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Challenge TB -Democratic Republic of Congo

Year 1

Annual Report

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October 30, 2015

This report includes information of CTB investments using USAID non-PEPFAR funding

Cover photo: *Supervision visit at Angenga Prison in Equateur West in September 2015*
(Photo credit: Dr Papy Lusameso)

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List of Abbreviations and Acronyms

ALTB	Ambassadeur de lutte contre la tuberculose
ART	Anti-Retroviral Therapy
APA1	Annual Plan of Activities Year 1
ATS	American Thoracic Society
CAD	Club des Amis Damien
CAG	Cellule d'appui à la gestion
CBO	Community Base Organisation
CCM	Country Coordinating Mechanism
CDV	Centre de Dépistage Volontaire
CPLT	Coordination Provinciale de Lutte contre la Lèpre et la Tuberculose
CPT	Cotrimoxazole Preventive Therapy
CSDT	Centre de Santé de Diagnostic et Traitement
CTB	Challenge TB
DOT	Directly Observed Therapy
DRC	Democratic Republic of Congo
DST	Drug Sensitivity Test
EMMP	Environmental Mitigation and Monitoring Plan
EQA	Evaluation externe du contrôle de qualité
EQE	Equateur Est
Femmes Plus	Fondation Femmes Plus
GF	Global Fund
HCW	Health Care Worker(s)
HIV	Human Immunodeficiency Virus
HR	Human Resources
HZ	Health Zone
IP	Implementing Partners

IPT	Isoniazid Preventive Therapy
IRD	Interactive Research & Development
KAP	Knowledge's, Attitudes and Practices
KNCV	KNCV Tuberculosis Foundation
KOE	Kasaï Occidental Est
KOO	Kasaï Occidental Ouest
KORS	Kasai Oriental Sud
LNAC	Ligue Nationale Antituberculeuse et Antilépreuse du Congo
LTBI	Latent TB Infection
MDR-TB	Multidrug-Resistant Tuberculosis
MNM	Maniema
MOH	Ministry of Health
MSH	Management Sciences for Health
N/A	Not available
NGO	Non-Governmental Organization(s)
NRL	National (TB) Reference Laboratory
NSP	National Strategic Plan
NTP	National Tuberculosis Program
OAC	Organisation à assise communautaire
OR	Operational Research
PATH	Program for Appropriate Technology in Health
PATI-V	Programme Anti Tuberculeux Intégré V
PATIOR	Programme Anti Tuberculeux Intégré pour la Recherche Operationnelle
PNCNS	Programme National des Comptes Nationaux pour la Santé
PEPFAR	U.S. President's Emergency Plan for AIDS relief
PLHIV	Person(s) living with HIV
PNLS	Programme National de Lutte contre le Sida

PNLT	Programme National de Lutte contre la Tuberculose
PRL	Provincial Reference Laboratory
Q	Quarter
SCMS	Supply Chain Management System
SKR	Sankuru
SKV	Sud Kivu
STTA	Short Term Technical Assistance
TB	Tuberculosis
TB-HIV	Tuberculosis and Human immunodeficiency virus
TEP	Tuberculose Extra-Pulmonaire
TPM+	Tuberculose Pulmonaire à Microscopie positive
TPMO	Tuberculose Pulmonaire à Microscopie négative
TSR	Treatment Success Rate
UNDP	United Nation's Development Program
The Union	International Union Against Tuberculosis and Lung Disease
USAID	United State Agency for International Development
WHO	World Health Organization
XDR-TB	Extensively Drug Resistant Tuberculosis
Xpert	GeneXpert MTB/Rif®

1. Executive Summary

Challenge TB (CTB) is a global 5-year project funded by the United States Agency for International Development (USAID) to reduce mortality and morbidity from tuberculosis (TB) in selected high TB burden countries. One of these countries is the Democratic Republic of Congo (DRC) where CTB engagement commenced in February 2015. In DRC, CTB supports the National TB Control Program (Programme National de Lutte contre la Tuberculose, PNLT) that is responsible for provision of TB care and control services. The CTB lead partner is the International Union against Tuberculosis and Lung Disease (The Union). The other CTB coalition partner working in DRC is Management Sciences for Health (MSH) that is focused on supporting implementation of TB-HIV activities. KNCV Tuberculosis Foundation (KNCV), the lead for the overall global project, provides remote technical supervision.

An inception mission to DRC took place in November 2014 by the representatives of KNCV, and the USAID Washington office to establish the PNLT priorities based on a gap analysis. The Union became registered in February 2015 and the Country Director was hired during the same month. The seven CTB-supported Coordination Provinciale contre la Lepre et la Tuberculose (CPLT) were engaged and informed of the planned CTB activities in March. The project was initially housed in the MSH office, but an official CTB country office was finally identified and opened in August 2015.

The CTB strategic objectives in DRC are to improve access of patients to quality TB, TB-HIV and drug-resistant TB (DR-TB) diagnosis and care, prevention of transmission and disease progression; and strengthening TB platforms. The total buy-in in Year 1 was USD 4,526,319 million.

The CTB country team operates from offices in Kinshasa and in the seven CPLT that are Equateur East, Kasai Oriental Sud, Kasai Occidental East, Kasai Occidental Ouest, Maniema, Sankuru and Sud Kivu. Office space for CTB provincial staff has been availed by the CPLT.

MSH in DRC works in the health zones (HZ) in five CPLT located in three provinces, namely Katanga, Province Orientale and Kinshasa, which were already supported by the U. S. President's Emergency Plan for AIDS Relief (PEPFAR). This work is funded fully with PEPFAR funds and is reported on through a separate report.

There are also four sub-contractors that are local non-governmental organizations (NGOs). They include the Club des Amis de Damien (CAD), the Ligue Nationale Anti-Tuberculeuse et Anti-Lepre au Congo (LNAC), the Fondation Femmes Plus (Femmes Plus), the Ambassadeurs de lutte contre la Tuberculose du Sud Kivu (ALTB) all working with communities in TB care and control with technical assistance of Initiatives Inc.

During the first Annual Plan of Activities (APA1), CTB worked in close collaboration and coordination with the Ministry of Health (MoH) through the NTP and the National AIDS Program at both the national/central level and the CPLT level. CTB also coordinated its activities with the principal recipients of Global Fund (GF) to ensure that CTB does not duplicate activities that received GF support.

The main CTB achievements in APA 1 were as follows:

- Supporting the NTP in revision and updating of the **national TB care and control policies and guidelines, namely** PATI V (the 5th edition of the "Programme National anti-Tuberculeux Intégré"). These guidelines include recommendations on new case finding algorithms, and the use of GeneXpert MTB/Rif (Xpert), particularly in TB risk groups and vulnerable populations. CTB will contribute to the implementation of the revised guidelines by promoting their use in all training and supervision activities so that quality of TB services can be improved, access to TB diagnosis increased and innovative approaches to active case finding be made.

- Strengthening **TB laboratory network** to improve TB and MDR-TB case finding and diagnosis:
 - Development of Technical Guidelines for External Quality Control (EQC) for sputum microscopy to be used by all laboratories in the country. This document is expected to strengthen assessment of peripheral laboratories so that they can provide reliable TB diagnostic and follow up services.
 - Situational analysis of the national TB reference laboratory (NRL) was carried out as the first step towards developing a National Laboratory Strategic Plan and its annual operational plan.
 - Expand accessibility to rapid diagnosis of TB and MDR-TB by installation of three GeneXpert MTB/Rif (Xpert) platforms.
 - In early 2015, CTB prevented a critical national shortage of essential laboratory commodities by supporting the procurement of an emergency supply to avert a crisis that could lead to discontinuation of diagnostic and follow up sputum microscopy testing.

- CTB responded fast to a request from the NTP for assistance in dealing with a report of a serious outbreak of TB in Mbuyi Mayi prison. All prisoners were screened and subsequently investigated for TB using direct sputum smear and Xpert, which resulted in diagnosis and treatment of 150 patients with drug-susceptible TB and 14 with drug-resistant TB. This activity exposed a serious gap in TB care and prevention which probably exists in most or all of Congolese prisons and requires expanded efforts by NTP to address this.

- Expanding access to TB services by private providers by engaging **70 private facilities** in the 7 CPLTs in addition to the 52 private facilities that attended to TB patients before CTB inception. One hundred and forty staff members from these 70 facilities were trained to ensure that they possess basic TB diagnostic, treatment and follow up competencies and skills.

- Set up innovative approaches for active TB case-finding in vulnerable and hard-to-reach populations in Sud Kivu and intensified case-finding in nine HIV care facilities through local partners working with communities.

- Developing the operations research (OR) agenda for PNLT (PATIOR) as well as a capacity building strategy for OR.

2. Introduction

The Democratic Republic of Congo (DRC) has a geographical area of 2,345,409 km² and an estimated population of 72.5 million¹, 43 percent of which is in the under-15 age-group and 70 percent of which live in rural areas. The recent history of the country has been marked by two decades of politico-military and social disorder which have slowed down the country's development momentum. Over 87 percent of the population lives on less than 1 dollar a day. Life expectancy at birth increased from 49 years in 1990 to 52 years for both sexes in 2012.²

Health services are administered in this gigantic country through 26 provincial health divisions. The peripheral level consists of 515 health zones with 472 hospitals and 8,266 primary health centers. The

¹ Plan National de Développement Sanitaire (PNDS) 2011-2015

² Indice de développement humain Mars 2013

health system suffers from fragmentation, lack of access to services, mainly for geographical (poor transport infrastructure in most areas of the country), insufficient funding, and weak planning and coordination of interventions.

The National TB Control Program (Programme National de Lutte contre la Tuberculose, PNLT) is fully integrated into the general health delivery system. At central level, the program coordinates the implementation of the national TB strategic plans. In addition, the Central Unit is responsible for the national TB reference laboratory (NRL) and TB medical stores. The intermediate level is responsible for coordination of TB diagnostic and treatment services at the Provincial Anti-Leprosy and - Tuberculosis Coordinations (Coordination provinciale de Lutte contre la Lèpre et la Tuberculose, CPLT). Each province has at least one CPLT; in total, there are currently 23 CPLTs. Each CPLT is responsible for a provincial TB referral laboratory. At a peripheral level, the health zones (HZ) are responsible for provision of TB and TB-HIV services through diagnostic and treatment centers (Centre de Santé de Diagnostic et de Traitement, CSDT). Each center has a TB focal person, usually a nurse, and a laboratory technician. The number of CSDTs has doubled over the last decade to 1,522 CSDTs in 2012 of which 43 are managed by private companies and 84 by private-for-profit institutions, the remaining are public health sector facilities. Of the 472 hospitals at the peripheral level, 393 (83%) provide TB services.

The TB laboratory network consists of 1,604 microscopy laboratories; on average three in each HZ. The laboratory staff are supervised by 23 provincial referral laboratories. These laboratories in turn are supervised by the NRL in Kinshasa. There are two laboratories that perform *M. tb* culture and drug susceptibility testing (DST): the NRL and the regional laboratory in Lubumbashi. Plans are underway to develop two additional regional laboratories, namely Kisangani and Mbuji-Mayi. Of note is the modest number (41) of Xpert platforms in the country at the start of CTB.

Several approaches are used in the country to ensure community participation in TB care and control and they include different types of grassroots community organizations (patient support groups, networks, non-governmental organizations [NGO] and community based organizations [CBO]).

Table 1 below shows the trend and yearly fluctuation in the number of notified TB cases from 2010 to 2014.

Table 1: Notified tuberculosis cases by type, DRC, 2010-2014

	2010	2011	2012	2013	2014
New smear+ TB	73,653	71,321	71,124	71,526	75,631
Relapses	5,647	4,921	5,171	5,145	5,397
Smear-TB	14,039	13,471	13,214	13,887	13,494
Extra-pulmonary TB	22,340	21,579	20,669	20,297	19,566
Other	2,957	2,998	2,608	2,748	2,806
Total TB	118,636	114,290	112,786	113,603	116,894

Based on the WHO estimates (2013), the TB (all forms) incidence in DRC was 220 (200–240)/100,000 population, and the detection rate was estimated to be 51% (47%-56%). In 2014, of the notified 75,631 new smear-positive TB cases, 42,735 (57%) were males and 32,604 (43%) females resulting in a Male/Female ratio of 1:1,31; 292 notified cases did not have sex specified. The proportion of children (0-14 years) among the notified TB (all forms) cases in 2014 was 11% (12,785/116,894).

In the 7 CTB-supported CPLTs, 34,540 cases of TB (all forms) were notified. There were 22,605 new smear-positive cases of whom 12,598 (56%) were males and 9,972 (44%) females (Male/Female ratio of 1:1,26). Of the notified 34,540 TB (all forms) cases, 4,239 (12%) were children. This proportion, however, ranged from 9% in Equateur Est (EQE), Kasai Occidental Est (KOE), Kasai Occidental Ouest (KOO), and Sankuru to 15% in Kasai Oriental Sud.

The TB treatment success rate (TSR) was 88% (in cohort of 2012, n=71,124) among new smear-positive TB patients and 74% among retreatment patients (n=5,171). For the cohort 2013, the TSR was 89% (n= 71,526) among new smear-positive TB patients and 77% among retreatment patients (n=5,145).

The proportion of multidrug-resistant TB (MDR-TB) among TB patients was estimated at 2.6% among new smear-positive TB and 13% among retreatment cases.³ In 2014, at the national level, 436 cases were treated by second line treatment and among them 405 (93%) had confirmed rifampicin resistance (RR). In the 7 CTB-supported CPLTs, 71 cases were treated by second line treatment and all were RR-confirmed. The success rate for the 2012 cohort at the national level was 60% (162/280) and 59% (17/29) for the 7 CTB-supported CPLTs, all patients were treated with the long regimen of 24 months. The success rate for patients treated with a 9 months regimen in 2013 in Kinshasa was 83% (57/69).

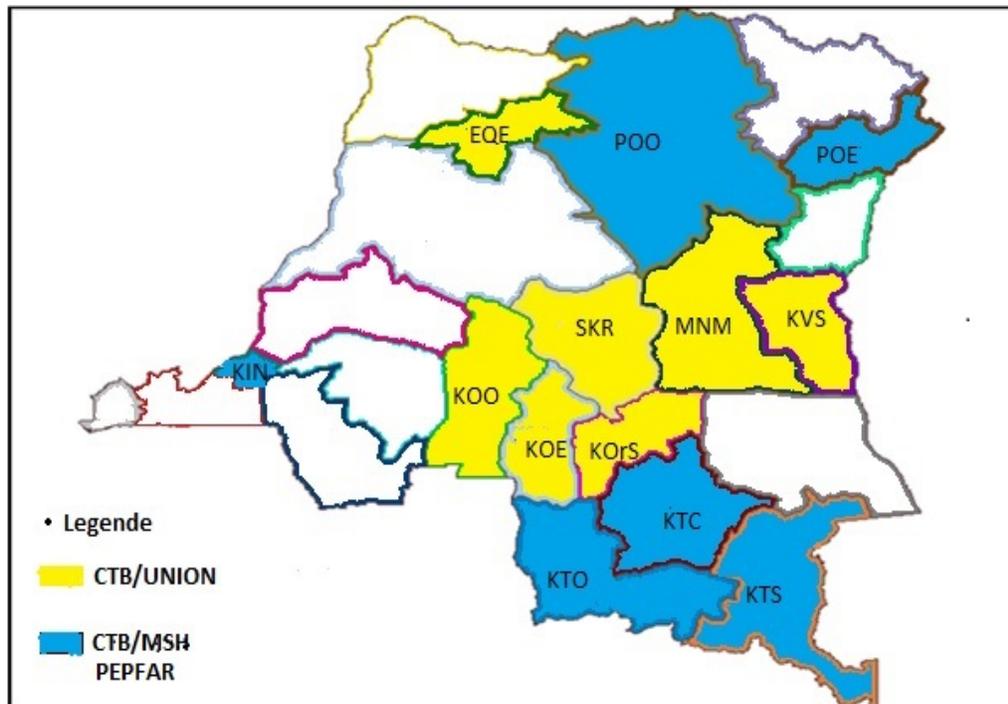
In 2014, the proportion of new smear-positive TB patients tested for HIV infection was low (41%) and among them, 9% were found to be HIV-infected. Of these, 97% were started on cotrimoxazole preventive therapy (CPT) and 81% on anti-retroviral treatment (ART).

CTB is one of the main mechanisms in supporting the NTP both technically and financially. Global Fund (GF) provides considerable support to the program. Damien Action (AD) supports the NTP at the central level and in selected other CPLTs where CTB is not working. The Leprosy Mission gives limited support to 4 CPLT (Maniema, Sud Kivu, Kasai Occidental Ouest, Sankuru) among the 7 CPLT supported by CTB.

³Global TB Report 2014, WHO

The map (Figure 1) below shows the geographical areas where CTB (in yellow) was active and where PEPFAR support was provided in APA 1 (in blue). Text box 1 below summarizes CPLT populations, key challenges in TB care and control and the HIV prevalence among the reproductive age-groups.⁴

Figure 1: Map of the Democratic Republic of Congo depicting the CPLTs supported by Challenge TB and Management Sciences for Health, 2014-2015



⁴ Enquête Démographique Santé RDCII 2013-2014

Text box 1: List and characteristics of Provinces and “Coordination Provinciale de Lutte contre la Lèpre et la Tuberculose” that received CTB support (PEPFAR and non-PEPFAR funded work plans), 2015

CTB geographic areas (non-PEPFAR/USAID Global Health-funded):

Province Equateur: *CPLT Equateur Est (EQE)* : 2,247,234 inhabitants: low TB detection rate (42%), hard-to-reach populations, wide-spread poverty, low coverage of TB-HIV and MDR-TB services, HIV prevalence 1,15%

Province Kasai Occidental 5,952,286 inhabitants: ***CPLT Kasai Occidental Est (KOE)*** 4,127,638 inhabitants), ***CPLT Kasai occidental Ouest (KOO)*** 1,824,648 inhabitants): low TB detection rate (59%), mining communities, internally misplaced populations, HIV prevalence 3,08%

Province Kasai Oriental 9,934,327 inhabitants: ***CPLT Kasai Oriental Sud (KORS)*** 8,020,330 inhabitants, ***CPLT Sankuru (SKR)***:1,913,997 inhabitants: low TB detection rate (52%), increased number of notified MDR-TB cases, congested prisons, mining communities, HIV prevalence 1,41%

Province Kivu Sud : *CPLT du Sud Kivu (SKV)* 4,741,358 inhabitants : low TB detection rate (41%), mining communities, post-conflict region, HIV prevalence 0,33%

Province Maniema : *CPLT du Maniema (MNM)* 2,391,905 inhabitants: low TB detection rate (68%), mining communities, post-conflict region, HIV prevalence 1,92%

CTB geographic areas (PEPFAR-funded):

Province Kinshasa 6,510,422 inhabitants and national capital city: TB-HIV activities in 16 health zones, HIV prevalence 1,26%

Province Orientale 8,989,757 inhabitants: TB-HIV activities in 3 health zones, province with large mining activities, post-conflict region, HIV prevalence 3,14%

Province Katanga 10,426,445 inhabitants: TB-HIV activities in 15 health zones, province with large mining activities, post-conflict region, HIV prevalence 2,09%

The CTB work plan in APA1 was carefully aligned to the National TB Strategic Plan (NSP) which aims to detect 129,254 TB cases, 16,634 TB-HIV patients, and 1202 MDR-TB patients by year 2015⁵ The CTB strategic framework is focused on the following three objectives. Each objective has sub-objectives that are summarized in Text box 2 below.

Text box 2: List of the Challenge TB objectives and sub-objectives in the Democratic Republic of Congo, 2015

Objective 1: Improve access to high-quality patient-centered TB, DR-TB & TB-HIV services by:

Sub-objective 1: Improving the enabling environment

Sub-objective 2: Ensuring a comprehensive, high quality diagnostic network

Sub-objective 3: Strengthening patient-centered care and treatment

Objective 2: Prevent transmission and disease progression by:

Sub-objective 5: Implementing infection control measures

Sub-objective 6: Management of latent TB infection

Objective 3: Strengthen TB service delivery platforms by:

Sub-objective 7: Enhancing political commitment and leadership

Sub-objective 10: Ensuring quality data, surveillance and monitoring & evaluation

Sub-objective 11: Human resources development

3. Country Achievements by Objective/Sub-Objective

Objective 1. Improved Access to high-quality patient-centred TB, DR-TB & TB-HIV services

Sub-objective 1. Enabling environment

The interventions and activities planned and implemented were as follows.

1.1. Provision of services according to national guidelines for all care providers and risk groups

1.1.1 Disseminate NTP operational guidelines (childhood TB, MDR-TB, TB-HIV) based on the patient-centred approach and support the operation of the Central Unit, including the National Reference Laboratory (NRL), and the 7 CPLT.

1.1.2 Identify private facilities that can be incorporated into the NTP in the 7 CTB-supported CPLT; 2 Map facilities/care providers (private, state and parastatal, and other care providers) in these CPLT; 3 Train care providers in the selected private sites in the 7 CPLT on national guidelines (PATI V) and build contractual relations between them and the NTP (for reporting).

1.1.4 Support the operation of the Central Unit, including the National Reference Laboratory, and the 7 CPLT

1.2. Demand side: Community empowered, especially among risk groups

1.2.1 Support TB patients to improve treatment intake; 2 Build community awareness to improve case screening and reduce patient stigma; 3 Create community awareness through targeted campaigns and for TB community groups (current and former TB patients).

1.2.2 Train community-based organisations (CBO) in community awareness (TB, MDR-TB, TB-HIV, child TB; 2 Conduct advocacy to parliamentarians and other decision makers to mobilise government resources for TB control; 3 Create awareness in above-mentioned activities, and 4 Train or orient community groups on tuberculosis.

1.2.3 Community-based action in the city of Kindu (Maniema) and in Kananga, targeting PLHIV and TB-HIV focusing particularly on women and children.

1.2.4 Provide NGO with support on sensitization and communication.

The table below summarizes the outcome indicators for this Sub-objective.

Table 2: Outcome Indicators for Sub-objective 1

#	Outcome Indicators	Indicator Definition	Baseline	Target	Result
				Y1	Y1
1.1.1	% of notified TB cases, all forms, contributed by non-NTP providers (i.e. private/non-governmental facilities)	Proportion of TB cases (all forms) reported by non-NTP providers (i.e. private/ non-governmental facilities)	NA	% available	% not yet available, please see explanation in 'Challenges' paragraph below

1.1.3	#/% of public sector/parastatal care facilities that report TB cases to the NTP (stratified by type: military, social security, etc.)	Proportion of public sector/parastatal care facilities that report TB cases to the NTP (stratified by type: military, social security, etc.)	NA	70 private providers (10 per CPLT) certified to provide TB management services	The target was achieved and all 70 private health facilities were identified. 140 HCW were trained (28 female, 112 male) from August to September 2015. Among these health facilities 61% (43/70) were private-for-profit and 39% (27/70) private-non-profit (13 church-related, 6 company, 1 police, 1 prisons, and 6 others). % of notified TB cases by private providers identified in APA 1 was not available yet. This will be evaluated in APA 2.
1.2.1	# of current/ex-TB patient groups engaged at the community level and also linked with the NTP	Number of current/ex-TB patient groups engaged at the community level and also linked with the NTP	In 2013, 270 current or former TB patients were trained in these 7 CPLT	In 2015, 350 current or former TB patients in the 7 CPLT will be trained (50 per CPLT)	250 community members were trained and engaged (110 females and 140 males) by two NGO, namely LNAC and Femmes Plus from April to June 2015. This represented 71% (250/350) of the APA 1 target.

Key results

Provision of services according to national guidelines for all care providers and risk groups

- Finalization of TB technical guide, NTP operational guidelines based on the patient-centred approach and including “new post-2015 TB” recommendations, TB control in children TB, MDR-TB, TB-HIV and high risk and vulnerable populations, such as prisoners. CTB staff participated in the writing of the revised guide a process led by the NTP manager. CTB provided background literature, references and technical support, particularly for case finding in vulnerable populations.
- Seventy private-for-profit health structures, and private-non-profit (church- and company) health facilities have been identified to increase access to TB diagnosis and care. The providers were selected based on several criteria that include patient attendances and location (distance from existing CSDT). It has been estimated that the selected providers represented approximately 13% of all NTP health facilities within the 7 CTB-supported CPLT.
- 140 healthcare providers working in these 70 private health facilities have been trained in TB care and prevention (In August 2015), and will report on case finding from APA 2.

Demand side: Community empowered, especially among risk groups

- Training on TB was done for 250 Organisation à assise communautaire (OAC) members (110 females and 140 males) within the 7 CTB-supported CPLT and in the CPLT of Kinshasa by two NGO, namely LNAC and Femmes Plus from April to June 2015. These participants were trained to create and increase TB awareness in the communities, recognize symptoms suggestive of TB and need to refer symptomatic persons to CDSTs for investigations.

Challenges

- The number of TB patients notified by these private facilities was unavailable. The CTB team will collect these data during APA2. Data collection will need on-the-job training of private providers by CTB staff to ensure data quality and timely submission.
- From June to September 2015, local NGO discontinued their activities due to interruptions in funding that were caused by the need to follow the CTB procedures (to ensure competitive recruitment of NGO). This led to postponement of several NGO-led activities, such as advocacy to the parliamentarians and other decision makers. This activity will be carried over to APA2.

Sub-objective 2. Comprehensive, high quality diagnostics

The interventions and activities planned and implemented were as follows.

2.1 Access to High Quality TB Diagnosis ensured

- 2.1.1 Develop a Laboratory National Strategic Plan (PSNL).
- 2.1.2 Train laboratory technicians in fluorescence microscopy and use of Xpert.

2.2 EQA network for laboratory diagnostics and services functioning

- 2.2.1 Develop a guideline for external quality assurance (EQA).
- 2.2.2 Support the laboratory supervision at central and provincial level.
- 2.3.2 Improve access to quality culture by training and supervision at the regional level.
- 2.4.1 Purchase three GeneXpert machines.
- 2.6.1 Establish Expedient laboratory specimen transport and results feedback system.
- 2.7.2 Ensure Biosafety measures in TB laboratories.

Table 3. Outcome Indicators for Sub-objective 2

#	Outcome Indicators	Indicator Definition	Baseline	Target	Result
				Y1	Y1
2.1.3	National Laboratory Plan	Description: National Laboratory Strategic Plan will be developed Indicator Value: National Laboratory Strategic Plan is finalized and ready for MOH approval Level: National Source: PNLT Means of Verification: Document available Numerator: NA Denominator: NA	0= National laboratory strategic plan not available	1= National laboratory strategic plan available	0 The National laboratory strategic plan is not complete yet but the 1 st step (situational analysis) was completed in APA1. Development is planned for quarter (Q) 1 of APA2.
2.1.1	# of laboratories performing microscopy	Number of laboratories performing microscopy (stratified by LED florescence, Ziehl-Neelsen)	NA	Baseline available	1,621 laboratories performing Ziehl-Neelsen microscopy (using Olympus microscopes) and 20 laboratories using fluorescence microscopy In the 7 CTB-supported CPLT, 548 laboratories perform Ziehl-Neelsen microscopy. No laboratory has LED fluorescence microscopy.

2.2.1	#/% of laboratories enrolled in EQA for smear microscopy	Proportion of laboratories enrolled in External Quality Assessment for smear microscopy	51%	75%	Target exceeded: Nationally, 93% (1,508/1,621) of CSDT laboratories participated in EQA. In 7 CTB-supported CPLT: 84% (458/548) of CSDT laboratories are enrolled in EQA.
2.2.2	#/% of laboratories showing adequate performance in external quality assurance for smear microscopy	Performance of EQA is just as important as having EQA established. This indicator measures the percent of laboratories enrolled in EQA for smear microscopy that successfully passed EQA in the last reporting period.	53% of CSDT laboratories efficient in 2013	65% of CSDT laboratories efficient in 2015	51 % (833/1,621) of CSDT laboratories were considered to have adequate performance at national level and 57% (312/548) of the laboratories in the 7 CTB-supported CPLT. The target was not attained due to various operational challenges, explained below.
2.3.1	% of confirmed TB cases who undergo DST and receive their results, disaggregated by new and previously treated cases	This indicator measures the proportion of confirmed TB cases with culture and DST requested that receive results (disaggregated by new and previously treated cases)	In 2013, 247 DTS tests were done, and 31 test results were received as MDR (12%); 2 were new cases and 29 were re-treatment cases	In 2015, at least 50% of those tested will receive their results	Indicator not available, however 8% (116 MDR-TB cases /1,459 DST done) of patients received their susceptibility test results nationally. In the 7 CTB-supported CPLT, this proportion was 25% (18 MDR-TB cases/72 DST done) of patients received these results. They were all retreatment cases.
2.4.2	#/% of Xpert machines that are functional in country (stratified by Challenge TB, other)	Proportion of Xpert machines that are functional in country	CTB: 0 Xpert machine National: 41 other Xpert machines	CTB: 3 Xpert machines National: 51 if the additional 10 platforms through GF support are delivered and function	100% (3/3) provided by CTB to Lisala, Lodja and Tshikapa laboratories. No new machines were provided by GF or other partners. Also 10 of the Xpert platforms were not fully functional. This brings the total number of functional platforms down to 34.
2.4.4	Rifampicin resistance rate of Xpert test results	This indicator measures rifampicin resistance rate of Xpert test results	In 2013, 61 cases with rifampicin-resistant strains were registered for treatment in the 7 CPLT	In 2015 , 90 cases are expected in the 7 CPLT	CTB: From October 2014-September 2015: 122 Xpert RR strains detected in the 7 CPLT. This represented 13% (122/948) RR strains of all Xpert specimens that were <i>M. tb</i> positive.

2.4.5	% unsuccessful Xpert tests	This indicator measures proportion of unsuccessful Xpert tests	NA	To be determined	1,8% (64/3,598) Xpert tests were unsuccessful from January to June 2015 nationally. 4,2% (203/4,801) unsuccessful in the 7 CPLT from October 2014 to September 2015.
2.4.6	#/% of new TB and Rif-resistant cases diagnosed using GeneXpert	Proportion of new TB cases diagnosed using GeneXpert	NA	Information available	From January-September 2015, there were 255 MDR-TB cases diagnosed at national level, using Xpert as first test. From October 2014-September 2015, in the 7 CTB-supported CPLT, 122 RR-TB cases were detected. All were identified among retreatment cases.
2.6.4	# of specimens transported for TB diagnostic services	Number of specimens transported for TB diagnostic services via a specimen transport system	In 2013, 3,290 samples from 7 CPLT	4,000 in 2014-15	5,368 samples transported in the 7 CPLT of which 2,148 (40%) were paid by CTB. Nationally, from June-September 2015, 1,000 sputum sample transportation boxes (provided by CTB) were distributed across 23 CPLT.
2.7.1	#/% of laboratories implementing national biosafety standards (stratified by laboratories performing culture, DST and Xpert)	This indicator measures proportion of TB labs implementing internationally recommended biosafety standards (stratified by labs performing culture, DST and Xpert). Note that this measurement requires operations research using a valid tool.	0	3 laboratories	33% (1/3) culture laboratories: only NRL in Kinshasa met this standard. It is also the only laboratory performing DST, ie 100% (1/1) biosafety standards in DST laboratories observed. Renovations of three incinerators was done in 3 provincial laboratories mentioned above that received the GeneXpert platforms.

Key results

The most important achievements were as follows:

- In early 2015, CTB prevented a critical national shortage of essential laboratory commodities by supporting the procurement of an emergency supply of Ziehl-Neelsen reagents and culture consumables to avert a crisis that could lead to discontinuation of diagnostic and follow up sputum microscopy testing.
- Twenty three laboratory technicians (6 female and 17 male) were trained in Xpert use from 26th to 29th August 2015.
- The guidelines for EQA for microcopy network were finalized in August 2015.
- Seven provincial reference laboratories (PRL) were provided with support supervision visits by the combined NRL and CTB teams in APA1. In September 2015, three Xpert platforms were installed in three PRL, namely Lisala in the CPLT Equateur Est, Lodja in the CPLT of Sankuru and Tshikapa in the CPLT of Kasai Occidental Ouest. The tests carried out using these 3 Xpert platforms will be monitored/reported on in the future APA 2.

- Three incinerators were renovated to strengthen clinical waste management in the same health facilities where GX were installed and their proper use was included in the Xpert training .
- From October 2014-September 2015, in the 7 CTB-supported CPLT, 5,368 sputum specimens were collected for Xpert testing, 4,801 tests were performed and 20% (948/4,801) Xpert tests were MTB detected.
- An international short-term technical assistance (STTA) conducted a situational analysis of the NRL in July 2015. This was the first step towards development of the National TB Laboratory Strategic Plan and an annual operational plan that will be completed in APA 2. The CTB staff supported the NRL and NTP in the entire process.

Challenges

- The Strategic Laboratory National Plan was not finalized due to the time that preparation of the situational analysis took, but will be completed in APA 2.
- Even though more than the targeted number of microscopy laboratories participated in EQA, both nationally and in the seven CTB-supported CPLT, EQA performance was not strengthened sufficiently to reach the set target of 65%. This was due to frequent staff turn-over, periodic shortages of laboratory reagents, and microscopes that were reportedly not functioning properly.
- The following reasons contributed to the low proportion of patients whose samples underwent DST: difficulties for sample transportation, unsatisfactory quality of samples on arrival at provincial reference laboratories, imminent risk of stock out of culture commodities, and high workload at the NRL.
- No new machines were provided by GF or other partners. Also 10 of the Xpert platforms were not fully functional. This brings the total number of functional Xpert platforms down to 34. There were only 34/41 functional Xpert platforms in the country as of end of APA1 due to the following: module and UPS failure, suspected miss-calibration, and unreliable electricity supplies. CTB will be providing solar kits and laboratory maintenance in APA 2 to improve the functionality of these platforms.

Participants in a practical session during a training in Xpert use for laboratory technicians held in Kinshasa from 26th to 29th August 2015 (Photo credit: Dr Stephane Mbuyi)



Sub-objective 3. Patient-centered care and treatment

The interventions and activities were as follows.

3.1 Ensured intensified case finding for all risk groups by all care providers

3.1.1 Organize a meeting at which screening protocols are developed for targeted risk groups.

3.1.3 Improve childhood TB diagnostic capacity through practical workshops for the 15 CPLTs.⁵

3.1.4 Implement active TB screening through the door-to-door approach in Sud Kivu.

3.2 Access to Quality treatment and care ensured for TB, MDR-TB, and TB/HIV for all risk groups from all care providers

3.2.1 Improve multidrug-resistant TB (MDR-TB) patient management and

Provide compassionate treatment to patients with extensively drug-resistant TB (XDR-TB).

Table 4: Outcome Indicators for Sub-objective 3

#	Outcome Indicators	Indicator Definition	Baseline (Year/ timeframe)	Target	Result
				Y1	Y1
3.1.1	# of cases notified (all forms)	The number of TB cases (all forms) reported by the NTP	National 113,603 TB cases all forms CTB For the 7 CPLT, 34,916 TB cases (all forms) notified in 2013	CTB For the 7 CPLT, 36,000 TB cases (all forms) will be notified in 2015	National 116,894 TB cases all form in 2014 CTB 25,522 TB cases (all forms) were notified in the 7 CPLTs in 9 months (October 2014-June 2015). (25,522/36,000)
3.1.8	% of TB cases (all forms) diagnosed among children (0-14)	This indicator measures proportion of TB cases (all forms) diagnosed in children 0-14 years of age. When childhood TB is a priority, being able to report on and measure changes in case notification by age group is important.	At national level, 4 % of new smear-positive TB and 12% of TB cases (all forms) in children (2013)	At national level, 5 % of new smear-positive TB and 15% of TB cases (all forms) in children	At the moment, data for October 2014-June 2015 are available but not yet validated: at national level, 4% (2,215/54,115) were children among new smear-positive cases and 10% among TB all forms (8,945/87,690). In the 7 CPLT: 5% (834/16,712) were children among new smear-positive cases and 12% (2,991/25,522) among TB all forms.

⁵ The PNLT proposed inclusion of additional CPLT and increasing their number from 7 to 15 for this activity. However, the funding was not sufficient to cover this expansion and CTB resorted back to the 7 'usual' CPLT.

3.1.13	#/% of presumptive TB patients referred by community referral systems	Proportion TB cases (all forms) notified that were referred of diagnosed via CB approach	In Sud Kivu in 2012-2013: 35,392 presumptive TB patients were referred by "Ambassadeurs du Sud Kivu. (17,604 were examined: 1,677 found to be smear-positive, 63 Xpert+, 167 smear-negative and 154 had EPTB).	At least 15,000 persons – Number of persons with cough > 15 days is reported «Ambassadeurs du Sud Kivu).	From March to September 2015: 9,389 presumptive TB patients were identified and referred. Ambassadeurs du Sud Kivu. (15,687 were examined: 9,389 persons with symptoms suggestive of TB were investigated 520 (5%) TB cases were diagnosed and began treatment.
3.2.1	Treatment success rate among bacteriologically confirmed TB cases	The proportion of a cohort of new and relapse TB cases (bacteriologically confirmed and clinically diagnosed) registered in a specified period that successfully completed treatment, whether with bacteriologic evidence of success ("cured") or without ("treatment completed").	An average of 88% both at national level and in the 7 CPLT	An average of 90% for the 7 CPLT	From October 2013-June 2014: treatment success rate (TSR) was 87% (51,828/59,547) nationally, and 88% (15,193/17,278) in the 7 CTB-supported CPLT. These results were achieved before onset of CTB.
3.2.4	#/% of eligible patients with drug-resistant TB enrolled on second-line treatment (disaggregated by sex, age and urban/rural)	The proportion of eligible patients with drug resistant TB (RR-TB/MDR-TB/XDR-TB) enrolled on second-line treatment (not the cumulative number on treatment) in the reporting period (disaggregated by sex, age [0-4, 5-14, adults], and urban/rural)	61 confirmed MDR-TB cases started treatment in 2013 in the 7 CPLTs (450 at national level)	80 confirmed MDR-TB cases will start treatment in 2015 in the 7 CPLTs (and 550 MDR-TB cases at national level)	From October 2014 to-September 2015, in the 7 CPLT, there were 122 (Xpert RR) MDR-TB cases and 84% (102/122) of them were started on treatment. The NTP patient record format contains information on age, sex and residential address. However, the reporting tool does not include these data and therefore, we cannot yet provide disaggregated data.
3.2.7	Treatment success rate for MDR-TB patients on treatment	The proportion of laboratory-confirmed MDR-TB patients successfully treated (cured plus completed treatment) among those enrolled on second line anti-TB treatment during the year of assessment (where applicable disaggregation by HIV status, XDR status).	For a cohort of 88 confirmed MDR-TB cases in 2011 at national level: 57% (50/88) success rate	65% success rate for the 2013 cohort (outcomes available in 2015)	At the National level MDR cohort 2012 TSR was 60% (162/269) with a long MDR-TB treatment regimen For MDR cohort 2013 TSR was regimen cohort 2012 83% (57/69) with Short MDR-TB regimen of 9 month regime, TSR was 59% (17/29) for success rate in the 7 CTB-supported CPLT

					among patients receiving the long MDR-TB regimen; cohort 2012. Results are not attributable to CTB which started in Jan 2015. HIV testing was not done due to test stock-out.
3.2.13	% TB patients (new and re-treatment) with an HIV test result recorded in the TB register	The purpose is to assess how many TB patients know their HIV status, regardless of whether testing was done before or during TB treatment. In settings where HIV is driving the TB epidemic, all TB patients should be offered and encouraged to have an HIV test.	2013: in the 7 CPLT, 32% (11,120/34,916) of TB (all forms) patients with for recorded HIV test result. Nationally, 44% (49,816/113,603) with this indicator.	In 2015: 50% in the 7 CPLT, and 60% at national level of TB patients (all forms) should have a known HIV status	In the 7 CPLT: 25% (6,455/25,522) and 46% (40,429/87,690) at national level had a known HIV status. These data are for the period from October 2014 to June 2015 Performance did not meet the target for reasons explained in the Challenges section below.
3.2.24	% MDR patients provided patient support (stratified by type of support: psychosocial, economic, etc.)	Proportion of MDR-TB patients who receive patient support (stratified by type of support: psychosocial, economic, etc.).	100% in 2013	100% (150 patients) in 2015	In the 7 CPLT supported by CTB 129 MDR-TB patients received support for follow up tests, supplementary nutrition and transport fees by September 2015. (This is 86% of the budgeted amount, which estimated 150 patients would need support during APA 1.) National data not available.

Key results

The key achievements in this sub-objective were as follows:

- Nutritional support, payment of transport fees and follow up laboratory tests were provided to 129 MDR-TB patients in the 7CTB CPLTs. This is 86% of the budgeted amount, which estimated 150 patients would need support during APA 1.
- Childhood TB training was held in one of the 7 CTB-supported CPLT (Kasai Oriental) at Mwene Ditu from September 21 to 25, 2015. The training was attended by 32 participants (17 female and 15 male) who represented eight health facilities in this coordination area that are known for serving

the pediatric population. The training was facilitated by Dr Faustin Kitelele from the Kalembe Lembe Paediatric Hospital in Kinshasa.

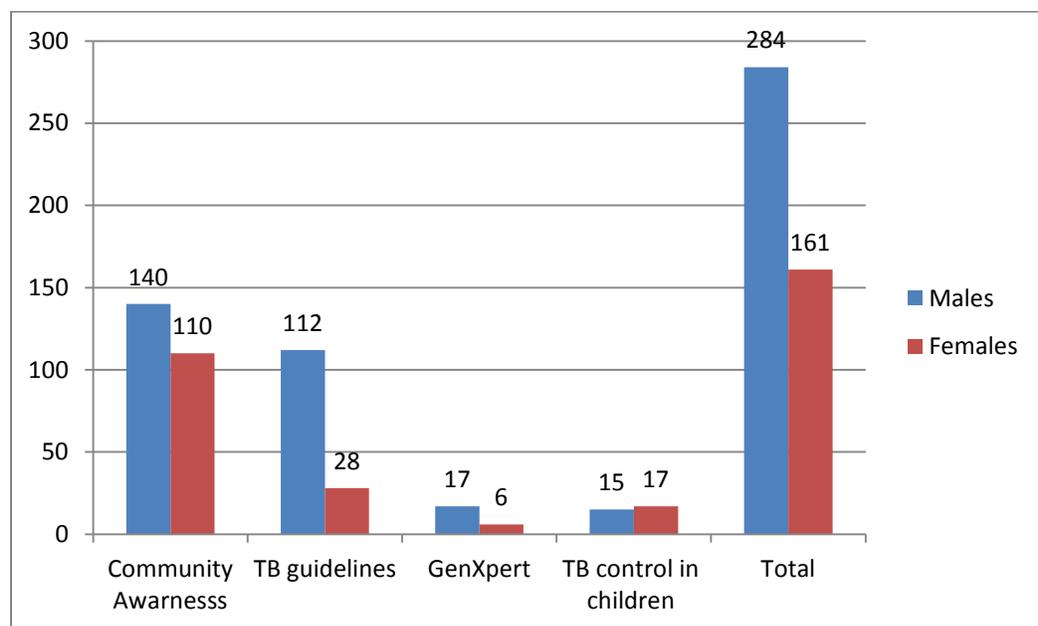
- Capacity assessments of the four partner NGOs were completed in APA1. The findings will form the basis for capacity building efforts to be carried out in APA2. The assessment determined that the capacity of three of the NGOs is currently insufficient. However, the NGOs were supported to develop action plans and a consultant was identified to support them in the finalization and implementation of these action plans.

Challenges

- Low proportion of TB (all forms) patients with a known HIV status remained a great concern. The main reasons for poor performance at both the national and CTB-supported CPLT include frequent stock-outs of rapid HIV tests (procured mainly with GF support), short supply of cotrimoxazole and certain anti-retroviral medicines. CTB will work with the Global Fund PRs and sub-recipients to ensure the availability of HIV tests in the 7 CTB CPTLS.
- Delays in starting patients on the second line MDR-TB treatment regimen were reported throughout the country. They were due to difficult access to Xpert testing and challenges experienced in transportation of both sputum samples and medicines. Delays often occur in distributing the second line drugs from national level to the CPLT treating the MDR-TB patient (ie. transportation costs are often lacking). There were also serious challenges in ensuring that all patients who had culture and DST specimens collected would also receive the results and an appropriate clinical assessment. Although CTB pays for sputum transport from the CPLTs to the NRL, the transport from the CDST to the CPLT (which is usually covered by the NTP or NGOs) is often still an issue.
- Importance of training of both HCWs and community members for improving of TB care and prevention at district level was fully recognized. During APA1, 445 persons were trained (284 or 64% males and 161 or 36% females (Figure 2 below). It followed that the male: female ratio was 1,8 (284/161=1,8). This ratio seemed different from the usual sex ratio of Congolese health personnel where female staff were in majority (M/F ration is 2,975/5,075 = 0.57 or 1:1.7) (Survey 2005). Females were strongly represented in the following categories: nurses/nursing assistants (84%), and laboratory assistants (56%). Women were poorly represented in the following categories: doctors (23%) and pharmacists (19%).⁶ In APA2, the CTB team will engage the NTP and CPLT so that a more representative sex distribution can be achieved among participants in CTB-supported training sessions.

⁶ Africa Health Observatory <http://www.aho.afro.who.int/en> visited the 23 October 2015

Figure 2. Sex distribution of health workers and community members trained through Challenge TB support, the Democratic Republic of Congo, March to September 2015



Objective2. Prevention of transmission and disease progression

Sub-objective 5. Infection control

Different infection control measures are and will be implemented in DRC with the support of GF funding. However, TB surveillance among HCW has not been implemented so far, and it was therefore included into the CTB work plan.

5.2.1. Status of TB disease monitoring among HCW

It was planned that CTB-support would be targeted at holding a national workshop facilitated by a STTA to develop a situational analysis and a protocol for operations research (OR) on TB surveillance among HCWs, which is in line with the newly-developed OR agenda, PATIOR. However, the STTA was postponed to APA2 due to delays in identification of a suitable consultant, competing activities by the PNLT, and the fact that no budget provision for consultant's travel had been made in APA1. The STTA is planned for quarter (Q) 1 of APA2 and will pave the way forward for the survey data collection later in APA2.

Table 5: Table Outcome indicator for Sub-objective 5

#	Outcome Indicators	Indicator Definition	Baseline	Target	Result
				Y1	Y1

5.2.1	Status of TB disease monitoring among HCWs	This indicator measures the status of TB IC implementation in health facilities.	0	1	0 Activity postponed to Q1 of APA2 due to the fact no suitable STTA was available.
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Sub-objective 6. Management of latent TB infection

6.1. Status of implementing LTBI diagnosis and treatment strategies

The following interventions were planned in APA 1:

- 6.1.1. Assess the use of INH preventive therapy among PLHIV in 10 target facilities
- 6.1.2. One-day synthesis workshop for operational evaluation of INH preventive therapy among PLHIV.

Table 6. Outcome indicator for Sub-objective 6

#	Outcome Indicators	Indicator Definition	Baseline	Target	Result
				Y1	Y1
6.1.1.	Status of implementing LTBI diagnosis and treatment strategies	This indicator measures the status of implementing LTBI diagnosis and treatment strategies in the country. (0=no policy or practice in place; 1=policies have been developed/updated; 2=LTBI strategies piloted or implemented in limited settings; 3=LTBI strategies implemented nationally	0	1	1 National IPT guideline is available

Key result

An assessment of IPT was done in 10 health facilities from September 16- 26, 2015. The objectives of this assessment were as follows:

- Evaluate actual implementation of IPT;
- Identify the main problems to set up this new intervention;
- Identify solutions to the identified problems to improve IPT implementation.

The preliminary report indicated that isoniazid was available in health facilities and IPT was provided to PLHIV without active TB disease. Also tools for IPT records were found available but HCWs failed to maintain them.

Challenges

- Need to train HCW in this intervention, in recording and reporting IPT records.

Objective 3. Strengthened TB Platforms

Sub-objective 7. Political commitment and leadership7. Political commitment and leadership

To increase the political commitment and leadership towards TB care and control, CTB planned two main activities in APA1:

7.2 Celebration of World TB day, TB control awareness: material printing, spots, TV broadcasts, SMS campaigns, school awareness.

The CTB team participated actively in commemoration of the World TB Day 2015 and provided complementary financial support to GF funding.

Advocacy among parliamentarians

Contract was signed with Ligue Nationale Antituberculeuse et Antilépreuse du Congo (LNAC) that has been identified as the local partner organisation to advocate for increase of the DRC government financial contributions towards TB care and prevention.

Table 7: Outcome indicator on sub-objective 7

#	Outcome Indicators	Indicator Definition	Baseline	Target	Result
				Y1	Y1
7.2.1	% of NTP budget financed by domestic resources	This indicator measures the percent of the NTP budget financed by domestic sources	8,8% of the NTP budget based on the National Strategic Plan budget was government-funded	A stable rate of 8, 8%. If the rate given to TB is stable, it will reflect political commitment towards TB care. However, between 2013 and 2015, a decrease of 3% of the MOH total budget was observed.	The information is not yet available in the MOH. In 2013, 8,6% (20,521,412\$/237,776,693\$) was allocated to the NTP of the overall MOH budget. In APA2, CTB will gather information from NTP and MOH.

Key results

During the commemoration of the world TB day 2015 the NTP and CTB teams arranged a TB case finding campaign in selected prisons. The incarceration population is growing with 25,360 currently held in 77 large prisons. An active TB case finding campaign was carried out during World TB Day in one prison in Mbuji-Mayi in Kasai Oriental Sud. This prison was found to be overcrowded and the majority of prisoners were malnourished. During this campaign, all 900 prisoners were screened for symptoms suggestive of TB and presumptive TB patients had their sputum specimens tested using Xpert. In total, 150 (17%) drug-sensitive TB were diagnosed of which 14 were RR/MDR-TB cases. All these patients were started on TB treatment and registered in the CSDT nearest to the prison.

This campaign and the findings have made the NTP determined to carry out similar campaigns in other prisons.

- A considerable number of TB and MDR-TB cases were detected and started on treatment (details in success story reported below).
- This activity prompted greater awareness about a TB epidemic that may prevail in the prisons.

Challenges

- Need to expand TB control activities in prisons and taking note of 3 types of prisons:
 - a) those with a TB diagnostic centre;
 - b) those in a health zone with a TB diagnostic centre; and
 - c) those without a TB diagnostic centre in the near-by health zone.
- There is also an urgent need to improve TB infection control in overcrowded prisons. This is the responsibility of the Ministry of Justice with technical support from the MOH.
- If possible, inmates with TB would need nutritional support.
- Difficulties of inmates continuing TB treatment after their release have been observed. As a result, there is a high rate of lost-to-follow up and a great risk of TB and MDR-TB transmission in the community.
- Advocacy among parliamentarians was postponed to Q1 of APA2. This was due to delays in contractual matters and forwarding earmarked funding to LNAC to carry out this activity.

Sub-objective 10. Quality data, surveillance and M&E

1. Conduct a 3-day workshop for the development of a 5 years Operational Research Agenda in line with National TB Strategic Plan.

An epidemiological assessment was conducted in 2013 and the results incorporated into the national strategic plan. In APA1, it was planned to hold a national workshop to prepare the TB OR agenda for PNLT. This was completed and a STTA carried by an international consultant. A five year OR Agenda and a proposed capacity building plan for OR in the DRC were developed.

Table 8: Outcome indicator for the sub-objective 10

#	Outcome Indicators	Indicator Definition	Baseline	Target	Result
				Y1	Y1
10.2.5	National operations research plan	This indicator measures the availability of operations research Plan that include a local partner(s)	Not available	Final draft document ready	NTP Operational Research (PATIOR) agenda developed including plans for OR capacity building of the NTP in a session from August 18-20, 2015. It was attended by 25 people (7 females, 18 males).

Keys results

- A STTA by an Marcel Yotebieng from USA took place from August 15th to 22th, 2015 in Kinshasa to support the NTP in developing and adopting a research agenda and a plan to strengthen staff capacity in OR. To achieve these objectives a 3-day workshop (from August 18-20, 2015) was organized with the participation of technical staff of PNLT, PNLs, WHO country representative and CTB office. The Union consultant responsible for technical supervision of CTB activities in DRC

participated in development of this agenda by providing references, debriefing and discussing relevant issues with the international consultant, and contributing to the final report.

- The priority OR questions identified were as follows:
 - What are the causes of the decline in TB notifications in certain provinces in DRC;
 - What is the best approach to implement active TB case finding in risk groups, such as prisoners, patients with diabetes, and displaced persons;
 - What is the feasibility and impact of active TB case detection among household contacts; and
 - What is the contribution of new diagnostic tools, such as Xpert, in control of tuberculosis in DRC.
- In terms of capacity building of motivated staff identified, the model with the tutor support as implemented by the Union (SORT-IT) was adopted for implementation.
- At the end of the workshop the NTP guide for operational research (PATIOR) was adopted. Local NGOs will be engaged, starting with their participation in the ethics committee of the PNL.
- Selected NTP staff were identified among workshop participants for OR capacity building.

Challenges

- Plans to organize NTP staff OR capacity building and its funding need to be made.

Sub-objective 11. Human resource development

Technical support to strengthen the competencies of PNL/CPLT/OAC staff was done through the following activities funded by CTB:

11.1.1 Supervisor training/retraining

- Retrain Supervisors through a five-day national training workshop.
- Conduct Supervision visits to motivate HCWs in the intermediate and peripheral level (laboratory and medical supervision).

11.1.2 Strengthening capacity of local NGO involved in CTB (LNAC, CAD and Fondation Femmes Plus (FFP) by the international NGO "Initiative Inc"

11.1.3 Strengthening the Central Unit Staff capacities by organising an English class for NTP staff.

11.1.4 Strengthening CPLT staff capacities

- Support participation of Three CPLT coordinators in International TB courses .
- Support participation of 14 staff of the 7 CPLTs in refresher traineeship through an experience sharing study trip.
- Support participation of four coordinators of the 7 CTB-supported CPLT in the Union World Conference in Cape Town in December 2015.

Table 9: Outcome indicators on Sub-objective 11

#	Outcome Indicators	Indicator Definition	Baseline	Target	Result
				Y1	Y1
11.1.1	Status of system for supportive supervision	This indicator measures the status of the system for supportive supervision	1= supportive supervision plan developed, but not implemented systematically;	2= supportive supervision plan implemented consistently,	2=supportive supervision plan implemented consistently. Supervision guidelines with a check list available and used during supervision visits.
11.1.2	% of planned supervisory visits conducted (stratified by NTP and Challenge TB funded)	The proportion of planned supervisory visits conducted (stratified by NTP and Challenge TB funded)	NA	100%	86% (12/14) twice per CPLT by national team and 100% (7/7) by the 7 CTB-supported CPLT to the CSDT level from May to September 2015. Special attention was given to supportive supervision of laboratory staff and services.
11.1.3	# of health care workers trained, by gender and technical area	This indicator measures the number of healthcare workers trained, by gender and technical area	NA	Number available	A total of 28 NTP and CPLT staff were/are trained in APA1: <ul style="list-style-type: none"> English class started in September 2015: 11 NTP staff (5 males and 6 females) International Mycobacteriology course in Cotonou from August 3 to 13, 2015, 3 staff from NRL (1 male and 2 females). International TB Management course in Cotonou (Benin), 3 CPLT staff (all males) from September 7 to 25, 2015 14 staff (all males) of the 7 CPLT had a study trip in Kinshasa and Bas Congo from September 21 to October 14, 2015. The International Initiative Inc provided technical assistance to reinforce competencies of the 4 partner NGO. <p>Across all CTB sub-objectives, 412 (113 females/299 males) were trained.</p>

Key results

- Study tours for looking, listening and sharing of experiences were organized in September 2015 as follows:

- The CPLT of Kinshasa received 6 staff from the following CPLT: Kasai Occidental Est, Kasai Occidental Ouest and Kasai Oriental Sud.
- The CPLT of Bas Congo Est received 4 staff from the following CPLT: Sankuru and Equateur Est.
- The CPLT of Bas Congo Ouest received 4 staff from the following CPLT: Sud Kivu and Maniema.
- Follow up of MDR-TB patients will be supported by community based care givers.
- Three CPLT coordinators (Sankuru, Kasai Occidental Est and Kasai Oriental Sud) attended the International TB management course in Benin in September 2015.
- Eleven NTP staff began an English language course in September 2015. This will be continued in APA2 to further strengthen their skills.
- During the first supervisory visits to the laboratories an imminent stock out of essential laboratory commodities was observed in several health facilities. CTB alerted the central level and managed to avert a service interruption by placing an urgent order.
- Preparations for two NTP and two CTB team members to attend the 46th Union World Lung Conference are at an advanced stage.

Challenges

- Capacity building is a long and continuous process. Its need is high in settings, such as the DRC one, where there is a high turnover of HCWs.
- Due to competing activities, NTP deferred organization of workshops to enhance supervisory skills of NTP and CPLT staff.
- Delay in the recruitment of CTB staff, especially at the central level, was a handicap in APA1. It led to a situation that assistance of the Union technical consultant was frequently required. CTB central unit staff shortage posed also challenges for implementation of supportive supervision and taking of remedial action immediately when required.
- The summary below indicates the recruitment at both the central and CPLT levels as of September 30, 2015 in the CTB office.

Table 10: CTB staff in Kinshasa office

Designation	Name	Date started duty
Director	Jean Pierre Kabuayi	25 February 2015
Deputy Director	TBD	
Financial officer	Fabien Mokumesi	7 September 2015
Senior Monitoring & Evaluation officer	TBD	
Monitoring & Evaluation officer	Joseph Otshudi Djeka	17 August 2015
Focal point TB-HIV	Max Ngoma	6 July 2015
Focal point DR-TB	Stephane Mbuyi	7 July 2015
Focal point community and risk groups	BOLA Valentin	20 July 2015
Assistant administrative	Bénédicte Tabu Faila	24 June 2015
Drivers	Balanga Boaz	1 July 2015
	Bolongo Serge	13 July 2015

Security guard	Balikumuami Ciralira Thyna	7 July 2015
Cleaner	Astrid Masengu	27 July 2015

Table 11 : CTB Staff in CPLTs

CPLT	Name of Medical Officer	Name of Accountant/Logistician
Kasai occidental Est	Honoré Ngueyi	Dinsodi Dinsodi
Kasai Occidental Ouest	Tridon Iyale Minga	Lita Kanyamanda Hangi
Kasai Oriental Sud	Jeanne Tshibungu	Anaclet Tshibas
Sud Kivu	Liliane Kitete	Salvador Kavuke
Equateur Est	Papy Lusameso	Mercier Bonsomi
Kindu	Pascal Kemaina	Robert Byanikiro
Sankuru	TBD	Jacques Kivuvu

4. Challenge TB Support to Global Fund Implementation

Table 12: Current Global Fund TB Grants

Name of grant & principal recipient (i.e., Tuberculosis NFM - MoH)	Average Rating*	Current Rating	Total Approved Amount	Total Disbursed to Date	Total expensed (if available)
CARITAS	B1	A2	\$73,6m	\$37,5m	N/A
MOH	B2	B2	\$21m	\$9,9m	N/A
TOTAL	B1	A2	\$139,1m	\$91,8m	N/A

* Since January 2010 (Consulted October 12, 2015)

The difference in the approved and disbursed amounts was due to the fact that the United Nation's Development Program (UNDP) is not currently functioning as the principal recipient.

In-country Global Fund status - key updates, current conditions, challenges and bottlenecks

The Concept Note prepared for the New Funding Mechanism was approved in July 2015. The Country Coordinating Mechanism (CCM) has fulfilled the conditions of the Global Fund. Currently, even though the rating is good, there is no link with the low disbursement and absorption of funds.

Challenge TB involvement in GF support/implementation, any actions taken during Year 1

Due to the delays experienced in the disbursement of GF grant and to ensure necessary complementary funding during the APA1, CTB provided:

- A part of the NTP's central operational costs. Also the 7 CTB-supported CPLT received support for a period of two quarters;
- Laboratory commodities for one quarter were procured through the CTB-support to avoid an imminent stock out of essential laboratory commodities in all CDST and at the central level.

5. Challenge TB Success Story

5.1 Putting TB on the agenda in prisons in DRC

It has been estimated that TB prevalence in the prisons in DRC (roughly 5,490/100) is, on average, 10 times higher than in the general population. An active TB case finding campaign was carried out during World TB Day in one prison in Mbuji-Mayi in Kasai Oriental Sud. This prison was found to be overcrowded and the majority of prisoners were malnourished. During this campaign, 150 (17%) drug-sensitive TB and among them 14 MDR-TB cases were identified among 900 prisoners who were screened for symptoms suggestive of TB and whose sputum specimens were tested using Xpert.

All these patients were started on TB treatment and registered in the CSDT nearest to the prison. This campaign and the findings have made the NTP determined to carry out similar campaigns in other prisons.

The TB treatment outcomes for inmates whose treatment was started during the campaign are not available yet and the CTB wishes to evaluate and report on these in APA2. However, the following challenges have already been observed:

- TB infection control and prevention are a great concern in biggest and overcrowded prisons (as observed in Mbuji-Mayi). There is no designated space for isolation of (MDR-) TB patients. It follows that transmission of TB, including DR-TB strains, may be rampant.
- Food supplies for inmates are limited and majority of inmates suffer from malnutrition.
- Most inmates take TB medicines regularly whilst in prison; however, some of them refuse to do so and demand additional food.
- Discharge of prisoners on TB treatment was done without informing the HCWs in charge of TB patients in the near-by CSDT and as a result, patients are not referred to a CDST and could not complete their treatment. They will be recorded as lost to follow up.
- The risk of transmission once back in the communities.

5.2 Les Ambassadeurs de lutte contre la tuberculose (ALTB) and their door-to-door campaign of active TB case finding among hard-to-reach communities

“Les Ambassadeurs du Sud Kivu” (ALTB) consist of former and current TB patients who are members of local communities in Sud Kivu CPLT. Members wish to help their communities and show their gratitude for receiving free and effective TB treatment. ALTB was formed in 2012 and has approximately 1,000 members. They provide also HIV and family planning services, the latter with help from *Association Santé Familiale* (ASF). Many people in this area have no access to health care services due to long distances to health facilities, and unavailability of easy transport that sometimes requires even boats. In addition, people are extremely poor and they are completely unable to pay for both transport costs and fees at clinics.



*Door-to-door sensitization to high risk groups by the NGO "Ambassadeur du Sud Kivu"
(Photo credit: Blandine Masembo, member of the NGO)*

TB Reach funded this organization until December 2014. Thanks to the CTB funding and technical support and training, the activities were resumed from April 2015. Each member has visited at least one household a day targeting the most remote parts of the area where access to health services poses huge problems to people.

From April to September 2015, 15,687 households were visited, and a total of 72,527 people underwent TB awareness creation. 9,389 persons with symptoms suggestive of TB were investigated at the CSDT and 520 (5.5%) TB cases were diagnosed and began treatment.

6. Operations Research

No OR was planned in APA1. The research agenda was established and a NTP capacity building strategy for OR (PATIOR) has been adopted during APA1 as explained above.

7. Key Challenges during Implementation and Actions to Overcome Them

Certain challenges impacted on multiple areas on the implementation of the CTB activities and had an adverse impact on the indicators:

- Delay to start the project and/or to continue some CTB activities for several reasons, including delays to obtain a CTB APA1 work plan approval and CTB staff recruitment.
- There were delays in GF grant disbursement that led to challenges in coordination of activities with the NTP and agreeing on their timing.
- There were stock-outs of key laboratory reagents and commodities, including rapid HIV test kits. This had an adverse effect on TB and HIV diagnostic services in most CPLT.
- Insufficient coordination among partners resulted in delays of data collection, reporting and data analysis.

The main challenges are summarized in the table below.

Table 13. Summary of key challenges in Challenge TB implementation in the Democratic Republic of Congo

#	CHALLENGE	ACTIONS	OBSERVATION
1	Strict requirements have caused delays in recruitment of CTB staff	The Union consultant and Head office staff have provided support to the CTB Country Director in the absence of CTB staff in CPLT. Initial supervision visit was done by the consultant recruited for a short term mission and by the CTB Country Director in the 7 CPLT in April 2015	Need to complete recruitment as soon as possible before the end of 2015.
2	Late start of the project	An accelerated work plan was developed to speed up implementation of planned activities.	Some success in acceleration was realized and 64% expenditure rate as of September 30, 2015 reached. Wish and need to avoid recurrence of delayed approval and receive APA2 approval in time to start activities without delay.
3	Irregular meetings between partners in the fight against TB	-Approaching partners involved -Advocating strongly to NTP to revitalize the partner meetings	CTB Country Director will continue requesting regular meetings.
4	Interruption of partner NGO activities due to the need for regularization of the contracts	This happened from June to September / October 2015. The Union Head Office support was requested to regularize partner NGOs' contracts in consultation with PMU.	Regularize partner NGO contracts in time to start APA2 without delay.

5	Irregular GF grant disbursement	Support to 7 CPLT and national level to cover partially their operational cost during two quarters.	Advocacy to USAID to continue this support until GF grant disbursements stabilize.
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8. Lessons Learnt/ Next Steps

Mutual strengths of the NTP and CTB teams at both national / central and CPLT levels contributed positively as follows:

- Good team cohesion and cordial working relationships with the PNLT, MOH, local partners, and the USAID mission in DRC, and The Union head office;
- Implementation of a new and innovative approach of active TB case finding in prisons, “door-to-door” case finding in Sud Kivu CPLT and drawing more attention to childhood TB interventions;
- Support given to the NTP for finalization of the new guidelines reflecting the TB care and control issues of the “post-2015 agenda”, including a revised algorithm using new tools, such as Xpert testing, to increase TB detection in vulnerable risk groups;
- Support given to the 7 CPLT that were identified as the coordination areas with the greatest need and having no other partners to support them; and
- Increased access to TB diagnosis using rapid molecular technology, including identification of patients with rifampicin-resistance. This has increased the number of MDR-TB patients in care.

The lessons learned from the CTB implementation in its first months favor its continuation in APA2 in the same technical and geographical areas:

- To increase and expand access to high quality diagnostic and treatment services and particularly, to increase case finding in general and in vulnerable populations and risk groups: support improvement of the laboratory network and innovative case finding approaches;
- To prevent, detect and treat patients with MDR-TB: increase access to new diagnostic tools by expanding the number and adequate use of Xpert machines, specimen transportation systems and provide support for MDR-TB patients identified in the 7 CTB-supported CPLT to enhance their treatment adherence;
- To strengthen integration of services for TB-HIV patients; and
- To provide support for operational costs of the NTP central unit and the 7 CPLT to strengthen management, monitoring and evaluation of TB care and control efforts.
- CTB will work with the Global Fund PRs and sub-recipients to ensure the availability of HIV tests in the 7 CTB CPTLS.
- Looking ahead to APA 2, CTB will advocate the UN Food and Agriculture Organization (FAO) to help provide support to TB/MDR-TB patients.
- After seeing the high number of male healthcare workers attending CTB trainings in Year 1, CTB will explore how to ensure more female HCWs are trained in the future.

Annex I: Year 1 Results on Mandatory Indicators

MANDATORY Indicators					
<i>Please provide data for the following mandatory indicators:</i>					
2.1.2 A current national TB laboratory operational plan exists and is used to prioritize, plan and implement interventions	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Score as of September 30, 2015	0	N/A	Substantial	1 STTA done for situation analysis, a second one planned for finalization of the laboratory operational plan during year 2 (APA2, not yet approved).	Provide relevant score in line with the indicator definition as presented in CTB M&E framework. Send a copy of current national TB laboratory operational plan to Mamuka and Claire.
2.2.6 Number and percent of TB reference laboratories (national and intermediate) within the country implementing a TB-specific quality improvement program i.e. Laboratory Quality Management System	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Number and percent as of September 30, 2015	1/3 (33%)	N/A	None	CTB is supporting the NTP by providing financial and technical support needed to obtain accreditation for the NTRL and the functional Regional	Under additional information, provide a score/rating for every reference laboratory implementing LQMS, either the "GLI Stepwise Process towards TB Laboratory Accreditation" (scoring = phase 1-4) or

				Laboratories in the second year.	SLIPTA/SLMTA for TB (scoring=stars 1-5). (Reference: Laboratory Quality Management Systems Handbook; http://www.who.int/ihr/publications/lqms/en/)
2.2.7 Number of GLI-approved TB microscopy network standards met	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Number of standards met as of September 30, 2015	4	N/A	None	The standards met: 3, 6, 8, 11	This indicator measures whether or not a country has assessed and met the 11 GLI-approved standards for the TB microscopy network. Please send the completed CTB checklist assessing the fulfilment of the requirements for each standard to Mamuka and Claire. In the additional comments column, provide a list of the standards (number only) that are met.
2.3.1 Percent of bacteriologically confirmed TB cases who are tested for drug resistance with a recorded result.	National 2014	CTB 2014	CTB APA 1 investment	Additional Information/Comments	Notes
Percent (new cases), include numerator/denominator	0,06% (45/75,631)	0,04% (8/22,605)	Moderate		This indicator measures the percentage of bacteriologically confirmed TB cases that are tested for drug resistance and also have results recorded in the TB register (disaggregated by new and previously treated cases). Please note that drug resistance testing includes phenotypic (culture DST) and genotypic (molecular DST by GeneXpert, LPA or other molecular
Percent (previously treated cases), include numerator/denominator	6,67% (360/5,397)	4,20% (63/1,498)			
Percent (total cases), include	0,50% (405/81,028)	0,29% (71/24,103)			

numerator/denominator					technologies).
3.1.1. Number and percent of cases notified by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e. gender, children, miners, urban slums, etc.) and/or case finding approach	National 2014	CTB 2014	CTB APA 1 investment	Additional Information/Comments	Notes
Number and percent	National 2014: TB all forms: 117,214 TB in children all forms : 11% (12,785/117,214) Private sector TB all forms: 8% (9,110/117,214)	7 CPLTs 2014: TB all forms : 34,540 Children TB all forms: 12% (4,239/34,540)	Limited	Routine NTP data does not disaggregate the number of TB cases notified by setting or population. In due course, CTB supported operational research will provide some information in the future (prisons, mines, hard to reach populations).	The number of TB cases all forms (i.e. bacteriologically confirmed plus clinically diagnosed, new and relapse) should be reported under columns B and C. Under additional information (Column E), give disaggregated data by setting (i.e. private sector, pharmacies, prisons, etc.) and/or population (i.e., gender, children, miners, urban slums, etc.) and/or case finding approach (ICF, ACF, CI). Private sector providers should be described according to context and case finding approach, for example, type of provider targeted (i.e. ,for profit medical clinics, pharmacists, informal providers, private hospitals, etc.)
3.1.4. Number of MDR-TB cases detected	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Total 2014	405	71	Moderate	National level data for the quarter from July to September 2015 is	Total number of bacteriologically confirmed MDR-TB cases diagnosed. Project should
Jan-Mar 2015	82	26			

Apr-June 2015	71	10		preliminary before national validation.	follow the MDR-TB/Xpert algorithm in country regarding whether Rifampicin-resistant TB cases (RR-TB) should be counted as confirmed MDR-TB. If a country's algorithm states that a RR-TB cases is automatically assumed to be MDR-TB (i.e. no further DST required), then RR-TB should be included in the number of confirmed MDR-TB cases diagnosed. Otherwise, RR-TB should be excluded until proven via further DST that the case is a confirmed MDR-TB case.
Jul-Sept 2015	102	32			
To date in 2015	255	68			
3.2.1. Number and percent of TB cases successfully treated (all forms) by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (i.e. gender, children, miners, urban slums, etc.).	National 2013 cohort	CTB 2013 cohort	CTB APA 1 investment	Additional Information/Comments	Notes
Number and percent of TB cases successfully treated in a calendar year cohort	Getting from WHO	90% (30,596/33,837)	None	Only data for all cases available. No data by setting or population.	Under additional information (Column E), give disaggregated data by setting (i.e. private sector, pharmacies, prisons, etc.) and/or by population (gender, children, miners, urban slums, etc.) and/or risk population groups defined by national policy (IDUs, diabetics, prisoners, etc.). There may be overlap between settings and groups. Disaggregation by risk population is required in contexts where Challenge

					TB is providing treatment support for a specific group according to the annual work plan or in contexts where operations research allows for disaggregation and comparison across groups.
3.2.4. Number of MDR-TB cases initiating second-line treatment	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Total 2014	436	71	Moderate	MDR-TB patients receive support for follow up tests, nutritional supplementation and transport to attend care. Data for 2015 are preliminary and will be confirmed after national validation	The number of bacteriologically confirmed, clinically diagnosed or unconfirmed MDR-TB cases started on second-line treatment during the reporting period. Unconfirmed MDR-TB cases are those awaiting C/DST results. RR-TB may fall under confirmed or unconfirmed depending on the country's MDR-TB diagnosis algorithm.
Jan-Mar 2015	82	26			
Apr-June 2015	71	10			
Jul-Sept 2015	84	24			
To date in 2015	237	60			
3.2.7. Number and percent of MDR-TB cases successfully treated	National 2012 cohort	CTB 2012 cohort	CTB APA 1 investment	Additional Information/Comments	Notes

Number and percent of MDR-TB cases successfully treated in a calendar year cohort	Getting from WHO	58% (17/29)	Moderate	60% (162/269) receiving 18-24 months treatment regimen. 83% (57/69) receiving 9-months treatment regimen (2012) and 2 XDR cases. 29 patients were treated in CTB-supported CPLT with 20 months treatment regimen. HIV status was unknown for many patients and outcomes cannot be disaggregated by HIV.	The proportion of confirmed MDR-TB patients successfully treated (cured plus completed treatment) among those enrolled on second-line TB treatment during the calendar year. Under additional information (Column E), as applicable, give disaggregated data by HIV status, and XDR status. RR-TB may fall under confirmed MDR-TB depending on the country's MDR-TB diagnosis algorithm.
5.2.3. Number and % of health care workers diagnosed with TB during reporting period	National 2014	CTB 2014	CTB APA 1 investment	Additional Information/Comments	Notes
Number and percent reported annually	N/A	N/A	None	It is planned that this indicator be collected from a sample of 3,000 health care workers in APA2.	This indicator measures the percent of healthcare workers (HCWs) diagnosed with TB (all forms) annually (disaggregated by gender and age). This measurement may require a special study using a validated tool and/or methodology.
6.1.11. Number of children under the age of 5 years who initiate IPT	National 2014	CTB 2014	CTB APA 1 investment	Additional Information/Comments	Notes
Number reported annually	U	U	None	No data available in 2014. The NTP started to collect age-related data from 2015. CTB will collect these data from implementers via	The number of children under the age of 5 years who initiate isoniazid preventive therapy (IPT) during the reporting period.

				the NTP "pediatric working group".	
7.2.3. % of activity budget covered by private sector cost share, by specific activity	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Percent as of September 30, 2015 (include numerator/denominator)	N/A	N/A	None	CTB will collect this information from the NTP and the Ministry of Health for the next year.	This indicator measures the proportion of CTB project activity budget covered by private sector cost share (if not monetary, will require estimation of costs) by specific activity.
8.1.3. Status of National Stop TB Partnerships	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Score as of September 30, 2015	0	N/A	None	National Stop TB Partnership is still waiting a formal registration.	Provide relevant score in line with the indicator definition as presented in CTB M&E framework. Please send a completed CTB questionnaire assessing the status of National Stop TB Partnership to Mamuka and Claire.
8.1.4. % of local partners' operating budget covered by diverse non-USG funding sources	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes

Percent as of September 30, 2015 (include numerator/denominator)	N/A	92% (1,100,000/1,200,934) for ALTB 52% (220,000/420,000) for Femmes plus 41% (105,105.15/254,717.95) for LNAC 40% (101,276.58/251,197.58) for CAD	Limited	Attached please find the questionnaires for these NGOs.	This indicator measures the proportion of CTB project local partners' operating budgets covered by non-USG funding sources. Please send copies of completed special questionnaires with collected relevant country level data among CTB local partners to Mamuka and Claire.
8.2.1. Global Fund grant rating	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Score as of September 30, 2015	B1	N/A	None	Caritas B1 and MOH B2. The average was B1. The big problem was the delay of disbursement (transition to the new model funding)	Provide the score based on the following: A1 Exceeds expectations A Good performance A2 Meets expectations B1 Adequate B2 Inadequate but potential demonstrated C Unacceptable
9.1.1. Number of stock outs of anti-TB drugs, by type (first and second line) and level (ex, national, provincial, district)	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Number as of September 30, 2015	1	N/A	None	Source of the data - NTP 2014 report. CTB will not invest in this indicator but will monitor supply of TB medicines.	This indicator should be used to report the number of stockouts of any type of TB drug at any level of the health system that results in interruption of treatment.
10.1.4. Status of electronic recording and reporting system	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes

Score as of September 30, 2015	1	N/A	None	There is an electronic file for CDST and CPLT quarterly data and it is available at the NTP central unit. However, paper-based system is used for both patient management and reporting.	Provide relevant score in line with the indicator definition as presented in CTB M&E framework.
10.2.1. Standards and benchmarks to certify surveillance systems and vital registration for direct measurement of TB burden have been implemented	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Yes or No as of September 30, 2015	No	N/A	Limited	STTA for a data quality assessment based on "Standards and Benchmarks for Tuberculosis Surveillance and Vital Registration System" is included in APA2 (not yet approved).	If assessed, please save a copy of the report/document assessing the status of relevant standards and benchmarks on the oncloud or send to us. In the additional comments column, include the country standards and benchmarks score (and year of completion) if an assessment was done.
10.2.6. % of operations research project funding provided to local partner (provide % for each OR project)	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes

Percent as of September 30, 2015 (include numerator/denominator)	N/A	N/A	None	No local NGOs or others partners were engaged in OR. An STTA to develop the NTP research priority agenda has been completed.	This indicator measures the proportion of Challenge TB-supported operations research project funding provided to local partner(s), by each OR project.
10.2.7. Operational research findings are used to change policy or practices (ex, change guidelines or implementation approach)	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Yes or No as of September 30, 2015	N/A	N/A	None	No OR started	Under additional information (Column E), please present relevant information for each individual project. Please send relevant special reports with qualitative details to Mamuka and Claire.
11.1.3. Number of health care workers trained, by gender and technical area	CTB APA 1		CTB APA 1 investment	Additional Information/Comments	Notes
	# trained males APA 1	# trained females APA 1	Moderate	Total # planned trainees in APA 1	
1. Enabling environment	264	90	354	380	Please note that healthcare workers include health facility staff, community health volunteers, laboratory staff, sputum transport technicians, and community-based DOTS workers. Below, please give disaggregated data by gender and sub-objective. Training includes any in-person, virtual, or on-the-job training that is longer than half a day and for which curriculum is available. This indicator is interchangeable with 'Number of individuals trained in any component of the WHO Stop/End TB Strategy with USG funding', which USAID missions may have as a
2. Comprehensive, high quality diagnostics	17	6	23	23	
3. Patient-centered care and treatment	15	17	32	25	
4. Targeted screening for active TB	0	0	0	0	
5. Infection control	0	0	0	0	
6. Management of latent TB infection	0	0	0	0	

7. Political commitment and leadership	0	0	0	0	requirement for internal agency reporting.
8. Comprehensive partnerships and informed community involvement	0	0	0	0	
9. Drug and commodity management systems	0	0	0	0	
10. Quality data, surveillance and M&E	0	0	0	0	
11. Human resource development	3	0	3	3	
Other (explain)	0	0	0	0	
Other (explain)	0	0	0	0	
Grand Total	299	113	412	431	
11.1.5. % of USAID TB funding directed to local partners	National APA 1	CTB APA 1	CTB APA 1 investment	Additional Information/Comments	Notes
Percent as of September 30, 2015 (include numerator/denominator)	N/A	17% (489,558/2,767,466)	Limited	The NGOs are the only partners to receive US funds directly. National coverage by these NGOs is expanding. They do not possess organizational capacity yet to mobilize more resources and manage funding in excess of USD 300,000.	This indicator measures the proportion of CTB annual funding directed to local partners.

Annex II: Status of EMMP activities

Year 1 Mitigation Measures	Status of Mitigation Measures	Outstanding issues to address in Year 2	Additional Remarks
<p>Ensure proper procurement of GeneXpert machines, Xpert cartridges, pediatric gastric probes, biological tests, incinerators and sputum containers, which will be delivered directly to the PNLT storage facility. Although the responsibility for proper storage and distribution to the CPLTs lies with the PNLT/CPLTs, CTB will advise the PNLT on the proper storage, based on the information provided on the manufacturer's Materials Safety Data Sheet.</p>	<p>Specification done by NTP for GeneXpert</p> <p>Warehouse meets the conditions of storage for GeneXpert machines and nasogastric tubes (temperature less than 15° Celsius with good air conditioning, absence of humidity)</p>	<p>To continue in Year 2. Good maintenance of air conditioning.</p>	
<p>Ensure proper disposal of clinical waste;</p> <p>Train health facility staff to manage clinical waste properly and ensure that this topic is integrated into training programs.</p> <p>Checked and discussed management and disposal of medical waste during supervision</p> <p>Provide Action plan and Minimum Program Checklist of Waste Management</p> <p>Provide forms to be filled in by clinical staff</p>	<p>During training sessions, demonstration on waste management has been done.</p> <p>Hospitals will provide necessary materials for HCW protection and waste management.</p>	<p>During laboratory technicians supervisions</p> <p>-To assure supervision and emphasize that waste management is a priority.</p> <p>-To develop, print, and distribute a waste management check list in APA 2</p> <p>-Conduct a KAP survey in the waste management among HCW</p>	

<p>confirming that clinical waste has been sent for incineration.</p>			
<p>Review of minor renovation plans to ensure compliance with conditions prior to implementation.</p> <p>Random site visits to evaluate implantation conditions as set out in the environmental mitigation plan.</p> <p>Incinerators will be properly installed including a brick chimney which channels fumes to reduce air pollution</p> <p>Training and information in use of incinerators and proper handling of clinical waste will be included in relevant activities, including support supervision visits.</p>	<p>Small renovations have been done in existing hole by raising the chimney, cracks repaired, etc</p> <p>Fence erected around incinerators to ensure that children, animals etc do not have access to incinerators.</p>	<p>To ensure that incinerators are used correctly</p>	<p>In Year 1, three incinerators (in Lodja, Lisala and Tshikapa) have been renovated Supervision done by CTB team to ensure the correct use of incinerators)</p>