinator, Andijan Oblast TB Dispensary
32	Dorinov A.	Head, TB laboratory, Andijan Oblast TB Dispensary
33	Tashkhodjaeva Sh.	Director, Project Hope/Uzbekistan

34	Tchitchinadze D.	Country Director in Uzbekistan for USAID TB Control Program, PH
35	Kurbanova R.	MDR TB specialist, USAID TB Control Program
36	Akhmadova M.	TB laboratory specialist, USAID TB Control Program
37	Yuldashova U.	Drug management specialist, USAID TB Control Program
38	Ulmasova D.	Technical team leader, USAID TB Control Program
39	Abdieva N.	Monitoring and evaluation specialist, USAID TB Control Program
40	Robbins G.	Director, Uzbekistan Country Office, USAID/Central Asia
41	Beegun D.	Democracy, Governance, and Health Team Leader, USAID/Central Asia
42	Ishanov A.	Alternate COR, Uzbekistan Country Office, USAID/Central Asia
43	Gadoev J.	NPO, Joint TB, HIV & Hepatitis Programme, WHO CO Uzbekistan

TAJIKISTAN

**USAID TB Control Program in Tajikistan
Final Program Performance Mission**

AGENDA

Dates: July 28 – August 3, 2019

Participants: Dr Nikita Afanasyev, Consultant on Assessment Mission of USAID TB Control Program
Dr Marina Kulikova, Consultant on Assessment Mission of USAID TB Control Program
Ms. Jamilya Ismoilova, Director, Project Hope/Tajikistan
Dr Zumrad Maxumova, Director, USAID TB Control Program in Tajikistan

Time	Description	Venue	Remarks
Sunday, July 28 Arrival to Dushanbe			
Monday, July 29, Dushanbe			
9:00-10:00	Meeting with USAID TB Control Program team and USAID Country mission Tajikistan representative	Vefa Center, Conference room	
10:15-11:00	Meeting with NTP Manager	National TB Center	
11:00-12:00	Lunch		
12:00-16:30	Departure and arrival to Sughd Region		Accompanied by USAID TB Control Program staff
Tuesday, July 30, Sughd region			
8:30	Departure to Spitamen district		
9:00-10:00	Meeting with Deputy Head, Health and Education, Spitamen district	Spitamen Khukumat office	
10:00-11:00	Meeting with PHC manager of Spitamen district	District hospital at Spitamen district	1. Outpatient treatment model of TB and MDR-TB patients 2. Performance of microscopy laboratory and rapid TB diagnostic methods
11:00	Departure to district CHL center in Spitamen		
11:30-12:30	1. Meeting with Patient Support Group specialists 2. Meeting with CHC members	CHL Center, Spitamen district	1. Contribution of Patients Support Group in TB treatment 2. CHC contribution in detection of new TB cases
12:30-13:30	Meeting with the Director of TB-Center, Spitamen ✓ Introduction to the National E-TB Register system ✓ Performance of the district laboratory: results of quality management system introduction; using of rapid diagnostic methods	District TB center	Evaluation team will meet with Director of TB District Center- Juraboev Homid
13:30-14:15	Lunch		
14:15-14:45	Departure to the Regional TB Hospital (Degmoy)		

Time	Description	Venue	Remarks
14:45-15:10	Meeting with Director of Regional TB Hospital in Degmoy - Madaminov Davron	Regional TB Hospital/Degmoy	Performance of Patients Schools' on the hospital level, meeting with nurses
15:10-15:30	Innovations in the National TB Program: telemedicine	Regional TB Hospital/Degmoy	
15:30-15:50	Meeting with coordinators and patients of Patient School (PS) (gather coordinators)	Regional TB Hospital/Degmoy	
15:50-16:50	Acquaintance with the work of Cultural Laboratory in Degmoy	Regional TB Hospital/Degmoy	
16:50-17:20	Departure to Khujand	Degmoy - Khujand	Arrival to Khujand
17.30 – 18.30	Meeting with CSOs «Iqbol Nek» and «Amali Nek»	CSO «Amali Nek» office, Khujand	Community engagement to implementation of TB Control
Wednesday, July 31, Khujand			
8:30-9:00	Meeting with the Deputy Head of the Regional Health Department of Sughd region, Republic of Tajikistan		Regional Health Department, Khujand
9:00-9:30	Meeting with the Deputy Head of the Regional Khukumat of Sughd region	Sughd Regional Khukumat	Khukumat contribution in the implementation of National TB Program. Social support for TB patients
10:40-16:30	Lunch + Departure to Dushanbe	Khujand - Dushanbe	
Thursday, August 1, Dangara			
8:30-10:00	Departure to Dangara	Dushanbe - Dangara	100 km distance from Dushanbe
10:45-11:20	Meeting with PHC manager of Dangara district	Dangara District Hospital	Collaboration of PHC and TB facilities in TB control
11:20-12:00	Meeting with T. Tumanov, Director, Regional Khalton/Kulyb TB Center and G. Mahmadaliev, Director of Rayon's Dangara TB Center - Electronic System OpenMRS - Visit to inter-district laboratory	District TB Center, Dangara	Overview of USAID TB Control Program contribution in the implementation of TB control activities
12:00-13:00	Lunch		
13:00-14:30	Meeting with CHC and outreach-workers of Dangara	Center of Healthy Lifestyle (CHL), Dangara	
14:30-17:00	Departure from Dangara to Dushanbe	Dangara - Dushanbe	Arrival to Dushanbe at 17:00
Friday, August 2, Dushanbe			
9:00-11:30	Visiting National TB Hospital/Machiton - introduction to performance of Center of Excellent (CoE) - visiting of TB National Reference Laboratory	National center of lung diseases, TB and thoracic surgery	Evaluation team to meet with the Dean of Medicine and manager of the National Reference Laboratory, Director of CoE
12:00-13:00	Lunch		
13:30-15:30	- Meeting with USAID TBCP team and conference call with USAID/Tajikistan representatives - Discussion of the visit results	Vefa Center, Conference Room	
Saturday, August 3, Dushanbe			
	Departure		

**USAID TUBERCULOSIS CONTROL PROGRAM IN UZBEKISTAN
FINAL PERFORMANCE ASSESSMENT MISSION
August 03-10, 2019
AGENDA**

Visitors: Nikita Afanasyev, Consultant on Assessment Mission of USAID TB Control Program
Marina Kulikova, Consultant on Assessment Mission of USAID TB Control Program

Participants in Uzbekistan:

David Tchitchinadze, Director, USAID TB Control Program in Uzbekistan
Shakhnoza Tashkhodjaeva, Director, Project HOPE Branch Office in Uzbekistan
Mukhabbat Akhmadova, Program Specialist, USAID TBCP Uzbekistan
Khasan Safaev, National TB Program representative

Time	Description	Venue	
UZBEKISTAN (August 04 – 10, 2019)			
Arrival to Tashkent Saturday Aug 3, 21:35			
Monday, August 5, Tashkent			
09:00-12:00	Work in the USAID TBCP office	USAID TBCP office	
15:00-16:00	Meeting with MOH Uz	MOH	
18:50 – 22:00	Departure from Tashkent to Navoi		
Tuesday, August 6, Navoi			
09:30-16:00	Visit to the Navoi Regional TB Dispensary	Navoi Reg. TBD	MDT, PS, COE, VDOT, QuanTB, Lab, Consilium
22:00-22:40	Departure from Navoi to Bukhara		
Wednesday, August 7, Bukhara			
09:30-13:30	Visit to the Bukhara Regional TB Dispensary	Bukhara Reg. TBD	Lab, Consilium, PS, MDT. COE, QuanTB, nurses-psychologic support
Air 15:20-16:20	Departure from Bukhara to Tashkent		
Thursday, August 8, Tashkent			
09:00-11:00	Work in the USAID TBCP office	USAID TBCP office	
11:00-12:00	Debriefing with USAID UZ	US Embassy	
14:00-15:00	Meeting with representatives of WHO, USAID Challenge TB project	WHO office	
17:20-21:40	Departure from Tashkent to Andijan		
Friday, August 9, Andijan			
09:30-13:00	Visit to the Andijan Regional TB Dispensary	Andijan Reg. TBD	Lab, COE, QuanTB, PS, consilium
15:40-18:15	Departure from Andijan to Tashkent		
Saturday, August 10, Tashkent			
09:00-10:30	Work in the USAID TBCP office	USAID TBCP office	
11:00-12:00	Meeting with the management of NTP	NTP	
15:40	Departure of N. Afanasyev and M. Kulikova from Tashkent		

USAID TB CONTROL PROGRAM

PROGRAM FINAL PERFORMANCE ASSESSMENT (CENTRAL ASIA)

TERMS OF REFERENCE

A. Purpose

Project Hope is seeking proposals from a team of consultants to conduct final performance assessment of the USAID TB Control Program in Central Asia. The overall purpose of this assignment is to make final performance assessment of the USAID TB Control Program against program objectives set and to confirm what has been accomplished. The assessment will help to document the evidence of accomplishments, lessons learned and recommendations for future TB interventions in the region.

B. Background Information

The five-year (September 1, 2014 through August 31, 2019) USAID TB Control Program (TBCP) is implemented by Project HOPE – People-to-People Health Foundation, Inc., USA (Project HOPE) in two Central Asian countries, Tajikistan and Uzbekistan.

The USAID TB Control Program seeks to improve health status of the people in Tajikistan and Uzbekistan by building capacity of the National TB Control Programs to provide more effective and more accessible TB diagnosis and treatment services, which reduce the burden of TB and MDR-TB and the development of drug-resistant tuberculosis (DR-TB). The Program focuses on vulnerable populations including women, prisoners, ex-prisoners, migrants, people who inject drugs (PWID), and people living with HIV (PLHIV). The Program supports national TB prevention, care and treatment programs in Tajikistan and Uzbekistan and contributes to the goals of the WHO's Global Strategy and Targets for Tuberculosis Prevention, Care and Control after 2015 (the End TB Strategy) and the US Government 2015-2019 Global Tuberculosis Strategy.

This external assessment will provide evidence of project progress and achievements. It will determine, if the project is achieving its objectives; what components worked well, which components did not work well, which components faced challenges during implementation; how these challenges were addressed; how sustainable the changes are; remaining gaps that will need to be addressed in any potential subsequent projects as well as lessons learned.

Findings from this assessment will inform decision making on approaches and scope for future projects.

Project Objectives

The USAID TB Control Program seeks to achieve the following objectives:

More equitable access to comprehensive and appropriate TB diagnostic and treatment services for vulnerable populations

Laboratory services provide more timely, quality TB and MDR-TB diagnosis

Patient centered system for TB and MDR-TB implemented widely across the region

Enhanced enabling environment promoting TB services that meet international standards

Human and institutional capacity of health system to manage TB and MDR-TB services strengthened

Coordination and linkage of TB with other health sectors and CSOs improved

TB service providers and managers using electronic TB MIS and using quality data for evidence-based decision making at all levels.

SUMMARY OF INTERVENTIONS

According to the 2014-2019 USAID TB Control Program strategy, it focuses its efforts on priority areas of TB control that NTPs also prioritize:

- Strengthening human resources at facility and community levels to manage TB and MDR-TB;
- Improvement of service delivery by focusing on improving the quality laboratory services, and strengthening of a patient-centered approach as a key pre-requisite of transition to outpatient care;
- Improving policy, advocacy and data use to support TB control improvements and ensure their sustainability.

Project interventions have varied over the five-year project period. Examples of the interventions are:

- Strengthen Continuing Medical Education to expand a sustainable evidence-based in-service training system for TB and PHC workers. The Center of Excellence (COE) in Uzbekistan within the Republican Scientific and Practical Center for TB and Pulmonology and the COE based at the National Center for Tuberculosis, Lung Diseases and Thoracic Surgery in Tajikistan lead this effort.
- Development of efficient and more effective laboratory services for timely, quality TB and MDR-TB diagnosis at the Regional/Oblast and District/Rayon levels;
- Development and expansion of a patient-centered approach;
- Community Health Committee (CHC) in Tajikistan – rural community-level health committees, which include representatives of local authorities, women’s committees, religious leaders, youth committees, medical workers. Their major purpose is to conduct information-educational activities within communities to reduce stigma and discrimination towards TB patients and their families, assist with referrals of people with TB symptoms for diagnosis, and provide socio- psychological support to TB patients.
- Multidisciplinary teams (MDT) in Uzbekistan – groups of experts set up to provide comprehensive assistance to vulnerable populations. Their core objectives are to improve access of vulnerable populations to quality services for prevention, diagnosis and treatment of tuberculosis and other health and social services; to increase demand and access of vulnerable groups to friendly services for TB diagnosis and treatment, and other health and social services; and improve adherence to treatment of TB among vulnerable populations.
- Strengthening NTPs to provide high quality TB, MDR-TB, and pediatric TB services by engaging PHCs, civil society organizations (CSOs) and the private sector in TB control effort;
- Updating TB control policy frameworks and regulatory bases to support implementation, adaptation and rollout of new approaches outlined in the document (CHCs, PSGs, MDTs, QMS, outpatient treatment of TB, etc.). It is anticipated that these policies will be codified into law;
- Monitoring and building local capacity to use data for decision making and advocacy;
- Improvement of inter-agency and cross-border collaboration in addressing TB control.

C. Objectives/tasks

The purpose of this assignment is to assess the TBCP against its stated outcomes and outputs as of the end of the final Program year (Year 5). Within this framework, the incumbent will:

1. Provide an independent assessment of the project implementation and achievements;
2. Measure the extent to which the expected results were achieved;

3. Identify the extent to which project results and accomplishments are likely to be sustained;
4. Identify components that have worked well and those that have not;
5. Identify challenges faced, how they were resolved;
6. Identify relevant lessons learned with a view to informing the design and implementation of future TB projects and programs in the region of Central Asia and, particularly, in Tajikistan and Uzbekistan.

Assessment Design

The assessment will use a mixed methods approach that includes a desk review of USAID, project, subcontractors, government and other relevant stakeholder documents/reports as well as interviews of project staff, partners, government officials and other stakeholders. Site visits to relevant places should be included.

Tasks and Responsibilities

The incumbent(s) will carry out the following key duties:

- Develop an assessment plan and methodology that is consistent with the scope in this TOR;
- Identify and develop methodological approaches and tools to capture data, in line with the expected assessment results;
- Conduct an in-depth desk review of: project documents and reports; administrative records related to the various activities; project's progress reports; and M&E data and reports;
- Organize and manage data collection, administering it with program stakeholders;
- Set up and conduct key informant interviews and focus group discussions (FGDs) with other relevant program stakeholders (A list of stakeholders will be derived in consultation with Project Hope, the NTP and USAID) and a representative sample of the vulnerable groups that have been one of the targets of the program and benefited from it;
- Collect any additional data that may be needed to answer specific assessment questions listed below;
- Undertake the in-depth analytical work to produce Inception Note and Assessment Report in all draft and final versions;
- Debrief the TBCP management team with key mission findings.

D. Deliverables

In particular, the following will be delivered upon completion of the assignment:

- An Inception Note (presenting the situational background, the assessment design and the list of key informants in the field);
- Developed data abstraction and qualitative tools (focus group guides, key informant interview schedules) to collect data needed to complete the assignment;
- Field work implementation plan to include proposed order of work in both countries, as is consistent with the included time line of deliverables;
- Detailed data analysis plan;
- Transcripts of all interviews. To protect confidentiality, evaluators may eliminate the names of respondents;
- A draft Assessment Report (presenting the evaluation findings, conclusions/lessons learned and recommendations where the "causal link" is strictly observed);
- A finalized Assessment Report, incorporating feedback from all relevant program stakeholders with a summary with key findings and recommendations in a PowerPoint format.

E. Reporting

The consultant(s) will report to the USAID TB Control Program Chief of Party and Regional Technical Director.

F. Level of Effort, Duty Station

The overall consultancy will require 35 days. It will be home-based with approximately 2-week field mission in Tajikistan and Uzbekistan.

G. Requirements

The assessment calls for a team of two consultants; a team lead and another consultant to support the lead.

Qualifications for the team lead:

- Advanced university degree in Evaluation, Health, Social Sciences, International Development, Law or related fields.

Essential skills and experience:

- Over 10 years of relevant professional experience in the field of development assistance evaluations;
- Substantial expert experience in conducting results-oriented evaluations of institutional development programs and/or in complex/strategic assessments, focused on public health;
- Strong knowledge of the USAID evaluation standards and requirements;
- Strong knowledge of quantitative and qualitative data collection methods;
- Strong analytical, writing and editing skills;
- Sound knowledge of developing qualitative and quantitative (proxy) indicators;
- Languages: Fluency in written and spoken English and Russian is required.

Desired skills and experience:

- Demonstrated knowledge of assessment methodology for development assistance projects and programs with specific experience in assessment methods and tools;
- Professional experience with Project Cycle Management, Logical Framework and Cost-Effectiveness approaches;
- An understanding of the TB control program interventions, patient-centered care approach and/or focus on vulnerable populations (women, migrants, PLHIV, PWID, prison populations) in Eastern Europe and Central Asia as well as intersecting knowledge of drug-resistant tuberculosis and factors driving the epidemic of DR-TB will be an added advantage;
- Experience of operating in strict operational environment, under tight approval process of local government agencies and limited access to health data
- Relevant experience with survey techniques, focus groups and other participatory methods.

Qualifications for second team member:

- Required qualifications to the second candidate are similar to the team lead;
- Skills and experience of candidates representing the team can complement each other.

ASSESSMENT QUESTIONS

PROJECT RESULTS	• To what extent did the project achieve the anticipated final results? • To what extent has the project strengthened TB systems?
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	• What systems were to expand access to TB diagnostic, treatment, and care services – focusing on vulnerable populations in each country? - How were systems around human resources and capacity strengthened? - How were policies, regulations and procedures strengthened? - How sustainable will project results be? Consider the extent to which the Project considered sustainability in its implementation and choice of strategies.
FIDELITY TO THE IMPLEMENTATION OF THE PROJECT PLAN	• To what extent did the project implement the work-planned activities? • Which activities were not implemented (or partially implemented) and why were these activities not implemented? • In what ways did any change in planned activities affect overall outcomes and results?
CONSORTIUM PARTNER RELATIONSHIPS	• How effective was the coordination between and within the project partnerships? • What mechanisms ensured coherence and exclusion of duplication?
RELATIONSHIP WITH KEY STATE STAKEHOLDERS	• How has the project worked with the specific governments? • What mechanisms have been used to coordinate planning, implementation, evaluation and reporting of results with NTPs and other relevant government units? • In what ways did the project accommodate any differences in systems and context in the two countries? • What challenges presented themselves in the coordination and/or relationship with the different government players? • How did the project address those challenges? • How lessons have been learned from this project on how to work with the governments in both countries?
COMMUNITY ENGAGEMENT AND CAPACITY BUILDING, INCLUDING CSOs	• How has the project coordinated with communities including CSOs serving vulnerable populations? • What impact has community engagement had on linking clients to care? Also, explore ways in which community engagement may have failed to improve linkage to care? • What could have been improved in how the project worked with community stakeholders?
NTP CAPACITY BUILDING	• How has the project developed capacity of the NTP? - What activities were conducted to enhance capacity? - Examine capacity in policies, regulations and procedures, - What challenges were observed in building NTP capacity and how were these challenges resolved? - What are the key capacity issues that future projects would have to address?
RECOMMENDATIONS	• What Recommendations do you make for future programming? • Examples of innovative approaches that were developed and applied?

TIMELINE

The consultancy is expected to start in May 2019. The inception note describing an assessment plan, methodological approaches and tools to capture data is expected by beginning of June 2019, and the draft report is

expected tentatively by the end of July 2019. This is a results-based assignment where payments are made upon satisfactory production of assessment deliverables. The estimated amount of work days for the assignment is 35 for the Assessment team. This includes 12 working days for the data collection field mission in Tajikistan and Uzbekistan.

DELIVERABLE	TIME FRAME OF COMPLETION (SUBJECT FOR REVIEW AND MODIFICATION)
Inception note	May 25, 2019
Data collection tools	June 5, 2019
Fieldwork implementation plan	June 5, 2019
Detailed analysis plan	June 10, 2019
Interview transcripts and other completed tools	June 20, 2019
Draft assessment report	July 15, 2019
Final assessment report	July 26, 2019

EVALUATION CRITERIA

Submissions will be evaluated based on the team's qualifications, and cost proposal. Pre-selected candidates may be invited for interview. The final selection is a subject for USAID approval.

SUBMISSION

To apply, send the following items to recruitment@projecthope.org by May 15th, 2019.

Expression of interest letter outlining how the team fits the qualifications above

CVs of team members. Please indicate which of the two members will serve as the team lead

List of similar projects that each member has evaluated, indicate the role they played on each assessment

A sample assessment report that the team lead has prepared

List of three professional references for each team member

A cost proposal that outlines the daily rate for each member, as well as other costs that will be incurred

Please note that all travel arrangements will be arranged, and paid for, by the Project. Candidates may pay for visas and maintain receipts for reimbursement.

ANNEX 6. BIBLIOGRAPHY AND INFORMATION SOURCES

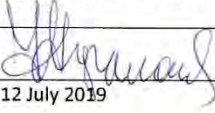
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ANNEX 7. DISCLOSURE OF CONFLICT OF INTEREST

Name	Nikita Afanasyev
Title	TB and public health consultant
Organization	
Evaluation Position?	☒ Team Leader ☐ Team member
Evaluation Award Number (contract or other instrument)	Agreement for provision of professional services of 12 July 2019
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	USAID TB control program (Uzbekistan and Tajikistan). Implementer name: Project Hope. Award number: AID-176-C-14-00001
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No
If yes answered above, I disclose the following facts: <i>Real or potential conflicts of interest may include, but are not limited to:</i> 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.	

I certify (1) that I have completed this disclosure form fully and to the best of my ability and (2) that I will update this disclosure form promptly if relevant circumstances change. If I gain access to proprietary information of other companies, then I agree to protect their information from unauthorized use or disclosure for as long as it remains proprietary and refrain from using the information for any purpose other than that for which it was furnished.

Signature	
Date	12 July 2019

Name	Marina Kulikova
Title	TB consultant
Organization	
Evaluation Position?	☐ Team Leader ☒ Team member
Evaluation Award Number (contract or other instrument)	Agreement for provision of professional services of 12 July 2019
USAID Project(s) Evaluated (Include project name(s), implementer name(s) and award number(s), if applicable)	USAID TB control program (Uzbekistan and Tajikistan). Implementer name: Project Hope. Award number: AID-176-C-14-00001
I have real or potential conflicts of interest to disclose.	☐ Yes ☒ No
If yes answered above, I disclose the following facts: Real or potential conflicts of interest may include, but are not limited to: 1. Close family member who is an employee of the USAID operating unit managing the project(s) being evaluated or the implementing organization(s) whose project(s) are being evaluated. 2. Financial interest that is direct, or is significant though indirect, in the implementing organization(s) whose projects are being evaluated or in the outcome of the evaluation. 3. Current or previous direct or significant though indirect experience with the project(s) being evaluated, including involvement in the project design or previous iterations of the project. 4. Current or previous work experience or seeking employment with the USAID operating unit managing the evaluation or the implementing organization(s) whose project(s) are being evaluated. 5. Current or previous work experience with an organization that may be seen as an industry competitor with the implementing organization(s) whose project(s) are being evaluated. 6. Preconceived ideas toward individuals, groups, organizations, or objectives of the particular projects and organizations being evaluated that could bias the evaluation.	

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Signature	
Date	12 July 2019