REVOLUTIONARY GOVERNMENT OF ZANZIBAR

MINISTRY OF HEALTH

ZANZIBAR INTEGRATED HIV, TUBERCULOSIS & LEPROSY PROGRAMME (ZIHTLP)

National Tuberculosis and Leprosy Research Agenda

2016/17 – 2019/20

December, 2016

ZANZIBAR TB AND LEPROSY

RESEARCH AGENDA

2016/17 – 2019/20

Table of Contents

FOREWORD

Ministry of Health Zanzibar through Zanzibar Integrated HIV, TB and Leprosy Programme (ZIHTLP) has a mandate to develop strategy plan for TB and Leprosy services. Together with this, there is monitoring and evaluation and research agenda documents. These documents elaborate issues pertaining to research, monitoring and evaluation using health care facilities (Primary Health Care Units and hospitals), institutions such as Public Health Laboratory (PHL) and Central TB Reference Laboratory (CTRL). The programme has developed this research agenda to provide an orientation for researchers, implementers, academicians and development partners with a common focus and vision.

Research coordination is done by the MoH and is implemented through ZIHTLP, these are executed at central, health facilities and community levels to ensure that research and evaluation findings are used to inform and guide the intervention programs. ZIHTLP has developed this TB research agenda to facilitate that implementation.

The agenda that outlines research priorities for the next years (2016– 2019) is important and has come at the right time. The purpose of the Agenda is to guide ZIHTLP; individual researchers; research institutions at local, regional, and international levels; and other stakeholders, including policy/decision makers to prioritize and harmonize research and evaluation on TB and Leprosy in the country. .

To achieve the objectives of heath sector strategic plan it is important that health care needs and the delivery of health services be prioritized in a systematic and rational way so that resources are fully utilized to attain maximum positive impact. Prioritize and other program decision. Cannot be affectively made unless they are informed by relevant information generated by high quality research.

It is against this background the ZIHTLP has developed this research agenda that identified research priorities in TB and leprosy.

All stakeholders are expected to formulate innovative plans that are aligned to the national agenda, and are urged to collaborate and keep the national agenda in mind. the MoH is determined to

support all stakeholders and to facilitate the synergy of the various efforts from all players in the fight against TB and leprosy

It is my sincere hope that all stakeholders shall join the fight against TB and leprosy using this this research Agenda as a platform. I wish to assure you on the government's commitment to implementing this new research agenda, 2016- 2019.The government will continue to work with the development partners and other stakeholders in response to TB/Leprosy.

ACKNOWLEDGEMENT

The Research agenda of TB and Leprosy under Zanzibar Integrated HIV, TB and Leprosy Program (ZIHTLP), was developed through the collaborative efforts of a wide range of individuals and organizations. A broad based consultative approach was taken to ensure the new agenda is basing on gaps identified through the current (2015 -19) ZIHTL strategic plan. The contributors were drawn from a number of departments and units of Zanzibar Ministry of Health (MoH), Zanzibar AIDS Commission, National Tuberculosis and Leprosy Programme and other sector. A list of their names can be found in Appendix 4.

The MoH wishes to acknowledge with gratitude of all valuable contributions which led to the development of this agenda that outlines TB and Leprosy health research priorities for the next four years (2016–2019). The MoH would also like to register its appreciation to the participants who worked for the period of development of these agendas.

We also recognized the highly significant financial support provided by the Global Funds against AIDS, Tuberculosis and Malaria through grant Number QNB-C-MoH also appreciate the technical support from the Tanzania Ministry of Health, Community Development, Gender, Elderly and Children (MoHCDEC) through NTLP facilitated by Dr. Zuweina Kondo and Dr. Johnson Lyimo. The MoH thank for their tiredness effort and hardworking style.

Finally, but not least, MOH highly recognize the efforts made by the ZHTLP team supervised by the Programme Manager Dr. Farhat Jowkhar Khalid, with assistant of Head of the ZIHTLP Strategic Information Unit Ms Asha Ussi Khamis who developed the Terms of Reference and coordinated all activities related to its development.

Furthermore, we thank all who participated in this task.

EXECUTIVE SUMMARY

The Ministry of health (Moh) through the ZIHTLP has developed a National TB and Leprosy research agenda (MTLREA) that outlines TB and Leprosy research priorities for the next 4 years (2016-2019). The Agenda includes research priorities aimed at objectively reviewing the different TB and Leprosy interventions that are currently in place. This agenda, apart from informing individual researchers, institutions, programmers, policy makers, and other stakeholders for key national TB and leprosy research priorities, will assist ZIHTLP coordination mandate of TB and leprosy health research and activities in the country. The aim is to ensure a coordinated and effective effort in response to the TB and Leprosy epidemic.

Gaps in TB and Leprosy Strategic plan 2015 -2019 were identified and discussed. This workshop included participants from the MOH, NTLP and other government sector, Research unit and other key stakeholders. During the 5-day workshop, participants identified research and evaluation priorities based on the 6 strategies:

- prevention;
- Treatment;
- laboratory;
- information, education, communication (IEC)/behavior change communication (BCC); and
- health systems strengthening.

This final Agenda was vetted and approved during the final plenary session of the workshop. This activity was overseen by the ZIHTLP. The team who implemented the process leading to the agenda included members from NTLP, all of whom are recognized for their immense contribution.

LIST OF ABBREVIATIONS

AIDS	Acquired Immuno - Deficiency Syndrome
ART	Anti-Retroviral Therapy
ARV	Anti-Retroviral
CBO	Community-Based Organization
CMS	Central Medical Store
CSO	Civil society Organizations
CTRL	Central Tuberculosis Reference Laboratory
DOTS	Directly Observed Treatment Short-course
DTLC	District Tuberculosis and Leprosy Coordinator
DRS	Drug Resistance Surveillance
FBO	Faith-Based Organization
GF	The Global Fund
HIV	Human Immuno-deficiency Virus
HSSP	Health Sector Strategic Plan
IEC	Information, Education, Communication
IPT	Isoniazid Preventive Therapy
IUATLD	International Union Against Tuberculosis and Lung Diseases
KNCV	Royal Netherlands Tuberculosis Foundation
MDG	Millennium Development Goal
MDR-TB	Multi-drug Resistant Tuberculosis
MNCH	Maternal New Born and Child Health
MOH	Ministry of Health
NGO	Non-Governmental Organization
NTLP	National Tuberculosis and Leprosy Programme
PHL	Public Health Laboratory
PMTCT	Prevention of Maternal to Child Transmission
POD	Prevention of Disabilities
PRSP	Poverty Reduction Strategy Plan
RTLC	Regional Tuberculosis and Leprosy Coordinator
SOP	Standard Operating Procedures
SWOT	Strengths, Weaknesses, Opportunities and Threats
SWAp	Sector-Wide Approach
TB	Tuberculosis
TBL	Tuberculosis and Leprosy
TLCU	Tuberculosis and Leprosy Control Unit
VCT	Voluntary Counselling and Testing
WHO	World Health Organization
ZTLP	Zanzibar Tuberculosis and Leprosy Programme
ZIHTLP	Zanzibar Integrated HIV, Tuberculosis and Leprosy Programme
3Is	Intensified Case Finding, Isoniazid Prophylaxis, Infection Control

1.0 BACKGROUND

1.1 TB AND LEPROSY SITUATION IN ZANZIBAR

United Republic of Tanzania ranks among 30 highest TB burden countries in the world. The first National TB Prevalence survey report of Sept 2013 in the United Republic of Tanzania has estimated prevalence rate of 124 per 100,000 population. The epidemiological profile for Zanzibar conducted in 2014 showed that TB notification rate in Zanzibar has increased in the last 10-year period from 38.4 in 2000 to 51.1 in 2013.

Treatment success rate trend for all new smear positive patients is varying each year, but improving. The average success rate for all patients for the period 2011 – 2015 is 90%. Treatment success rate for women (85.2%) was better than that for men (81.2). In the last five years' treatment success rate was more than the WHO target of 85% success rate. The overall death rates for the period 2003 – 2012 seems to be on the decline from over 8% to 3%.

MDR-TB cases notified in Zanzibar is still low. The first case of MDR-TB in Zanzibar was diagnosed in 2009 in Pemba. Since then the average notification is one or two cases per year. The National Drug Resistant Survey (DRS) of 2007 indicated that the MDR-TB burden is low (1.1% in new, 3.9% in retreated cases). The low MDRTB burden is probably the result of tight basic TB control over 30 years, but each case represents the possibility of transmission, and is very expensive to treat.

The coverage of HIV testing among TB patients has been fluctuating. The proportion of female and male TB patients tested practically was equal. Among all TB patients tested for HIV, an average 16% tested positive. This percentage fluctuated somewhat over the years. The proportion of HIV positive among female TB patients was 22% which is substantially higher than that of male TB patients who tested HIV positive (15%), which is similar to other countries. (ZIHTLP 2015-2019 TB &leprosy Strategic plan).

Childhood TB covers the age group of 0-14 and according to WHO[1] this should normally consist of 5 -15% of the total number of notified cases. In 2014, a total of 102 (15.7%) childhood TB cases were notified among all cases and in 2015 17% (145) of all cases were children. The Ministry of

[1] WHO benchmark: Among new TB cases, the percentage of children diagnosed with TB is between 5-15% in low- and middle- income, and < 10% in high-income countries (WHO pre-publication 2014)

health Zanzibar through ZIHTLP in collaboration with Ministry of health Tanzania mainland and other partners has now developed childhood TB manuals along with training materials and job aids and have revised the M&E tools to incorporate children. The roll out of Xpert MTB/RIF machines will improve case detection by including children in the algorithms. HIV counseling and testing among children with TB is performed in an integrated manner as part of comprehensive HIV care under one roof especially at Mnazi mmoja hospital.

The programme still faces some challenges as case detection relies on clinical evaluation and the use of score charts with limited capacity at the peripheral health facility. There is no clear mechanism for linking adult services where TB is diagnosed; to child health services to facilitate screening and management of child contacts. There is gap in contact tracing of smear positive TB patient and chemoprophylaxis of children below 5 years of age

Leprosy situation

Although MDT results are fairly good in Zanzibar, the number of newly detected leprosy patients with disabilities has not significantly declined. According to Annual Reports Number of all new leprosy patients registered has decreased from 177 in 2014 to 104 in 2015. The case detection rate was slightly less than 1 per 100,000 populations. Among all new cases registered the percentage of MB patients, which is the source of Leprosy infection, has increased from 56% (101/177) in 2014 to 71% (74/104) in 2015. Nearly 93% of the new multi-bacillary leprosy cases completed 12 months of MDT treatment. However, the treatment completion rate is below the WHO target of 95%. Among the 104 new Leprosy cases diagnosed in 2015, thirty-eight (38) patients had disability grade 1 and six (6) had grade 2. The percentage of Leprosy cases with disability grade 2 has increased from 3% in 2014 to 5.8% in 2015. Among factors contributing to this was delay in diagnosing of Leprosy among HCWs due to inadequate knowledge and patients delay in seeking health care services caused by low awareness on Leprosy.

The trend of registered new leprosy cases has been fluctuating in the last 4 years with prevalence rate of around 1 case per 10,000 populations similar to the WHO elimination target. Tanzania has been declared to have reached the leprosy elimination targets in 2006. Zanzibar still has some districts with high prevalence of leprosy above WHO targets including South, Central, West and Micheweni administrative districts.

1.2 NATIONAL TB AND LEPROSY CONTROL STRATEGIC PLAN

Currently the ZIHTLP is implementing its 2015-2019 TB and Leprosy Strategic Plan which have the following Vision and Mission:

Vision – Zanzibar free of new HIV, Tuberculosis and Leprosy infection

Mission – To prevent and control the spread of HIV, TB and Leprosy infection among the General and most at risk Zanzibar population

The main Goal of the plan is to reduce the incidence by 25% and mortality by 50% of TB and Leprosy by 2019

The following are the Specific objectives

1. To provide universal access to quality assured services to detect and treat 90% of all forms of estimated TB cases by 2019
2. To diagnose and properly manage all estimated MDR TB cases by 2019
3. To increase the proportion of TB patients co-infected with HIV receiving timely ART from 52% to 100% by 2019
4. To reduce new Leprosy cases with disability grade 2 from 0.9 to 0.3 per 100,000 population by 2019

To attain the above objectives, the plan has identified 8 key Strategies which will facilitate the attainment of the set objectives. The following are the key strategies:

Strategy 1: Scale up TB diagnostic services based on newer technologies for all forms of TB, including special focus on childhood TB

Strategy 2: Strengthen integrated patient centred care and prevention for all forms of TB

Strategy 3: Scale up the programmatic management of drug resistant TB

Strategy 4: Strengthening the implementation of TB/HIV collaborative activities in Zanzibar

Strategy 5: Strengthen prevention of disability due to Leprosy

Strategy 6: Foster partnership with non-health sectors, other health programmes, NGO, community groups and Civil Society to ensure the successful implementation of ZIHTLP

Strategy 7: Contribute to health System Strengthening based on Primary Health Care

Strategy 8: Enable and promote TB and Leprosy research with a focus to improve programme performance

2.0 INTRODUCTION

This national TB and leprosy research for the next 5 years (2016/17–2019/20). The agenda is intended to guide the National HIV, TB and leprosy control programme (ZIHTLP); individual researchers; local, regional, and international research institutions; and other stakeholders, including policy and decision makers, to prioritize and harmonize research on TB and leprosy in Zanzibar. This agenda seeks to promote research and evaluation to inform TB/Leprosy prevention, treatment, and care; support and impact mitigation; and ensure that research findings are used effectively. Implementation of the agenda will inform individual researchers and institutions of key priorities and will assist ZIHTLP in its coordination mandate of the health sector TB/Leprosy research. The agenda is also intended to ensure that the research activities that are undertaken contribute to the national response.

2.1 STATUS (ACHIEVEMENTS AND CHALLENGES) IN TB RESEARCH IN ZANZIBAR

The previous strategic plan emphasized the need for TB and leprosy research agenda. Several researches on TB and Leprosy have been conducted in the country for the past decades. however most of the research lacks focus of the country priorities in the control of these diseases. In addition, the implementation of these researches and dissemination of their results have not been conducted in an organized and coordinated manner. The TB and Leprosy research agenda is developed with the aim to provide guidance and coordination to all stakeholders in the conduction of these researches. This will assist the program and the country as whole to attain its targets.

2.2 ORGANISATION OF THE RESEARCH AGENDA

This agenda has been developed based on the TB and Leprosy strategic plan 2015-19. Where by the key gaps were identified from strategies; of which research topics/agendas were obtained. The developed agenda is also considered other key national and global documents, such as the MOH health sector strategic plan, the Tanzania National TB research agenda, the WHO TB strategies including STOP TB Strategies and END TB Strategies 2035.

The developed Research agenda has prioritized main areas for research implementation; hence, which will provide evidence based solutions to assist and accelerate the achievement of the set targets. These results are important for decision-making in line with national priorities. This

document will also serve as a resource mobilization tool, sets future direction and defines a baseline to monitor progress towards targets and impact of the interventions. The agenda has four years' implementation plan.

3.0 GOAL AND OBJECTIVES OF THE NATIONAL TB AND LEPROSY RESEARCH AGENDA

3.1 Goal

The overall goal of the NTBLRA is to guide researchers, policy makers, program implementers, academic institutions, health development partners and other stakeholders on research priorities for TB and Leprosy in Zanzibar.

3.2 Specific Objectives

The specific objectives of the agenda are to:

1. Promote the conduct of TB and leprosy research responsive to the priority needs of Zanzibar.
2. Facilitate the mobilization of resources for the conduct of locally relevant TB and Leprosy research
3. Promote multidisciplinary and collaboration in the conduct of research
4. Facilitate the coordination of health research conducted by various stakeholders
5. Promote the strengthening of capacity for conducting research in Zanzibar

4.0 METHODOLOGY

The agenda was developed through a five days' consultative workshop which consisted members from various programmes, units and sections within the Ministry of Health and Second vice president's office (see annex 1). A National Strategic Plan (2015 – 2019) for Tuberculosis and Leprosy was used as a main reference to draw the gaps; other gaps were also drawn from other documents like annual reports etc. The participants were divided in to four groups and assigned to go through the laid down eight strategies from the strategic plan in order to identify gaps and challenges, each group had two strategies to work on.

Each group presented a number of gaps in a plenary. Through the discussion, the presented gaps were later prioritized and came up with the research topics. Finally, each group developed research questions with justifications from the agreed topics.

5.0 GAPS IN TB AND LEPROSY RESEARCH

These gaps were identified through review of the existing literature on TB and leprosy and intensive consultations with a variety of stakeholders.

Gaps identified for Strategy 1

1. TB rate among TB risk group is not known
2. Low childhood TB case detection
3. Low suspicious rate among HCPs
4. Low coverage on TB management training for health care workers
5. Low positivity rate from microscopy sites and Gene X pert site

Gaps identified for Strategy 2

1. Inadequate implementation of community DOT services
2. Low Community awareness on TB

Gaps identified for Strategy 3

1. Knowledge of capacity of the country to manage MDR TB
2. Low cases diagnosis of MDR TB cases
3. Unknown prevalence and estimations of TB Drug resistance among TB cases.

4. Inadequate adherence of MDR TB patients to treatment

Gaps identified for Strategy 4

1. Low number of TB/HIV positive patients enrolled in to the ART program.
2. Low uptake of IPT at Chake Chake and Mnazi mmoja CTCs.
3. TB recurrence to PLHIV patients who are on IPT in Zanzibar

Gaps identified for Strategy 5

1. Poor Community awareness: e.g. awareness on signs and symptoms, cultural believes, attitudes,
2. Stigma
3. Inadequate HCWs skills in the management of leprosy and disabled leprosy patients
4. Poor leaders (political, local, community, religious, traditional,) involvement on leprosy
5. High incidence of leprosy reaction

Gaps identified for Strategy 6

1. Low number of case reported from private health facilities
2. Inadequate involvement of private health sectors, traditional healers and NGOs on TB interventions
3. Inadequate private HCWs skills in the management of TB
4. Poor coordination of Partners: coordination of TB activities: workplan, quarterly /annually meetings, lack of coordinating bodies for CSOs TB activities
5. Poor implementation of work place TB control policy
6. Low integration of TB interventions in non-health sectors

Gaps identified for Strategy 7

1. Inadequate impact of conducted trainings of health care workers translating in to practice
2. Inadequate impact of supervision and mentorship interventions to improve TB services
3. Inadequate space in laboratories (PHCUs), CTC, OPD, TB wards, TB clinics etc. to effectively implementation of TB IPC interventions.
4. Poor quality of TB data reported in HIMS by health facility level staff as verified through routine data quality assessment.

5. TB mortality data not link to the vital statistics registry
6. Insufficient capacity of newly recruited staff from training institutions to diagnose and manage TB patients

Gaps identified for Strategy 8

1. Lack of TB research agenda and implementation of TB related research
2. Inadequate knowledge of ZIHTLP staff at all levels to conduct TB related research
3. No database to track TB research in Zanzibar

6.0 PRIORITY RESEARCH AGENDA FOR ZANZIBAR

This section presents the key research areas for Zanzibar. The priorities are organized in eight areas based on the strategies in the National TB and leprosy Control Strategic Plan 2015/16 - 2019/2020. Within each of research areas, priorities are articulated in specific subthemes. An attempt has been made to outline these priorities within each sub-theme under the following structure: Epidemiology, Prevention, Diagnostics and Treatment. This structure has been followed for all disease-based thematic areas. The research priorities are outlined in a reasonably broader sense with a view of allowing a researcher to have discretionary opportunity and flexibility to design specific research studies that address a particular identified topical area of priority research.

Strategy 1**:** Scale up TB diagnostic services based on newer technologies for all forms of TB, including special focus on childhood TB.

No	Gaps	Research Question	Justification
1	TB burden/rate among TB risk group is not known	1. What is the TB rate among risk groups?	Data showing TB cases notified among TB risk group is not available (routine data not disaggregate. The findings will determine if there is a need for specific intervention for high risk groups
2	Low childhood TB case detection	1. Factors contributing to low child hood TB case detection 2. Sensitivity of the diagnostic methods (based on our guideline) of TB in children	Only 3% child diagnosed in 2016 while our target is 15% of all diagnosed cases
3	Low TB suspicious index among HCPs	1. Asses HCPs knowledge and skills on TB management at all entry points.	TB case detection is still low despite the fact that significant number of patients with presumptive TB symptoms are registered in the cough book. (Supervision and quarterly reports)
4	Low positivity rate from microscopy sites and Gene X-pert site	Why sputum specimen positivity rate is low What are the factors contributing to low sputum specimen positivity rate	Procurement of Gene X-Pert was expected to increase TB case detection. However, the number of samples examined using Gene X-Pert does not reflect the expected positivity rate

Strategy 2: **Strengthen integrated patient centered care and prevention for all forms of TB**

1.	Inadequate/inappropriate implementation of community DOT services	Factors contributing to inadequate implementation of community DOT	DOT is a strategy to assure adherence, hence good treatment outcome. However, it has been reported patients who opted for community DOT (most of patients) seems not to be observed by their treatment supporters
2.	Low Community awareness on TB	Conduct KAP study for TB	Low case detection, low suspicious index and late diagnosis are highly suggested that community awareness is low

Strategy 3: **Scale up the programmatic management of drug resistant TB**

The programme expects to build capacity to diagnose and treat drug resistant TB in Zanzibar based on PMDT guidelines. It is expected that the programme will able to diagnose and enroll on treatment between 8 – 17 cases annually as per the estimates of MDR-TB burden in Zanzibar. PHL will have the capacity to do TB culture and DST and there will be a pool of health workers experienced in the management of MDR-TB and its adverse reactions.

1.		Asses capacity of the country to manage MDR TB	MDR TB cases historically were managed in Kibong'oto during intensive phase. Recently ZIHTLP decided to start MDR TB services in Zanzibar. Although there have been training on PMDT for some staff, the capacity of the program and infrastructure has not been assessed. The aim of the proposed assessment is to get information that will be used to improve the quality of services.
2.	Low Community awareness on TB	Explore factors that hinder diagnosis of MDR TB cases.	According to ZIHTLP annual reports of 2013 to 2015 only 3 to 4 cases of MDR TB cases were diagnosed in the country. According to MDR TB burden (NSP TB&LP 2015/19) it is estimated 8-17 cases to be diagnosed and enrolled annually. The findings will help to develop strategies to increase recruitment of MDR TB cases.
		Conduct surveillance for TB Drug resistance among TB cases.	The last TB drug resistance survey 2005/06 did not produce information specific for Zanzibar. However, the

			ZIHTLP plans to conduct this surveillance of drug resistance among TB cases. Findings of the surveillance study will provide information on the magnitude and types of resistance. The finding will also enable the program to prevent further increase of drug resistance TB.
		Study on factors contributing to inadequate adherence of MDR TB patients to treatment	Long duration of treatment and serious side effects reduces capacity of patients providing to their families the necessities. If these undesirable situations are not addressed the patient adherence to treatment will be severely challenged. In order to have good outcome, psychosocial and economic issues of the patients and their families must be considered.

Strategy 4**: Strengthening implementation of TB/HIV collaborative activities in Zanzibar**

1.		Asses factors that contribute to Low number of TB/HIV positive patients enrolled in to the ART program.	Studies showed that better outcome realized if TB/HIV patients on TB treatment are also enrolled in the ART program within 2 weeks from the start of TB treatment. The existing data (ZIHTLP 2015) showed that proportion of TB patients tested for HIV testing is high at around 100% while the proportion of TB/HIV patients receiving ART is at 86%. The findings of the study will provide information on the reasons for this and enable program to develop strategies to address the problem.
2.	Low Community awareness on TB	Explore factors that contributing to low uptake of IPT at Chakechake and Mnazi Mmoja CTCs.	IPT is recommended to be effective in reducing reactivation of latent TB among PLHIV (WHO…..). In Zanzibar, the IPT program started 4 years ago, as pilot in Chakechake and recently scaled up in Mnazi Mmoja CTC. The existing data reveled low uptake of IPT in both centers. The study results will be used to increase enrollment in the centers and map out scale up strategies.

		Determine of TB recurrence to PLHIV patients who are on IPT in Zanzibar	The ZIHTLP implementing IPT to PLHIV; it is documented that PLHIV who are in IPT can stay for two years without TB infection. There is a need to review recurrence of this intervention for proper implementation and updated Zanzibar data.
		Conduct demonstration project to provide evidence for the relevance of TB/HIV coordinating committees Conduct historical comparison study to provide evidence for the relevance of TB/HIV coordinating committees	Coordination of TB/HIV at the zonal and district level is crucial. The committees existed for more than 6 years but its impact and relevance were not documented. The study will compare matched districts (control and intervention) against the set of agreed indicators. The finding will guide the program on the way forward.

Strategy 5**: Strengthen prevention of disability due to Leprosy**

5.1	Poor awareness on Leprosy diseases (: e.g. awareness on signs and symptoms, cultural believes, attitudes), among key stakeholders (community, political and religious leaders e.t.c)	KAP study on leprosy diseases among Key stakeholders (community, political and religious leaders etc.) in Zanzibar	Low leprosy cases detection (ZIHTLP annual report 2015), data on KAP on Leprosy disease are not available for Zanzibar, Recent focus only on endemic areas (ZIHTLP annual report 2015) Evidence of notifying more patients during active case finding (ZIHTLP annual report 2015) In adequate resources allocations to the leprosy interventions (ZIHTLP annual report 2015)
5.2	Stigma	Stigma index survey on Leprosy	There are no formal documentations on stigma on leprosy: no research conducted on leprosy to measure the level of stigma at any level in Zanzibar (assumption…….)

5.3	Improper management of leprosy and disabled leprosy patients	Assessment on the management of leprosy patients in Zanzibar Are recommended resources in the management of leprosy patient available in Zanzibar?	Low suspicious index of the HCWs on leprosy cases (ZIHTLP Annual Report 2015) Lack of Pre-service training curriculum addressing leprosy management according to the guideline (TB and Leprosy Strategic plan 2015 -19)
5.5	High incidence of leprosy reaction among the patients Leprosy drug toxicity	Assessment on the magnitude of leprosy drug toxicity/ incidence of leprosy reaction	Patients with drug reactions develop disabilities

Strategy 6**: Foster partnership with non-health sectors, other health programmes, NGO, community groups and Civil Society to ensure the successful implementation of ZIHTLP**

5.1	Low number of cases reported from private health facilities	What factors causes low cases notified from private health facilities	Low number of cases reported from private health facilities (ZIHTLP Annual Report 2015) PPP is a crucial/key component in the country's strategy (MKUZA 2015-2020, HSSP 2015 – 2019, TB &Leprosy SP 2015 – 2019)
5.2	Inadequate involvement of private health sectors, traditional healers and NGOs on TB interventions	What factors causes low involvement of Private health sectors, traditional healers and NGOs in TB Interventions	Few non-governmental organizations involved in TB interventions. (ZIHTLP Annual Report 2015) PPP is a crucial/key strategy; They are key stakeholders in the control of the diseases (MKUZA 2015-2020, HSSP 2015 – 2019, TB &Leprosy SP 2015 - 2019) Few numbers of NGOs working on TB interventions
5.3	Inadequate private HCWs skills in the management of TB: (Improper management of Tb patients by HCWs in the private healthcare facilities)	Are TB patients from the private health facilities managed according to the guidelines? Are recommended resources/working tools in the management of TB patient available in the private facilities?	Low suspicious index of the HCWs on TB cases It has been identified that patients in private facilities are not managed according to algorithm PPP is a crucial/key strategy; They are key stakeholders in the control of the diseases (MKUZA 2015-2020, HSSP 2015 – 2019, TB &Leprosy SP 2015 - 2019)

6.4	Poor coordination of Partners: coordination of TB activities: work plan, quarterly /annually meetings, lack of coordinating bodies for CSOs TB activities	What is the existing modality of coordination of the Ips What is the best modality of Implementing partner's coordination's	Duplications of efforts Un harmonization of work plans
6.5	Poor implementation of work place TB control policy	To what extent workplace policy functional: Status of implementation the TB workplace policy	Poor evidence of workplace activities focusing TB control
6.3	Low integration of TB interventions in non-health sectors	Status of the TB interventions in the Non-Health Government sectors	high TB burden necessitate control at all levels, sectors
5.5	High incidence of leprosy reaction among the patients Leprosy drug toxicity	Assessment on the magnitude of leprosy drug toxicity/ incidence of leprosy reaction	Patients with drug reactions develop disabilities

Strategy 7**: Contribute to health System Strengthening based on Primary Health Care**

SN	GAPS	RESEARCH QUESTION	JUSTIFICATION
1	Inadequate impact of conducted trainings of health care workers translating in to practice.	Why trainings of health workers do not adequately improve TB service delivery	Routine program supervision visit reveal low TB suspicious index despite many trainings have been provided. The program realized that the impact of training may be unsatisfactory
2	Insufficient capacity of newly recruited staff from training institutions to diagnose and manage TB patients.	Assess factors contributing to low knowledge and skills for newly recruited staff on TB diagnosis and management	The performance of newly recruited staff is unsatisfactory based on supportive supervision findings. Resources are used to provide in- service training for new employees.
3	Poor quality of TB data reported in HMIS by health facility level staff as verified through routine data quality assessment.	Assess factors relating to poor reporting of routine TB data at health facility level	Staff at health facility level are producing incomplete, inaccurate TB reports (*National strategic plan 2015 – 2019 for TB and Leprosy control -SWOT analysis)* -Inconsistency of data between HMIS and program data

4	Inadequate impact of supervision and mentorship interventions to improve TB services.	Assess factors leading to inadequate impact of supervision and mentorship in improving TB services	Low improvement of TB service delivery despite regular supportive supervision and mentorship as identified during supportive supervision

7.0 IMPLEMENTATION STRATEGY

7.1 Operationalization of the Research Agenda

The implementation of the TB and Leprosy Research Agenda will be a vital instrument for the ZIHTLP to support the continuous generation of evidences needed to inform program strategies, and implementation needed to achieve the control of TB and Leprosy diseases in Zanzibar. To maximize the potential for the implementation of this research agenda, there is need for the involvement of all the stakeholders at both national and international levels in the design and execution of the research priorities. While several partners involved in research will support the implementation of this agenda, the ZIHTLP, which is responsible for the control of the two diseases, will also be responsible of the execution of this agenda. With the support of the existing research boards and committees, the Program, will advance the objectives of this research Agenda.

This agenda is in line with TB and Leprosy strategic plan (2015-2019) and the research priorities in the agenda will be implemented within the five years of the strategic plan. Key stakeholders in the implementation are MOH, ZIHTLP, ZAMREC, MMH, PHL, Zanzibar institute for research, Ifakara Health Institute, Universities, CSOs, Development partners such as WHO, USAID, GRLA and other Implementing partners. It is therefore, expected that stakeholders will make deliberate efforts in conducting and supporting research in the identified priorities. ZIHTLP will identify technical committee to oversee the compliance of the research being conducted and continuous provide technical advice/input to ZIHTLP.

As public resources for doing research are oftentimes limited, the available resources will be focused mainly in the priority areas identified in this document. The Program will take a lead in exploring and solicit resources to implement the agenda.

In order to promote the ownership in the planning and execution of the RA, the partners' efforts shall aim at nurturing the capacity development of ZIHTLP by disseminating this document and

by conducting and publishing research outcomes. However, it is important to consider the limitations of ZIHTLP capacity to conduct operational research. That is why partnerships are necessary to conduct research while building local capacity. Therefore, ZIHTLP will make a plan for capacity enhancement of its staffs to ensure quality operationalization of the agenda. The following are among the plans to achieve this:

- Training on research of TB and Leprosy topics to be included into new proposals/funding model
- Promote use of TB research agenda in generating student projects in high learning institutions e.g. SUZA/ZAMREC Obtain
- Establishing awards for student projects addressing TB and Leprosy research agenda
- Promote attendance to online courses for example coursera, UNION
- Share advertisements for research courses from other institutions

The strategic information unit will be responsible for the monitoring and evaluation of the agenda, documentation and dissemination. Furthermore, the unit will lead the implementation by making plans and coordinate dissemination of the agenda, mapping resources, organize and coordinate technical committee meetings and monitor identified funded researches. The program will plan to hire an officer who will be responsible for the coordination of the agenda. The dissemination of related operational research findings will always first be targeted at the local audience before publication in national, regional and international scientific journals. The ZIHTLP, Academic partners, health care workers and the targeted community members will be included in dissemination events.

7.2 Technical Committee for the operationalization of the agenda

The TB Research technical committee is an organ of the Ministry of Health under ZIHTLP. It is composed of a wide range of experts to advocate, advice, facilitate, and create a forum of interface between program personnel and researchers to understand and complement each other in priority setting, capacity building, generation and utilization of locally available evidence and providing technical support and guidance in all TB related research in Zanzibar. The committee will compose not more than ten members including representatives from implementing and development

partners, research institutions in the country. The committee will meet on quarterly basis to discuss all key issues pertaining to their roles and responsibilities.

The committee will be chaired by ZIHTLP Program manager and deputy chair will be Head of research unit. The secretariats team will compose a team of four members from ZIHTLP Strategic Information Unit and Research Unit from Ministry of Health.

The following are the members of committee;

1. Program manager – ZIHTLP - Chairperson of the committee

2. Head of research unit – Ministry of health - Deputy Chairperson of the committee

3. Academic officer – school of health (SUZA)

5. Zanzibar coordinator - Tanzania commission for science and technology (COSTECH)

6. Director public health laboratory Pemba (PHL)

7. Head of research unit - Mnazi Mmoja hospital

8. Liaison officer - WHO Zanzibar

9. Representative from implementing partners

10. Secretary of Zanzibar Medical Research Ethical Committee (ZAMREC)

SECRETARIAT:

A secretariat will be composed of four members

1. Strategic Information Unit - ZIHTLP
2. Research unit – MOH

DUTIES OF TECHNICAL COMMITTEE

1. Coordinate and oversee implementation of research related to TB and Leprosy
2. Alignment of research to the national priorities and TB and leprosy research agenda.

3. Ensure quality of ongoing TB and leprosy research
4. Facilitate dissemination of research findings to different stakeholders.
5. Promote uptake and implementation of positive research findings, innovation and best practices in order to improve programmatic implementation.
6. Mobilize resources for conducting identified research priorities in collaboration with Government of Zanzibar and donors
7. Ensure existence of TB and leprosy research inventory in Zanzibar
8. Ensure ethical approval of all TB and leprosy research by ZAMREC and data protection through instituting data transfer agreement

DUTIES OF SECRETARIET:

1. Organize technical committee meetings
2. Prepare and maintain meeting minutes
3. Follow up on matters arising from previous technical committee meeting
4. Facilitate OR capacity building activities at all level.

8.0 AGENDA FINANCING

Resource mobilization is crucial for the implementation of the research agenda. Four strategic steps have been identified in planning for resource mobilization:

1. Map potential donors

There are different institutions that are supporting or willing to support research in Zanzibar. To support implementation of the research agenda, Zanzibar Integrated TB and Leprosy program will take initiative to map existing and potential donors. The main purpose of mapping is to identify potential donors, local and international, who can provide technical and financial support to conduct the research of interest.

The mapping process will involve key informant interviews with key stakeholders working on TB/HIV and Malaria in Zanzibar. The program will also search from the published study papers to identify relevant potential funders. Research institutions such as ZAMREC, NIMRI will be approached to seek their advice and guidance in searching for funds based on their experience.

Once identified, the list of potential donors will be analysed and matched with the research agenda accordingly. Thereafter, each research topic will be linked with the potential relevant donor for ease of reference.

Develop research proposal

Selling of research proposal is one among the approaches to seek funds to implement research topic. The program through S.I. unit will take efforts to develop research proposals with budget and seek support from different stakeholders on research such as TB Union, KNCV and WHO. Interested parties will be collaboratively assured of their interests and safety of their funds.

Incorporate research topics into expected grant opportunities/Plan of Action(POA)

The programme has the opportunity to apply for various International grant such as Cooperative Agreement from the US government through CDC, UNDAP support through UN family as well as international NGO such as Save the Children and Germany Leprosy Relief Association (GLRA). ZIHTLP will also include the prioritized research topic in the government fund through its annual Plan of Action (POA). The approved research topic will be incorporated and made part of the available funding opportunity.

Liaise with academic/research institutions (locally and internationally)

The linkage will be done by submitting the research topics to research institutions for the purpose of soliciting funds as well as establishing collaboration for technical support. The research will be conducted in collaboration with the interested institutions or solely by program depending on the nature of the secured funds.

9.0 MONITORING AND EVALUATION OF THE AGENDA

The tracking of the stakeholders' adherence to the Agenda shall be part and parcel of monitoring Agenda implementation that would be managed by SI unit like other programs where SI coordinating officer will be responsible for monitoring the progress. The tracking will be informed by some tools/indicators as described below. This tracking shall benchmark the review of the Agenda.

9.1 M&E working coordination

The link will be established between ZIHTLP and Research unit under Department of Planning, Policy and Research (DPPR) of MoH in collaboration with other Research Institutes within and outside of Zanzibar. The findings of the study results will be shared with stakeholders through different channels such as (meetings, publications in scientific journals, and other forums).

9.2 Tools for Tracking Adherence to the Agenda

9.2.1 Checklist for Submission of Review of Research Protocols ZAMREC

All developed protocol will be reviewed for approval by respective ethical boards **(ZAMREC)**, where checklists for submission of protocols for ethical review shall contain an element of whether the study is addressing any of the priority areas.

9.2.2 Catalogue of Protocols Developed from the Priority Areas

Using the database of the ZAMREC of approved protocols of studies addressing the priority areas.

9.2.3 Monitoring and Evaluation (M&E) Reports

ZAMREC shall be supported to be undertaking M&E visits to sites where the approved studies are being conducted.

9.2.4 Progress and Final Reports

Progress and final reports shall be submitted to an ethics committee that approved the study as per its stipulated guidelines and standard operating procedures. At the end of the research study, final report shall be deposited with the ethics committee that approved that study with copies submitted to ZIHTLP and MOH.

9.2.5 Database and Directory of Research Studies

Final reports of studies deposited with MoH, ZAMREC and ZIHTLP shall be used to compile database and directories of approved research studies.

9.3 Review of the Agenda

This Agenda has a lifespan of five years in line with the HSSP. Informed by emerging issues in health and the above stated indicators for tracking the stakeholders' adherence to the implementation of the Agenda, there would a midterm evaluation followed by a final review of the Agenda after five years.

10. REFERENCES

4. National Strategic Plan 2015 – 2019 for Tuberculosis and Leprosy Control
5. WHO. A Global Action Framework for TB Research – the Third Pillar of WHO's End TB Strategy. Geneva: World health Organization; 2015.
6. Lönnroth K, Migliori GB, Raviglione MR et al. Towards tuberculosis elimination: An action framework for low-incidence countries. Eur Respir J 2015; 45:928–52
7. WHO Priority research questions for TB/HIV in HIV-prevalent and resource-limited settings 2010.pdf
8. WHO. A research agenda for childhood TB. WHO/HTM/TB/2007.381 [.pdf]
9. WHO Research Agenda on Drug Resistant Tuberculosis [.pdf]
10. WHO Scaling Up Programmatic Management of Drug-Resistant Tuberculosis: A Prioritized Research Agenda [.pdf]
11. http://www.stoptb.org/global/research/agendas.asp
12. B. Velayutham et al, Setting priorities for a research agenda to combat drug-resistant tuberculosis in children, 2015, International Union Against Tuberculosis and Lung Disease Vol 5 No 4.

ANNEX 1: PARTICIPANTS LIST TO DEVELOP TB AGENDA

NO	NAME	TITLE
1.	Dr. Ahmed M. Khatib	Exec. Director ZAC
2.	Dr. Ali Salum	Director MMH
3.	Sophia Mohamed	M&E Officer
4.	Ameir Khamis	ZIHTLP
5.	Maryam Khamis	CTC Coordinator
6.	Shaaban Hassan Haji	KP Coordinator
7.	Khamis Abubakar	TB/HIV Focal person
8.	Julius Obeid Mshana	RTLC Unguja
9.	Valeria Rashid	IPC Officer
10.	Salama Abdalla	ZCTC
11.	Tatu Bilal	HTS
12.	Ali Hamid	Data Manager
13.	Suleiman Abdulkarim	DTLC Urban West
14.	Issa Abeid	Assistant PM
15.	Mwinyi Msellem	MMH – Training and Research Unit
16.	Abdul-latif Haji	MOH- Planning Unit
17.	Hafidh Saleh	ZIHTLP
18.	Dr Faiza Abass	Ass PM ZMC
19.	Dr Sania Shafi	PMTCT Coordinator
20.	Attiye Shaame	Director Planning unit
21.	Safia Abdalla	HBC Coordinator
22.	Salma Mohd	Research Unit
23.	Omar Mwalim	Head NCD Unit
24.	Dr Sauda Kassim	RTLC Pemba
25.	Hamad Omar	DTLC South Pemba
26.	Abdalla Omar	Ass. PM Pemba

FACILITATOR'S LIST - WORKSHOP TO DEVELOP TB AGENDA

NO	NAME	TITLE
1.	Dr. Zuwena Kondo	M&E NTLP
2.	Dr. Johnson Lyimo	MDR Coordinator
3.	Dr. Farhat J. Khalid	PM ZIHTLP
4.	Asha Ussi Khamis	SI Coordinator ZIHTLP

Department of Preventive Services and Health Education

Ministry of Health

P.O.BOX 2745, Zanzibar, Tanzania

Tel. 255 24 2231973

Fax 255 24 2231973

E-mail:tblepznz@zanlink.com