

Towards Tuberculosis Elimination in Kiribati Project

Mid Term Evaluation

March 2016

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About the Review Team.

The team consists of two project management and M&E professionals who have had experience in various project evaluations at varying degrees. The team were members of the Philippine NTP Joint Review team in 2008 focusing on the areas of Advocacy, Communication and Social Mobilization, Financial Management, Laboratory Systems and M&E Systems.

The Team Leader, Paul Bagtas has been working with the Pacific Countries for four years. He has held the role of grant coordinator for TB and HIV grants under the Global Fund Mechanism. Prior to coming to the Pacific, he was the M&E manager for a Global Fund HIV project in the Philippines and prior to this was a Deputy Program manager for a Tuberculosis grant in the Philippines as well. Mr. Bagtas managed the end of project review for a Global Fund HIV project

Member(s) of the team are:

Paul Sombrero – A seasoned grant manager for both public health and disaster response, has been involved in various projects for capacity building for M&E, data quality assessments, evaluation of service delivery programs in communities. Past experiences include data management for MDRTB information systems, managing Global Fund grants for Tuberculosis, organizational capacity building and managing a laboratory preparing culture media. Mr. Sombrero was a team member of the Global Fund HIV Round 5 end of project review in the Philippines.

Acronyms Used

ACSM	Advocacy Communication and Social Mobilization
AFB	Acid Fast Bacilli
ANS	Assessment of National Systems
APR	Annual Program Review
BCG	Bacillus Calmette–Guérin vaccine
CT	Contact Tracing
DFAT	Department of Foreign Affairs and Trade (Australia)
DHS	Demographic Health Survey
DM	Diabetes Mellitus
DOTS	Directly Observed Therapy Short course
DRTB	Drug Resistant Tuberculosis
DSSM	Direct Sputum Smear Microscopy
DST	Drug Susceptibility Test
EQAS	External Quality Assurance Services
FAR	Fixed Asset Register
HIV	Human Immuno-deficiency Virus
IEC	Information, Education and Communication
M&E	Monitoring and Evaluation
MDRTB	Multi-Drug Resistant Tuberculosis
MHMS	Ministry of Health and Medical Services
MTB	Mycobacterium tuberculosis
MTR	Mid-term Review
NTP	National TB Program
PHD	Public Health Division
PHN	Public Health Nurse
PSM	Procurement and Supply Management
QTBECP	Quality TB Epidemic Control Project
REIP	Research, Evidence and Information Programme
RIF	Rifampicin
SDH	Social Determinants of Health
STEPS	STEPwise approach to surveillance
SPC	Secretariat of the Pacific Community
TA	Technical Assistance
TAG	Technical Advisory Group
TTBEK	Towards Tuberculosis Elimination in Kiribati
WHO	World Health Organization

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Executive Summary

On 1 November 2012, the Department of Foreign Affairs and Trade (then AusAID) approved funding for the “Towards the Elimination of TB in Kiribati” (TTBEK) project in Kiribati. The new project makes use of the lessons learned of a previous DFAT funded TB project in Kiribati, the “Quality TB Epidemic Control Project” (QTBECP) that came to an end in 2012. The TTBEK distinguishes itself from the previous QTBECP in that it has aligned itself more closely with the National TB Strategic plan of Kiribati and that the TTBEK’s mission clearly defines its role and mandate that the project will make a gradual shift away from direct support for implementation towards facilitation and capacity support under an integrated annual work plan. The more focused approach of the new Project will complement NTP efforts to reduce the burden of TB, and will provide Kiribati with a good platform from which to commence TB elimination plans¹

Attesting to the closer link to Kiribati’s National TB Strategic Plan, the following objectives of the project have been cast and linked to the National TB Strategic Plan:

Objective 1 – To support universal access to quality TB services, including through active case finding and community mobilization (aligned with NTP *Strategic Plan* Objectives 1-4)

Objective 2 – To support quality laboratory diagnosis and clinical standards (aligned with NTP *Strategic Plan* Objectives 5 and 6)

Objective 3 – To support programmatic management of important co-morbidities in Kiribati, including TB-HIV, TB-Diabetes and MDR-TB (aligned with NTP *Strategic Plan* Objective 8)

Objective 4 – To support planning and management of the NTP and contribute to strengthening related aspects of the health system in Kiribati (aligned with NTP *Strategic Plan* Objectives 7 and 9)

Objective 5 – To strengthen TB intervention strategies through evidence-based operational research (aligned with NTP *Strategic Plan* Objective 9)

This Mid Term Review was part of the proposal in order to ascertain progress with alignment of Project inputs under the single NTP *Strategic Plan* and preparedness for integration of Project functions and financial management.

Focusing on the Mid-term of the project, the revised approved grant is for the amount of AU\$ 2,016,199 going up to the end of year 3 (December 2015).

Out of AU\$ 2,016,199 the project reports an expenditure of AU\$ 1,490,805, a 74% total burn rate, and a further look of the burn rate per project objective, the following is a ranking of how well each objective performed in utilizing the project inputs.

Objective number and Objectives	Burn Rate
1: Support for universal access to quality TB services (including through active case finding and community mobilisation)	80%
4. Health systems strengthening, planning and management	74%
2. Support for quality laboratory diagnosis and clinical standards	43%

¹ TTBEK Proposal

5. Operational research	40%
3. Support for programmatic management of TB-HIV, TB-DM and MDR-TB	23%

It can be observed that the objective with the highest burn rate is Objective 1 – Universal Access to quality TB services. This accomplishment goes hand in hand with the latest programmatic result for case notification wherein the NTP registers a case notification rate of 378 per 100,000 population, counting just the cases up to the end of October 2015. The evaluation team made an estimation, using the average number of cases the previous years to estimate the notification rate for 2015, which is estimated to be 419 per 100,000 population. Using this estimation, and even the available data up to the end of October, this is an over accomplishment, in fact, in the committed target for case notification in the performance framework where the target was set to 315 per 100,000 population. Support for the salaries of the contact tracing nurses and DOTS workers, and support for their daily operations such as active case finding, can be directly attributed to this excellent result.

It must be noted however, that a key sub item under this objective, which supports Advocacy, Communication and Social Mobilization (ACSM) has been significantly under-utilized. The engagement of an ACSM consultant, which has been delayed due to availability issues of the preferred consultant, has had a domino effect on other ACSM related activities i.e. printing of ACSM materials. The NTP has informed the MTR review team that the consultant will be on board for the first quarter of 2016. If this catch up materializes and other related activities are implemented, it can be expected that more people will come for testing and therefore further increase case notification rates.

Second in fund utilization is Objective 4 - Health systems strengthening, planning and management, which directly contributes to the NTP's capacity for service delivery thru NTP management HR support and capacity building (training and workshops) has performed well. The project's support for the NTP adviser has been invaluable as the adviser lends his technical expertise to the NTP. Project management by Secretariat of the Pacific Community, has likewise been helpful to the NTP by establishing protocols on financial and procurement exercises and by linking experts as part of the Technical Advisory Group. What has contributed to the under-utilisation is the underspending for M&E activities for Kirimati and other outer islands. It is noted that a pilot study conducted in 6 outer islands/villages under the project shows that very few cases are found in the said 6 sites, with North Tarawa reporting only 6 cases in May 2015.

Of the remaining three objectives that have been hugely underutilised, Objective 2 is highlighted as this represents a comparatively huge amount of money as compared to objectives 5 and 3 which are Operational Research and Programmatic Management of TB-HIV, TB-DM and MDRTB. Objective 2 pertains to laboratory strengthening and it is must be noted that the project made a milestone for procuring a Gene Xpert (Xpert MTB/RIF)² machine and supporting its use thru procurement of cartridges and building the capacity of the laboratory for using the machine which has helped the NTP detect a Drug Resistant TB case in 2015. However, the under-spending relates to a delayed procurement of a digital chest X-Ray machine and activities associated to use the machine e.g. training for health workers. It must be noted however that the NTP has this activity in the pipeline for the first quarter of 2016.

As mentioned, the notification rate as of the latest available data for 2015 registers an over accomplishment as compared to the committed target in the performance framework. It must be noted however, that favourable treatment outcomes (cured or treatment completed) lags

² Xpert MTB/RIF is an automated, cartridge-based nucleic amplification assay for the simultaneous detection of TB and rifampicin resistance directly from sputum in under two hours - <http://who.int/tb/laboratory/mtbrifrollout/en/>

behind. Of the 90% target for Treatment Success, based on the electronic TB registry, the Treatment Success Rate is only at 84%. This short fall is primarily attributed to the poor recording by the NTP staff responsible for maintaining the registry.

As the Secretariat of the Pacific Community is the project manager, it has provided support to improve the case recording and reporting of the NTP by introducing tools such as a revised TB reporting template, which processes data into information and graphical representations. However, further review of the accomplished template suggests that careful recording of data by the NTP coordinator is still wanting.

SPC, as the project manager has provided guidance on procurement and financial processes, which shadows its own corporate policy. It must be noted that there is no sub-grant agreement between SPC and MHMS, hence the MHMS is not legally bound to follow these policies and can find this as a loophole for certain irregularities. Issues pertaining to asset management, specifically for project procured vehicles not undergoing the motor pool system of the MHMS, have been reported to the Review Team as well as project staff contract renewal being made autonomously within the NTP. This was however brought up to the Assistant Secretary of Health for Administrative Services of the MHMS by the Review Team and has received a positive response for rectification.

Considering the gains made thus far, the integration phase of the project can proceed and the following are key recommendations culled out from the review

1. M&E, specifically recording and reporting of data needs careful attention and this aspect can be grouped together with other management functions that the NTP must carry out, such as asset/supply management, financial management and organisational management as a whole. Considering the limitations in capacity and time of the current NTP management team, it is therefore recommended that a local project specialist be engaged by the project to ensure not only precise data reporting but also to routinely review and ensure that commitments are met and that bottlenecks are resolved and risks mitigated. This specialist should be directly reporting to SPC to ensure tenure security in case of issues that may arise concerning NTP management staff. A detailed recommendation is offered at the end of this document and for the NTP, it relates to both programmatic and institutional facets of program management, which the recommended project specialist can create a timeline to fulfill, should the recommendations be accepted.
2. The NTP adviser has drafted an ascension plan and as this is an essential document in order for the integration to take place, it must be reviewed and agreed on immediately by DFAT, SPC and the MHMS. The ascension plan contains key milestones set by the MHMS on its capacity to integrate the project and will serve as a springboard for the project specialist in the commencement of her/his engagement.
3. During this review the MHMS permanent secretary has disclosed that a number of hospital staff will be made available for the NTP to either increase the number of DOTS workers or replace the existing DOTS workers. The permanent secretary has also supported managing the vehicles procured by the project by putting the said assets under the fleet management of the MHMS, which will promote efficient stewardship of the vehicles. This step by the MHMS is recommended by the review team.
4. It is recommended that SPC enter a sub grant agreement with the MHMS in order to increase the MHMS' accountability for the project. It will also provide more authority for SPC in having the MHMS adhere to implementation protocols for the project.
5. The NTP should catch up on project activities that have been delayed, such as the procurement of a digital chest X-Ray machine and the engagement of an ACSM consultant to come up with an ACSM plan for the NTP
6. Revisit the targets and revise accordingly based on the trend for the last 3 years. The trending shows that TB is still on the rise in Kiribati but this has been the result of the active case finding efforts supported by the project. This meant that missing cases

were captured. With the recommended activities for catch up, it might still produce an uptake in cases being notified to the NTP and more missing cases captured from the community at large and cases that might have not been reported to the NTP due to the absence of a more advanced and reliable radiology diagnosis. A careful estimation for case notification for the next phase should consider these factors.

7. A system wide M&E system should be in place in order to streamline reporting for notifiable diseases. This will create an additional layer for checks by centrally placing the responsibility for managing data in the MHMS. Currently as observed there is no data quality check and reports that feed globally have data quality risks. The MHMS secretary has floated the idea of utilizing DHIS2 (District Health Information System), this is an avenue to be pursued or whatever data collection and management system that the MHMS will decide to use. This will also ensure proper mapping and identification of health centers in the country
8. The procurement and supply management in the MHMS is not being fully utilized by the NTP. The pharmacy is using an information system and although issues have been observed in the accuracy of the system due to human errors, lodging the supply management centrally will establish good practices for supply management. The NTP should work closely with the Pharmacy / Medical Store.
9. While it is not recommended at this point in time to integrate with the financial systems of the MHMS, it can be ventured that side-along work with a staff from the MHMS' finance unit can take place so that at this point in time, the project financial information and structure can be recognized by the MHMS' finance unit and come up with an system improvement report for the MHMS financial system. This will help estimate an integration timeline for the financial system, should it be found feasible and financial risks, feasible.

1. Introduction

Since 2003, Kiribati has consistently had the highest notification rates of TB in the Pacific. In fact, Kiribati has now taken over Solomon Islands in terms of actual number of TB cases notified (432 versus 346)³.

Kiribati has a fragile economy, with a low *per capita* gross domestic product and increasing poverty. Development is constrained by rapid population growth, rapid urbanization on Tarawa, youth unemployment, and high vulnerability to climate change and external financial influences.

The urban areas of South Tarawa and Betio are the most crowded islands in the country, with almost 50% of the total population (of which more than half reside on Betio).⁴ Here, the social determinants of health (SDH)⁵ – poverty, population density, housing and ventilation, water supply and sanitation, and standards of nutrition, education and hygiene – are highly

3 WHO Country TB Profiles - <http://who.int/tb/country/data/profiles/en/>

4 Preliminary data from the 2010 Census show that the population of Betio has increased by 25% from 12,500 in 2005 to more than 15,700 in 2010 (representing a population density greater than 10,000 people per square km). The overall population of South Tarawa has also jumped 25%, from about 40,000 to just over 50,000.

5 CSDH (2008). *Closing the gap in a generation: health equity through action on the social determinants of health. Final Report of the Commission on Social Determinants of Health*. Geneva, World Health Organization

conducive to active transmission of TB and other diseases, and contribute to the highest notification rates in Kiribati⁶.

It is recognized by the Ministry of Health and Medical Services (MHMS) that a number of risk factors⁷ are present that significantly increases the susceptibility of people getting infected with TB, as follows:

1. Diabetes: The number of new cases of diabetes was up, from 248 in 2005 to 842 in 2010, while the 2004–2006 STEPs (STEPwise approach to surveillance) survey showed around 28 percent of the adult population had diabetes.
2. Nutrition: Under-nutrition is a significant problem in children; the 2009 Demographic Health Survey (DHS) found that close to one quarter of children are underweight or severely underweight, while in 2010 the percentage of newborn infants weighing less than 2500 grams at birth was 22 percent.
3. Smoking: In the 2005 Census, almost 70 percent of the males aged 30–54 years said that they were regular smokers, compared to less than 50 percent of females aged 30–54 years. The proportion of 15–19-year-old smokers was 32 percent for males and 8 percent for females.

The three points mentioned above have been linked to increasing the chances of a person acquiring TB. People with diabetes, specifically, are 2-3 times at higher risk of having TB than those without diabetes.

The Australian Department of Foreign Affairs and Trade (DFAT) supported the fight against TB in Kiribati initially thru the “Quality TB Epidemic Control Project” (QTBECP) that started in 2006. In 2012, the Kiribati National TB Programme (NTP) started another DFAT-funded project - Towards TB Elimination in Kiribati (TTBEK) project. not as an extension of the QTBECP, but rather, a new project package which gave emphasis on a more proactive and forward looking approach to reflect the: (a) relevant processes of consolidation and maintenance that will now follow, (b) the commitment of the NTP and MHMS towards the absorption of NTP key services at the end of the proposed 5 years of this Project, and (c) the continuation into the longer term goal of TB elimination.

This will involve a balance between maintaining the momentum and good progress achieved with QTBECP and Global Fund support, improving on the achievements of those projects where possible, then commencing preparation for TB elimination planning as incidence declines and NTP capacity matures. It will build on the sound TB infrastructure and systems developed under QTBEK Phase 1 and refine the nationwide expansion of TB services created in Phase 2 by enhancing, strengthening and consolidating activities within the NTP, and by integrating donor-funded planning and management mechanisms and resources with NTP and MHMS structures and systems. The project will focus on eliminating TB through early case detection using efficient diagnostic tools, effective treatment programs and provision of equitable and accessible TB services to the community, especially the isolated and the poor. TB elimination plans will be an integral part of the project implementation and are expected to continue as part of the NTP longer term plans and activities beyond 2017, towards the global target of TB elimination in 2050⁸.

The TTBEK project objectives are aligned with the National TB Strategic Plan 2012-2015, as follows:

6 TTBEK Proposal

7 MHMS Strategic Plan 2016-2019, pp. 12-13

8 TTBEK Proposal p.18

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Objective 5 – To strengthen TB intervention strategies through evidence-based operational research (aligned with NTP *Strategic Plan* Objective 9)

TTBEK is a project set out for 5.25 years of implementation with a total proposed budget of AUD 2,947,649, implemented in 3 phases: a transition phase (from 1 October 2012 to 31 December 2012); an alignment and support phase (from 1 January 2013 to 31 December 2015) and an integration phase (from 1 January 2016 to 31 December 2017).

The TTBEK project is co-managed and co-implemented by the Kiribati MHMS and the SPC Research Evidence and Information Programme (REIP) – Public Health Division (PHD). Technical support is provided by SPC, World Health organization, SA Pathology and a TB Technical Advisory Group (TAG).

This project budget provides a host of support for activities such as engaging NTP staff, support for active case finding activities, M&E visits, capacity building activities, workshops, procurement and provision of laboratory supplies and equipment, maintenance of health equipment and vehicles and provision of Technical Support (supporting Technical Advisory Group missions) among others.

The Design document indicated that the following are the key priorities of the Alignment phase:

- Further strengthening of infrastructure and systems developed under QTBEK Phases 1 and 2 and the Global Fund TB grant, to ensure high quality TB services are available and accessible to the community;
- Consolidation and alignment of resources from other projects and the MHMS to further improve the quality of TB services, extend community outreach to vulnerable communities, and support capacity building of staff; and
- Introduction, harmonization and consolidation of TB services into national health systems and mechanisms (e.g. introduction of DOTS and other core NTP functions to the work of Nurse Aides on the outer islands and PHNs on South Tarawa).

SPC is the grant manager of the project, and has signed the grant agreement with DFAT on 1 November 2012. Part of the agreement was for SPC to provide management, coordination and administrative support for the project, utilizing existing staff in the Public Health Division – Research, Evidence and Information Program. Apart from managing the grant, SPC also provides technical assistance and implements a number of activities in the budget. Currently, the SPC staff providing direct coordination and management is an Epidemiologist by profession with extensive experience in managing TB programs and managing foreign funded grants. There to provide administrative support is a Senior Administrative Officer and Finance Officer within the Public Health Division of SPC. The Senior Administrative Officer records all financial information (including monies spent in procuring items and engaging TA providers) of the project and reports it to SPC's corporate finance. This corporate finance

manages financial information within its NAVISION system as this is the procedural process followed by all projects in SPC.

The MHMS supports the NTP through the funding of 2 core NTP staff positions (TB Manager and a TB nurse) and the procurement of first line TB drugs through the Global Drug Facility. In the design document, the MHMS will also facilitate and provide overall supervision for the roles of outer island Medical Assistants and Midwives supervising Nurse Aides who are monitoring and supervising DOTS and case finding activities in their communities.

The NTP will be directly responsible for implementation of the *National TB Strategy*, which guides all technical aspects of the Project.

Within the design document, a Mid Term Review was planned in order to ascertain the readiness of the project to move towards the integration phase as proposed in the design document.

A call for proposals to conduct the MTR was advertised by SPC on 10 July 2015 and then re-advertised on 9 October 2015. Based on the invitation document, the purpose of the evaluation is *to determine whether or not project interventions have contributed to increased TB case notification and successful treatment outcomes in Kiribati, and the overall effectiveness and capacity of the NTP and its readiness to absorb TTBEK project functions. This is to be done by assessing the performance and lessons learned by the Kiribati NTP and implementing partners. Specifically, the mid-term evaluation will assess whether or not the package of interventions provided by recipients under Grant Agreement number 58833/64926 and the technical support provided by the TB Advisory Group, of SPC and other technical assistance providers in the country, improved TB case notifications and treatment success. The evaluation will aim to assess outcomes in specific areas of TB control, such as case finding, diagnosis, case-holding, and advocacy, communication and social mobilization (ACSM), and analyze the common factors or patterns that contribute to success and identify areas for improvement. With the TTBEK project's focus on capacity building of the health service providers, laboratory strengthening, information campaign and community involvement, it is expected that these initiatives will translate into improved access to quality services that result in increased treatment success rate for TB patients.*

Under these 2 main premises, the points stated in the design document for the purpose of the MTR and the points taken from the call for proposals, these has guided the MTR team for the conduct of the MTR. The Objectives of this MTR are the following:

- To conduct a progress review of the infrastructure and systems that contribute to quality TB services. This is meant to include program management; financial management; PSM; M&E; coordination and collaboration; availability (or absence) or written policies and procedures.
- To understand what resources are or have been made available from other projects and from the MHMS to improve quality TB services (which includes human resources)
- To assess programmatic outcome indicators if the results are in line with the project framework
- To tie together budget utilization with programmatic and implementation progress
- To identify risks in implementation and to provide recommendations to mitigate identified risks
- To obtain success stories and best practices from implementation of the project.

- To assess the overall effectiveness and capacity of the NTP and its readiness to absorb TTBEK project functions. Program Management, Financial Management, M&E, Institutional capacity (policies, coordination capacity) subsets this final objective.

2. Methodology

The methodology used in the Mid-term Review was designed in direct response to the requirements of the Terms of Reference as spelled out in the SPC Request for Proposal No. SPC RFP15/80, dated 10 July 2015. Implementation consisted of a series of processes involving both quantitative and qualitative instruments.

The consultant evaluators organized the MTR into 3 distinct phases: preparatory phase, assessment phase, analysis, and communication phase. An evaluation plan was submitted to SPC (See Annex B).

Preparatory phase

Methodology: Desk Review and development of data collection instruments

Prior to the site visit, project and program documents were reviewed in order to get a comprehensive picture of the TB program in Kiribati and the socio-political environment that affects the TB program.

The following documents were shared to the team as reference documents for this evaluation

Document Title	Brief Description of the document	Contributes to Objective #
1. Final Kiribati Draft Health Financing Note June 2015	Supporting information on health financing in Kiribati and also M&E systems	4
2. 20150710 Kiribati ANS update FINAL	Information describing the financial landscape within the MHMS (and GoK). Information culled out were the risks faced in Kiribati with financial acquittals	4
3. 2014 Revised SPC TB Proforma_Kiribati_ver28.1 1.2014	Shows a standard indicator reporting template required by SPC from the NTP	ALL
4. TTBEK Programmatic Reporting Template	Shows a standard project reporting template for the NTP to report to SPC	ALL
5. TTBEK APR SPC Procurement and Finance procedures	Annual Program Review presentation that indicates SPC's procurement and financial procedure as required by SPC to the NTP	4
6. TTBEK Cash Request Authorization	A systematic and formal cash request form indicating amount requested, breakdown of activities and authorization from the NTP to request disbursement from SPC	4
7. TTBEK Disbursement Notification Acknowledgement Receipt	Provides evidence for acknowledging receipt of funds from SPC to NTP	4

8. SPC TOR Template	Provides guidance to the NTP on writing a Terms of Reference when engaging consultants	4
9. Flowchart on Procurement Process	Provides guidance to the NTP on procurement processes to be used by the NTP	4
10. 2014 TB Register	Electronic TB Register provided by the NTP	1 & 3
11. Grant Agreement	TTBEK Grant agreement between SPC and DFAT (AusAID)	ALL
12. Final MHMS strategic plan 2016 to 2019	MHMS Strategic Plan highlighting TB being still a public health concern in Kiribati among other diseases (such as NCDs)	1 & 3
13. Kiribati_nationalhealthplan_2012-2015	As stated	ALL
14. GMU ME Visit Kiribati Program Sept2014	A program implementation monitoring and support for TB and HIV programs funded through SPC PHD. Members of the mission team were representatives from the SPC REIP program and Grant Management Unit	ALL
15. Mission Report Active Case Finding	Independent Consultant's report on active case finding initiatives of the NTP	1
16. BSC Servicing Test Summary	A report on tests determining the performance of the NTP's biological safety cabinet class II	2
17. Kiribati_Debriefing_13th December_2014	Debriefing paper of an SPC mission that contains a follow up of previous TA visit recommendations and to conduct other cross-cutting laboratory strengthening activities	ALL
18. Lab Mission report -April 2014	A report from the Institute of Medical and Veterinary Science based in Adelaide with a main objective of undertaking an on-site visit to the national TB laboratory in Tarawa, Kiribati, with particular reference to reviewing the conduct of TB culture, to assess key laboratory performance indicators, and to obtain raw data for cost/benefit analysis.	2
19. SPC Kiribati Mission Report -Sept 2014	A mission report by SPC containing a review of the progress in the implementation of the TTBEK grant in Kiribati	ALL
20. TB Lab Summary report Kiribati - 12th Dec 2014	A mission report by SPC with the objective of conducting an initial baseline on where the Kiribati TB Laboratory is in terms of Laboratory Quality Management System and	2

	assisting the laboratory in developing laboratory performance indicators	
21. TB Strategy Active Case Finding Medium Term 2014-2018	Medium Term Active Case Finding strategy of the NTP which has captured the recommendations on the active case finding mission by an independent consultant	1
22. SPC Kiribati Trip Report 2-14 Feb 2015	SPC Mission report to review and verify TB reports and to review and update the TTBEK 2015 work and financial plan. The mission also notes providing assistance to the TAG visit which happened during the mission	ALL
23. Research Summary TB DM	Research Summary on the association of T and Diabetes in Kiribati	5
24. Kiribati TB Case Finding Poster	Poster presentation on the active case finding strategy of the NTP and findings on an ad hoc case finding mission to the outer islands	5
25. Kiribati TB Guidelines	Kiribati 2008 guidelines for controlling TB	1,2 & 3
26. Financial Performance Letter to Secretary of Health Kiribati - 17 06 2015	Describes the NTP's financial performance in implementing the TTBEK project	2
27. Project Design Document	TTBEK proposal	ALL
28. TTBEK Transfer workplan matrix	An Annex to the TTBEK transfer plan by the NTP which assesses and justifies the HR needs of the NTP to absorb the project (incomplete)	4
29. TTBEK_MHMS TRANSFER AND SUCCESSION PLAN	Draft succession plan or transfer plan of the NTP to absorb the TTBEK project	4
30. Collaborative framework for care and control of TB and Diabetes	As stated	3
31. Collaborative framework for care and control of TB and HIV_AIDS	As stated	3
32. TB Infection Control Policy	As stated	1

These documents are compiled as Annex C.

Financial records were also provided to the review team and this was used to create a budget versus actual analysis. The analysis was carried out per objective and a number of activities were listed that were deemed critical underspending or non-spending, at the same time, key items were also highlighted as having good utilization that contributed to the objectives said activities belong under

The following data collection instruments (Annex D) were developed:

1. Excel-based data aggregating template to allow computation of the following indicators:
 - a. 5-year trend of TB notification rate, disaggregated into new, new and relapse, etc.
 - b. Treatment success rate

- c. Positivity rate
2. Key informant interview (KII) guide was used to obtain knowledge, skills, practices and challenges experienced by health staff working with the NTP (a list of KII done is tabled below). Information on staff capacity, obtained from the KII were important to assess the readiness of essential NTP staff, hence the NTP as a whole, in its readiness for integration with the project. Capacity for program management, procurement, financial management, M&E have been derived from these KIIs
 3. Guide questions for focused group discussions (FGD) have been used to basically have the same desired information of KIIs. FGDs were employed for staff which had the same roles such as DOTS workers and Contact Tracing Nurses. These two set of staff groups provided essential information on how the NTP has increased the number of cases detected. At the same time FGDs were also employed for NTP service beneficiaries or target clients such as TB patients in their second phase of treatment and prison inmates. This was to help assess the satisfaction level for the services they receive from the NTP, also as a way to provide supporting information on the capacity of the NTP for integration. Patients who are satisfied and are provided with standard care for TB treatment factors importantly to favorable treatment outcomes.

The table below outlines the desired resource person/s in implementing the qualitative approach

Objective	Component	Resource Person	Method of Data Collection
1	Case Finding	DOTS workers	FGD
	Advocacy Communication and Social Mobilization	NTP Coordinators, CSOs or Community Based Organization	FGD
	TB and Gender	Youth and Women Coordinator	KII
	Contact Tracing	Contact Tracing Nurses	FGD
	TB in Prisons	Prison inmates and Jail wardens	FGD
2	Laboratory Management	Laboratory Manager, Medical Technologist	KII
3	Multi Drug Resistant TB Drug Management	NTP Coordinator, NTP Manager	KII
	TB and Diabetes	NCD Coordinator	KII
	TB and HIV	STI and HIV Coordinator	KII
4	Human Resources	Director for Public Health, NTP Manager, Representative from the Public Service Ministry	KII
	Financial Management Systems	Finance staff in country and Administrative Staff from SPC	KII
	Monitoring and Evaluation	NTP Coordinators, Nurse, NTP manager	KII

	Procurement and Supply Management	Warehouse / Pharmacy clerk, Chief Pharmacist, NTP coordinator, SPC project administration staff	KII
5	Operational Research and Policy	NTP Manager, Director for Public Health	KII

Bearing in mind that the focus of phase 3 of the project or its “integration phase” is to ensure the maintenance and long term sustainability of project inputs and the NTP itself, the qualitative approach will seek out to measure, per Objective of the project if sufficient levels of functionality has been reached to be ready for integration.

Assessment Phase

Methodology: Data Review, Key Informant Interview and Focus Group Discussion

The mission to country commenced on 23 November 2015. While in transit to Kiribati, the evaluation team was able to meet up with representatives from SPC to conduct a preliminary meeting on 20 November 2015.

Prior to the site visit, the team met with SPC in Nadi, November 20-22, to discuss further the Mid Term Review. It is clear from discussions with SPC that financial systems are improving with the new project finance person. SPC indicated areas of concerns such as asset management wherein there is a need to make use of the MHMS' motor pooling system.

On the second day of the on-site visit, the team met with DFAT and were asked to look into budget utilization and risks that can be mitigated in order for the integration phase to push through. During the meeting with DFAT, it has been brought up by the team that the team will look into both financial and programmatic aspects of the project.

A revised schedule and people met is provided in Annex E

It is important to note that during the dates stated above, the SPC TB adviser was always available for daily feedback and discussions were done between the MTR team and the SPC TB adviser. It should also be emphasized that the TB adviser has inhibited himself during the sessions for the KII and FGDs.

Analysis Phase

Data collected from the site and information gleaned from the reference and supporting documents formed the starting point of the analysis. These are then pitted against not just the Objectives of the MTR as stated in the design document and in the Terms of Reference but were also correlated with best practices and gold standards in NTP program management and in project management as a whole.

Data collected were grouped per objective in order to obtain an analysis that comprehensively outlines what objectives are doing well and what objectives should be improved. The conduct of an objective by objective review resulted in understanding the status of the project and the readiness or capacity of the NTP to integrate with the project.

Programmatic data obtained on case finding and treatment outcomes were analyzed using the design document and its performance framework as the measuring stick to report and analyze progress. Data obtained was also compared to what was reported globally in order to ascertain consistency.

Mission reports from SPC and TA providers were reviewed also to reinforce the findings of the on-site visit especially the interview sessions.

The following are additional points considered in this MTR, to provide more insight on how well the project is performing.

Coverage	This looked at the contribution of the project to health systems wide strengthening that apart building the capacity of the NTP staff, that the project also contributed to strengthening the capacity of other staff within the MHMS such as other laboratory staff within the MHMS or other clinicians that benefitted from the new technology that the project introduced.
Impact	This was to determine if the project has produced positive results in terms of case identification.
Relevance	This answered the question if the project activities are still the most appropriate set of activities to do, that the project is important for the government of Kiribati and that it aligns with the MHMS strategic plans and development priorities. It also shed light on the relevance of inputs and strategies to the country; how the project implementers adapted to the needs of the community
Efficiency	<p>This assessed if the implementation of the activities has used the most sufficient and available resources. The following were looked at:</p> <ul style="list-style-type: none"> - actual as against desired implementation which will assess the process work flow for getting activities off the ground - expenditure as against allocation and whether fiscal prudence has been observed - current costs of outputs as against planned costs and the level of risks involved both programmatically and financially
Effectiveness	This sought to assess if the project on track with the expected result in the midterm. This also looked at the satisfaction of the intended beneficiaries and if the international standards for treatment and care are observed
Monitoring and Evaluation	This sought to answer if the data flow system is generating credible information and if the data and information obtained is being used for program improvement and learning
Sustainability	<p>This sought to assess if the gains made thus far can be sustained and in which way did the project fit into the institutional context and in which way it does not. This included, among others, to the following aspects</p> <ul style="list-style-type: none"> - Implementation and management structure - Institutional stewardship and organizational structure - Legal mandates and issuances
Gender Equity	This identified gaps and risks to seeking and providing services due to gender. This also tried to assess if there is any conscious effort to seek out and mitigate risks due to gender inequality. At the minimum it also sought to obtain if data being reported is appropriately disaggregated to indicate data among women and young women

Communication Phase

A draft report was submitted in 6 January 2016 and feedback was provided by both SPC and DFAT. Following comments made by SPC in January and an appraisal of the report from DFAT in February, a Teleconference transpired between SPC, DFAT and the reviewer in 19 February 2016. The reviewer agreed on most of the findings in the appraisal and SPC's comments but also key to that discussion (and in the appraisal document) was for the MTR report to highlight recommendations which can be implemented at the soonest. A revised Executive Summary was done by the review team and also a revised Introduction that highlights further the context of Tuberculosis in Kiribati, the role of SPC and provides a clearer distinction of the project from the NTP.

3. Limitations of the Review

This review was not intended to be a program review of the NTP, but in order to ascertain relevance, effectiveness, efficiency, gender equality, monitoring and evaluation capacity, and sustainability, it was essential to have a review of program records and interventions, and how it relates to the value criteria expressed. It is therefore the limitation of the project that no highly technical interventions are recommended.

This review also happened mainly in Kiribati and therefore was not able to physically observe and sample the system that SPC uses to record the finances it manages. It is essential to state this as the understanding that the final financial data comes from this system. The communication with SPC corporate finance was limited to e-mail exchanges but actual review of the project as lodged in the Navision system was not observed.

The main source for reviewing TB notification and Treatment Outcome data comes from the electronic TB register and only the paper based register was used for purposes of sampling when cross checking the consistency between the TB register, electronic TB register, and the laboratory register. A comprehensive review of the paper based TB register or a comprehensive data quality is a limitation of this review. Also, since the electronic TB register does not indicate the district or the village where a TB patient was detected, this review cannot illustrate geographical coverage i.e. concentration of cases and how many hotspots were serviced.

There has been limitation on the availability of people requested to be met. As in the original schedule, it was deemed essential to meet up with a representative from the ministry of Public Service to review the NTP's fiscal prudence in applying nationally recommended rates for per diem, travel, allowances and other HR costs apart from the salary. The chief pharmacist and Diabetes clinic coordinator were not met as well. The chief pharmacist was not met and only the pharmacy clerk. Key Informant interview sessions and a re-schedule was agreed with the chief pharmacist but did not eventuate. The Diabetes coordinator was not met as well, as it might have been a coordination issue with the NTP but several attempts were made to see the coordinator at the diabetes clinic but to no avail.

4. Assessment Criteria

Referencing the five (5) objectives of the project, this evaluation was set out to look into the disease trend, implementation capacity and management arrangements. The concept used is a logical framework wherein inputs are clearly carried towards the desired outcome of the project, in which to put simply, that the investment infused by DFAT has increased case notification, improved treatment outcomes, that sustainability is taking shape and that the project is poised to be integrated to the national system.

In brief the following systems were assessed and as to the rationale for selecting such systems.

- Capacity for case finding and case management – that provision of TB treatment and services is standard among DOTS providers and that the investment made for

capacity building and human resources has improved access to treatment. Also this ensures that treatment of patients adheres to the International Standards of TB Care.

- **Laboratory Management** – Aside from having a separate objective for its own in the project structure, laboratory management (systems and capacity) laboratory systems directly relates to one of the key elements of DOTS - **Case detection through quality-assured bacteriology**. Laboratory processes and procedures such as specimen collection and handling, document control and data and information management are important areas to provide a picture of the NTP laboratory's capacity
- **Financial System** – To ascertain that the investments made supported the attainment of project objectives, financial resources must be managed effectively and efficiently and that fiscal prudence is practiced in order to maximize the value for money. The flow of financial information as well as financial controls and processes have been reviewed in order to support the accuracy of a budget versus actual analysis and the quality and process of acquittals.
- **Procurement System** – Other than assuring that uninterrupted supply of drugs in ensured, being one of the key pillars of DOTS, the procurement system and practices should demonstrate that procurement and supply management best practices are observed in order to not delay or put at risk patient treatment and project deliverables.
- **M&E Systems** – To ensure that data provided to key stakeholders ad that data is of quality to be translated to information, the evaluation looked at the data flow system and capacity to do M&E. The M&E system and how effective it is will promote confidence for the reported notification and treatment outcome data collected in this evaluation. The following data quality dimensions have been used:
 - **Accuracy** -Also known as validity. Accurate data are considered correct: the data measure what they are intended to measure. Accurate data minimize errors (e.g., recording or interviewer bias, transcription error, sampling error) to a point of being negligible.
 - **Completeness** -Completeness means that an information system from which the results are derived is appropriately inclusive: it represents the complete list of eligible persons or units and not just a fraction of the list.
 - **Timeliness** -Data are timely when they are up-to-date (current), and when the information is available on time. Timeliness is affected by: (1) the rate at which the program's information system is updated; (2) the rate of change of actual program activities; and (3) when the information is actually used or required.
 - **Integrity** - Data have integrity when the system used to generate them is protected from deliberate bias or manipulation for political or personal reasons⁹.
- **Implementation Capacity / TB Program management** – This is to ascertain that proper coordination and correct policies (whether of the MHMS or SPC) are observed by the project so that protocols are not overlooked, coordination with relevant government units are done and that activities committed by the project have been carried out in a correct and timely manner.

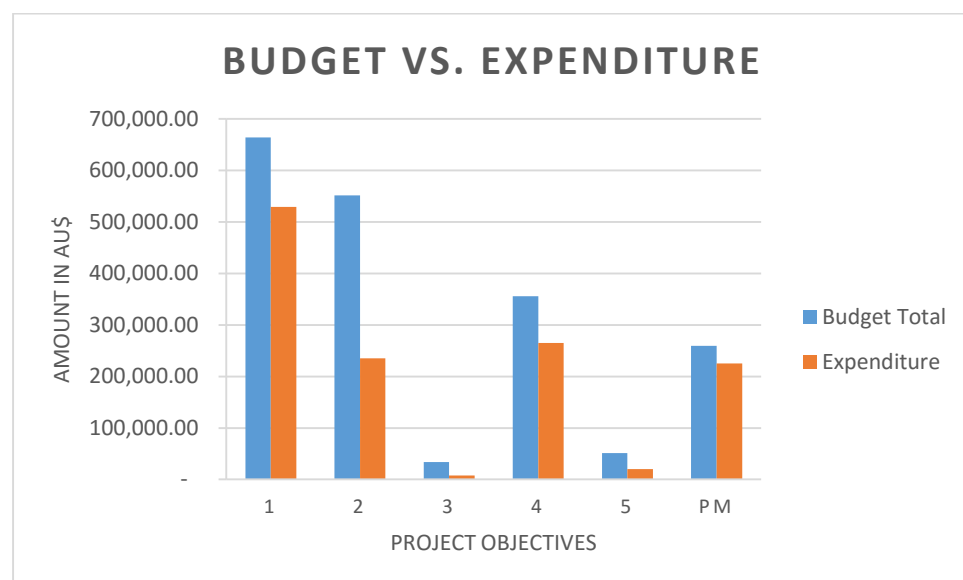
Each criterion, as illustrated above, falls within one of the Objectives of the project and results of the data collected with the above points will be grouped per objective. It will also be illustrated below how each objective performs in terms of spending rate as this will provide insight for value for money. The budget and actual data will cover the period of inception of the project up to the end of phase 2 – December 2015.

⁹ <http://www.cpc.unc.edu/measure/resources/tools/monitoring-evaluation-systems/data-quality-assurance-tools/dqa-auditing-tool-implementation-guidelines.pdf>

5. Analysis of Data Collected

Budget versus Actual Analysis

The analysis made is to correlate spending rate and each major component per Objective. Initially presented is the budget versus variance analysis illustrated in the graph below, where the numbers relate to objective numbers and PM is Project Management. The graph below does not contain management fees.



A budget-variance analysis shows that Objective 1 has the highest spending rate at 80%. Among the expenditure items in this Objective, activities pertaining to case finding has the highest spending rate with salary support for contact tracing nurses and DOTS workers. What lags behind are the ACSM expenditure items. The main reason for this delay is that the preferred ACSM TA provider has not been engaged due to conflicting commitments of the TA provider. The delay of engaging the TA provider resulted in other ACSM related activities such as training of an ACSM task force and production of other materials were not carried out.

The total budget in Objective 1 that relates to ACSM totals to AU\$ 137,195 and the corresponding expenditure against this budget is AU\$ 55,345. However, for activities that relate to case-finding, the budget for three years is AU\$ 526,777 and the corresponding expenditure is AU\$ 473,861.

For Objective 2 a total of AU\$ 551,407 was earmarked for the following activities: Procurement of a digital X-Ray and related training to its use, development of guidelines pertaining to the laboratory and TB treatment, Procurement and support for the Gene Xpert machine, support for laboratory personnel which includes training and salaries. Out of the budget only 42% was utilized, or AU\$ 235,418 and the contributing factor to this underspending relates to non-procurement of the digital X-Ray and associated Technical Assistance and training. It is also noteworthy to mention that Clinical training for doctors and nurses, including on diagnosis and management of pediatric TB has never been conducted. Also, technical TB training has not been provided for the NTP manager.

For Objective 3, Looking at the fund utilization for this objective, out of the AU\$ 33,890 budget, a utilization of 22% (AU\$ 7,764) has been reported. Looking closely at the activities under this objective it pertains mainly to TB and HIV. Considering the low burden of HIV in

country, and that testing kits have been provided previously by the Global Fund HIV grant, and only recently was a DRTB case diagnosed, utilization remains low.

However, it is noted that a bi-directional screening process has only been introduced and upon review of the documentation, it can provide stronger guidance on collaborative activities for TB and HIV and TB and Diabetes coordination and will further facilitate the activities in this objective.

The budget for objective 4 performed well as it registers a spending rate of 74%, that out of the AU\$ 355,850 it has utilized AU\$ 264,883. However, most of the expenditures made pertain to salaries, workshops and training. A number of key items, significant to the design of the project were poorly utilized. These are M&E visits and maintenance of infrastructure.

A look at the budget for objective 5 shows that out of AU\$ 51, 070 a total of AU\$20,233 was spent, or a utilization rate of 40%. Major contributor to this underspending is that the OR studies are still underway. However, it must be noted that the cost of the OR has been underspent due to the fact that SPC has shouldered significant costs for a regional OR training, which saved the project of engaging an OR trainer.

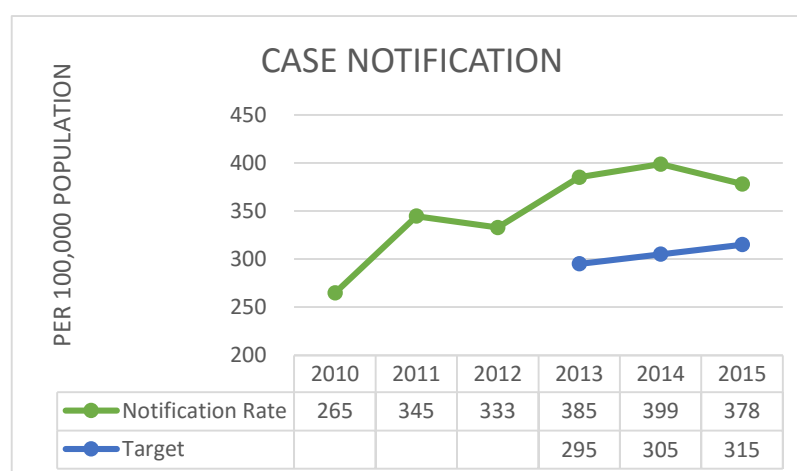
PROGRAMMATIC ANALYSIS

Objective 1

Objective 1, Universal Access, will look at Case Finding, ACSM, TB and Gender, and Contact Tracing. The following are the observations for major areas under this objective.

Case Detection

An analysis of a 4-year disease trend shows that cases notified to the NTP has increased.



The notification rate just by October 2015 is 378 per 100,000. This was the data available during the time of the review based on the electronic TB Register. A summary of cases was lifted from the TB Register and analyzed using a data aggregation sheet developed for this MTR (Annex C). The NTP's target for TB notification rate by the end of 2015 is 315 per 100,000 population, clearly showing a considerable increase of cases being notified to the NTP as previously projected.

Obtaining the average cases from November to December, for the purpose of comparing annual case notification rates and a projected trending of cases, the team came up with a projected additional average cases of 45 cases between November and December. Taking this into consideration, the notification rate by the end of the year is projected at 419 per 100,000 population. This is a 58% increase in case notification compared to 2010. Based on the

baseline data on incidence (488 per 100,000) and on the most recent available rates of incidence from WHO (497 per 100,000 in 2013), the gap between incidence and notification rates is decreasing.

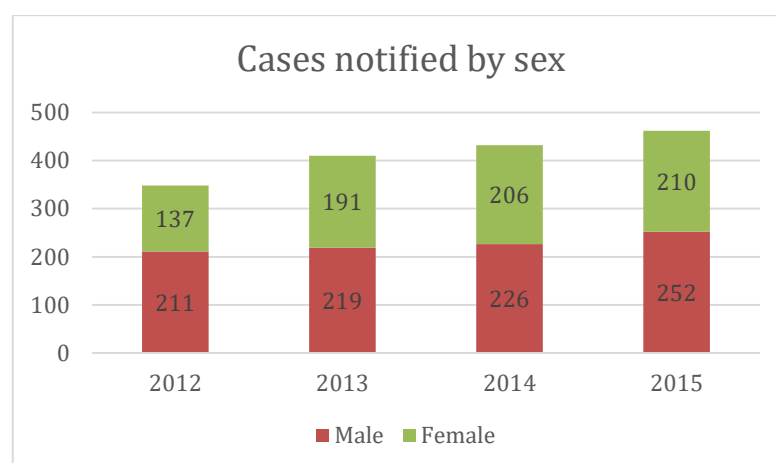
Findings:

- The active case finding efforts of the NTP has clearly produced an increase in case notification. What has been termed as household surveys is a method employed by the DOTS workers to get household members in the general community to get tested should signs and symptoms of TB are present. Household surveys makes use of current IEC materials, flipcharts and pamphlets, the latter of which is given to the household as reference information for future use should TB symptoms arise. Most of the strategies outlined in the TB Guideline for Active Case Finding has been adopted. However, some strategic priority stated in the guideline needs some review like implementing active case finding in the other “hot spots” - Abaiang, North Tarawa, Abemama, North Tabiteneia, Nunonti, Beru and Kiritimati. Currently, 4 out of 11 hotspots is where active case finding is being implemented thru house surveys. A pilot study conducted shows that there are minimal cases coming in from selected hotspots in the study.
- The NTP conducts screening among prisoners in the 2 jails Betio and Bairiki. The plan is to conduct visits to the jail at least once a year. The prison is Bairiki was visited and the inmates confirm that there was a visit done by the NTP during the first half of 2015. However, no cases were identified from that visit. An annual visit is likely the most efficient way to conduct screening among prisoners and wardens as the living conditions of those who are in Bairiki prison is not that congested. Ocular inspection of the institution indicates that there is sufficient space and ventilation is good in what appears as dormitories rather than jail cells
- Contact Tracing Nurses have not received any orientation for the role, except for 1 of the 5 engaged by the NTP. CT Nurses learn the role thru day to day duties and while a number of capacity building activities were held by the NTP thru quarterly updates and activities from visiting TA group, the CT nurses **perceive** that they have not been trained to do their work. This is consistent with the mission report on active case finding conducted in February 2014¹⁰
- Related to the mission report on Active Case Finding, the recommendations of that report has been considered by the NTP in writing the TB strategy on Active Case Finding – Medium Term. This Strategy also follows the WHO guideline on Latent TB Infection
- In 2015, an uptake of pediatric TB cases has been observed, for ages 0-4 and 5-14. Comparing the data between 2014 and 2015, an increase of around 235% is observed in ages between 0-4. It is difficult to ascertain pediatric TB cases at this age and it is likely thru a physician’s opinion thru clinical observation that pediatric TB cases are detected at this age range. However, the increase in the number of cases is overwhelming and without any laboratory confirmation, these are all possible TB cases that is highly suspect for over diagnosis. While data on the number of infants receiving BCG vaccine was obtained, the number of live births was not provided at the time of the review. It may be possible that further investigation on the quality

10 Dr Vishnu Vardhan Kamineni, Report on Tuberculosis Active Case-Finding, p.17

BCG vaccine is warranted or if universal coverage for BCG vaccination is indeed practiced.

- There is no data to suggest that sex is a hindrance to accessing TB services by women. Between 2012 and 2015, 45% of cases are women. The data presented in the graph shows a projected data to cover up to December 2015. The average number of cases for December (2012 to 2014) was applied with a ratio of 49% to 51% which is the proportion of cases of men and women for the month of December from 2012 to 2014, 51% being women. Globally, the proportion of women for incident TB cases account for 37% of the total 9 Million incident cases in 2013.¹¹



The 2015 data makes use of the projection used by the reviewer, as mentioned in the case notification section, to obtain an approximate number of cases for 2015

- There is no ACSM strategy in place for the TB Program, the NTP Adviser and NTP Manager indicated that a consultant will come in by February of 2016 for a 6-month mission to provide technical assistance in coming up with a grounded ACSM plan. In the meanwhile, IEC materials used by the NTP are both in English and in the vernacular and that Advocacy campaigns are relegated to household surveys and theater group presentations (drama play) during World TB day.
- While the uptake in cases notified may mean widespread, uncontrolled transmission of TB, it cannot be as simple as this. The design document has established a peak in cases and it has been clear that recording of cases remains a challenge (please see section on M&E below). Significantly, the project aims to increase case detection and that active case finding has just been implemented, this may also be a case of missing cases being caught in the system.

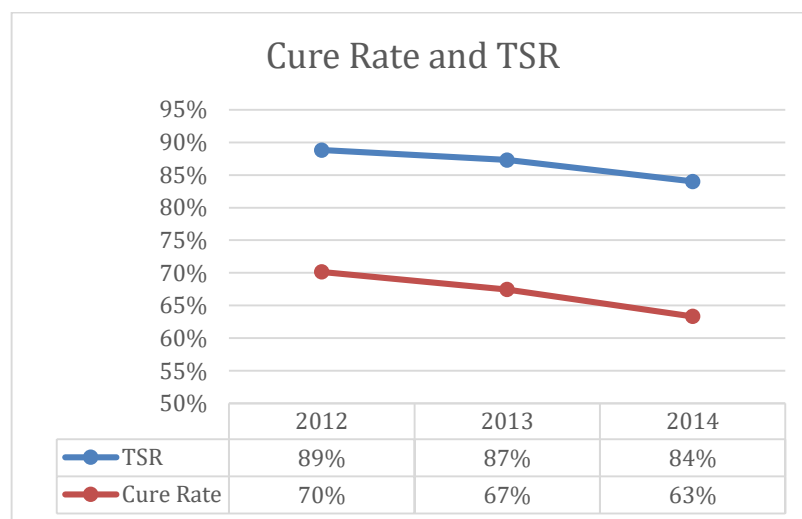
Case Management

The project also aims to improve treatment outcomes. This means that patients should complete the full course of their treatment regimen with either a cured or treatment complete result at the end of the 6 months' treatment. The graph shown below illustrates that from 2012 the Treatment Success Rate and Cure Rate are declining. This falls short of the committed results in the performance framework of the project which projected a 90% treatment success

¹¹ WHO Global TB Report 2013, Box 2.3, The burden of TB disease among women and children, p.30

rate¹² and >85% Cure rate. This also fails to meet the recommendation of the TB Guidelines for Active Case finding that the NTP maintain a >85% treatment success rate.

The 2015 data is not yet taken into account as the last case for this year will be able to complete the treatment, expectedly, by 1 July 2016.



There can be several reasons for the decline in the performance, however most noticeable in 2014 is the simple absence of the treatment outcome data in the TB register. In the cohort of those who are New Smear Positive for 2014, 14 patients have no treatment outcome to date, which is more than 10 months of the last New Smear Positive case registered in December 2014. While the previous years do not have any treatment outcome of “Not Evaluated” there is this significant increase of such outcome in 2014. If co-related with the “died” treatment outcome, the previous years averaged 12 cases who had this treatment outcome while in 2014, there was only 4. The lack of treatment outcome data may go both ways and should be further investigated.

Findings:

- DOTS workers provide DOT to the patient currently on treatment. The DOTS workers are project funded staff and do not have security of tenure once the project comes to a halt. However, it has been indicated that the MHMS will support the existing work of the DOTS worker thru additional man power in the forthcoming year
- There is a risk of running out of TB drugs for those who are currently on treatment as some patients enrolled on treatment do not have a kit solely assigned for them. The DOTS workers consume a kit for multiple patients and open a new one once the current box is spent. Although stock out has never been reported in the past, the risk, albeit minimal, still poses a threat in treatment completion and will setback the already underachieved results. This practice is also contrary to the rationale of putting the TB drugs on kits, that the kits can help in treatment adherence as patients would feel that the TB drugs is especially for them (as their names should be written on their kit) and that should the patient transfer to a different facility, they can take their kit with them to continue treatment in the receiving facility.¹³

¹² Treatment success rate per the project proposal was 95% and this is a revised target during implementation

¹³

http://www.stoptb.org/assets/documents/gdf/whatis/FS%20on%20Stop%20TB%20Patient%20Kit_final.pdf, p.2

- The reported treatment outcome data is not complete, therefore unreliable, as the electronic register does not record all treatment outcomes for some patients. A cross check with the TB proforma submitted to SPC in 2014 and 2015 shows that the data among the 2 set of reports and that of the TB register is not consistent. Also a quick cross check on the data available on the WHO TB website¹⁴ concurs with the electronic TB register. It is highly likely that the report that the NTP provides come from the electronic TB register.

Objective 2

Objective 2 of the project aims to support quality laboratory diagnosis and clinical standards. Health equipment, capacity building, human resource, technical assistance and operational costs have been programmed in the project budget in order to meet this objective

The NTP laboratory is ran by the laboratory supervisor and a laboratory aide and both do DSSM and use the *GeneXpert* machine upon the order of the NTP physician. The laboratory register is ready on hand upon the request of the evaluation team. There also exists a work load table and a logbook for using the *GeneXpert* machine.

Findings:

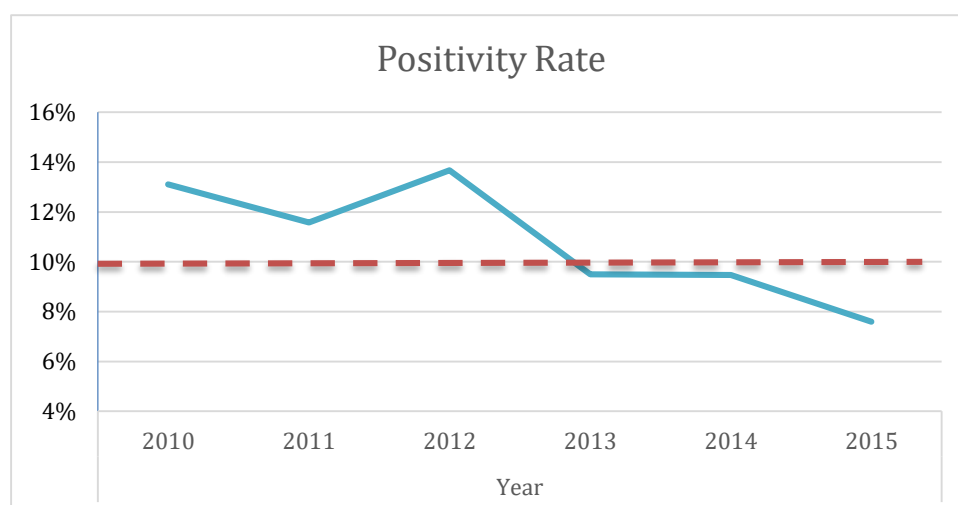
- The introduction of the *GeneXpert* machine has provided support for both the lab and NTP in identifying and classifying patients for enrollment. It was instrumental in detecting the re-emergence of DRTB in the country with a Rifampicin resistant patient diagnosed thru the *GeneXpert*. It is noted however that both DSSM and *GeneXpert* are ran at the same time when the NTP clinic doctor orders for the specimen to be ran through the *GeneXpert* machine. This is consistent with the *GeneXpert* algorithm illustrates that the described protocol is used for patients at risk for MDRTB and for patients with or at high risk for HIV.
- It has been noted that the laboratory, when requested to run specimens in the *GeneXpert* machine, it is simultaneously subjected to DSSM. It is important to note this to make relevant a positivity rating of the laboratory and analyze the workload of the laboratory.
- The NTP laboratory has accepted the recommendation from a mission report from IMVS that Xpert MTB/RIF **should** be used rather than conventional microscopy, culture and DST as the initial diagnostic test in **adults** presumed to have MDR-TB or HIV-associated TB¹⁵
- The positivity rate shown in table below shows a rate below 10%. Prior to the onset of the project, the positivity rate is fluctuating above 10%. A value higher than 10% indicates that clinicians are not well aware of TB symptoms and only send those patients at advanced stages of TB for sputum examination. When X-rays are used as a filter to select patients who should have a sputum smear examination, positivity rates are expected to be higher than 10%. A value less than 10% may indicate that the clinicians are referring too many “suspects” for sputum smear examination, and laboratory services can be overburdened with unnecessary negative examinations, which could compromise the quality of their work.¹⁶ This indicates that at the initiation of active case finding, more patients have been referred to the NTP

14 <http://www.who.int/tb/country/data/profiles/en/>

15 Richard Lumb, Report on Tuberculosis Laboratory Mission Tarawa, Kiribati 7-10 April 2014

16 WHO - Compendium of Indicators for Monitoring and Evaluating National Tuberculosis Programs WHO/HTM/TB/2004.344, 130

laboratory and a continued decline will indicate the need for rebuilding the capacity of all laboratory personnel not just the laboratory supervisor.



- A previous mission report from the Institute of Medical and Veterinary Science makes note on the quality of the specimens being received at the laboratory being salivary. This has been confirmed by the laboratory supervisor and further to this confirmation is that, specimens that are salivary are still being enrolled by the NTP as new smear negative instead of requesting another sputum specimen from the patient.
- Closely related to the above, a workload analysis done shows that the estimated daily work load of the laboratory is not beyond what is recommended by WHO of 20-30 samples per day per microscopist. Based on the workload report from the laboratory, the calculated average number of samples tested per day in 2015 is 15 samples. This strongly indicates that the current staffing of the laboratory is enough to ensure all specimens are correctly diagnosed.

No of samples tested for 2015 with projections for Nov and December	3,667
Average sample tested per day 2015	15 samples

- Review of the workload report shows that all specimens underwent DSSM twice, which is the base recommendation in order to correctly diagnose a specimen as AFB positive. However, a random sampling of the laboratory register, cross checked with the NTP Register shows that not all patients who were registered as New Smear Positive had their sputum examined twice. Some patients whose specimen who had a scanty (1–9 bacilli in 100 microscopic fields) result were even enrolled as new smear positive patients. A case of pulmonary TB is considered to be smear-positive if one or more sputum smear specimens at the start of treatment are positive for AFB (provided that there is a functional EQA system [in country] with blind rechecking). If no functional EQA system is in place in country it is recommended that two or more initial sputum smear examinations positive for AFB, or one sputum smear examination positive for AFB plus radiographic abnormalities consistent with active

PTB as determined by a clinician, or one sputum smear positive for AFB plus sputum culture-positive for *M. tuberculosis*¹⁷.

- Documentation - The documentation present in the laboratory are the Laboratory policies and guidelines available in the TB Laboratory, Process flows (visible in the laboratory), and Infection control policies (newly placed).
- During the random sampling of the laboratory register it has been observed that a number of unclear entries on some fields have been made. Fields such as “date examined” and “gender” were filled in with tick marks. A wrong chronology of the entries was also noted between March and April, July and August, and September and October 2015. A specimen result was also ineligibly written causing confusion if the result was negative or and AFB 1+ result. As the laboratory register should essentially link with the TB register, unclear and questionable entries in the laboratory register reflect in the accuracy of the TB register hence posing the risk of misreporting and generating credible information for program use and dissemination to stake holders.

Objective 3

Until recently in 2015, an MDRTB case was detected in Kiribati. With the aid of the Gene Xpert machine, a Rifampicin resistant case was diagnosed and further drug resistance testing was being done during the time of this MTR.

Findings:

- HIV counseling and testing happens in the what they call as the VCCT sites (Voluntary Counseling and Testing). Kiribati has 2 accredited VCCT sites. The counselors are mostly nurses and would have basic background on TB. However, there has not been any training provided for these counselors on TB screening and no orientation yet that pertains to the NTP program of the MHMS
- Preliminary arrangements of collaborating with disease programs such as Diabetes and HIV has produced additional HIV cases, this is upon review of a TB and Diabetes/HIV logbook and key informant interview with the NTP manager and HIV STI coordinator. A collaborative framework has been developed by the NTP to provide guidance on a bidirectional screening system and management of cases involving TB and HIV.

Objective 4

The following are the findings per thematic area identified in this review.

Procurement and Asset Management

The TTBEK project is invested in procuring high value items and equipment that greatly aid the objectives of the project. A number of vehicles and laboratory equipment such as the *GeneXpert* machine has been procured by the project and is being used by the NTP. SPC as the grant manager applies its procurement policy to the project to ensure that risks related to procurement are managed. SPC manages the process until goods or service delivery in close coordination with the NTP, that they also participate in the process like that of identifying prospective candidates for goods or service delivery or taking the initiative to communicate with the suppliers should delivery is taking a long time.

Since there are no SPC in country staff in Kiribati, Asset and Supply management lies with the MHMS - NTP being the primary users of the assets. This includes warehousing, distribution, maintenance and disposal

17 WHO - Treatment of tuberculosis Guidelines - Fourth edition 2010, 25

Findings:

- NTP staff including the former finance person was oriented/trained on procurement processes and supply management, including forecasting, last December 2014. Informal and ad hoc, on the job re-orientation is done during country visit by SPC and by other consultants engaged to assist the project implementers. Upon interview with the NTP adviser, he confirms the understanding that the NTP needs to source out suppliers and forward it to SPC for procurement
- Stock-out for reagents used for AFB staining has been reported to the evaluating team due to the following reasons:
 - Error of counting available goods in the warehouse
 - Delay of initial payments to suppliers
 - Unstable lead time of suppliers especially if the mode of goods transport is by sea

This shortage has been mitigated by borrowing reagents from other programs while waiting arrival of the order for the NTP laboratory

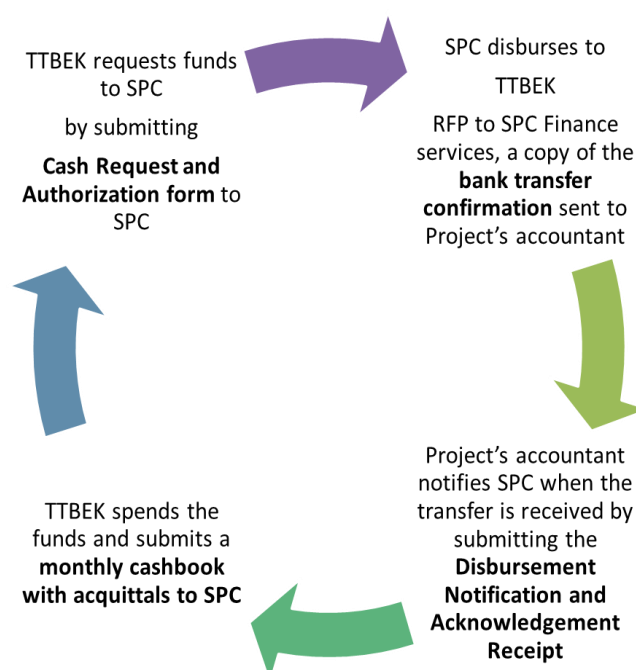
- The warehousing of TB drugs is done in the NTP clinic and not in the pharmacy and the reason offered to the evaluators is the NTP adviser requested to the MHMS secretary to allow the NTP to house the TB drugs. Only a stock take report is submitted by the NTP to the pharmacy. Ordering of First Line Drugs is done by the TB adviser with coordination from the Global Drug Facility (GDF).
- In addition to the risk identified above in Case Management section, that no TB kit is solely dedicated to a patient and a kit is shared among a number of patients, it has come to the attention of the MTR team that shortfalls on First Line Drugs have happened in January 2016. This has necessitated a request of emergency supplies from Papua New Guinea for First Line Drugs. There is an indication that a second emergency request may be needed in order to meet the TB treatment demand of the country.
- As observed by the evaluator during a visit to the pharmacy, some medicines and other medical commodities are not placed on elevated areas which make it prone to the elements that can compromise the good's quality and worst spoilage of drugs. Also observed are that some medicine boxes are open and not properly labeled.
- The condition of the warehouse is adequate enough to hold perishable drugs, however portions of the storage areas visited have damaged ceilings that can be source of water leaks during rainy season.
- It was observed by the evaluators that the project motorcycles are not garaged in the MHMS compound but rather taken home by DOTS workers. The argument presented was that in order to not accelerate the wear and tear of the motorcycles, it is garaged at the DOTS workers' residence which is usually within the vicinity of the area each DOTS worker is assigned to. However, there has been an indication that not all DOTS workers now live within their area of responsibility. This presents a challenge for the project to properly monitor the condition and usability of the vehicles.
- During the site visit, it was verified that a vehicle, reportedly procured under the project has been disposed thru a bidding process. Reportedly, the purchase value of the asset is AU\$29,000 and was awarded to the winning bidder for AU\$6,000. The

vehicle was supposedly purchased in 2012. It cannot be verified if the book value is indeed AU\$6,000 or if it was purchased in 2012 as the asset is not recorded in the Fixed Asset Register of the project. The sold value was even below a mechanic's estimate and was only awarded to the highest bidder. The said vehicle has been verified by the evaluating team as still functional. The reason offered to the evaluators as to why the vehicle was sold is that maintaining the vehicle would be costlier in the future rather than keeping it. This incident highlights the following issues:

- Inconsistent coordination of the NTP with SPC in the disposal of assets. Since SPC is the project manager, all assets are under the stewardship of SPC.
- The Fixed Asset Register is not complete or updated. There is a possibility that the vehicle has been procured using QTBECP funds, in which the TTBEK is treated as a continuation of the QTBECP project. Since it appears that the QTBECP has transitioned to TTBEK, all assets from QTBECP should have been transferred to the FAR of the TTBEK project. However, the FAR of the TTBEK project only goes up as early as 2013, which is the initial phase of the TTBEK project.

Financial System

The project's financial management is guided by SPC's financial policies and procedures. The following diagram illustrates the financial circuit between SPC and TTBEK¹⁸



During the project's Annual Program Review (APR), SPC required a number of forms to be accomplished by the NTP in aid of the process above. One is the cash request authorization

¹⁸ SPC Presentation of Procurement and Finance for the TTBEK APR, Nadi, Fiji, December 2014

that is the instrument to initiate a disbursement request which requires the TTBEK to list all activities to implement that is included in the cash request. Another is a disbursement acknowledgement form which provides paper trail that funds have been received in country and is a tool to track disbursement received from SPC.

This Annual Program Review serves as a meeting as well to come up with a costed annual work plan. It is noted that the financial systems of the MHMS is not being used for budgeting and expenditure planning.

The Project uses a cashbook system that is submitted to SPC 15 days after month end. The cashbook provides information of activities that corresponds to an activity code, its actual cost and basically an opening and closing balance for the month. The cashbook is prepared by the project accountant with supporting documents obtained from the NTP.

Findings:

- Bank reconciliation is not an issue since the project administrator of SPC reconciles the cashbook with the bank statement. However, a guideline must be established on bank reconciliations to indicate the frequency, process and archiving of bank reconciliation reports. This is good practice for documentation and issue resolution should any issue arise.
- Bank reconciliation at the implementation level is an issue since there is no bank reconciliation being done by the project accountant. It is important to note that apart for this being the norm, which SPC does the bank reconciliation for the project, since the NTP is the expender of the funds, a robust bank reconciliation should be undertaken, cumulatively and periodically by the NTP. If this remains un-attended, it will reflect key health financing issues on monitoring and reporting as reflected in the health financing note undertaken in 2015.
- The project falls in line with the Assessment of National Systems (ANS) 2014, recommendation #4

“To manage the level of acquittals for ACGs, require acquittal of expenditure at least every 3 months where the funding agreement extends beyond 1 year. This will facilitate potential issues to be identified earlier and allow action to be taken.”

Since acquittals are done every month and key to this is a dedicated accountant for the project.

- In terms of MHMS guidelines that should be used by the project in determining financial instructions for travel (per diem rates and other incidentals) the project accountant refers to an outdated financial policy (1974). Probed on the updated policy in determining realistic rates for per diem, a memo or circular from the Public Service Office was mentioned. This poses a risk for the project implementation as it cannot reference any legally mandated and updated rates and instructions for financial procedures
- The latest orientation/training done by SPC to capacitate the finance team was in December 2014 and has involved the former finance person working for the project. No orientation was done, only a handover, by the outgoing finance person to the current finance officer. This validates the statement made by the project accountant that some of the MHMS' financial policy is unclear to him. This new project accountant works part time for an SPC climate change project and for the TTBEK project and has joined only in 2015.

- A standard record form/template is being used. The form however contains a Global Fund marking which may create confusion in posting and can be seen as an internal control issue during a financial audit
- No clear approval levels and thresholds have been observed by the evaluators, which may compromise, albeit low, in fiscal prudence, i.e. financial transactions, regardless of the amount, can be approved by anyone from the following: the NTP coordinator, NTP Manager or the TB Adviser.
- Via random sampling of transaction documents, the review team noted some transactions being processed and paid for even without official approvals. This may present an audit risk
- A financial audit has been conducted in January 2016 while this report was being finalized, therefore, the findings of the audit has not informed this review. It will be recommended that the findings of this review together that of the audit recently conducted will be used to inform DFAT and SPC
- Tracking tool for advances given to staffs (e.g. salary advances and travel advances) is missing. During the interview with the financial accountant, any imprest not retired completely is subject to salary deduction. However, the project accountant indicated that since there is no monitoring tool, a final accounting of a staff's unretired imprest or of any balance will be deducted in the last pay of the staff or from their provident fund, since there is no robust tool to track any advances. This however does not apply to projects with relatively short life cycles and further exposes the fund manager (SPC) to financial and legal risks
- While SPC produces a budget versus variance analysis and that this is informed to the NTP, there is an indication that the NTP either disregards this information or needs further capacity building on financial management. The table below shows significant over spending of the NTP on selected activities

Cumulative Budget (2012-2014) vs Reported Expenses (as at 31 October 2014), Selected Items and Activities, TTBEK Project

Item/Activity	Budget in AUD (2012-2014*)	Expenses in AUD (2012-2014**)	Variance
Human resource	377,629	565,026	- 187,397
Laboratory maintenance cost	10,000	31,963	- 21,963
Laboratory technical assistance	30,000	49,216	- 19,216
Printing of reporting forms and registries	900	3,949	- 3,049
Fuel and car repair costs	15,000	27,224	- 12,224

* ending December 2014

** ending October 2014

Monitoring and Evaluation

To ensure that the project reports relevant data, consistent with the performance framework, SPC has developed the TTBEK Programmatic Reporting Template. The template is split into indicator and activity reporting on a 6 monthly cycle.

A number of forms contribute to the fulfillment and verification of this reporting template, as follows:

1. TB Register (with notations on DM and HIV testing)
2. NTP Laboratory Register and work load report
3. Contact Tracing Register
4. Activity / Training Reports
5. Drug Stock Take

The data flow from the NTP to SPC is clear and roles and responsibilities are also clear in transmitting and approving the reports. The evaluation looked more closely at the M&E systems of the NTP, the data flow and responsibilities for data collection and data management

Findings:

- The NTP coordinator is responsible for collecting data and managing the TB registry. There is an existing electronic TB Register that the NTP coordinator manages which is lifted from the paper based TB register. Currently there are 2 staff (1 project hired, 1 organic staff) who fill in the TB register once a case is detected. On a weekly basis the NTP coordinator copies the data from the TB register to her electronic TB register. The NTP coordinator indicates that she performs a weekly and monthly review of the NTP register to ensure that all corrections are captured in the electronic TB register. The 2 staff that input data on the TB register do not have the responsibility to alert the NTP coordinator of any changes in the entries and thus compromising the accuracy, integrity and timeliness of the data being reported to SPC.
- An electronic contact tracing registry also exists. This is managed by one of the contact tracing nurses, wherein the TB contact tracing screening cards from the other 4 contact tracing nurses are used to feed data to the electronic contact tracing register. Upon request for the contract tracing register the CT Nurse in charge indicated that the computer she is using to manage the CT register is nonfunctional hence the evaluators were not provided with the electronic copies during the visit
- The electronic TB register is almost a mirror image of the paper based TB register, at least in terms of the fields needed to be present to make a TB register relevant for program and project reporting. It is noted however that the paper based TB register being used lacks essential fields such as HIV counseling and testing and DM testing. Only HIV counseling and testing fields are present in the electronic TB register. Considering that the burden in Kiribati and most of the region is with DM, comparatively with HIV, it would be important for the NTP to update their TB register (both electronic and paper based) to include these 2 co-morbidities.
- Entries from the paper based TB register have been randomly sampled to tie-in with the Laboratory Register. The following have been observed during the sampling:
 - Entries from September 2014 in the TB register was not found in the laboratory register
 - Delayed registration of a patient in June 2015, the lag time of which is 21 days

- Entries from the electronic TB register and the format of the TB register have been reviewed and the following have been observed:
 - The format of the Electronic TB register is inconsistent from year to year with fields added in 2013 and then reverted back to the old version in 2014. Fields such as disease site, patient classification and sputum specimen follow up are inconsistent fields throughout the years.
 - The HIV counseling and testing data is inadequately filled up. While the NTP claims that they test all TB patients from HIV, this does not show in the electronic TB register
 - TB treatment outcomes are missing from the electronic TB register

The above observation compromises the quality of data being reported to the stakeholders in terms of accuracy and completeness

- Staff responsible for reporting and managing data have indicated that they were not provided with capacity building for M&E which supports the observation of having erroneous entries in the TB register and lack of awareness in providing feedback to the NTP coordinator when changes are made in the TB register.
- There is no written guideline on recording, reporting and providing a 2-way feedback for the purpose of data management
- As stated in the design document, that *the MHMS will also facilitate and provide overall supervision for the roles of outer island Medical Assistants and Midwives supervising Nurse Aides who are monitoring and supervising DOTS and case finding activities in their communities*, the MHMS relied on the project staff to carry out M&E missions in the outer islands

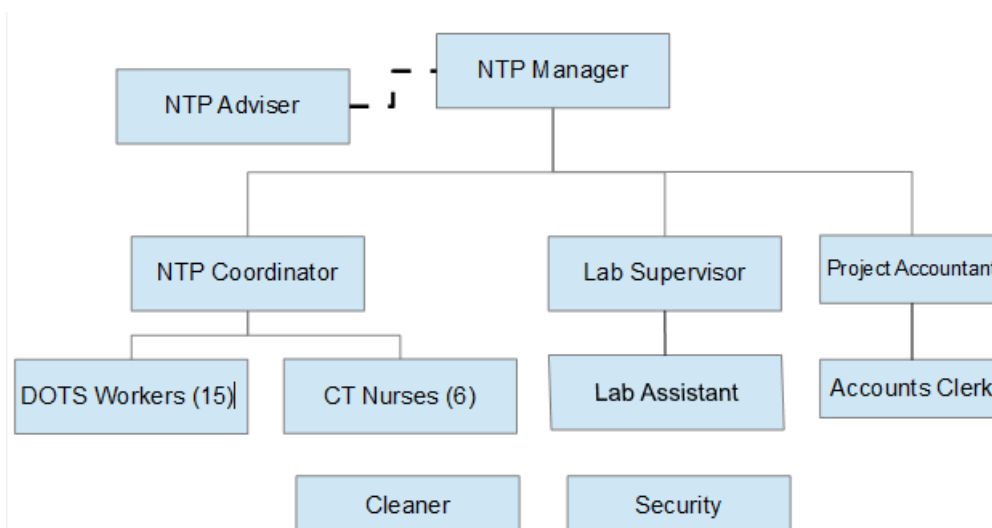
Implementation Management

Findings:

- All training pertains to technical training, and program management training for NTP staff has been neglected. Lack in the capacity for budget programming and management is evident in the recording of expenditures reported to SPC.
- Delays in implementation for major activities such as training for radiology and engaging a TA for ACSM has affected sub activities such as procuring the X-ray machine and development of an ACSM plan and IEC materials. While activities linked to procuring an X-Ray machine will be compromised, obviously because of the absence of the equipment, ACSM activities could have been done, although sub-optimally to provide more program information on what may seem to work to increase case detection and reduce stigma in the community and thus provide updated information to the ACSM consultant upon initiation of the ACSM mission
- A parallel system seems to be running in the NTP for administrative functions that is the responsibility of the MHMS as a whole. Instances like staff contract renewal not being coursed through the MHMS administrative services but under the discretion of the NTP adviser.
- In related to above, the NTP is not utilizing the transport management unit of the NTP, hence providing opportunity to take advantage of the project vehicles by those they are assigned to. It also promotes unequal use of project vehicles as some DOTS

workers who need to avail of transport services reportedly have for some time, unable to use the project vehicles

- Introduction of a succession plan that envisions MHMS' takeover of human resources of the staff to ensure continuity of services. Meeting with the secretary of health, the plan of the MHMS is to absorb the project in a phased manner but indicated in a smaller scale. The MHMS is moving forward with outsourcing its Orderly services and this would free up around 30 hospital orderlies who are government organic staff. The MHMS plans therefore to assign a number of staff to the NTP as DOTS workers. The indication is that the additional staff will either replace the existing DOTS workers by the end of the project but for the meanwhile learn the role working alongside with the existing DOTS workers. While this is a positive step to increase the MHMS workforce, care must be taken to ensure the capacity of the additional work force. An automatic placement of former orderlies might cause further investment for training and operational cost, may reduce funds for services and the NTP may not be able to take advantage of qualified people in the country's labor force that can perform as DOTS workers.
- From the succession plan, it is indicated that the NTP will only maintain TTBEK posts that it will consider essential and necessary to carry out the work of the NTP, considering budget constraints as well. Presently the organizational chart of the NTP is as follows:



Perusing the MHMS transfer plan matrix from the succession plan– only the DOTS workers have been categorized as high important roles. And as stated above, these roles will be filled in by orderlies, or as in the ascension / turnover plan, the BTC nurses will be used in replacement of DOTS workers. CT nurses have medium importance, together with the NTP coordinator and the NTP adviser. It will be prudent to set targets for the next 2 years before the NTP or the MHMS can decide how the integration phase, as far as HR is concerned can happen. Targets for case notification and treatment outcomes must be realistic and well informed.

- A collaborative framework has been introduced to work with relevant health programs such as HIV, Diabetes and Leprosy. The current Program Manager for TB holds the same position for the Leprosy and HIV and STI programs. A discussion with the secretary of health indicates that the program manager is being groomed to

be an overall medical officer for infectious diseases and the MHMS will provide a replacement for the TB Program Manager position.

- At the identification of a TB drug resistant case, the NTP has taken advantage of the agreement with WHO on accessing the TB Second Line Drug stockpile in Manila as well as coordinating with the Green Light Committee in setting up a Programmatic Management of Drug Resistant TB
- Capacity building activities implemented by the NTP has been inclusive of other health workers within the MHMS. Twenty-six clinicians and 5 laboratory staff within the MHMS have been included in the training for the *GeneXpert* machine, for example.
- The HITEC which was planned to provide an oversight for the project is not functioning

Objective 5

OR studies have been done and has helped shape the design of the TB interventions in Kiribati such as an OR in TB-diabetes, outer-island case finding and mission reports on laboratory and contact tracing.

In addition, the Annual Programme Review done in 2014 is by itself a pseudo-OR which looked into the implementation arrangements including risks and bottlenecks. Findings of the review led to some changes effected in the project such as an expanded reporting approach that has included both programmatic and laboratory reports, performance based disbursement and an introduction of additional activities and indicators to highlight the bi-directional approach for screening and treating TB-Diabetes mellitus and TB-HIV.

Several laboratory missions were also done to look into the operations and implementation of the laboratory component both by SPC (Tebuka) and other consultants.

Findings:

- There are currently 2 operational research studies underway which will look in to the utilization of the GeneXpert machine, water and sanitation and ICD-10, cause-of-death lists. It is clear that the even in this component of the project, it has system wide benefits should the papers be completed.

6. Evaluation Results

All in all, the budget utilization of the project is at 74%, with objectives 1 and 4 being the most utilized. The activities of the project for these activities contributed directly to the excellent case finding results of the NTP thru support for the DOTS workers and contact tracing nurses. It is to be emphasized that the increase in case notification is attributed to the active case finding approach by the project. However, with the lack of a well-grounded ACSM plan, there is likelihood that more cases will be coming in, especially if the ACSM strategy will include changing health seeking behaviors. The project has made available funds for the NTP, however, the NTP has failed to capitalize making use of the resources to strengthen the systems within the NTP and in MHMS as a whole. As observed, there has been a seeming independent system running in the NTP. With issues between the NTP and the Pharmacy, the NTP has instead requested that they manage the first line TB drugs procurement. Vehicles that should have been undergoing monitoring by the MHMS thru its motor pooling system was not made use of. Instances of staff renewal have been independent of the HR process of the MHMS. What this appears to be is that the NTP adviser and the NTP manager have added to their workload, with the already increasing demand of case

management due to the influx of cases. This has contributed to the number of major activities being delayed with significant impact to preparing the country for TB elimination – cases in point are the ACSM strategy and the procurement and associated activities for the utilization of digital X-ray machine.

There has been no evidence of a single monitoring system of the resources that is allocated to the NTP. Discussions with the project accountant reveals that the financial monitoring he has been performing has been for the project alone. While it is understandable that the project accountant is new to the project and that no handover was performed between him and the former project accountant, it does emphasize the lack of record keeping capacity of the NTP. Even with the maintenance of the Fixed Asset Register, which only goes back to 2013, which has created some confusion on the origin of the vehicle recently auctioned by the NTP, which has been indicated to have been procured under the QTBECP period, but this remains in question since there was no comprehensive Fixed Asset Register presented to the team. Harmonization and consolidation of TB services into the national health system has been indicated in the transition plan, albeit a draft, presented to the review team. It indicated the level of importance of each staff position with a beginning caveat that only those that the MHMS will see as essential to continue the project and depending on resources available will be maintained. It is however good to note that the MHMS is taking immediate steps to avoid unnecessary allocation of resources for HR by standardizing the salaries for the project funded staff with the banding in the MHMS.

SPC as project manager has provided for the NTP access to technical assistance and tools to help in the implementation of the project. SPC also has held annual reviews in order to guide the NTP in writing its annual operating budget and mitigate any risks in implementing the project. Requests for budget reallocation has been discussed as well during these workshops and SPC provides sound advise and realistic direction for any budget reallocation. However, the lack of any legal document for the relationship between SPC and MHMS is absent. The roles of the two parties and their interfacing is described in the design document, but good practice will always seek even a Memorandum of Agreement or better, a grant agreement, not only to enforce any protocols from SPC to the MHMS, but to provide more clarity on the role of MHMS as the implementing partner.

The following is a tabulation of evaluation results per objective.

	Results
Objective 1 – To support universal access to quality TB services, including through active case finding and community mobilization	<p>The active case finding activities supported by the TTBEK project in 4 of the identified 11 hotspots in Kiribati thru house to house surveys is creating a positive effect and over-achieving the project commitments on case notification. Case finding in identified high risk groups are mixed. There are no cases identified in the prisons and some prisoners are aware of what TB is and responded positively when asked whether they know what to do in case they need medical attention.</p> <p>On the other hand, “possible” TB cases from age ranges 0-4 and 5-14 have significantly increased from 2014 to 2015 as a by-product of intensified contact tracing activities. It is noted however that over diagnosis or referral is happening since only 1 of the 5 CT nurses have been trained for the role and only an informal training has been conducted thru quarterly updates / meetings. Capacity of clinicians for identifying pediatric cases remains in question since the budget for this training activity remains unutilized.</p>

	<p>Cases notified to the NTP yields a notification rate of 419 per 100,000 population which falls short of the latest available incidence rate reported thru WHO of 497 per 100,000 (2013). Albeit that the WHO data is 2 years back, the above observation for case finding presents that the “missing” cases come from the community, TB laboratory and from other health facilities.</p> <p>The target for Treatment Success Rate for smear positive patient is 95%, and the project is lagging behind the target with the latest Treatment Success Rate of 84% in 2014, calculated thru the electronic TB Register. It is possible that with the intensified case finding activities, a number of TB cases enrolled are detected too late, that is, the disease was already advance for a positive treatment outcome to be achieved. However as clearly observed, there is a need to build up the capacity of the people recording and reporting data in the TB registers. As stated a number of entries in the TB registry lack information on treatment outcome. During the analysis of the electronic TB register, with the limited time on hand, any patient without any remark on treatment outcome has been considered a negative outcome (not evaluated)</p>
Objective 2 – To support quality laboratory diagnosis and clinical standards	<p>As cases are pouring in from the community direct from the households, there is likelihood that the laboratory services for DSSM has been caught unprepared for the sudden surge of cases as the positivity rate is below 10%. It is not a question of over burdening the laboratory since the calculated workload per day is 15 specimens but rather the readiness and capacity of the laboratory to absorb the increase in workload. Capacity as used here is to train the laboratory assistant for quality DSSM.</p> <p>Another probable reason for the low positivity is the quality of the specimen extracted from the TB suspect. The laboratory supervisor narrates that they still get a number of salivary specimens and previous laboratory mission reports that patient who are smear negative due to salivary specimens get enrolled for treatment¹⁹</p> <p>The introduction of the GeneXpert Machine has led to the detection of a Rifampicin resistant case and is seen to be further useful in this regard.</p>
Objective 3 – To support programmatic management of important co-morbidities in Kiribati, including TB-HIV, TB-Diabetes and MDR-TB	<p>Cases from the HIV and Diabetes clinic are inconclusive from the TB register provided and while records are available to cross check individual patients for the cross referral, it is difficult to ascertain thru a national reporting mechanism, the yield for the collaborative activities. The collaborative framework has just been drafted which might be the cause for the lack of reporting in the TB register and also the capacity of the NTP coordinator to consciously record DM and HIV testing results in the electronic TB register</p>

<p>Objective 4 – To support planning and management of the NTP and contribute to strengthening related aspects of the health system in Kiribati</p>	<p>While SPC as the project manager provides management and technical support to the NTP, there is an overall observation that the implementation capacity of the NTP still needs to be strengthened, especially in terms of program management. The following results indicated below illustrates the risks and challenges in the management of the project.</p> <p>The project wide procurement process is of low risk due to the fact that SPC manages the procurement process and guides the NTP where their input is needed. A procurement flow chart, thresholds for methods of procurement and levels of delegation is adhered to by SPC.</p> <p>Risks in asset management is high due to lack of proper coordination by the NTP to appropriate channels on asset management and disposal. Un-monitored use of vehicles, incomplete fixed asset register and disposal of project vehicles runs the risk of liquidating project assets without the knowledge of SPC. As have been observed during the site visit, a vehicle was disposed of, which is still in running condition and could have been further used by the program. Whether this was done intentionally that the SPC staff was not made aware of this incident, there is no legal and binding document to make the NTP liable for its action, i.e. there is no grant agreement that SPC can enforce upon NTP to agree on terms and conditions for asset management.</p> <p>There is a dichotomy in evaluating the financial management system of the project. It can be seen that on one side is where SPC manages and provides guidance to the NTP for financial management procedures. SPC as fund manager has limited oversight on the day to day financial transactions of the NTP, and this role goes to the NTP manager and NTP coordinator. SPC does not have a dedicated staff to provide this level of oversight to the project. The NTP's management of the project finances thru implementation however presents a considerable amount of risk. Incorrect entry of activity codes in the cashbook shows that the NTP is reporting expenditures on incorrect budget lines which represents a risk for exhausting budget lines where there are still activities still left for the wrongly used budget line. Significant overspending on material expense categories such as HR indicates that the NTP is not monitoring their implementation budget.</p> <p>The is reflected on SPC since there is no sub grant agreement between SPC and the MHMS hence exposing SPC to financial risk by the NTP's lack of fiscal prudence</p> <p>A rapid assessment of the M&E System of the NTP shows that there is a big room for improvement.</p> <p>M&E Structure and Process</p> <p>There is no documented organizational structure/chart that clearly identifies positions that have data management responsibilities and there is no position dedicated to M&E and this is done partly by the NTP coordinator and reports from the NTP coordinator are reviewed by the NTP manager and NTP adviser. However, it is noted that the NTP coordinator is not reviewing the quality of data (i.e., accuracy, completeness,</p>
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	<p>timeliness and confidentiality). Lastly there is no training for staff aimed for data quality.</p> <p>Data Management</p> <p>There are no quality controls in place from when data from the paper based form is transferred to the electronic TB register. Essential fields such as treatment outcomes are incomplete. There is no written procedure to address late, incomplete, inaccurate and missing reports; including following-up with NTP staff who write on the TB register on data quality issues.</p> <p>Data Quality</p> <p>Using data quality dimensions, the NTP needs to improve on accuracy, completeness and integrity of the data that they put in the TB register</p> <p>NTP needs to harmonize itself with the MHMS where applicable. Staff recruitment and asset management run in standalone systems for some instances in the NTP. The move to assign orderlies to the NTP as DOTS workers represents some risks for the program as the learning curve might be too steep for some of the orderlies and this would setback the gains already made by the project. Overall, as stated previously in earlier sections, since there is no sub grant agreement between SPC and the MHMS, this represents a risk since the NTP has used this set up to their advantage in an offhand disposal of assets. Not only does present a risk for SPC being the grant recipient but for DFAT as well, that resources are mismanaged by the NTP</p>
Objective 5 – To strengthen TB intervention strategies through evidence-based operational research	<p>OR studies done and helped shape the design of the TB interventions in Kiribati. The same can be said of TA missions that provided evidence and technically sound recommendations to the NTP such as having an Isoniazid Preventive Therapy (IPT) register and putting children ages 0-4 that are deemed at high risk for TB on (IPT). While there are 3 more OR studies in the pipeline, the result of which is envisioned to contribute to better planning of the NTP and the MHMS as a whole</p>

The following is a tabulation of findings based on the additional evaluation criteria set out by this MTR

Coverage	<p>The project is reaching more people thru its active case finding initiative as evident in the increase in the number of cases notified to the NTP. As stated in the limitations, it is impossible to derive geographical coverage from the electronic TB register and thus a comprehensive review of the paper based TB register is needed to extract geographical coverage. Alternatively, the NTP should accommodate location data in the electronic TB register.</p>
Impact	<p>There is an indication from the case notification data that cases are still on the rise in Kiribati. This trend is contrary to the expected impact of the project of a reduced incidence by the end of the project. However, this is to say that the target set for incidence need to be revisited and the project is actually making a positive impact as more and more cases are expected to come with the introduction of the ACSM plan.</p>

Relevance	With the gains achieved thus far and potentially more in terms of increasing case notification, improving treatment outcomes the project is still relevant and that it can help move Kiribati forward towards TB elimination. Strategies such as active case finding, intensified contact tracing, laboratory strengthening are key components that impacted the project positively. Investigation is needed to ascertain factors that drive down the Treatment Success Rate. With the detected DRTB patient, support to addressing MDRTB remains highly relevant
Efficiency	<p>A number of risks both programmatically and financially has been identified by the evaluation team that affects efficiency. The NTP running in some instances, in isolation from the MHMS processes presents an operational risk and does not efficiently use resources available at the MHMS.</p> <p>Efficient use of time is also wanting, as a number of activities have been delayed due to timing issues and which reflects the time management skill of the NTP.</p> <p>While fiscal prudence is attributed to the check and balance role that SPC provides as grant manager, the oversight for daily operations and expenditures, mainly residing with the NTP, presents financial risk as attested by the overspending in HR and Fuel costs</p>
Effectiveness	<p>There has been an uptake in the number of cases notified to the NTP which over achieves the indicator for case notification. The under achievement for the treatment success rate should not be accepted at face value as a number of reasons could have affected the treatment outcome and can be remedied.</p> <p>The TB patients are treated using the International Standards of TB Care as gathered from interviews with patients.</p>
Monitoring and Evaluation	By not meeting certain data quality dimensions, it can be concluded that the data reporting and management system of the NTP needs improvement. Issues on data quality have been noted both from the electronic register and paper based registers
Sustainability	Sustainability of the project has yet to be established at this point in time. While plans are underway to absorb positions that have been instrumental to the gains that the project is enjoying, a much clearer picture must be painted by the MHMS on how it envisions the NTP structure to be after the project. While the MHMS indicated that the DOTS worker's positions can be absorbed, at risk to the project sustainability are the discontinuance of the additional laboratory staff and the CT nurses. The NTP coordinator post can be filled in by the deputy NTP coordinator. Key milestones for integration, initially tabled in the project proposal have not been met hence further downgrading the opportunity for full integration of the project with the MHMS
Gender Equity	There is no data to suggest that there is gender imbalance in seeking TB services. The ratio of male and female receiving TB services is up and beyond the Global figure

7. Recommendations

Tuberculosis remains in the strategic agenda of the MHMS. The target set by the MHMS at the end of 2019 for TB is attainable - 315 per 100,000 notification rate. However, at this point

in time it remains a question whether the traction that the project has thus far gained for the NTP will be sustainable, with key milestones for integration not met and much of the integration relies on increasing the budget of the MHMS for TB control.

While there is the existence of a draft ascension plan from the NTP, and that a thorough discussion needs to happen in order to formalize and finalize this document, there is an urgent need to catch up with activities that can make integration plans much realistic. In order to this a list of key activities from the work plan is suggested below for catching up.

- Procurement of digital chest x-ray machine and associated technical assistance
- International TB technical training (short attachments) of radiographers and clinicians with well-established clinical and digital radiology facilities
- ACSM consultancy to develop ACSM strategy, associated monitoring framework and capacity development plan
- Clinical training for doctors and nurses, including on diagnosis and management of pediatric TB
- Establishing referral systems between national TB programme and non-communicable diseases programme for bi-directional screening of TB and diabetes patients

In connection to this, and in order to ensure that these key items are implemented, there is a need to engage a project specialist to manage the project on a full time basis and should be working within the MHMS but reportable to the Permanent Secretary or to SPC, should SPC still wish to engage with the project. The project specialist's task is to ensure that project timelines are met by regular monitoring the progress of the project in terms of financial and programmatic areas of concern. This may entail a weekly update on the project status not just for tracking purposes but to also come up with suggestions on how to keep the project timeline in sync, resolve issues and mitigate risks. The project specialist should come up with a ranking of activities based on the work plan that have been poorly implemented and discuss with the NTP a realistic timeline in carrying out these activities. Having said this, it is envisioned that the project specialist should have enough experience with both programmatic and financial management.

There are points of integration that can already happen at this point in time such as harmonization with MHMS policies on Human Resource management and fleet management but a number of points for integration should take place for sustainability and proper management.

- A system wide M&E system should take place in order to streamline reporting for notifiable diseases. This will create an additional layer for checks by centrally placing the responsibility for managing data in the MHMS. Currently as observed there is no data quality check and reports that feed globally have data quality risks. The MHSM secretary has floated the idea of utilizing DHIS2 (District Health Information System), this is an avenue to pursued or whatever data collection and management system to use. This will also ensure proper mapping and identification of health centers in the country
- The procurement and supply management in the MHMS is not being fully utilized by the NTP. The pharmacy is using an information system as well. Although issues have been observed in the accuracy of the system due to human errors, lodging the supply management centrally will establish good practices for supply management

- While it is not recommended at this point in time to integrate with the financial systems of the MHMS, it can be ventured that side-along work with a staff from the MHMS' finance unit can take place so that at this point in time, the project financial information and structure can be recognized by the MHMS' finance unit and to estimate an integration timeline.
- With regards to the draft ascension plan and the disclosure of the MHMS secretary that the plan is for the MHMS to allocate hospital orderlies who will become redundant once the outsourcing scheme of the MHMS takes place, it is recommended that this must be reviewed carefully. The strength of the current staffing of DOTS workers is their contribution to having more cases presenting to the NTP clinic. With the expectation of having an ACSM strategy in place and further diagnostic capacity thru the digital X-Ray, it is likely that more cases might reported. If the MHMS will be able to free up a number of orderlies and can be engaged as DOTS workers, they should be On-The-Job trainees and be paired up with DOTS workers and supervised by the CT Nurses. This is to provide both the NTP and orderlies a chance to see the fit of the on-the-job staff for the role. A 3 month program may suffice to ascertain suitability. Ideally it would be effective to retain the present DOTS worker roster, but given the need to integrate this would be an alternative that the NTP can consider.

Below are more detailed recommendations for the consideration of the NTP, SPC and DFAT.

To the NTP

1. Adopt the active case finding efforts to the remaining 11 hotspots in Kiribati to ensure that "missing" cases are detected and reported. The NTP should start training nurses assigned to these hotspots for TB detection, sputum collection and proper recording and reporting
2. Build capacity for detecting pediatric TB cases. There is an allocation in the budget that has not been used for Clinical training for doctors and nurses, including on diagnosis and management of pediatric TB
3. Ensure that all suspects provide 2 AFB+ specimens before registering them as New Smear Positive patients.
4. Re-train DOTS workers and CT nurses in proper collection of sputum.
5. Regular cross checking of TB Register and Lab register should be done by the NTP Nurse and the Lab Supervisor to ensure that all patients who were tested positive for TB is enrolled to the DOT and overall, to check the consistency of both registers
6. With the ACSM strategy in the pipeline, ensure that Advocacy meetings are done regularly, especially to sites where active case finding is implemented to avoid misinformation to the community at large and to optimize reception of the DOTS workers.
7. Include capacity building activities for health workers in the collaborative framework for HIV and DM.
8. Conduct surveillance of TB disease prevalence among people with diabetes as this is essential to inform planning and implementation of the collaborative framework. This is also essential in contributing to detection of additional TB cases as well as in providing epidemiological data for decision-making on TB screening among people with diabetes.

9. Conduct regular surveillance to frontline workers involved in the collaboration framework and other wards in the hospital. Also include jail wardens during awareness campaigns in the prisons and conduct active case finding to the jail wardens. This activity has been under-utilized in the project budget.
10. Collaborate with other ministries that have gained traction in ACSM campaigns, such as roadshows conducted by Ministry of Women, Youth and Social Affairs (MWYSA). This provides an opportunity for the NTP to take advantage of the extensive network of the MWYSA and that it sustains the gain of gender balance for people receiving TB services.
11. Put in place and manage the following financial processes: Budget versus Actual analysis, Cashbook to Bank statement reconciliation, management of an updated Fixed Asset Register with book values.
12. Adopt a data flow system which guides staff collecting data on aggregating data and reporting the aggregated data to the NTP coordinator on a regular basis.
13. Adopt data quality checks to ensure that logbooks and other sources of data are consistent with the TB register. The same should be applied to quality checks between the laboratory register and the TB register, the paper based TB register and the electronic register
14. Build staff capacity for data recording and reporting
15. Strictly adhere to the MHMS administration policies on extending staff contracts
16. Utilize the transport unit of the MHMS for fleet management
17. Initiate discussion between MHMS and SPC for project integration to agree to the succession plan and agree to the extent of the milestones and delivery dates not only of the HR needs analysis but to the other components of the succession plan as well i.e. utilities, shipping fees, running of the *GeneXpert* among other things.

TO SPC

1. Consider commissioning a study or a TAG mission on factors affecting negative treatment outcomes in Kiribati. Also consider probing on the sudden increase in pediatric cases
2. Capacitate for M&E, staff involved in data recording on data quality and data management. Also consider commissioning a data quality audit first to identify capacity and system gaps for M&E
3. Consider executing a sub grant agreement between SPC and MHMS to promote accountability and stewardship of the project to the MHMS
4. Consider to include in the budget a program management training for the NTP manager that will increase capacity for budget programming, planning and M&E
5. Consider revisiting the targets for Case Notification and Incidence Rate in the performance framework. At the end of the project the estimated incidence for TB cases (all forms) to be going down.

TO DFAT

1. Consider engaging a project management specialist who will ensure that the project milestones are on time and that risks are averted or mitigated in meeting project milestones. The project management specialist should be independent of the NTP

adviser and NTP manager. DFAT can consider having this person report to SPC or to the Permanent Secretary

8. Lessons Learned

The active case finding initiative of the NTP is an excellent step towards TB elimination in Kiribati and can be a potential model for the region, the cost is high but the returns are valuable. House to house surveys are very useful and it can reach further heights if a good advocacy plan is in place.

Patient treatment management is found to be one of the strengths of the NTP, although limited in time, the Focus Group Discussion which was based on the International Standards for TB Care, found that the patients felt positive about the treatment and that communication with the patient was good in terms of treatment adherence and providing treatment enablers such as vitamins and pain relievers.

There are three core staff in the NTP that are responsible for the implementation of the project, both programmatically and financially. While oversight is provided by the NTP advisor, there seems to be a struggle for project management as evident in the lack of oversight or stewardship for project resources. This can be inferred through over utilization of the budget and a questionable asset management disposal incident. While it is important to note, however, that the NTP advisor provides overall technical direction and appears to be the most experienced in the project in terms of TB program management. What can be done better is to invest on the TB Program Manager or the anticipated replacement to undergo capacity building on project management and for the NTP coordinator, or the government funded staff, the deputy coordinator to be trained in technical matters, which include M&E and Case Management at the very least.

This review shows as well the important role of M&E in a project or a program. As with most of the Pacific Island countries, where populations are relatively low hence sample sizes are equally, relatively low, a mistake in recording treatment outcomes, even for just a few cases will have a significant effect in correctly presenting country data.

This review also shows the significance of having project management expertise in running health programs. Good management practice would recommend that high level staff be less involved with technical work but should give more attention on management and efficiency. As with the case of the NTP, both the NTP advisor and the NTP manager perform highly technical roles, which showed that project management has been overlooked and has resulted in ad hoc project management roles

9. Annex

In consideration of the file size that the full set of documents will affect this report, a list of Annexes is provided with a link to a cloud storage to be maintained by the review team for 6 months until finalization of this report and can be downloaded thru this link – <https://onedrive.live.com/redir?resid=C039C9D172D33267!2288&authkey=!APqhdi6Ljbow9mI&ithint=folder%2c>

The following is the Annex List:

1. Annex A – Mid Term Review Terms of Reference
2. Annex B – Detailed Evaluation Plan
3. Annex C - Project Documents Reviewed
4. Annex D – Data Collection Instruments
5. Annex E – List of People Met