National Tuberculosis Strategic Plan of Lesotho, 2018-2022

Ministry of Health
Kingdom of Lesotho

Acknowledgments

The development of the National Tuberculosis Strategic Plan of Lesotho 2018 – 2022 has been a joint effort between the National Tuberculosis and Leprosy Programme and diverse stakeholders and development partners. We wish to acknowledge with gratitude their valuable contribution that made this exercise possible.

Special thanks and appreciation go to the members of the TB/HIV Advisory Group, Programme staff and experts from our partners, who provided constructive comments and suggestions on the various drafts until the present final document. We commend the work of our consultants for their professionalism and supportive assistance. It will be amiss of us not to thank in a special way the sponsors of the technical assistance received, with special mention to the World Health Organization.

Finally, deepest gratitude goes to the staff of the Programme for their precious inputs and their day-by-day dedication.

Dr Llang Bridget Maama Maime
National Tuberculosis and Leprosy Programme

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Foreword

In Lesotho, the burden of the infectious diseases remains high while non-infectious diseases are increasing and giving additional strain on our, still fragile, health system. Tuberculosis is primarily driven by the HIV epidemic and both are our major public health problems. We have seen during the last years an increasing capacity of detecting and curing tuberculosis patients and a decreasing in incidence and mortality; still, Lesotho is among the 30 countries with the highest tuberculosis burden in the world.

To prevent and control tuberculosis, our country has always pursued the internationally-recommended strategies and recommendations, such as the DOTS Strategy and then the Stop TB Strategy. With the comprehensive external end-term review in November 2017, our National Tuberculosis and Leprosy Programme had the great opportunity to fully embrace the recently-developed End TB Strategy and Global Plan to End TB 2016-2020 that are contributing to the achievement of the Sustainable Development Goal (SDGs). The review revealed significant progresses in tuberculosis prevention and control consequent to the expansion to all districts of the treatment services and of new molecular diagnostic tools able to deliver results within few hours. The review exposed as well a number of weaknesses and the delayed impact of our efforts on tuberculosis epidemiology.

Through the implementation of the National Tuberculosis Strategic Plan 2018 – 2022, the country will strive to accelerate the reduction in incidence and mortality and ensure that no Mosotho suffers catastrophic cost due to tuberculosis. The diagnostic network will be further improved, community TB care interventions will be strengthened as well as the services to key populations, including the early identification and treatment of tuberculosis infection before that develops into disease. A countrywide survey on tuberculosis prevalence will be conducted to provide a clear picture of the levels of tuberculosis, presently based on estimates. Such challenges will require a capable and inspired central management of the Programme.

The commitment of my Ministry and my personal is to fulfil the obligations taken under the Moscow Declaration to End TB and the New York Declaration on the Fight Against TB by supporting the full implementation of the National Tuberculosis Strategic Plan 2018 – 2022. To be successful, we look at the close collaboration and coordination with our national and international partners.

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Mr. Nkaku Kabi
Honourable Minister of Health

Acronyms

ACSM	advocacy, communication and social mobilization
aDSM	active tuberculosis drug-safety monitoring and management
AIDS	acquired immune deficiency syndrome
BCMCF	Baylor College of Medicine Children's Foundation
CDC	Centre for Disease Control and Prevention (USA)
CHAL	Christian Health Association of Lesotho
DHMT	District Health Management Team
DOT	directly observed treatment
DOTS	Global strategy to control TB launched in 1994, incorporated into the Stop TB Strategy in 2006 and replaced by the End TB Strategy in 2016
eDOT	directly observed treatment through digital means
EGPAF	Elizabeth Glazer Foundation
GDP-PPP	gross domestic product purchasing power parity
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
GINI	index of inequality in the distribution of family income in a country; within the range of 0-100, the higher is the Gini index, the higher is the unequal distribution
HIV	human immunodeficiency virus
ICAP	International Centre for AIDS Treatment and Care Programme
IGRA	interferon-gamma release assay
KAP	knowledge, attitudes and practice
LPA	line probe assay
LTBI	latent tuberculosis infection
M&E	monitoring and evaluation
MDR	multidrug-resistant
MOH	Ministry of Health and Social Welfare
MOJCS	Ministry of Justice and Correctional Service
NGO	nongovernmental organization
NAC	National AIDS Commission
NTLP	National Tuberculosis and Leprosy Control Programme
NTRL	National Tuberculosis Reference Laboratory
PEPFAR	United States President's Emergency Programme for AIDS Relief
PHC	primary health care
PIH	Partners in Health
PSM	procurement and supply management
TB	tuberculosis
TST	tuberculin skin test
USA	United States of America
USAID	United States Agency for International Development
VHW	village health worker
WFP	World Food Programme
WHO	World Health Organization

Executive summary

The National Tuberculosis Strategic Plan of Lesotho 2018 – 2022 follows the previous National Tuberculosis and Leprosy Control Strategic Plan 2013 – 2017 and its update extending it until 2018. It is inspired by three main documents: The End TB Strategy, the Framework for Implementing the End TB Strategy in the African Region 2016-2020 and the Global Plan to End TB 2016-2020. The plan incorporates the main parts of the currently available draft of the National Tuberculosis Laboratory Network Strategic Plan 2017 – 2021 and takes into account the ongoing grants of the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) and the projects implemented by a number of international partners. The plan builds on the analysis and recommendations of the Joint Review of STI/HIV/AIDS, TB and Hepatitis Programmes conducted in October 2017 and of a number of other technical assistance missions. It considers the recently issued National HIV/AIDS Strategic Plan 2018/19-2022/23 and the National Health Sector Strategic Plan 2017-2022.

The National Tuberculosis Strategic Plan of Lesotho 2018-2022 translates the political commitment of the government taken in November 2017 in Moscow with the Declaration to End TB and in September 2018 in New York with the Declaration on the Fight Against TB (A/RES/73/3) of the United Nations General Assembly (UNGA). Accepting the challenge and responsibility of participating in the global efforts, the plan adopts the following two goals to be achieved by 2022:

- To reduce the overall mortality of TB by 75%
- To reduce the overall incidence of TB by 50%

Consistently, the plan states the following six objectives:

1. To find 90% of all incident TB cases and place all of them on appropriate treatment
2. To treat successfully 90% of all drug-susceptible TB patients, irrespectively of their HIV status
3. To find 90% of the incident drug-resistant TB cases, place all of them on appropriate treatment and successfully treat 75% of them, irrespectively of their HIV status
4. To find 90% of the incident TB cases in vulnerable populations, place all of them on appropriate treatment and successfully treat 90% of them
5. To increase the workload capacity of the TB laboratory services to more than 67 000 Xpert MTB/RIF tests per year
6. To enhance stewardship in the National TB Programme and maximize resources for the achievement of the strategic goals

Each objective has to be reached through the implementation of a set of strategies.

The overall implementation of the National Tuberculosis Strategic Plan of Lesotho 2018-2022 would mean that 1.6 million target people will be screened for TB, at least 150 000 people at risk of TB will receive preventive treatment and more than 31 000 TB patients will be treated successfully. The cost of implementing such plan is estimated at Lesotho Maloti (LSL) 966 million, equal to United States Dollars (USD) 71 million.

National Tuberculosis Strategic Plan of Lesotho 2018-2022

GOALS

TB mortality reduced by three quarters

TB incidence reduced to half

OBJECTIVES

Find 90% of all new TB patients and treat them

Cure 90% of all new TB patients treated, irrespectively of their HIV status

Find and treat 90% of all drug-resistant TB patients and cure at least 75% of them

Find, treat and cure 90% of the new TB patients among vulnerable populations

Have quality and efficient TB laboratory services

Enhance the leadership of the Ministry of Health and the resources for TB

Introduction

The National Tuberculosis Strategic Plan of Lesotho 2018 – 2022 follows the previous National Tuberculosis and Leprosy Control Strategic Plan 2013 – 2017 and its update extending it until 2018. It is inspired by three main documents: The End TB Strategy, the Framework for Implementing the End TB Strategy in the African Region 2016-2020 and the Global Plan to End TB 2016-2020. The plan incorporates the main parts of the currently available draft of the National Tuberculosis Laboratory Network Strategic Plan 2017 – 2021 and takes into account the ongoing grants of the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) and the projects implemented by a number of international partners. The plan builds on the analysis and recommendations of the Joint Review of HIV, TB and Hepatitis Programmes conducted in October 2017 and of a number of other technical assistance missions. It considers the recently issued National HIV/AIDS Strategic Plan 2018/19-2022/23 and the National Health Sector Strategic Plan 2017-2022.

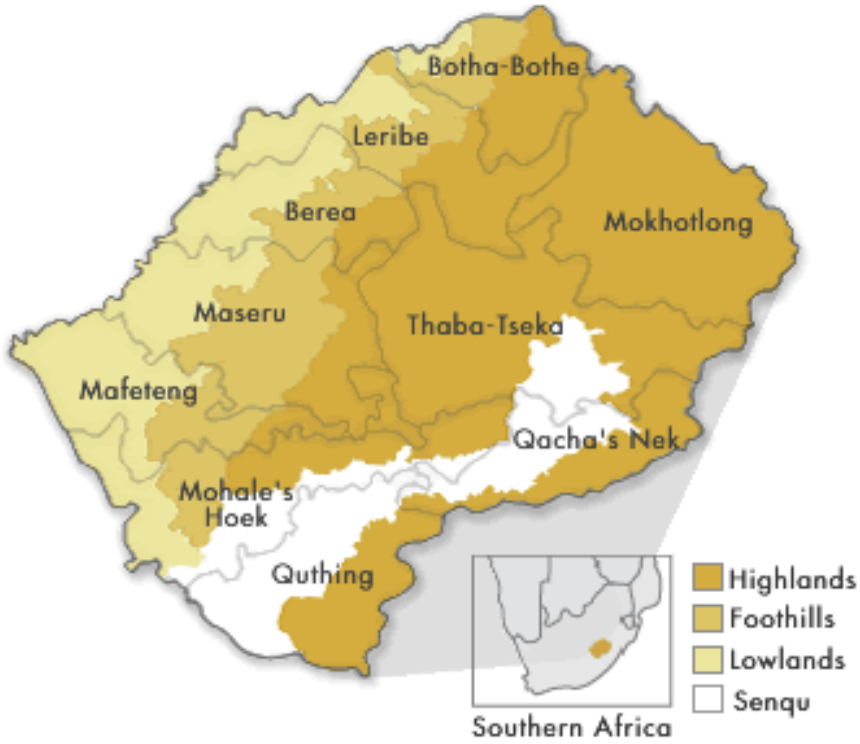
The National Tuberculosis Strategic Plan 2018-2022 is the result of the collective efforts of all stakeholders who first met in a workshop in November 2017 to discuss and agree on the goals, objectives and strategic interventions; the work continued later with a restricted writing committee to identify the activities under each strategic objective; the core plan was then completed with the other components, such as the operational plan, the monitoring and evaluation framework, the technical assistance plan, and the budget plan. The drafting of the plan was supported by two international consultants who worked closely with the TB/HIV Advisory Committee during two country visits in November 2017 and December 2018 and remotely.

The National Tuberculosis Strategic Plan of Lesotho 2018-2022 translates the political commitment of the government taken in November 2017 in Moscow with the Declaration to End TB and in September 2018 in New York with the Declaration on the Fight Against TB (A/RES/73/3) of the United Nations General Assembly (UNGA). Building up on such declarations, the plan has bold goals and objectives, while achievable, and calls for the full collaboration with the National HIV Programme along with its national strategic plan, the only way to address effectively the overlapping of the two epidemics that locates Lesotho the first country in the word for tuberculosis (TB) incidence and mortality rates as consequence of its highest HIV prevalence.

Country profile

Lesotho is a small, landlocked country encircled by the Republic of South Africa (see Figure 1). Its territory of 30 000 sq. km is mostly highlands, with its lowest point 1400 metres above sea level and the highest reaching nearly 3500 metres. In lowlands, the temperature can vary between 30°C in summer and below 0°C during winters; in highlands, the temperature average is much lower and snow is common all the year-round.

Figure 1: Map of Lesotho showing its topography and administrative districts.



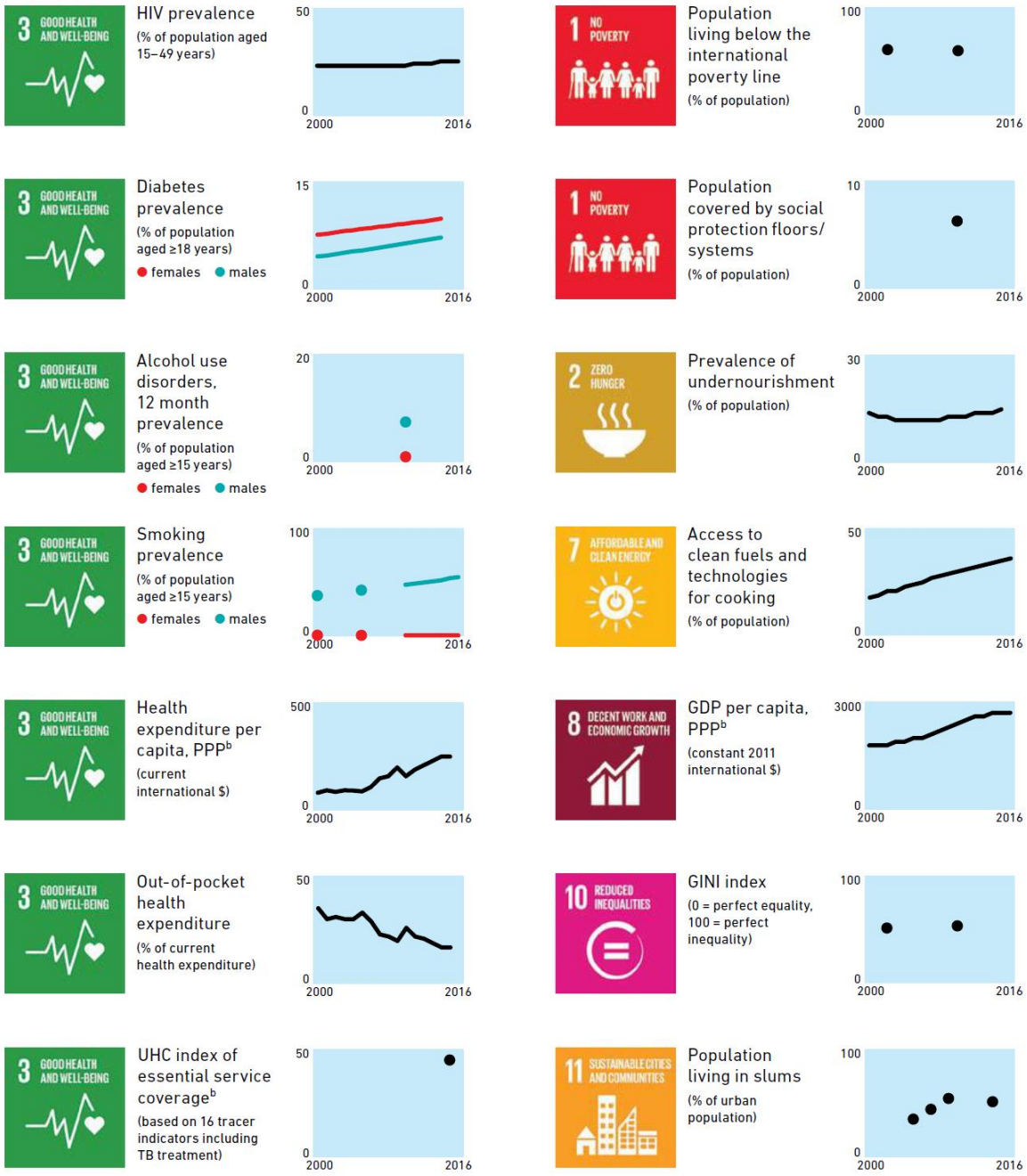
The population of Lesotho in 2017 is estimated of 2.2 million people with 68% of them living in rural area; more than 90% of the people are Basotho, Bantu-speaking people, and of Christian religion (half Protestants and half Roman Catholics).[1] Seventy seven percent of the adult population is literate (with 85% female literacy exceeding that of males at 68%). Lesotho is a constitutional monarchy, ruled by a King as head of state, and governed by a 33-member Senate and a 120-member National Assembly, with the Prime Minister as head of the government and having executive authority.

The economy of Lesotho is based on farming, manufacturing, mining and water. The farming is mainly of informal crop cultivation and animal husbandry and concentrated in the western lowlands (about 20% of the country territory). The manufacturing sector employs mainly women and made Lesotho in the past one of the most important garment manufacturers in sub-Sahara Africa for very famous North America brands. Mining in Lesotho is mainly of diamonds in four mines (Letseng, Mothae, Liqhobong and Kao); more important are the remittances from those working in mines in South Africa, although there has been a decline from highs of 120 000 in the 1980's to lows of 50 000 miners presently. Water is the most important natural resource of the country; it is collected in dams from rivers across the country, and covers all the needs of the country and generates a significant surplus that is sold, as water and electricity, to South Africa.

The last global economic crisis decreased the textile exports and lowered the diamond global prices. Consequently, the mining sector and related jobs has contracted in Lesotho. The World Bank classifies Lesotho among the lower-middle income countries (2017)[2] with United States dollars (USD) 1141 gross domestic product purchasing power parity (GDP-PPP) per capita, 54 GINI index (2010), 57% of the population living (2016) below the international poverty line (USD 1.90/day PPP) and 52% of the population covered by social protection systems. A summary of the indicators in the Sustainable Development Goals that can be associated with the TB incidence is shown in Table 1.

[1] Lesotho Bureau of Statistics (http://www.bos.gov.ls/
[2] https://www.worldbank.org/en/country/lesotho

Table 1: Indicators in the Sustainable Development Goals associated with TB incidence; Lesotho, 2017.[3]



The official currency is the Loti (plural: Maloti), which is interchangeable with the other currencies of the Common Monetary Area (CMA) composed by Lesotho, Namibia, South Africa and Swaziland. Lesotho is also member of the Southern African Customs Union (SACU), under which taxation in trading goods has been eliminated between Botswana, Lesotho, Namibia, South Africa and Swaziland. The main partners

[3] From WHO. Global Tuberculosis Report 2018.

currently supporting Lesotho's development are, the World Bank and the European Union, the United States of America, the People's Republic of China, the United Kingdom and Germany.

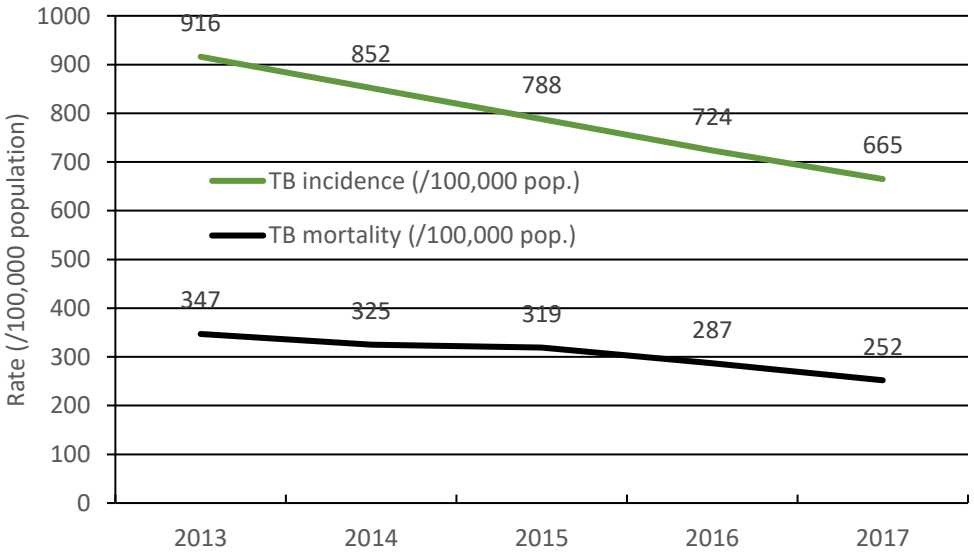
Lesotho is administratively divided into ten districts: Berea, Botha-Bothe, Maseru, Leribe, Mafeteng, Mohale's Hoek, Mokhotlong, Qacha's Nek, Quthing and Thaba-Tseka. More than half of the total population lives in the four districts of Berea, Leribe, Mafeteng and Maseru, the latter including the capital town of Maseru with around 253 000 population.

The top ten causes of deaths in 2017 were: HIV/AIDS, tuberculosis (TB), , cerebrovascular disease, lower respiratory infection, ischemic heart disease, diarrhoeal diseases, diabetes, neonatal disorders, road injuries and interpersonal violence.[4]

Burden of tuberculosis and HIV

The World Health Organization (WHO) includes Lesotho among the high-priority countries in the world for tuberculosis (TB) and for HIV-related TB (TB/HIV). For 2017, it estimated a TB incidence of 665 (430-949) new cases (including relapses) and a TB mortality of 252 (169-351) deaths (including HIV-positive patients) per 100 000 population; both incidence and mortality being the highest rates in the world. TB incidence and mortality decreased steadily during the past years (see Figure 2), respectively of 26% (6.5% annually) and 20% (5% annually), not enough to meet the goals indicated by the National Tuberculosis and Leprosy Programme (NTLP) for 2013 – 2018 (see later). A countrywide TB prevalence survey is planned in 2019 to determine the actual TB burden in the country, with the financial support of the Global Fund and the World Bank.

Figure 2. Estimated TB incidence and mortality rates; Lesotho, 2013-2017

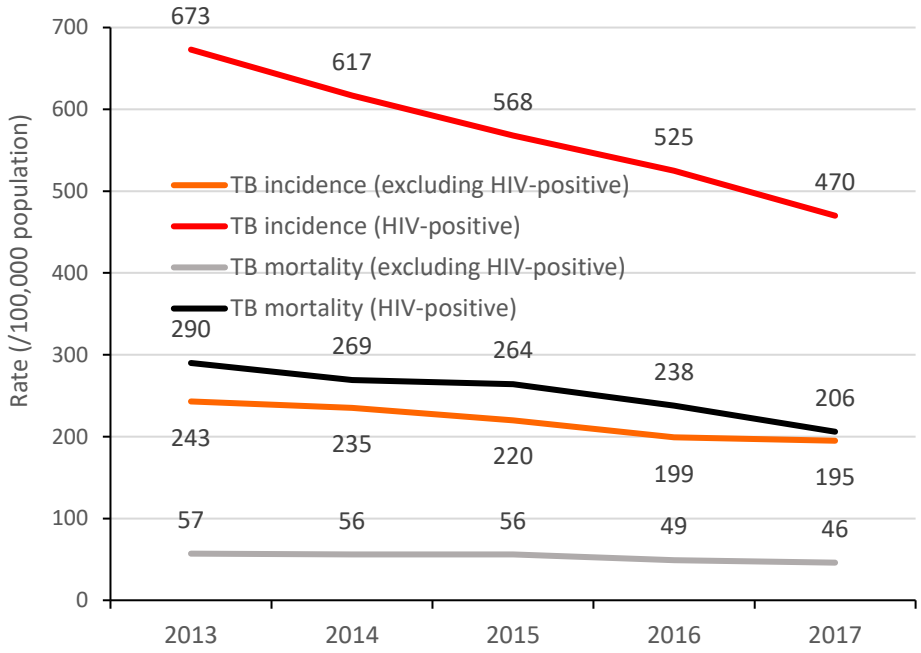


Based on the national drug resistance survey conducted in 2014, the multidrug resistant and rifampicin resistant (MDR/RR) TB is estimated in 4.8% (3.7-5.9%) of the newly-diagnosed and 14% (9.2-18%) of the previously-treated TB patients.

[4] http://www.healthdata.org/lesotho

The estimated HIV prevalence among TB incident cases is 73% (64–80%), proportion that highlights how important is the overlapping of the two epidemics and the impact that HIV has on TB in Lesotho (see Figure 3).

Figure 3. Estimated TB/HIV incidence and mortality rates; Lesotho, 2013-2017



The above rates, when translated into absolute numbers, are equivalent to 15 000 (9600-21 000) estimated new TB cases, of whom 11 000 (6700-15 000) are due to their HIV infection, and 5600 (3800-7800) deaths due to TB occurring annually in Lesotho, i.e. 41 people getting sick of TB (30 due to their HIV infection) and 15 deaths due to TB every day. Either from the newly-diagnosed or previously-treated TB cases, 1100 MDR/RR-TB new cases are estimated occurring annually.

According to the latest Lesotho Population-Based HIV Impact Assessment survey conducted in 2016-2017, 25.6% of the adult population (15-59 years) is living with HIV (30.4% of females and 20.8% of males), corresponding to 306 000 people living with HIV. Moreover, 2.1% of the children (0-14 years) is living with HIV (2.6% of girls and 1.5% of boys), corresponding to 13 000 children living with HIV. The annual incidence of HIV among adults is 1.5% or 13 000 new people living with HIV annually.

The location inside South Africa and the economic links explain how Lesotho has an epidemiological burden similar with and partly dependent from South Africa, country with the second highest level of TB incidence in the world (567 new cases per 100 000 population), with 19% of the adult population living with HIV and with very high levels of MDR/RR-TB especially among mine workers.

Health system

According to the MOH master health facility list of 2017, health services are delivered through 290 health facilities: 21 general hospitals, 4 primary hospitals, 261 health centres/clinics and 4 filter clinics; one military hospital should be also counted. Part of these facilities are owned by churches affiliated with the Christian Health Association of Lesotho (CHAL), few by the Lesotho Red Cross and more by private providers (see Table 2).

Table 2. Health facilities by type and ownership. Lesotho, 2017

Owner	General/ specialized hospital	Primary hospital	Health centre/clinic	Filter clinic	Total
Government	12	0	110	4	126 (43%)
Christian Health Association of Lesotho (CHAL)	8	0	61	0	69 (24%)
Lesotho Red Cross	0	0	4	0	4 (2%)
Private	1	4	86	0	91 (31%)
Total	21	4	261	4	290 (100%)

Primary health care (PHC) is provided by resident nurses or nurse practitioners working in the 261 health centres and clinics, each of them serving 6000-10 000 population. Below the health centres, there are more than 6000 village health workers (VHW) and traditional birth attendants. The general hospitals at district level serve as referral centres for patients from the health centres as well as centres for coordination and supervision. All main hospitals are concentrated in Maseru town and district. The Queen Mamohato Memorial Hospital serves as the main referral hospital of the country, but serious emergencies are referred to the neighbouring South Africa. The Botšabelo TB and Leprosy Hospital, also in Maseru town, provides specialized inpatient and outpatient services. Three other specialized hospitals are the Baylor College of Medicine Children's Foundation, the Senkatana Hospital for HIV and AIDS and the Mohlomi Mental Hospital. The Queen Mamohato Memorial Hospital is a public-private partnership opened in Maseru in 1996.

Approximately 85% of the population lives within 10 kilometres from a health facility. The physical access to health services could be is even more difficult, due to the mountainous topography (80% of the territory is above 1800 metres); the Lesotho Flying Doctors provide emergency medical services to remote mountainous areas. The economic inability to afford transport costs also represents a barrier for a significant proportion of population.

The Department of Pharmaceutical Services is responsible for the provision of medicines to all hospitals and health centres in the country, while the National Drug Services Organisation (NDSO) is responsible for the procurement and distribution of these medicines throughout the health system. As there are no local pharmaceutical manufacturers in Lesotho, all pharmaceuticals are imported.

The National Laboratory Services of the MOH is responsible of the National Reference Laboratories (NRL) which lists the National Tuberculosis Reference Laboratory (NTRL) and the National HIV/AIDS Reference Laboratory.

The administrative authority of the Ministry of Health is decentralized to the local government structures, with 10 District Health Management Teams (DHMTs) managing and coordinating the health activities. CHAL facilities remain the responsibility of its secretariat.

In 2014, Lesotho had USD 276 per capita health expenditure with 69% private expenditure on health (out-of-pocket health expenditure).

National TB and Leprosy Programme

Policy and organization

The NTLP is currently implementing the 2012-2018 Strategic Plan, which TB goals are to reduce prevalence and mortality rates by 25% and 50% respectively (2008 baseline); to achieve them, it considers six strategic objectives:

1) Addressing low treatment success and completion rates for basic TB DOTS
2) Scaling up integrated TB/HIV Collaborative activities;
3) Scaling up programmatic management of drug resistant TB);
4) Addressing TB in high risk groups and populations;
5) Contributing to health system strengthening based on the Primary Health Care concept, Monitoring and Evaluation and Impact measurement;
6) Impact of Regional and Global Initiatives and conventions on TB Control in Lesotho.

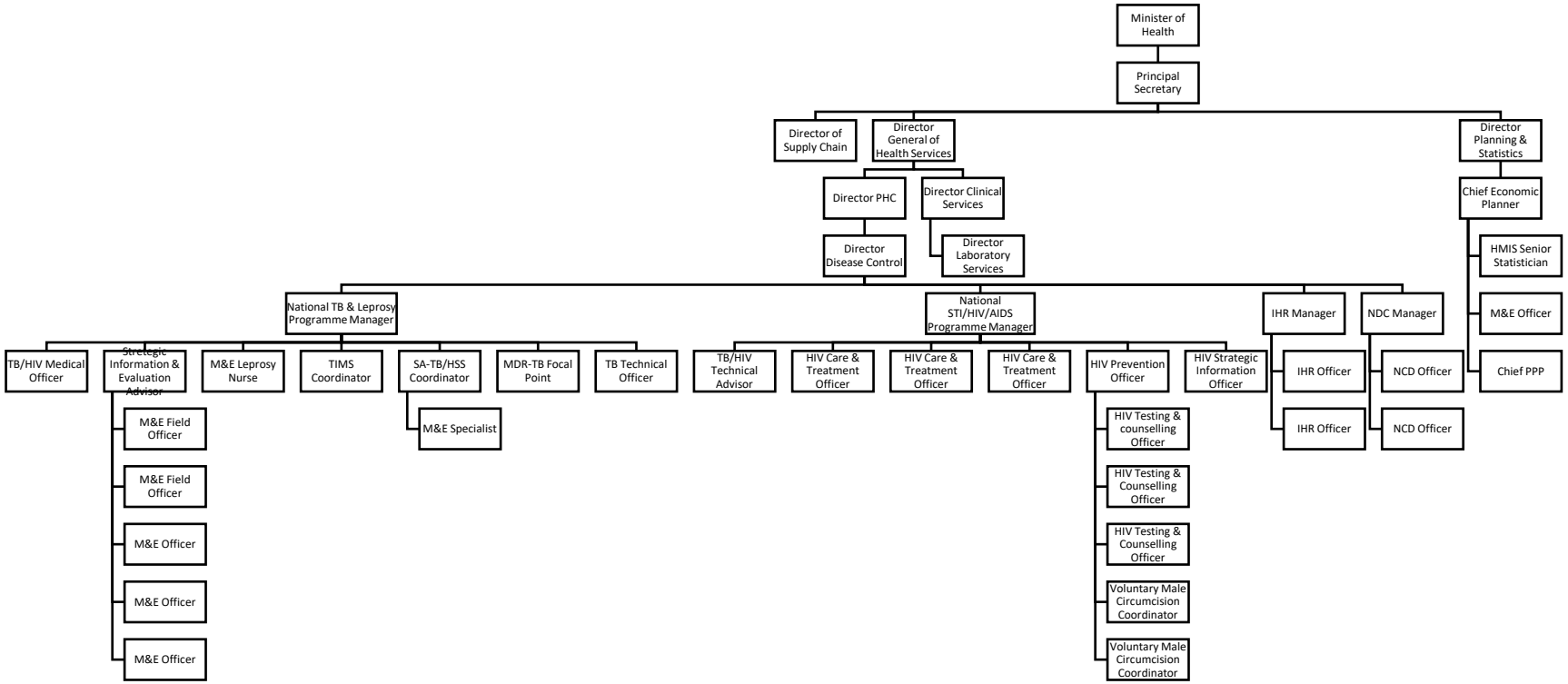
NTLP is headed by a Manager working under the Director of the Disease Control Directorate, who reports to the Director of Primary Health Care Department, who reports to the Director General of Health Services. The NTLP Manager leads a team composed by: TB/HIV Medical Officer (international), Strategic Information & Evaluation Advisor (SI&E, with the funds of the Elizabeth Glazer Foundation [EGPAF]), Monitoring and Evaluation (M&E) Leprosy Nurse working in the Leprosy Hospital, MDR-TB Focal Point (under recruitment, with World Bank funds) and TB Technical Officer (under recruitment, with World Bank funds). The NTLP can also count on three focal persons in the Directorate of Laboratory Services, Directorate of Supply Chain and Directorate of Planning & Statistics (see Figure 4). The staff described here, however, do not have such titles in the official organogram of the Ministry of Health (MOH); for example, the two national managers of TB/Leprosy and of STI/HIV/AIDS are respectively a consultant physician and a manager in the MOH payroll.

At district level, one healthcare worker is assigned as District TB Coordinator but without receiving any financial compensation for his/her additional responsibilities. At community level, various workers including the VHWs, nongovernmental organization (NGO) workers and traditional healers in their varying capacities deliver TB care in close collaboration with the District Health Management Team (DHMT) and the District TB Coordinator.

The TB laboratory network consists in the National TB Reference Laboratory (NTRL) located in Maseru and 22 other laboratories at district and sub-district level: ten government laboratories in the district hospitals; eight laboratories of CHAL; three laboratories for miners and ex-miners in the district offices of the Employment Bureau of Africa (TEBA) of Leribe, Mafeteng and Maseru; and one laboratory at the military hospital. The NTRL performs direct microscopy (either ZN and fluorescence), rapid diagnosis through Xpert MTB/RIF assay and line probe assay (LPA), culture and drug susceptibility testing for isoniazid and rifampicin in solid media and species identification. The peripheral laboratories perform direct microscopy of sputum and rapid diagnosis through Xpert MTB/RIF assay. The NTRL acts as a referral laboratory for TB culture, species identification and drug susceptibility testing for the all country, with diagnostics samples sent by the peripheral laboratories through various means, including the motorbikes of Riders for Health and private courier services. Beside the provision of these core technical activities, NTRL ensures support and maintenance of the laboratory network, through routine quality assurance of direct microscopy and Xpert MTB/RIF investigations, the development of TB laboratory national guidelines and training of TB

laboratory staff; The NTRL also participates in epidemiological and operational research. The supranational TB reference laboratory (SRL) for Lesotho is in Kampala, Uganda.

Figure 4. NTLP functional organogram and links with most important Ministry of Health related functions.



A number of organizations are partners of the NLTP (Table 3).

Table 3. Main partners of the NTLP

Baylor College of Medicine Children's Foundation (BCMCF)	Based in Houston, Texas, USA. BCMCF operates main centre in Maseru and five satellite centres in the surrounding districts providing training in HIV, TB, and general child health. Other activities are: direct patient care to HIV-exposed and infected children and their families; psychosocial assistance to adolescents through "Teen Clubs" and to men who have HIV-infected family members through "Caring Fathers" support groups; comprehensive medical evaluation of children released for adoption from orphanages (http://bipai.org/lesotho)
Christian Health Association of Lesotho (CHAL)	Based in Maseru, Lesotho. Organisation established in 1974 to co-ordinate the health activities as undertaken by mission hospitals and clinics in Lesotho. All eight hospitals and 61 health centres under this group rely on donor support, including the Government, United Nations organisations, and church organisations and SolidarMed to provide health services (https://www.aidsmap.com/org/6819/page/1411896/).
Elizabeth Glazer Foundation (EGPAF)	Based in Washington DC, USA. Through the support of the United States President's Emergency Programme for AIDS Relief (PEPFAR), it contributes to the delivery of HIV services in the health facilities of five districts (reduced from the 10 after PEPFAR support scaled down). In addition to HIV services, EGPAF support includes provision of TB services across the whole TB care cascade including isoniazid preventive therapy and infection control. Through UNITAID support, EGPAF supports implementation and scale up of innovative models of TB care for children and improves the market for child-friendly TB medicines. Other activities include the technical assistance to the Ministry of Health, advocacy to inform health policies, and operational research (http://www.pedaids.org/).
Foundation for Innovative New Diagnostics (FIND)	Based in Geneva, Switzerland. It provides technical support to TB laboratory services, including the use of mobile phone technology to communicate laboratory (https://www.finddx.org/).
Jhpiego (affiliate of Johns Hopkins University)	Based in Baltimore, Maryland, USA. Under the support of the Global Fund, Jhpiego provides outreach TB/HIV services among key populations like youth, the elderly and factory workers. With the support of the Elton John AIDS Foundation, it tests and treats inmates at prisons for HIV and TB in five districts (Butha-Buthe, Thaba-Tseka, Quthing, Qacha's Nek and Mokhotlong) (https://www.jhpiego.org/).
International Centre for AIDS Treatment and Care Programme (ICAP)/Columbia University	Based in New York, USA. ICAP supports 8 projects: 1) HIV Impact Assessment Survey (to assess HIV prevalence, incidence, and access to prevention, care, and treatment services); 2) Strengthening Strategic Information for Health (technical assistance to enhance the coordination of health management systems and surveillance activities and support the implementation of an electronic medical records system; funded by PEPFAR through the Centre for Disease Control and Prevention [CDC]); 3) Nursing Education Partnership Initiative (enhancing teaching

	and learning in partnership with all six nurse training institutions in Lesotho; funded by PEPFAR); 4) Research on Integrated TB/HIV Care for Miners - the PROMISE Study (prospective cohort study evaluating the effectiveness, feasibility and acceptability of family-focused, integrated TB and HIV services using SMS text messaging and lay counsellors and in collaboration with The Employment Bureau Of Africa-TEBA; funded by PEPFAR through CDC); 5) Research on Prevention of Childhood TB - PREVENT Study (study of the effectiveness and acceptability of a combination community-based intervention to identify and screen child contacts of adult TB cases and provide those eligible with isoniazid preventive treatment;(funded by NIAID); 6) TB in Miners (strengthening monitoring and evaluation systems to improve linkage of paediatric patients to HIV care and treatment; funded by PEPFAR through the CDC); 7) TB/HIV Evaluation (assessment of TB and HIV collaborative activities among people living with HIV and TB patients; funded by PEPFAR through the CDC); 8) Accelerating Children's HIV/AIDS Treatment - ACT Initiative (strengthening monitoring and evaluation to improve linkage of paediatric patients of HIV care and treatment services; funded by PEPFAR through the CDC) (https://www.dental.columbia.edu/education/global-programs/international-center-aids-care-and-treatment-program-icap).
Partners in Health (PIH)	Based in Boston, Massachusetts, USA. Supported financially by the Global Fund, it runs and provides support to nine MOH and CHAL clinics, serving rural communities in the highlands through implementation of the Rural Initiative Program that include HIV and TB care and treatment and other related interventions. PIH is also supporting the programmatic management of drug resistant TB, through the construction of the country's first public TB reference laboratory in 2012 and MDR-TB hospital for critically-ill patients used also for training of clinicians across Africa (https://www.pih.org/).
Riders for Health International	Based in London, United Kingdom. Under the support of the Global Fund, it manages a national motorcycle fleet that mobilises outreach health workers countrywide to transport diagnostic samples (including for TB) and their results between health centres and district hospitals (https://www.ridersintl.org/lesotho.html).
University Research Co.,LLC (URC)	Based in Chevy Chase, Maryland, USA. URC assists the MOH through two projects: 1) Strengthening Laboratory Diagnosis and Monitoring to Scale up and Improve HIV/AIDS Care and Treatment Services in the Kingdom of Lesotho (funded by the Centers for Disease Control and Prevention (CDC)); and 2) Applying Science to Strengthen and Improve Systems (ASSIST) Project in Lesotho, regional project funded by the United States Agency for International Development (USAID) to improve postnatal HIV, maternal, and infant care and nutrition support covering Kenya, Lesotho, Mozambique, South Africa, Tanzania, and Uganda) (http://www.urc-chs.com/).
World Bank	Based in Washington DC, USA. Among the several projects in Lesotho, the World Bank supports the project "Southern Africa Tuberculosis and Health System Support" covering Lesotho, Zambia, Malawi and Mozambique. The project aims at improving coverage and quality of TB control and occupational lung disease

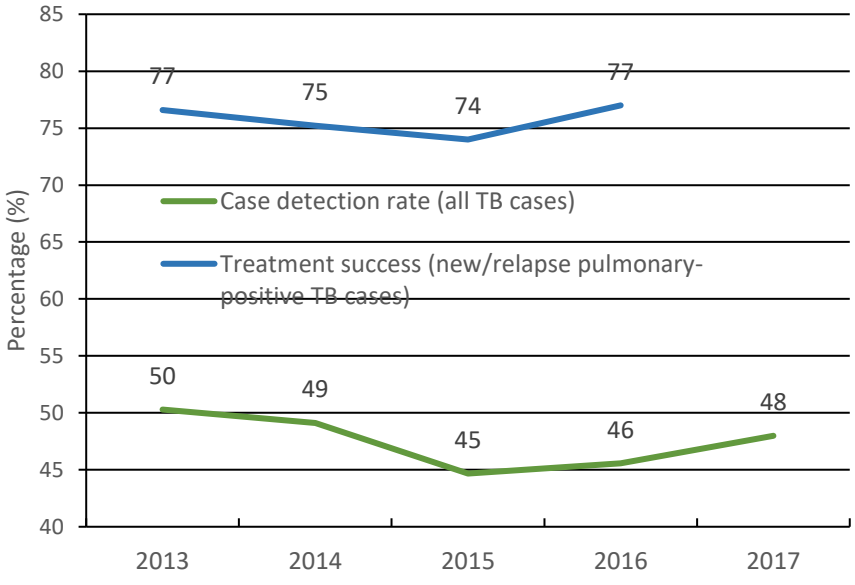
	services among miners, ex-miners, their families, labour-sending areas, and health workers (http://documents.worldbank.org/curated/en/929101467030173486/pdf/PAD1716-PAD-Box396255B-PUBLIC-IDA-R2016-0081-1.pdf).
World Food Programme (WFP)	Based in Rome, Italy. It provides food assistance to vulnerable, moderately malnourished groups including young children, pregnant and nursing mothers, and those undergoing HIV and TB treatment (http://www1.wfp.org/countries/lesotho).
World Health Organization (WHO)	Through its offices (country, regional for Africa and headquarters) it provides technical and other forms of assistance s for a wide spectrum of health related activities in the country. Through the Global Laboratory Initiative (GLI) supported by UNITAID, it supports state-of-the-art, quality-assured TB diagnostic technologies and laboratory services (http://who.int/tb/en/).

Approaching the end of the NTLP Strategic Plan 2013-2018 and of the Global Fund HIV/TB grant in June 2018, at the beginning of the process of negotiation of the new grant, the MOH requested WHO to conduct an extensive review of the NTLP, which occurred jointly with the review of the national STI/HIV/AIDS and hepatitis programmes during 23 October to 3 November 2017. The results of the review have been the necessary analytical basis to draw the National TB and Leprosy Control Strategic Plan 2018-2022.

Achievements

The National TB and Leprosy Strategic Plan 2013-2018 had the goals of reducing the TB prevalence and mortality rates by 25% and 50% respectively. From 2013 to 2017, the TB mortality in Lesotho decreased of 28% (from 347 to 252 deaths/100 000 population), which is still far from the mortality target; the limitations in estimating a TB prevalence makes the achievement of the first target uncertain. Based on the NTLP records, only 47% of the estimated TB new/relapse TB cases were registered for treatment in 2017 and only 77% of them were successfully treated in (2016), as shown in Figure

Figure 5. Detection and treatment success rates of new/relapse TB cases; Lesotho, 2013-2017.

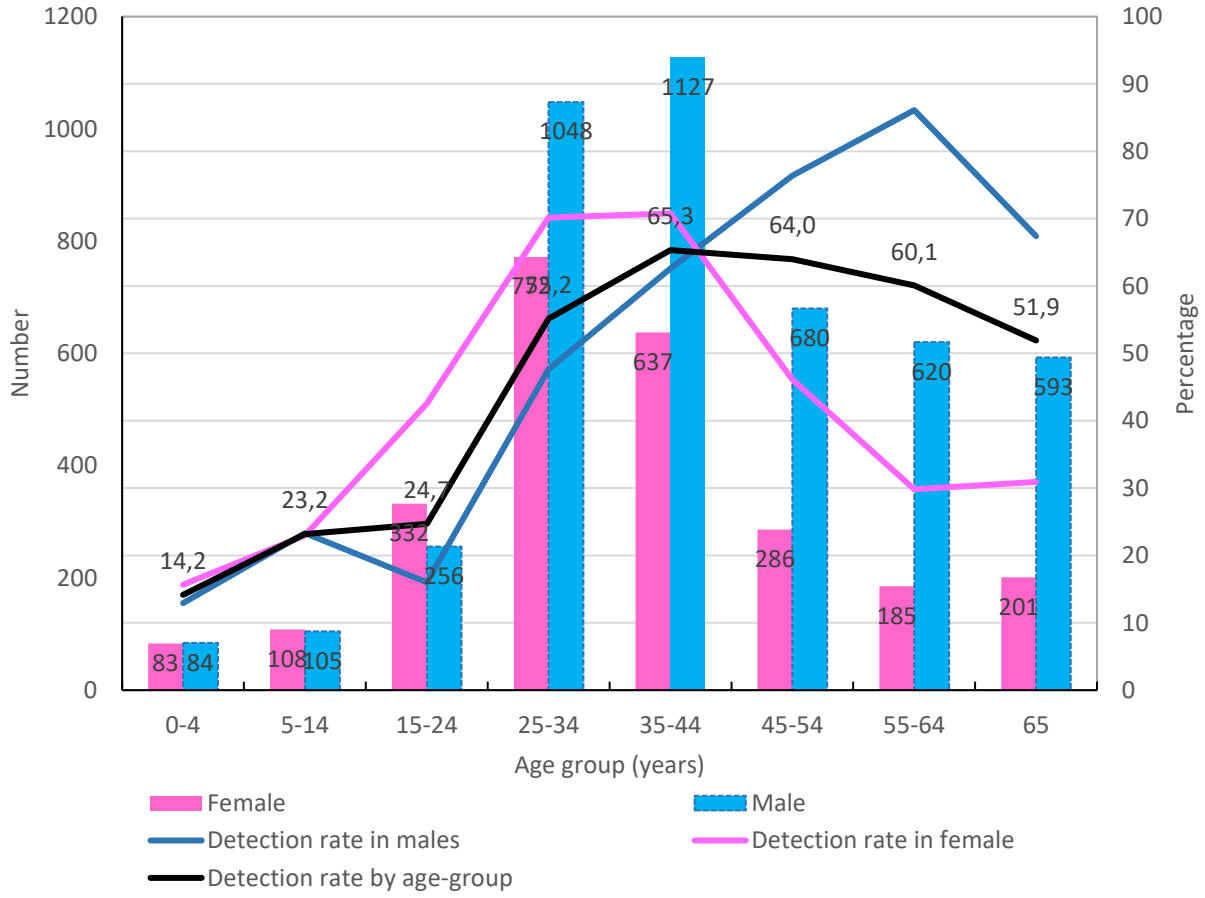


5. As already mentioned before, a countrywide TB prevalence survey will be conducted in 2018 and its results used to update the current estimation of TB incidence and the related TB case detection rate.

The distribution by age group and sex of the new/relapse TB cases notified by the NTLP in 2017 (see Figure 6) shows a predominance of the male patients in all age groups that increases with the increasing exposure to social life, similarly to many other countries in the world.

The TB notification peaks are among men of 35-44 years and women of 25-34 years, mirroring the distribution of HIV prevalence in the population and explained by the high levels of TB/HIV coinfection.

Figure 6. New/relapse TB cases notified and case detection rate by age group and sex; Lesotho, 2017.



However, if calculated the TB case detection rate by age-group and sex (compared with the WHO estimates of TB incidence by age-group and sex), it is evident a lower detection among adolescents, especially boys. There are no studies in Lesotho documenting specifically gender inequality and forms of human rights violations influencing the access to TB services. Neither legal environmental assessments for TB similarly to those made for HIV.

The TB/HIV cascade (Figure 7) shows that only 43% of the estimated new TB/HIV cases are detected despite that 93.6% of the new TB cases notified were counselled and tested for HIV. Of the 4690 TB/HIV

cases detected, 4310 (95%) received antiretroviral treatment and 100% received co-trimoxazole preventive treatment.

Figure 7. New/relapse TB cases notified according to the TB/HIV cascade; Lesotho, 2017.

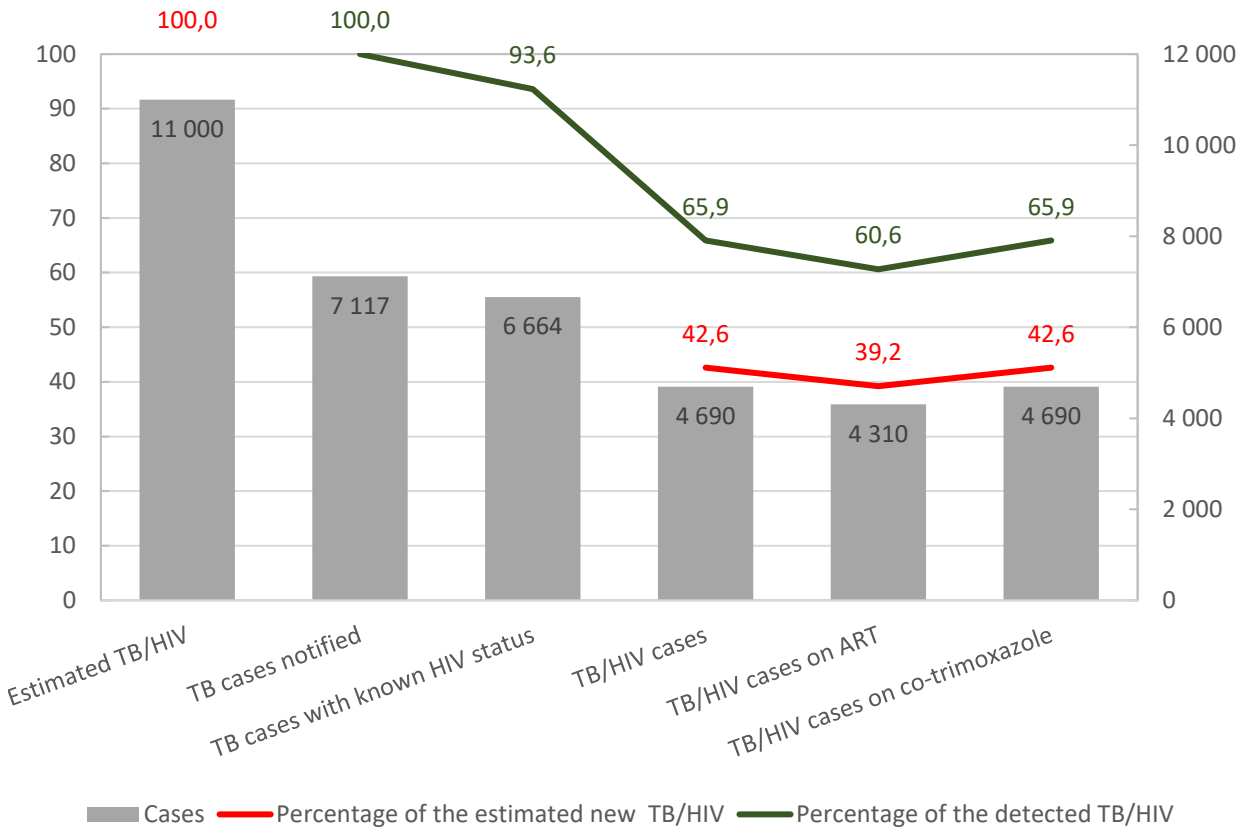
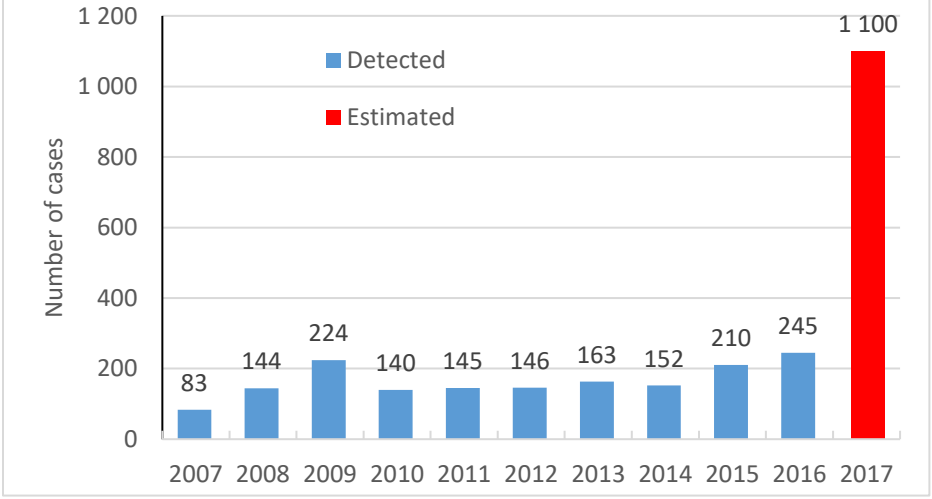


Figure 8. Number of new MDR/RR-TB cases placed on appropriate treatment; Lesotho, 2007-2017.



The first cases of MDR-TB were treated in 2007. Since then, the enrolment of patients on proper treatment slightly and reached a plateau of 245 new MDR-TB cases treated in 2016, still a small proportion of the 1100 MDR/RR-TB cases estimated in the country (Figure 8).

The Joint Review identified a number of strengths, weaknesses, opportunities and threats (SWOT analysis) for TB prevention and care, the most important of them are summarized in Table 3.

Table 3. SWOT analysis (main observations only related to TB) from the Joint Review of HIV, TB and Hepatitis Programmes, 23 October-3 November 2017.

Strengths	**Weaknesses**
▪ High political commitment with first-line anti-TB drugs directly procured from the Global TB Drug Facility with government budget and TB services provided free-of-charge. ▪ GeneXpert MTB/RIF assay used as first TB diagnostic tool. ▪ Well-functioning system of transportation of biological samples to serve areas without a TB laboratory (Riders for Health). ▪ Recording and reporting tools in place. ▪ Network of VHWs providing directly observed treatment (DOT) to 20-25% of TB patients; one Adherence and Psychological Support Officer in each district hospital. ▪ One-stop TB and HIV services delivered in many healthcare facilities. ▪ People-centred care model for treatment of drug-resistant TB patients in Maseru, with increasing number of patients under appropriate treatment and support. ▪ Three Occupational Health Services Centres available in Maseru, Mafeteng and Leribe.	▪ MOH not exercising effective stewardship on TB prevention and control and with its partners ▪ Discrepancy between national and international efforts and NTLP achievements. ▪ Delayed TB diagnosis and low (46%) case detection. ▪ Inadequate laboratory capacity and manpower ▪ Low treatment success rate among new/relapse TB cases (74%) and previously-treated TB cases (64%). ▪ Failure to adequately monitor and coordinate programmatic activities at lower levels. ▪ Insufficient implementation of the 3 I's (TB intensified screening, preventive treatment and infection control). ▪ Diagnosis and treatment of drug resistant TB highly centralized. ▪ No memorandum of understanding in place between NTLP and private healthcare providers. ▪ Poorly functional supply chain system for TB drugs and laboratory commodities.
Opportunities	**Threats**
▪ Presence of multiple partners supporting the MOH technically and financially. ▪ Available system of documenting miners through TEBA. ▪ TB and STI/HIV/AIDS national programmes fall under the same MOH Directorate of Disease Control. ▪ Joint TB and HIV application to a Global Fund grant. ▪ Harmonization of Health Services in the Mining Sector project under the Southern African Development Community (SADC) ▪ The National Social Protection Strategy 2014/2015 – 2018/2019 considers the support (cash assistance, grants, food	▪ High poverty and unemployment rates, food insecurity and high HIV prevalence. ▪ NTLP over reliant on partner support. ▪ Highly mobile cross border labour force ▪ Illegal miners and undocumented migrants. ▪ Difficult mountainous terrain and hard-to-reach isolated communities.

parcels and psychosocial support) of persons with disability or chronic illness and their family. ▪ Available policy on HIV counselling and testing and treatment.	

Based on the above SWOT analysis, a number of gaps were identified that should be filled in by the National TB Strategic Plan 2018-2022 (see Table 4).

Table 4. Gaps (only TB-related) identified during the Joint Review of HIV, TB and Hepatitis Programmes, 23 October-3 November 2017.

1. NTLP central unit understaffed and not formally established within the MOH
2. Insufficient coordination among partners.
3. Limited and delayed laboratory investigation of presumptive TB cases; insufficient TB case finding among high-risk population, including children; high number of primary lost-to-treatment follow up patients.
4. Insufficient laboratory manpower.
5. High proportions of new/relapse and previously-treated TB patients who die (14% and 19% respectively) and are not-evaluated for treatment outcomes (10% and 11%).
6. Technical supervision visits rarely conducted.
7. Drug-susceptible TB patients do not receive any material support.
8. TB/HIV collaborative activities insufficiently implemented.
9. Limited capacity of diagnosis and treatment of drug-resistant TB.
10. High TB risk populations such as miners and people with diabetes mellitus not appropriately targeted.
11. Weak linkages between NTLP and private healthcare providers in TB care and prevention.
12. Insufficient tracking of primary defaulters.
13. Weak nutritional management of undernourished TB patients.

National Tuberculosis Strategic Plan 2018-2022

The National Tuberculosis Strategic Plan 2018-2022 of Lesotho reflects the consolidated view of a number of inputs given by reviewing relevant global, regional and country reports and other documents and discussing among the most important national and international partners of NTLP. It represents their strong commitment to work together towards common strategic directions and targets, essential condition for success, as implicit from the recommendations of the Joint Review of HIV, TB and Hepatitis Programmes of October 2017 and other recommendations.

Accepting the challenge and responsibility to participate in the global efforts, the National Tuberculosis Strategic Plan 2018-2022 of Lesotho adopts two goals of the End TB Strategy, with reference to the baseline of 2017 and to be achieved by 2022:

GOALS

- To reduce the overall mortality of TB by 75%
- To reduce the overall incidence of TB by 50%

Consistently, the National Tuberculosis Strategic Plan of Lesotho 2018-2022 states six objectives, inspired by the global 90-90-90 targets to end TB and HIV and guided by the gap analysis conducted by the recent Joint Review of HIV, TB and Hepatitis Programmes:

OBJECTIVES

1. To find 90% of all incident TB cases and place all of them on appropriate treatment.
2. To treat successfully 90% of all drug-susceptible TB patients, irrespectively of their HIV status.
3. To find 90% of the incident drug-resistant TB cases, place all of them on appropriate treatment and successfully treat 75% of them, irrespectively of their HIV status.
4. To find 90% of the incident TB cases in vulnerable populations, place all of them on appropriate treatment and successfully treat 90% of them.
5. To increase the workload capacity of the TB laboratory services to more than 67 000 Xpert MTB/RIF tests per year.
6. To enhance stewardship in the National TB Programme and maximize resources for the achievement of the strategic goals.

Each objective will be reached through the implementation of a set of strategic interventions consistent with the international recommendations for TB prevention and control and those provided by the Joint Review of HIV, TB and Hepatitis Programmes of October 2017. The rational of each strategic intervention is shortly described below.

Objective 1: To find 90% of all incident TB cases and place all of them on appropriate treatment

With this objective, NTLP wants to significantly increase its TB case detection_rate (only 48% of the new/relapse TB cases as estimated in 2017, but it could be moved upward by the results of the TB prevalence survey to be conducted in 2019). There are seven strategies to be followed through the implementation of a number of interventions:

Strategy 1.1:	Update the NTLP guidelines
Strategy 1.2:	Strengthen TB detection among the patients seeking for care in the health facilities at all levels
Strategy 1.3:	Involve all heath providers
Strategy 1.4:	Intensify active TB case finding among TB contacts and high-burden TB areas
Strategy 1.5:	Strengthen the capacity of the VHWs
Strategy 1.6:	Register and report all diagnosed TB cases
Strategy 1.7:	Increase TB awareness in the general population

Strategy 1.1: Update the NTLP guidelines

The last version of the NTLP manual was issued in 2016; however, policies and best practices in TB prevention and control (e.g. screening, laboratory diagnosis, etc.) are continuously updated by new international evidence and should be incorporated into the NTLP guidelines. This task, so important for the future training of the healthcare workers of all levels, will be undertaken by the TB/HIV Advisory Committee with some external technical assistance. The new NTLP manual should be widely distributed for the prompt consultation of all TB service providers, including those working for other ministries (e.g. MOJCS) and for the non-profit and for-profit private sector.

Strategy 1.2: Strengthen TB detection among the patients seeking for care in the health facilities at all levels

The too low positivity rate of the sputum samples processed in laboratory, and the consequent delay in TB diagnosis, suggests the need to improve the collection of those samples, either if later examined by direct microscopy or by Xpert assay. The comparison of the different records is key to identify and trace those patients who were diagnosed with TB but did not show up to start their treatment. The streamlining

of timing TB diagnosis with timing treatment will be further pursuit by facilitating the communication between district and peripheral healthcare providers.

Strategy 1.3: Involve all heath providers

An expanding private health sector, especially in the most populated districts, attracts people seeking for care, including those with respiratory symptoms, the most frequent reason of medical consultation in Lesotho. Some of them may have TB and have their diagnosis unnecessary delayed, or be treated for TB not according to the international standards and with significant out-of-pocket costs. A phase-wise approach in coopting private providers for the delivery of NTLP services, as suggested by successful public-private partnerships in other countries, could represent a win-win collaboration contributing to the achievement of Objective 1.

Strategy 1.4: Intensify active TB case finding among TB contacts and high-burden TB areas

Tracing of the close contacts of TB infectious patients and of paramount importance and NTLP wants to significantly improve its performances through standardization of practices and clear assignment of responsibilities. Furthermore, the most recent evidence internationally proposes shorter treatment regimens (likely to increase compliance) for the latent TB infection, otherwise likely to progress to TB disease especially in in small children and PLHIV. Four X-ray mobile units were purchased for the national TB prevalence survey and could be cost-effectively used to screen difficult-to-reach populations.

Strategy 1.5: Strengthen the capacity of the VHWs

The VHW work in the communities and are part of them; they are of paramount importance for any TB activity, starting from the early identification of signs and symptoms indicative of TB that need to be further evaluated by the district doctor. Despite the importance of the VHW, they are neglected and the NTLP want to establish a fresh, sustainable and long-run collaboration supported by training, tools for their work and financial incentives linked to their TB case finding performances as successfully introduced in other countries in the world.

Strategy 1.7: Increase TB awareness in the general population

Positive knowledge and attitudes in the general population could change practices and behaviors towards TB and boost the self-reporting of more aware respiratory patients to the healthcare facilities. But the use of mass-media and other means of communication are usually expensive and should be properly designed and planned, possibly guided by an initial knowledge-attitude-practice (KAP) survey and reassessed later in their impact. School children are an easy target for tailored education and an opportunity to reach, through them, their teachers and families.

Objective 2: To treat successfully 90% of all drug-susceptible TB patients, irrespectively of their HIV status

With this objective, NTLP wants to significantly decrease the TB case fatality rate and increase the treatment success rate among the newly-diagnosed and previously-treated TB patients. The main strategies to pursuit are four:

Strategy 2.1:	Supervise the treatment of all TB patients, including eDOT
Strategy 2.2:	Improve health workers' attitude and user-friendly delivery of TB services
Strategy 2.3:	Support TB treatment adherence and provide social protection
Strategy 2.4:	Provide regular supply of quality anti-TB and ancillary medicines
Strategy 2.5:	Improve nutritional care of undernourished TB patients

Strategy 2.1: Supervise the treatment of all TB patients, including eDOT

The direct observation of anti-TB treatment (DOT) is still considered important to prevent the development of drug resistance; it should consider the patients' needs and not represent any additional burden to the condition of TB disease. VHWs and DOT supporters are close to patients' residence and in the best position to assist them, including with DOT. Inspired by the National Health Strategic Plan 2017-2022 and its attention to new health technologies, the NTLP will further explore the feasibility and appropriateness of eDOT in specific settings.

Strategy 2.2: Improve health workers' attitude and user-friendly delivery of TB services

A positive attitude of the health workers towards patients and their families contributes significantly to the treatment compliance and overall clinical management. Such attitude will be pursuit among the health workers through specific training on communication and non-financial awards while promoting quantitative and qualitative assessments by those using the TB services.

Strategy 2.3: Support TB treatment adherence and provide social protection

While not properly documented, the risk of catastrophic cost due to TB could be expected high in Lesotho, a country with half of the population living below the international poverty line. The main strategy followed by NTLP will be to facilitate the access by TB patients and their families to existing social support schemes offered by the Ministry of Social Development, this through a standardized social assessment of all patients and a closer institutional collaboration. Moreover, community-based activities will be strengthened along the line of past successful experiences, such as the promotion of the use of the Patient's Charter for TB Care, awareness and stigma reduction in the community, lay support to TB case finding and treatment.

Strategy 2.4: Provide regular supply of quality anti-TB and ancillary medicines

The successful treatment of TB patients is also depending from the uninterrupted availability of high-quality anti-TB drugs and treatment supporting drugs. NTLP will strengthen its collaboration with the Supply Chain Coordination Unit and support its capacity to timely forecast needs and procure adequate quantities of drugs from international mechanisms such as the Global TB Drug Facility.

Strategy 2.5: Improve nutritional care of undernourished TB patients

Especially among the TB/HIV patients, the addition to their medicine treatment of nutrient-rich food could decrease significantly their case fatality rate and increase their chances to be cured from TB. The NTLP guidelines will be updated to ensure a solid scientific approach to nutritional care, its effective delivery through the collaboration with existing partners and its long-term sustainability through the MOH.

Objective 3: To find 90% of the incident drug-resistant TB cases, place all of them on appropriate treatment and successfully treat 75% of them, irrespectively of their HIV status

The third objective of the NTLP is to drastically increase its capacity to detect and manage drug-resistant TB (latest data analysis showing that only 19% of the estimated new rifampicin-resistant TB patients are detected and 66% are treated successfully). High case fatality rates are reported when anti-TB drug resistance coexists with the HIV infection and the strategies considered under this objective are four:

Strategy 3.1:	Establish effective airborne infection control measures in all health settings
Strategy 3.2:	Provide prompt and effective treatment with quality anti-drug resistant TB and ancillary medicines
Strategy 3.3:	Strengthen the programmatic management of drug resistant TB decentralized at regional level
Strategy 3.4:	Strengthen the care of drug-resistant TB patients at community level

Strategy 3.1: Establish effective airborne infection control measures in all health settings

Airborne infection control measures are essential to prevent TB transmission in healthcare settings populated by high number of PLHIV such as in Lesotho. New infection control national guidelines will be developed jointly with the National HIV/AIDS Programme and the Environment Department of the MOH and specific job aids will be printed and disseminated for easy consultation and implementation at the different levels of healthcare. Based on a countrywide assessment and district plans, effective TB infection control measures will be implemented and supervised, including for environmental control and individual protection. National capacity will be built through specific international training courses.

Strategy 3.2: Provide prompt and effective treatment with quality anti-drug resistant TB and ancillary medicines

The NTLP guidelines for the treatment of multidrug- and rifampicin-resistant TB patients will be updated according to the latest internationally-recommended standards and shorter, fully oral regimens will be introduced. Consequently, the national needs for Group A, Group B and Group C anti-TB drugs will be revised for international procurement supported by national registration. Active TB drug safety monitoring and management will be strengthened.

Strategy 3.3: Strengthen the programmatic management of drug resistant TB decentralized at regional level

While maintaining and further strengthening the MDR/RR TB Hospital in Maseru, two additional centres will be established in Leribe and Mohale's Hoek district hospitals to increase the NTLP capacity to treat successfully all patients as per objective 3. The initial evaluation, treatment prescription and follow up of each MDR/RR TB patient will be retained within a national committee of experts (TB Consilium). Health workers of all levels will receive specific training and supportive supervision on monthly basis.

Strategy 3.4: Strengthen the care of drug-resistant TB patients at community level

The day-by-day management of patients on drug-resistant TB treatment will be strengthen at community level through the VHW and DOT supporters to be trained and incentivized. Patients will receive periodic home visits and a range of incentives and treatment enablers.

Objective 4: To find 90% of the incident TB cases in vulnerable populations, place all of them on appropriate treatment and successfully treat 90% of them

In supporting the achievement of the first objective, NTLP wants under this objective to enhance the early detection and treatment of latent TB infection (LTBI) and TB disease among groups of population at higher risk identified in the people living with HIV, the children <5 years, the healthcare workers, the miners and peri-mining communities, the inmates, the mobile population and other people with immunosuppressing conditions.

Strategy 4.1:	People living with HIV
Strategy 4.2:	Children <5 years
Strategy 4.3:	Healthcare workers
Strategy 4.4:	Miners and peri-mining communities
Strategy 4.5:	Inmates
Strategy 4.6:	Mobile population
Strategy 4.7:	People with diabetes mellitus and other populations at risk

Strategy 4.1: People living with HIV

The high prevalence of HIV and level of integration of HIV and TB services in Lesotho show reductive the approach of targeting PLHIV for clearly-assigned responsibilities in implementing TB/HIV collaborative activities. Through this strategic plan, the NTLP wants to strengthen the coordination and technical work with the national HIV/AIDS Programme at all levels in supporting the effective TB screening, TB preventive treatment and TB infection control in all healthcare settings, while ensuring universal access to antiretroviral and anti-TB treatment and co-trimoxazole preventive therapy. The implementation of mirroring interventions included in the current National HIV & AIDS Strategic Plan 2018/19 – 2022/23 will be discussed and coordinated between the HIV/AIDS and TB national programmes.

Strategy 4.2: Children <5 years

In 2017, the children <5 years of age were only 2% of the total new/relapse TB cases reported by the NTLP. To increase the TB detection in this age-group, the NTLP guidelines will be revised and implemented through the proactive screening of all children household contacts of TB cases and of all those attending healthcare facilities. NTLP will enhance TB diagnosis, treatment and prevention through the adoption of diagnostic algorithm and drugs formulations for paediatric use and training of healthcare workers.

Strategy 4.3: Healthcare workers

In 2017, NTLP reported 55 new TB cases among healthcare workers, with a reported incidence rate that is almost the double of the one estimated among the general population. Besides the adoption of TB infection control measures described in other parts of this plan, NTLP will support special programmes of wellness (which also include TB screening) and special TB recording and reporting.

Strategy 4.4: Miners and peri-mining communities

There is a rough estimation of more than 30 000 Basotho miners (in gold or diamond mines located in the country and in South Africa) and their families at a risk that is 30% higher of drug-susceptible and drug-resistant TB than the general population. Consistent with a multi-country (Lesotho, Malawi, Mozambique, South Africa, Zambia) project implemented under a World Bank loan, the NTLP will enhance TB case finding, prevention and treatment at different places and times and facilitate social support through existing mechanisms of occupational health compensations.

Strategy 4.5: Inmates

There is a rough estimation of more than 2600 inmates in the 12 correctional services facilities of Lesotho, with an estimated 30% higher risk of TB than the general population. NTLP will establish a close collaboration with the Ministry of Justice and Correctional Service to undertake periodic TB screening among the prison population and ensure full access to TB diagnosis and treatment with same civilian standards. Adequate TB infection control measures will be established and all TB activities monitored by joint supervisory visits.

Strategy 4.6: Mobile population

According to the United Nations High Commissioner for Refugees (UNHCR), there are less than 50 refugees and asylum seekers in Lesotho, mainly from Congo. Moreover, in addition to the miners already covered under strategy 4.4, there are a number of mobile groups of population (e.g. garment workers and their families, plantation workers and transport workers) at higher risk of TB and with lower access to healthcare services. NTLP will improve its data intelligence and organize outreach TB services.

Strategy 4.7: People with diabetes mellitus and other populations at risk

Besides HIV, there are other medical conditions increasing the risk of TB, such as diabetes mellitus, silicosis, malnutrition, severe kidney disease, others. Mental health institutions are well known environments for higher TB incidence. NTLP will enhance the collaboration with the relevant services to strengthen early detection, treatment and prevention of TB in such populations.

Objective 5: To increase the workload capacity of the TB laboratory services to more than 67 000 Xpert MTB/RIF tests per year

NTLP needs effective laboratory services to ensure the early diagnosis and correct treatment of all TB patients pursuit under the previous objectives 1-4. The timely access, including physically, of TB laboratory diagnosis has to be universal and the workload capacity of the TB laboratory network has to be increased to almost three times as it is now. Three are the strategies chosen under this objective:

Strategy 5.1:	Increase access to rapid and accurate detection of TB and drug-resistant TB
Strategy 5.2:	Strengthen the quality of TB laboratory services
Strategy 5.3:	Strengthen human resource capacity for TB laboratory diagnosis

Strategy 5.1: Increase access to rapid and accurate detection of TB and drug-resistant TB

An action plan to strengthen the NTRL and its network will be developed in collaboration with the National Laboratory Services and describing the specific interventions, ways and means to support effectively the NTLP efforts. The NTRL will be supported in achieving formal role and adequate capacity. The coverage of molecular MTB/RIF rapid diagnosis will be expanded countrywide, also through different transportation means of the biological samples. The current capacity in bacteriological culture and drug susceptibility testing will be maintained and further expanded to LPA investigation to exclude the resistance to fluoroquinolones, condition for the treatment of MDR-TB with shorter regimens. Laboratory consumables will be ensured timely and in adequate quantities.

Strategy 5.2: Strengthen the quality of TB laboratory services

The quality of laboratory investigations will be assured through regular supervision visits and monitoring of selected performance indicators, timely supply of quality laboratory reagents and regular maintenance and service of the laboratory equipment. Collaboration and external quality control with the Supranational TB Reference Laboratory in Kampala, Uganda, will continue.

Strategy 5.3: Strengthen human resource capacity for TB laboratory diagnosis

The national TB laboratory network suffers a shortage of skilled staff. Filling the gaps in the laboratory staff and providing adequate training is of strategic importance to have an effective laboratory diagnosis of TB.

Objective 6: To enhance stewardship in the National TB Programme and maximize resources for the achievement of the strategic goals

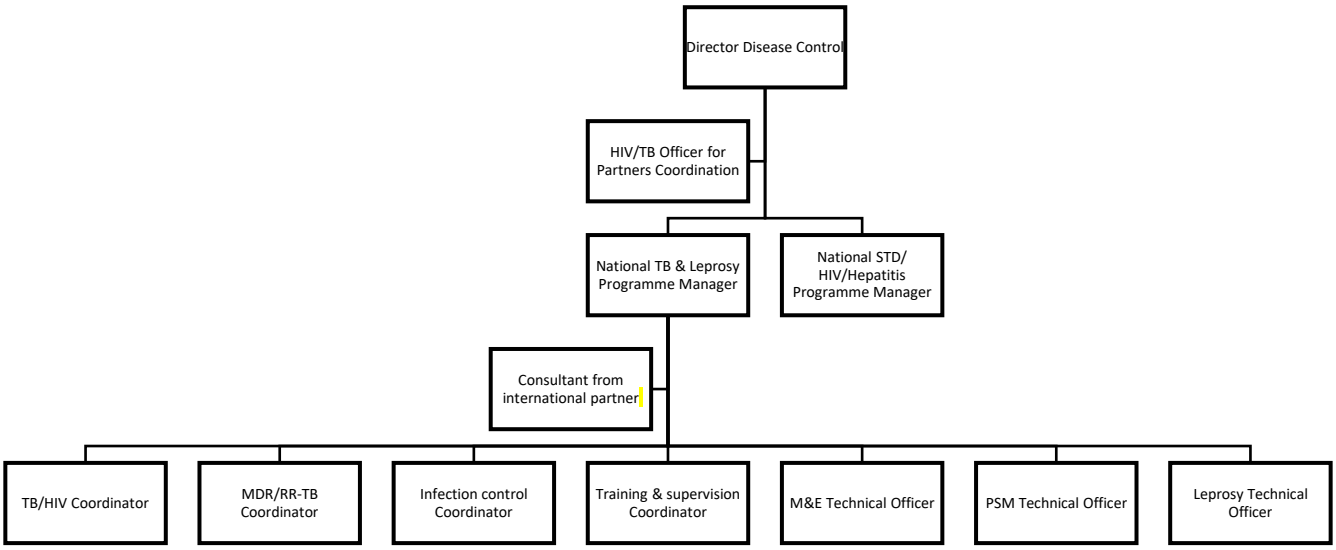
The many challenges that NTLP has to address during the next five years call for effective stewardship and adequate resources. The sixth objective of this plan considers eight strategies of intervention:

Strategy 6.1:	Strengthen the programme management at central level
Strategy 6.2:	Strengthen the programme management at district and lower level
Strategy 6.3:	Strengthen the supervision of TB services at all levels
Strategy 6.4:	Strengthen the capacity of healthcare workers at all levels for the effective management of the TB patients and the programme
Strategy 6.5:	Undertake research to optimize implementation and programme innovation
Strategy 6.6:	Strengthen TB recording and reporting system for the regular and timing monitoring of programme activities and performances according to international standards
Strategy 6.7:	Establish effective mechanisms of coordination between all national and international partners for the joint implementation of the programme activities towards the strategic goals
Strategy 6.8:	Maximize the available funds and establish innovative funding for long-term sustainability of the activities

Strategy 6.1: Strengthen the programme management at central level

At present, the NTLP central management as represented in the Directorate of Disease Control (Figure 3) lacks of staff, official status and line of authority. The coordination with the many national and international partners is difficult and limited by various existing mechanisms with somehow unclear and overlapping responsibilities and conflicting agendas. Strategically, the MOH wants to support the NTLP stewardship by creating a managerial central unit along key programmatic functions (see Figure 6).

Figure 6. Proposed NTLP central unit.



Further strengthening of the NTLP central management will be provided by external comprehensive reviews of the programme to be conducted every three years.

Strategy 6.2: Strengthen the programme management at district and lower level

At district level, the District TB Coordinator and the District TB Officer will receive an official assignment for their functions so crucial for the smooth implementation of the NTLP. On their turn, the DHMTs and relevant local committees will be supported in the organization of regular coordination meetings with special focus on TB. Furthermore, all DHMTs will be invited to biannual retreats in Maseru with the NTLP central unit.

Strategy 6.3: Strengthen the supervision of TB services at all levels

The supervision of all healthcare facilities providing TB services is considered essential to ensure the consistency of such services with updated NTLP guidelines, their quality in respect of the beneficiaries, the completeness and quality of the TB recording and reporting. The supervision visits will be supportive (including written feedbacks) rather than inspective and of all facilities each quarter by the NTLP central unit to the districts and by the District TB Coordinators to the periphery. Such major overtaking will be implemented through a standardized comprehensive supervision checklist and monitored according to annual plans.

Strategy 6.4: Strengthen the capacity of healthcare workers at all levels for the effective management of the TB patients and the programme

The updating of the NTLP guidelines in so many parts, as foreseen in this plan, will require a major programme of training of the staff. The training needs for each level of staff will be identified through the analysis of their tasks, the training methodology and material developed and the training courses delivered at central and district levels as appropriate. Annual plans will consider both training of new staff and retraining.

Strategy 6.5: Undertake research to optimize implementation and programme innovation

Research is important orient and guide policy decisions and NTLP benefits of it only partially, neither existing a national plan based on priorities and opportunities, nor a national coordination and a database from where to retrieve published and unpublished research results. The NTLP's research capacity fully depends from the partners. All interventions under this strategy are to overcome the above constraints. NTLP plans under this strategy also an assessment of the actual TB burden in the country, currently estimated by WHO and based on old data. During 2018-2019, NTLP will conduct a country-wide TB prevalence survey which will provide updated information used to readjust, if necessary, future public health planning.

Strategy 6.6: Strengthen TB recording and reporting system for the regular and timing monitoring of programme activities and performances according to international standards

Understanding the level and trends of the TB disease burden and how they are influenced by the NTLP performances is very important. Under this plan, there is the willingness to improve the NTLP capacity to meet all WHO-recommended standards and benchmarks for TB surveillance and vital registration systems through the digital processing of TB data, the training of staff and the promotion of data consolidation and analysis each quarter in all districts.

Strategy 6.7: Establish effective mechanisms of coordination between all national and international partners for the joint implementation of the programme activities towards the strategic goals

Under this strategy, the NTLP, on behalf of the MOH, will advocate for the establishment of a National AIDS and TB Commission to replace the existing National AIDS Commission (NAC) in order to better represent the interests and constituencies for TB prevention and control and the coordination between STI/HIV/AIDS and TB plans and interventions. Moreover, NTLP will enhance its actions for the establishment of a Parliament TB Caucus and to further raise TB in the political agenda.

Strategy 6.8: Maximize the available funds and establish innovative funding for long-term sustainability of the activities

A number of interventions are considered under this strategy to ensure adequate domestic and international funding to a country facing the highest TB rates in the world. Beside the consistent financial commitment of the Government and of the many external partners, it will be explored also the possible support from the private business under their corporate responsibility policy.

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Annex A: List of objectives, strategies and interventions, 2018-2022

Objective 1: To find 90% of all incident TB cases and place all of them on appropriate treatment
Strategy 1.1: Update the NTLP guidelines
Intervention 1.1.1: Develop an updated NTLP diagnostic algorithm for all providers which comprehensively considers the most appropriate symptomatic, laboratory and Xray tools for TB screening and diagnosis Sub-intervention 1.1.1.1: Support the TB/HIV Advisory Committee to develop a new NTLP diagnostic algorithm jointly with NTRL Sub-intervention 1.1.1.2: Print and disseminate for display the new algorithm in all healthcare facilities
Intervention 1.1.2: Revise and update the NTLP manual in all its parts for effective TB prevention and control Sub-intervention 1.1.2.1: Support the TB/HIV Advisory Committee to update the NTLP manual guidelines Sub-intervention 1.1.2.2: Print and disseminate the new NTLP manual
Strategy 1.2: Strengthen TB case detection among patients seeking for care in the health facilities at all levels
Intervention 1.2.1: Retrain all healthcare workers in sputum collection and communication with patients
Intervention 1.2.2: Monitor the quality of sputum samples collected for investigation Sub-intervention 1.2.2.1: Revise the laboratory management information system to allow the analysis of the quality of the sputum samples Sub-intervention 1.2.2.2: Analyse monthly the laboratory register for quality of sputum samples Sub-intervention 1.2.2.3: Analyse quarterly the sputum positivity rate among new investigations and patients
Intervention 1.2.3: Retrieve initial lost-to-follow up TB patients Sub-intervention 1.2.3.1: Cross-check monthly the laboratory register and the treatment register for initial lost-to-follow up TB patients Sub-intervention 1.2.3.2: Support the tracing of initial lost-to-follow up TB patients for treatment initiation
Intervention 1.2.4: Facilitate the diagnosis of presumptive TB patients Sub-intervention 1.2.4.1: Support telephone communication of health centres with district hospitals Sub-intervention 1.2.4.2: Provide transport reimbursement to presumptive-TB patients for diagnosis at district hospital
Strategy 1.3: Involve all heath providers
Intervention 1.3.1: Involve the professional associations of doctors, nurses and pharmacists Sub-intervention 1.3.1.1: Support national consultations annually on public-private partnership through the professional associations Sub-intervention 1.3.1.2: Develop a brochure with description of collaboration between private providers and Ministry of Health
Intervention 1.3.2: Undertake memorandum of understanding with the main single private TB providers Sub-intervention 1.3.2.1: Conduct a situation analysis and mapping of the main TB private providers in most relevant districts Sub-intervention 1.3.2.2: Review existing drafts of memorandum of understanding and define the public-private partnership framework with clear description of TB roles and responsibilities of the private providers and the Ministry of Health Sub-intervention 1.3.2.3: Train the co-opted private TB providers

Sub-intervention 1.3.2.4: Sign the memorandum of understanding with each private TB provider through an official ceremony in the Ministry of Health and release of official certificate for display in the practice
Intervention 1.3.3: Provide supportive supervision of the co-opted private providers to monitor TB cases detected and treated successfully
Intervention 1.3.4: Support prevention and treatment of TB and LTBI in factory workers
Intervention 1.3.5: Support the training of traditional healers through their organization
Strategy 1.4: Intensify active TB case finding among TB contacts and high-burden TB areas
Intervention 1.4.1: Improve the recording of contact tracing activities Sub-intervention 1.4.1.1: Appoint one of the staff in each health facility as TB contact tracing focal point Sub-intervention 1.4.1.2: Develop standard operating procedures for TB contact tracing Sub-intervention 1.4.1.3: Develop, print and distribute TB contact tracing slips
Intervention 1.4.2: Introduce shorter regimen for treatment of LTBI Sub-intervention 1.4.2.1: Support the TB/HIV Advisory Committee to identify the most appropriate options for the treatment of LTBI, to be included in the NTLP manual, and revise the needs for procurement and supply management Sub-intervention 1.4.2.2: Provide LTBI treatment according to the new guidelines and monitor intake
Intervention 1.4.3: Together with the National HIV/AIDS Programme, arrange visits of priority populations for TB screening and HIV counselling and testing through the X-ray mobile units purchased for the national TB prevalence survey
Strategy 1.5: Strengthen the capacity of the VHWs
Intervention 1.5.1: Provide revised training to the VHWs Sub-intervention 1.5.1.1: Revise the TB curriculum and material for the training of VHWs Sub-intervention 1.5.1.2: Train the VHWs according to the revised TB curriculum
Intervention 1.5.2: Support the work of the VHWs Sub-intervention 1.5.2.1: Provide VHWs with identity cards with MOH logo Sub-intervention 1.5.2.2: Revise and distribute a simple form for the VHWs to report all TB activities to the health centre Sub-intervention 1.5.2.3: Support at the district health centre monthly meetings with all VHWs Sub-intervention 1.5.2.4: Provide performance-based financial incentives to VHWs (for each TB patient detected)
Strategy 1.6: Register and report all diagnosed TB cases
Intervention 1.6.1: Supply regularly all health facilities with TB cards and registers
Intervention 1.6.2: Provide specific training on TB recording/reporting to the staff of all health facilities in charge of data entry and processing
Intervention 1.6.3: Develop an effective system for referral and feedback of TB patients from one health facility to another within the country Sub-intervention 1.6.3.1: Improve the form for patient referral with return slip Sub-intervention 1.6.3.2: Provide routine follow up of the patient taken in charge through telephone or other means
Strategy 1.7: Increase TB awareness in the general population
Intervention 1.7.1: Conduct a countrywide KAP survey on TB as baseline and after three years to assess the impact of ACSM activities
Intervention 1.7.2: Develop a national ACSM strategy and action plan for TB based on the results of the KAP survey

Intervention 1.7.3: Implement annually the activities included in the ACSM action plan Sub-intervention 1.7.3.1: Publish through mass media (newspapers, radio, TB) Sub-intervention 1.7.3.2: Organize public events (school competitions, sports, other) Sub-intervention 1.7.3.3: Celebrate the World TB Day Sub-intervention 1.7.3.4: Advocate for TB with policy makers and national and international stakeholders
Intervention 1.7.4: Support TB health education among school children, families and teachers Sub-intervention 1.7.4.1: Develop written annual plans of collaboration with the Ministry of Education Sub-intervention 1.7.4.2: Develop TB specific education material for children, families and teachers
Objective 2: To treat successfully 90% of all drug-susceptible TB patients, irrespectively of their HIV status
Strategy 2.1: Supervise the treatment of all TB patients, including eDOT
Intervention 2.1.1: Provide performance-based incentives to VHWs/DOT supporters for each TB patient treated successfully
Intervention 2.1.2: Support the use of eDOT in difficult-to-access areas
Strategy 2.2: Improve health workers' attitude and user-friendly delivery of TB services
Intervention 2.2.1: Give an award every year to the health facility and healthcare worker with the best programme outcome indicators
Intervention 2.2.2: Promote patients' anonymous feedback and include its mandatory discussion during the monthly meetings of the DHMT
Intervention 2.2.3: Include in the training of health staff a specific part related to communication with TB patients and their families
Intervention 2.2.4: Include among the Performance Base Funding (PBF)'s indicators the patients' waiting time for receiving TB services
Intervention 2.2.5: Conduct Clients' Satisfaction Surveys
Strategy 2.3: Support TB treatment adherence and provide social protection
Intervention 2.3.1: Provide ready-to-use supplementary food/hygiene packages to all TB patients as incentives to treatment adherence
Intervention 2.3.2: Work with the Ministry of Social Development to conduct home visits for TB affected households in need
Intervention 2.3.3: Provide social support to the TB patients in need Sub-intervention 2.3.3.1: Develop a checklist to routinely assess the social needs of each TB patient Sub-intervention 2.3.3.2: Assess the social needs of each TB patients and provide assistance in entering into existing social support schemes Sub-intervention 2.3.3.3: Establish working relationship with the Ministry of Social Development to facilitate social protection of TB patients and households at central and district levels Sub-intervention 2.3.3.4: Provide psycho-social support to all TB patients in need
Intervention 2.3.4: Further strengthen community-based TB activities through available and tested tools (e.g. Engage TB)
Strategy 2.4: Provide regular supply of quality anti-TB and ancillary medicines
Intervention 2.4.1: Monitor quarterly the data regarding stock levels of anti-TB medicines and TB laboratory reagents in all health facilities
Intervention 2.4.2: Supervise regularly the storage and stock levels of TB commodities at district and peripheral level
Intervention 2.4.3: Update the essential list of anti-TB medicines and incorporate fixed-dose combinations

Intervention 2.4.4: Work with the Supply Chain Coordination Unit of the MOH to produce correct and timely forecasting and quantification of needs through the use of QuanTB
Intervention 2.4.5: Procure and manage the supply of the first-line anti TB and ancillary medicines
Intervention 2.4.6: Maintain regular communication and collaboration with the Global TB Drug Facility
Strategy 2.5: Improve nutritional care of undernourished TB patients
Intervention 2.5.1: Develop NTLP guidelines on nutritional care of TB patients
Intervention 2.5.2: Train healthcare workers on the NTLP guidelines on nutritional care
Intervention 2.5.3: Procure and supply of nutrient-rich food to all TB in/outpatients in need in collaboration with relevant partners
Intervention 2.5.4: Advocate for inclusion of nutritional care costs to TB patients under the budget of the MOH
Objective 3: To find 90% of the incident drug-resistant TB cases, place all of them on appropriate treatment and successfully treat 75% of them, irrespectively of their HIV status
Strategy 3.1: Establish effective airborne infection control measures in all health settings
Intervention 3.1.1: Support the TB/HIV Advisory Committee to develop the NTLP infection control guidelines and job aids
Intervention 3.1.2: Support the implementation of TB infection control measures in all health facilities Sub-intervention 3.1.2.1: Support an TB infection control assessment of all health facilities Sub-intervention 3.1.2.2: Provide specific training to all the staff of the health facilities Sub-intervention 3.1.2.3: Support the development of district plans for TB infection control Sub-intervention 3.1.2.4: Reinforce adequate infection control practices in MDR/RR patients' households
Intervention 3.1.3: Provide tools for environment control and individual protection (ultraviolet germicidal irradiation lamps, particulate respirators (N95 or FFP2) and facial masks)
Intervention 3.1.4: Include infection control in the comprehensive checklist for TB supervision
Intervention 3.1.5: Build capacity on TB infection control of the MOH Environmental Department Sub-intervention 3.1.5.1: Support the international training of at least two staff in TB infection control Sub-intervention 3.1.5.2: Support minor civil work in 20 health facilities every year for the improvement of TB infection control measures
Strategy 3.2: Provide prompt and effective treatment with quality anti-drug resistant TB and ancillary medicines
Intervention 3.2.1: Support the TB/HIV Advisory Committee to update the drug-resistant TB guidelines, to be included in the NTLP manual
Intervention 3.2.2: Procure and manage the supply of anti-TB medicines Sub-intervention 3.2.2.1: Support the registration in Lesotho of all anti-TB medicines to treat drug-resistant TB patients Sub-intervention 3.2.2.2: Revise the needs of anti-TB medicines according to the new regimens for drug-resistant TB patients Sub-intervention 3.2.2.3: Procure and manage the supply of adequate quantities of quality anti-TB medicines of Group A, B and C
Intervention 3.2.3: Implement active TB drug-safety monitoring and management (aDSM)
Strategy 3.3: Strengthen the programmatic management of drug resistant TB decentralized at regional level
Intervention 3.3.1: Maintain and strengthen the central MDR/RR TB Hospital in Maseru to provide care for critically ill patients

Intervention 3.3.2: Maintain and expand the temporary housing in Maseru for drug-resistant TB patients newly enrolling on treatment and patients not suitable for community-based TB care
Intervention 3.3.3: Maintain and strengthen the central clinical MDR/RR TB team
Intervention 3.3.4: Refurbish the TB wards of the regional MDR/RR-TB referral centres in Leribe and Mohale's Hoek district hospitals
Intervention 3.3.5: Establish a national committee of experts (TB consilium) for drug-resistant TB treatment prescription and follow-up
Intervention 3.3.6: Supervise regularly the PMDT services Sub-intervention 3.3.6.1: Supervise monthly each of the three regional MDR/XX-TB centres Sub-intervention 3.3.6.2: Supervise each district by the central clinical MDR/XX TB team to follow-up of DR TB patients
Intervention 3.3.7: Provide training on PMDT to the health workers of all levels
Intervention 3.3.8: Revise the SOP for the timely communication of drug-resistant TB laboratory results to the clinicians
Strategy 3.4: Strengthen the care of drug-resistant TB patients at community level
Intervention 3.4.1: Train DOT supporters and VHW on drug-resistant TB care
Intervention 3.4.2: Maintain financial incentives to the DOT supporters
Intervention 3.4.3: Provide food/hygiene packages to all drug-resistant TB patients as incentive for treatment completion
Intervention 3.4.4: Provide transport reimbursement to all drug-resistant TB patients and their supporters for regular treatment follow up
Intervention 3.4.5: Conduct home visits for drug-resistant TB affected households in need
Intervention 3.4.6: Provide psycho-social support to the drug-resistant TB patients in need
Objective 4: To find 90% of the incident TB cases in vulnerable populations, place all of them on appropriate treatment and successfully treat 90% of them
Strategy 4.1: People living with HIV
Intervention 4.1.1: Support coordination and technical work with the National HIV/AIDS Programme at all levels
Intervention 4.1.2: Collaborate with the National HIV/AIDS Programme to intensify the diagnosis of TB (including LF-LAM) and LTBI among PLHIV
Intervention 4.1.3: Coordinate with the National HIV/AIDS Programme for the full access to LTBI treatment among the HIV target populations and other groups as per new guidelines
Intervention 4.1.4: Coordinate with the National HIV/AIDS Programme for the full access to HIV counselling and testing and ART among all TB patients
Intervention 4.1.5: Provide co-trimoxazole preventive therapy to the TB patients living with HIV
Strategy 4.2: Children <5 years
Intervention 4.2.1: Support the TB/HIV Advisory Committee to update the guidelines for childhood TB, to be included in the NTLP manual
Intervention 4.2.2: Screen for TB all children living in the households affected by TB
Intervention 4.2.3: Promote the screening for TB ((TST or IGRA) of all children attending care at health facilities
Intervention 4.2.4: Support the TB diagnosis among children through enhanced sputum collection and chest Xray

Intervention 4.2.5: Provide LTBI treatment to all household children and others eligible
Intervention 4.2.6: Provide appropriate anti-TB treatment to children with child-friendly formulations Sub-intervention 4.2.6.1: Support the TB/HIV Advisory Committee to update the list of anti-TB medicines with paediatrics fixed-dose combination medicines Sub-intervention 4.2.6.2: Procure and manage the supply of quality anti-TB medicines for paediatrics use
Activity 4.2.7: Train VHWs on LTBI and TB diagnosis and treatment in children
Strategy 4.3: Healthcare workers
Intervention 4.3.1: Support wellness programmes for the healthcare workers
Intervention 4.3.2: Maintain a specific recording and reporting of TB cases among the healthcare workers
Strategy 4.4: Miners and peri-mining communities
Intervention 4.4.1: Support the TB/HIV Advisory Committee to develop specific guidelines for TB prevention and control in mines and peri-mining communities
Intervention 4.4.2: Screen for TB all miners (upon employment, periodic, at the end of contract) and contact household members
Intervention 4.4.3: Support clinics specifically serving miners and peri-miners communities in collaboration with the Employment Bureau of Africa (TEBA)
Intervention 4.4.4: Coordinate with Medical Bureau for Occupational Diseases and Compensation (MBOD) for claim compensations and occupational health services to miners and ex-miners
Intervention 4.4.5: Establish cross-border mechanisms for continuation of supervised anti-TB treatment and evaluation of treatment outcome
Intervention 4.4.6: Inform/educate miners and their households on TB
Intervention 4.4.7: Enhance the access to financial compensations for specific diseases contracted during mining occupation
Strategy 4.5: Inmates
Intervention 4.5.1: Conduct a TB prevalence survey in the inmate population
Intervention 4.5.2: Screen all inmates for TB (at entry and every six months) and provide ongoing access to TB diagnosis
Intervention 4.5.3: Provide effective anti-TB treatment with quality medicines during detention
Intervention 4.5.4: Follow up the TB treatment of all inmates after their release from prison
Intervention 4.5.5: Support the establishment of effective airborne infection control measures in prisons
Intervention 4.5.6: Support the MOJCS in the recording and reporting of all TB cases to NTLP
Intervention 4.5.7: Ensure close collaboration and coordination with the MOJCS Sub-intervention 4.5.7.1: Organize quarterly meetings of coordination with representatives of the MOJCS Sub-intervention 4.5.7.2: Provide training on NTLP guidelines, including infection control, to the healthcare workers and other staff working in prisons Sub-intervention 4.5.7.3: Conduct jointly supervisory visits in all prisons
Strategy 4.6: Mobile population

Intervention 4.6.1: Establish and maintain a system for effective monitoring and tracking of TB among migrant workers
Intervention 4.6.2: Provide outreach TB services (education, screening, treatment) among non-documented immigrants
Strategy 4.7: People with diabetes mellitus and other populations at risk
Intervention 4.7.1: Coordinate with the relevant services for the treatment of diabetes mellitus among TB patients
Intervention 4.7.2: Strengthen TB prevention and control in mental institutions Sub-intervention 4.7.2.1: Screen all mental health patients for TB Sub-intervention 4.7.2.2: Support implementation of TB infection control measures in mental institutions
Intervention 4.7.3: Strengthen TB prevention and control in patients with other medical risk factors Sub-intervention 4.7.3.1: Collaborate with other services for their TB screening of patients at risk for TB and LTBI treatment Sub-intervention 4.7.3.2: Collaborate with other services for the management of TB and coexisting pathologies
Objective 5: To increase the workload capacity of the TB laboratory services to more than 67 000 Xpert MTB/RIF tests per year
Strategy 5.1: Increase access to rapid and accurate detection of TB and drug-resistant TB
Intervention 5.1.1: Support the development of an action plan for strengthening the National TB Reference Laboratory and the TB laboratory national network
Intervention 5.1.2: Strengthen the National TB Reference Laboratory role and functions Sub-intervention 5.1.2.1: Support the accreditation process and formalization with the MOH of terms of reference and adequate organogram Sub-intervention 5.1.2.2: Support the participation of NTRL staff in relevant international training courses and meetings Sub-intervention 5.1.2.3: Improve the NTRL store for laboratory commodities
Intervention 5.1.3: Strengthen capacity for rapid second-line anti-TB drugs susceptibility testing through LPA Sub-Intervention 5.1.3.1: Support procurement and management of the supply of LPA consumables Sub-Intervention 5.1.3.2: Facilitate adoption of biosafety measures to prevent cross-contamination of samples in the laboratory
Intervention 5.1.4: Support construction and maintenance of mini TB laboratories in 13 health centres located in mountainous and other difficult-to-reach areas
Intervention 5.1.5: Facilitate universal access to molecular MTB/RIF rapid diagnosis Sub-intervention 5.1.5.1: Support the regular service and maintenance of all molecular TB diagnostic services in the country (Xert MTB/RIF assay machines and accessories) Sub-intervention 5.1.5.2: Support timely procurement of adequate quantity of cartridges for all Xpert MTB/RIF machines in the country Sub-intervention 5.1.5.3: Support installation and use of a remote monitoring software on all Xpert MTB/RIF machines
Intervention 5.1.6: Advocate for maintaining the present capacity in culture and drug sensitivity testing
Intervention 5.1.7: Maintain collaboration with existing laboratory sample transportation services provider and expand it to cover new laboratories through private courier Sub-intervention 5.1.7.1: Procurement of spare containers for safety transport of biological samples Sub-intervention 5.1.7.2: Support maintenance and running costs of 10 motorbikes run by Riders for Health Sub-intervention 5.1.7.3: Contract services of Riders for Health

Sub-intervention 5.1.7.4: Strengthen transport of TB samples with various means (horses, private courier services) Sub-intervention 5.1.7.5: Pilot and possibly expand the use of drones and other technologies for transportation of samples
Intervention 5.1.8: Conduct one countrywide anti-TB drug resistance survey every 3 years
Strategy 5.2: Strengthen the quality of TB laboratory services
Intervention 5.2.1: Facilitate monthly monitoring of performance of the laboratories through selected indicators
Intervention 5.2.2: Engage laboratory unit to integrate the NTLP checklist for supervision with a laboratory component
Intervention 5.2.3: Collaborate with NTRL to establish and implement joint supervision activities
Intervention 5.2.4: Support the external quality assurance by the Supranational TB Reference Laboratory in Kampala, Uganda
Intervention 5.2.5: Support procurement and management of the supply of laboratory reagents
Intervention 5.2.6: Support service and maintenance of all TB laboratory equipment through contract service with suppliers
Strategy 5.3: Strengthen human resource capacity for TB laboratory diagnosis
Intervention 5.3.1: Advocate for development of a national human resources development plan for laboratory staff
Intervention 5.3.2: Support laboratories to fill the gaps in staff according to the plan
Intervention 5.3.3: Support refresher training courses to laboratory staff
Objective 6: To enhance stewardship in the NTLP and maximize resources for the achievement of the strategic goals
Strategy 6.1: Strengthen the programme management at central level
Intervention 6.1.1: Support the establishment and effective functioning of a NTLP central unit at the MOH headquarters Sub-intervention 6.1.1.1: Support the establishment of a NTLP central unit composed by staff responsible of the following key functions: overall programme management, TB/HIV coordination, MDR-TB coordination, infection control coordination, training and supervision coordination, procurement and supply management, monitoring and evaluation Sub-intervention 6.1.1.2: Support the work of the NTLP central unit (office equipment and consumables, etc.)
Intervention 6.1.2: Develop for the MOH clear terms of references and lines of authority for the proposed NTLP central unit
Intervention 6.1.3: Organize short training courses on health management for the staff working in the NTLP
Intervention 6.1.4: Support the participation of the staff of the NTLP central unit in relevant international meetings and training courses
Intervention 6.1.5: organize external comprehensive review of the NTLP after 3 years from implementation of the plan
Strategy 6.2: Strengthen the programme management at district and lower level
Intervention 6.2.1: Support the official establishment of the positions of District TB Coordinator and District TB Officer
Intervention 6.2.2: Conduct biannual retreats at central level with all DHMTs
Intervention 6.2.3: Hold coordination meetings with DHMTs, Health Centres Committee and Community Council Committee
Strategy 6.3: Strengthen the supervision of TB services at all levels
Intervention 6.3.1: Support the TB/HIV Advisory Committee to revise the existing checklist to ensure the comprehensive supervision visit of all TB activities in a health facility
Intervention 6.3.2: Develop annual plans of supervision

Intervention 6.3.3: Supervise quarterly all health facilities and provide written feedback Sub-intervention 6.3.3.1: Conduct supervisory visits at district level by the NTLP central unit Sub-intervention 6.3.3.2: Conduct supervisory visits at peripheral level by the District TB Coordinators
Strategy 6.4: Strengthen the capacity of healthcare workers at all levels for the effective management of the TB patients and the programme
Intervention 6.4.1: Identify TB training needs of each level of staff based on current job descriptions and task analysis
Intervention 6.4.2: Revise/develop TB training methodology and material for each level of staff
Intervention 6.4.3: Design a national TB training action plan for in-service training and continuous training
Strategy 6.5: Undertake research to optimize implementation and promote innovation
Intervention 6.5.1: Create a national TB-related research database of reports, master thesis, articles, etc. conducted in Lesotho by any stakeholder
Intervention 6.5.2: Develop a TB research agenda to be reflected into the National Health Research Agenda
Intervention 6.5.3: Support the training of two staff under the Structured Operational Research and Training IniTiative (SORT-IT)
Intervention 6.5.4: Plan and conduct clinical trials and operational research studies to improve quality of TB care
Intervention 6.5.5: Plan and conduct a country-wide TB prevalence survey Sub-intervention 6.5.5.1: Develop the protocol for a country-wide representative TB prevalence survey and analyse its results Sub-intervention 6.5.5.2: Conduct a country-wide representative TB prevalence survey
Strategy 6.6: Strengthen TB recording and reporting system for the regular and timing monitoring of programme activities and performances according to international standards
Intervention 6.6.1: Improve the electronic processing of TB data to ensure user-friendly data entry, easy transmission to other levels, standardized quarterly reports
Intervention 6.6.2: Provide specific training on TB data consolidation and interpretation by all DHMTs
Intervention 6.6.3: Support quarterly meetings in all DHMTs to promote the consolidation, validation and analysis of TB data at district level
Strategy 6.7: Establish effective mechanisms of coordination between all national and international partners for the joint implementation of the programme activities towards the strategic goals
Intervention 6.7.1: Advocate for the establishment of a National AIDS and TB Commission in order to ensure the effective coordination with all national and international HIV and TB stakeholders at the highest political levels. Sub-intervention 6.7.1.1: Support the establishment and activities of the Parliamentary TB Caucus Sub-intervention 6.7.1.2: Provide TB orientation to the Members of Parliaments and Senate
Intervention 6.7.2: Advocate for dedicated attention to TB prevention and control by the Multisectoral Coordination Committee on Health Sub-intervention 6.7.2.1: Advocate for the effective establishment of the Multisectoral Coordination Committee on Health Sub- intervention 6.7.2.2: Promote the discussion on TB prevention and control within the Multisectoral Coordination Committee on Health
Strategy 6.8: Maximize the available funds and establish innovative funding for long-term sustainability of the activities
Intervention 6.8.1: Explore sponsorships for supporting TB and TB/HIV prevention and control from national and international private business under their corporate responsibility policy.

Intervention 6.8.2: Participate in discussions within the MOH for the government allocation of NTLP budget on regular and emergency basis
Intervention 6.8.3: Participate in regional and global initiatives aimed at raising financial and other support

Annex B: Monitoring and evaluation framework, 2018-2022

	Indicator	Calculation	Result level	Level	Source	Frequency	2017	Target 2018	Target 2019	Target 2020	Target 2021	Target 2022
Goals	Mortality rate	Deaths from TB / 100 000 pop.	Impact	National	WHO estimate	Annually	252 (5,600)	214 (4750)	176 (3900)	138 (3,100)	100 (2,200)	63 (1,400)
	Incidence rate	New/relapse TB cases x 100 000 pop.	Impact	National	WHO estimate	Annually	665 (15,000)	599 (13,300)	533 (11,800)	467 (10,350)	401 (8,900)	333 (7,500)
Objective 1	Case detection rate	New/relapse TB cases registered x 100 / new TB cases estimated	Outcome	District, national	Quarterly reports of TB case finding	Quarterly, annually	48% (7117)	56% (7,400)	64% (7,600)	73% (7,500)	81% (7,200)	90% (6,750)
	Percentage of treatment enrolment	New/relapse pulmonary TB cases laboratory confirmed registered for treatment x 100 / new/relapse pulmonary TB cases laboratory confirmed	Output	District, national	District TB laboratory register and TB treatment	Quarterly, annually	97%	100%	100%	100%	100%	100%
1.1	Updated NTLP manual	Yes/no	Process	National	NTLP	one			Yes		Yes	
1.2	Sputum positivity rate	New/relapse TB cases bacteriologically confirmed x100/ total new respiratory patients investigated	Output	District, national	TB laboratory register	Quarterly, annually			5%	10%	15%	15%
	Bacteriological confirmation rate	New/relapse pulmonary TB cases bacteriologically confirmed x100/ total new/relapse pulmonary TB cases registered	Output	District, national	TB treatment register	Quarterly, annually	58%	64%	70%	77%	85%	90%
1.2.3	Percentage of initial lost-to-follow up cases	New/relapse pulmonary TB cases registered for treatment x100 / total new pulmonary TB cases bacteriologically confirmed	Output	District, national	TB laboratory register and treatment register	Quarterly, annually	22%	17%	11%	5%	2%	0%

	Indicator	Calculation	Result level	Level	Source	Frequency	2017	Target 2018	Target 2019	Target 2020	Target 2021	Target 2022
1.3.2	Number of MOU signed with private TB providers	Number	Process	National	NTLP records	Annually	0	0	2	2	3	5
1.3.2	Percentage of new/relapse TB cases detected in private providers	New/relapse TB cases detected by private x100/ total new/relapse TB cases registered by NTLP	Outcome	National	Records of private providers	Quarterly, annually	0%	0%	1%	2%	5%	5%
1.3.2	Percentage of new/relapse TB cases treated successfully by private providers	New/relapse TB cases successfully treated x100/ total new/relapse TB cases registered for treatment with private providers	Outcome	National	TB treatment register	Quarterly, annually	0%	0%	90%	90%	90%	90%
1.4	Ratio of TB contacts screened per each active TB case	TB contacts screened / new/relapse TB cases detected	Output	District, national	Register of TB contacts	Quarterly, annually			4	4	4	4
1.4.2	Eligible TB contacts who started LTBI treatment	People who started LTBI treatment because eligible	Output	District, national	Register of TB contacts	Quarterly, annually		15,000	23,000	22,600	21,700	20,250
1.6	Percentage of new/relapse TB patients not evaluated for treatment outcome	New/relapse TB patients not evaluated for treatment outcome x 100 / new/relapse TB patients registered for treatment	Outcome	District, national	Quarterly reports of treatment outcome	Quarterly, annually	3% (2016)	3%	0%	0%	0%	0%
1.7	Percentage of general population aware of TB	People aware of TB (transmission, main symptoms) x 100 / total people interviewed	output	National	Survey	2018						100%
1.7.1	KAP survey conducted	Yes, no	Process	National	NTLP	2018				Yes		Yes

	Indicator	Calculation	Result level	Level	Source	Frequency	2017	Target 2018	Target 2019	Target 2020	Target 2021	Target 2022
1.7.2	ACSM national plan developed	Yes, no	Process	National	NTLP	2018			Yes			Yes
Objective 2	Treatment success rate	New/relapse TB cases successfully treated x 100 / total new/relapse TB cases registered for treatment	Outcome	District, national	NTLP records	Quarterly, annually	77%	80% (5,920)	80% (6,080)	90% (6,750)	90% (6,480)	90% (6,075)
2.1	Percentage of TB patients under DOT	TB patients under DOT x100 / total TB patients registered for treatment	Output	District, national	TB patient card	Quarterly, annually		95%	100%	100%	100%	100%
2.2	Percentage of TB patients satisfied of the services	TB patients satisfied x 100 / total TB patients interviewed	Output	District, national	Survey	Annually		70%	80%	90%	100%	100%
2.3	Percentage of TB patients lost-to-follow up	New/relapse TB patients lost to follow up x 100 / new/relapse TB patients registered for treatment	Outcome	District, national	NTLP records	Quarterly, annually	4%	2%	1%	0%	0%	0%
2.3.1	Percentage of TB patients receiving food/hygiene packages	TB patients receiving food/hygiene packages during their treatment course x 100 / total TB patients registered for treatment	Output	District, national	NTLP records	Quarterly, annually		50% (3,600)	60% (4,400)	80% (6,000)	90% (6,500)	90% (6,000)
2.3.3	TB patients in need receiving social support	TB patients receiving social support	Output	District, national	NTLP records	Quarterly, annually		1,400	2,200	3,750	4,300	4,000
2.4	Percentage of healthcare facilities who had stock-outs of anti-TB and ancillary medicines	Number of healthcare facilities who had any stock-out of anti-TB and/or ancillary medicines x 100 / total number of healthcare facilities with TB patients on treatment	Output	District, national	NTLP records	Quarterly, annually	10%	0%	0%	0%	0%	0%

	Indicator	Calculation	Result level	Level	Source	Frequency	2017	Target 2018	Target 2019	Target 2020	Target 2021	Target 2022
2.5	TB patients receiving nutritional care	Number of TB patients receiving nutritional care	Output	District, national	NTLP records	Quarterly, annually		1,400	2,200	3,750	4,300	4,000
Objective 3	MDR/RR case detection rate	New MDR/RR cases notified x 100 / new MDR/RR cases estimated	Outcome	National	NTLP	Annually	19% (210)	36% (431)	50% (590)	64% (729)	78% (833)	90% (878)
	MDR treatment success rate	MDR cases successfully treated x 100 / MDR cases registered for treatment	Outcome	District, national	District TB treatment register	Quarterly, annually	66% (2016)	66%	68%	70%	75%	75%
3.1	Percentage of healthcare facilities with adequate infection control practices	Healthcare facilities having "demonstrable" TB infection control practices consistent with international guidelines x 100 / total healthcare facilities evaluated for TB infection control	Output	National	Supervisory reports	Annually	1% (3)	1% (3)	25% (70)	50% (140)	100% (280)	100% (280)
3.2	Number of healthcare facilities reporting no stock-outs of anti MDR/RR-TB medicines	Healthcare facilities where second-line anti-MDR/RR-TB medicines were present x 100 / total number of healthcare facilities with MDR/RR-TB patients on treatment	Output	District, national	NTLP records	Quarterly, annually	1	1	3	3	3	3
3.2.3	Percentage of healthcare facilities implementing aDSM	Number of healthcare facilities who implement aDSM x 100 / total number of healthcare facilities	Output	District, national	NTLP records	Quarterly, annually	1% (3)	1% (3)	25% (70)	50% (140)	100% (280)	100% (280)
3.4	Percentage of MDR-TB patients receiving	MDR-TB patients receiving food/hygiene packages during their treatment	Output	District, national	NTLP records	Quarterly, annually	100% (210)	100% (431)	100% (590)	100% (729)	100% (833)	100% (878)

	Indicator	Calculation	Result level	Level	Source	Frequency	2017	Target 2018	Target 2019	Target 2020	Target 2021	Target 2022
	food/hygiene packages	course x 100 / total MDR-TB patients registered for treatment										
Objective 4	Case detection rate (in each vulnerable population)	New/relapse TB cases detected x 100 / new/relapse TB cases estimated	Outcome	National	NTLP records	Annually	?					90%
	Treatment success (in each vulnerable population)	New/relapse TB cases successfully treated x 100 / new/relapse TB cases registered for treatment	Outcome	National	NTLP records	Annually	?					75%
4.1.2	Percentage of PLHIV screened for active TB	PLHIV screened for TB x 100 / total PLHIV new TB cases detected	Output	National	HIV services records	Quarterly, annually		100% (237,000)	100% (259,000)	100% (275,000)	100% (287,000)	100% (297,000)
4.1.3	Percentage of PLHIV newly enrolled in HIV care who started on TB preventive therapy	PLHIV newly enrolled in HIV care who are started on treatment for LTBI x 100 / PLHIV newly enrolled in HIV care	Output	District, national	HIV records	Quarterly, annually	50% (7,500)	75% (10,500)	100% (10,000)	100% (8,000)	100% (6,000)	100% (5,000)
4.1.4	Percentage of registered new/relapse TB patients with documented HIV status	New/relapse TB patients registered who had an HIV test result recorded in the TB register x 100 / f new/relapse TB patients registered in the TB register	Output	District, national	NTLP records	Quarterly, annually	91% (6,664)	95% (7,000)	100% (7,600)	100% (7,500)	100% (7,200)	100% (6,750)
4.1.4	Percentage of registered new/relapse TB patients documented HIV-positive	New/relapse TB patients documented HIV-positive x 100 / total new/relapse TB patients having documented HIV	Output	District, national	NTLP records	Quarterly, annually	70% (4,664)	70% (4,900)	70% (5,320)	70% (5,250)	70% (5,000)	70% (4,750)

	Indicator	Calculation	Result level	Level	Source	Frequency	2017	Target 2018	Target 2019	Target 2020	Target 2021	Target 2022
		status, either positive or negative										
4.1.4	Percentage of HIV-positive new/relapse TB patients placed on ART during TB treatment	HIV-positive new/relapse TB patients started on TB treatment who are already on or started on ART during TB treatment x 100 / HIV-positive new/relapse TB patients registered	Output	District, national	NTLP records	Quarterly, annually	84% (3,900)	90% (4,400)	95% (5,000)	100% (5,250)	100% (5,000)	100% (4,750)
4.1.4	Case fatality rate among HIV-positive new/relapse TB patients	HIV-positive new/relapse TB patients died during TB treatment x 100 / total HIV-positive new/relapse TB patients registered for treatment	Outcome	National	NTLP records	Quarterly, annually		<5%	<5%	<5%	<5%	<5%
4.1.5	Percentage of HIV-positive new/relapse TB patients who received co-trimoxazole preventive therapy	HIV-positive new/relapse TB patients registered who started or continued on co-trimoxazole preventive therapy during TB treatment x 100 / HIV-positive new/relapse TB patients registered	Output	District, national	NTLP records	Quarterly, annually	100% (4,664)	70% (4,900)	100% (5,320)	100% (5,250)	100% (5,000)	100% (4,750)
4.2	Percentage of new/relapse TB cases among children <5 years	New/relapse TB cases by age group and sex x 100 / total new/relapse TB cases	Outcome	District, national	NTLP records	Quarterly, annually	2% (167)	2% (148)	4% (304)	6% (450)	6% (432)	8% (540)
4.2.2	Children <5 years household TB contacts and eligible who	New/relapse TB cases by age group and sex x 100 / total new/relapse TB cases	Outcome	District, national	NTLP records	Quarterly, annually		400	800	1,200	1,600	1,800

	Indicator	Calculation	Result level	Level	Source	Frequency	2017	Target 2018	Target 2019	Target 2020	Target 2021	Target 2022
	started LTBI treatment											
4.3	TB notification rate among health workers	New TB cases x 100 000 / population of healthcare workers (breakdown by categoy)	Impact	District, national	NTLP records	Annually	690 (total 55)	600 (48)	500 (40)	400 (30)	300 (24)	200 (16)
4.4	TB notification rate among miners	New TB cases x 100 000 / total population of miners	Impact	District, national	NTLP records	Annually		880 (292)	710 (240)	620 (210)	530 (180)	400 (130)
4.4	TB treatment success among miners	New/relapse TB cases successfully treated x 100 / total new/relapse TB cases among miners	Outcome	National	NTLP records	Annually		66%	68%	70%	75%	75%
4.5	TB notification rate in prison	Prisoners diagnosed with active TB x 100 000 / annual average of prison population	Impact	National	Prison records	Annually		880 (22)	710 (18)	620 (16)	530 (13)	400 (10)
4.6	Number of mobile population screened for TB	People screened for TB (by category)	Output	National	Special records	Annually		25,000	29,000	32,000	32,000	32,000
Objec	Laboratory workload	Total number of Xpert MTB/RIF tests per year					26,000	32,700	46,500	53,300	60,200	67,000
5.1.3	Number of new MDR/RR-TB patients tested through LPA	Number of new MDR/RR-TB patients tested with LPA/RIF	Output	District, national	TB laboratory register	Quarterly, annually		431	590	729	833	878
5.1.5	Percentage of new/relapse pulmonary TB patients tested with Xpert MTB/RIF	New/relapse pulmonary TB patients tested with Xpert MTB/RIF x 100 / Total new/relapse patients diagnosed with pulmonary TB	Output	District, national	TB laboratory register	Quarterly, annually		100% (7,400)	100% (7,600)	100% (7,500)	100% (7,200)	100% (6,750)

	Indicator	Calculation	Result level	Level	Source	Frequency	2017	Target 2018	Target 2019	Target 2020	Target 2021	Target 2022
5.1.7	Percentage of patients with indicative TB who received laboratory results within 3 days	Patients who received Xpert MTB/RIF and/or LPA results within 3 days from sample collection x 100/ total patients investigated						70% (52,000)	80% (60,000)	100% (75,000)	100% (72,000)	100% (67,500)
5.1.8	Countrywide anti-TB drug resistance survey	Yes/no	Output	National	NTLP report	every 3 years			Yes			Yes
5.2.1	Number of laboratories who participated in monthly internal quality control	Laboratories who participated in monthly internal quality control	Output	National	NTLP report	Annually		17	17	30	30	30
5.2.3	Number of TB laboratories supervised quarterly	Number of TB laboratories supervised quarterly	Output	National	NTLP supervisory reports	Annually		17	17	30	30	30
5.2.5	Number of laboratories reporting no stock-outs of laboratory reagents	Number of laboratories where laboratory reagents were always present	Output	District, national	NTLP records	Quarterly, annually	0	18	18	31	31	31
Objective 6	NTLP central unit established and staffed	Yes, no	Process	National	MOH's records	2019	No		Yes			Yes
6.1.5	External comprehensive review of NTLP conducted	Yes, no	Process	National	Report	Every 3 years				Yes		
6.2	Number of retreats at	Number of meetings with written minutes	Output	District	DHMT meeting reports	Monthly	0		2	2	2	2

	Indicator	Calculation	Result level	Level	Source	Frequency	2017	Target 2018	Target 2019	Target 2020	Target 2021	Target 2022
	central level with DHMTs											
6.3	Percentage of healthcare facilities supervised every quarter	Number of healthcare facilities supervised in one quarter x 100 / total number of healthcare facilities	Output	District and sub-district	NTLP supervision plan	Quarterly	0	50% (145)	75% (200)	100% (290)	100% (290)	100% (290)
6.5	Number of research studies published in peer-reviewed magazines	Operational research studies published in peer-reviewed magazines	Process	National	International scientific literature	Annually	0		2	3	4	5
6.6	Completeness of TB reporting	TB reports submitted quarterly by the reporting units x 100 / total TB reports expected quarterly by the reporting units	Output	National	Quarterly reports	Quarterly, annually		100% (136)	100% (136)	100% (136)	100% (136)	100% (136)
	Accuracy of reporting	TB case-finding and treatment outcome reports recorded completely and accurately x 100 / total TB case-finding and treatment outcome reports examined	Output	National	Quarterly reports	Quarterly, annually			100%	100%	100%	100%

Annex C: Operational plan, 2018-2022

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
Objective 1: To find 90 % of all incidents TB cases and place all of them on appropriate treatment									
Strategy 1.1: Update the NTLP guideline									
1.1.1									
1.1.1.1	Develop a new NTLP diagnostic algorithm jointly with NTRL	International TA (see Annex D)	NTLP Central Unit	1		Mar			
	Meeting of the TB/HIV Advisory Committee	Meeting	TB/HIV Advisory Committee	2		2			
1.1.1.2	Print out of the new algorithm	Printed algorithm	TB/HIV Advisory Committee	600		500		100	
1.1.2									
1.1.2.1	Update the NTLP manual guidelines	International TA (see Annex D)	NTLP Central Unit	1		Mar			
	Meeting of the TB/HIV Advisory Committee	Meeting	TB/HIV Advisory Committee	10		4	2	2	2
1.1.2.2	Print the new NTLP Manual (500 copies)	NTLP manual printed	NTLP Central Unit	600		500		100	
	Training of all DHMTs (5-day training in Maseru, 20 people per district)	Training in Maseru	NTLP Central Unit	2		1		1	
Strategy 1.2: Strengthen TB case detection among patients seeking care in all health facilities at all levels									
1.2.1	Train all healthcare workers in sputum collection and communication with patients (1-day training in each district of 2 staff per facility)	Staff trained	DHLM	2,000		500	1,000	500	
1.2.2									

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
1.2.2.1	Revise the laboratory management information system to allow the analysis of the quality of the sputum samples	Laboratory management system revised	TB/HIV Advisory Committee, NTRL	1		1			
1.2.2.2	Analyze the laboratory register for quality of sputum samples (monthly, 30 laboratories)	Monthly report	NTRL	630		90	180	180	180
1.2.2.3	Analyze the sputum positivity rate among new investigations and patients (quarterly, 30 laboratories)	Quarterly report	NTRL	420		60	120	120	120
1.2.3									
1.2.3.1	Cross-check the laboratory register and the treatment register for initial lost-to-follow up TB patients (monthly, 10 districts)	Monthly report	DHLM	480		120	120	120	120
1.2.3.2	Trace initial lost-to-follow up TB patients for treatment initiation (5% of TB patients)	Tracing of initial lost-to-follow up TB patients	DHLM	1,485		370	380	375	360
1.2.4									
1.2.4.1	Support telephone communication of health centers with district hospitals (10 hospitals, airtime 100 LSL/month)	Monthly allowance for telephone communication	NTLP, DHLM	480		120	120	120	120
1.2.4.2	Provide transport reimbursement to presumptive-TB patients for diagnosis at district hospital (4 people per each TB patient)	Transport reimbursement to presumptive-TB patients for diagnosis at district hospital	DHTM	148,500		37,000	38,000	37,500	36,000
Strategy 1.3: Involve all heath providers									
1.3.1									

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
1.3.1.1	Support national consultations annually on public-private partnership through the professional associations	Contribution to annual conference of professional association	NTLP Central Unit	8		2	2	2	2
1.3.1.2	Develop a brochure with description of collaboration between private providers and Ministry of Health	Brochure	TB/HIV Advisory Committee	5,000		5,000			
1.3.2									
1.3.2.1	Situation analysis and mapping of the main TB private providers; development of standard memorandum of understanding	International TA (see Annex D)	NTLP Central Unit	1		Jun			
1.3.2.2	Review existing drafts of memorandum of understanding and define the public-private partnership framework	Standard memorandum of understanding for public-private partnership developed	TB/HIV Advisory Committee	1		1			
1.3.2.3	Train the co-opted private TB providers (1-day, individual training)	Training course at central level	NTLP Central Unit	12		2	2	3	5
1.3.2.4	Sign the memorandum of understanding with each private TB provider through an official ceremony in the Ministry of Health and release of official certificate for display in the practice	Official ceremony with certificate	NTLP Central Unit, MOH	12		2	2	3	5
1.3.3	Provide supportive supervision of the co-opted private providers to monitor TB cases detected and treated successfully (each provider, quarterly)	Supervision visit to private provider	NTLP Central Unit, DHTM	48		8	8	12	20
1.3.4	Trainon TB peer educators in factories (1-day training, 200 persons)	Peers educators trained in factories	NTLP Central Unit	250		50	150		50

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
1.3.5	Train traditional healers through their organization (1 workshop/year)	Workshop supported	NTLP Central Unit	4		1	1	1	1
Strategy 1.4: Intensify active TB case finding among TB contacts and high-burden TB areas									
1.4.1									
1.4.1.1	Appoint one of the staff in each health facility as TB contact tracing focal point	Staff appointed as TB focal point	DHTM	206		206			
1.4.1.2	Develop SOP for TB contact tracing activities	Standard operating procedure developed	TB/HIV Advisory Committee	1		1			
1.4.1.3	Develop, print and distribute contact tracing slip (10 per each TB patient)	Contact tracing slip printed	NTLP	364,500	74,000	76,000	75,000	72,000	67,500
1.4.2									
1.4.2.1	Support the TB/HIV Advisory Committee to update policy on treatment of LTBI	International TA (see Annex D)	NTLP Central Unit, TB/HIV Advisory Committee	1		Mar			
	Meeting of the TB/HIV Advisory Committee	Meeting	TB/HIV Advisory Committee	1		1			
1.4.2.2	Provide LTBI treatment to all TB close contacts (3 contacts/TB patient)	Person treated for LTBI	DHTM	102,550	15,000	23,000	22,600	21,700	20,250
1.4.3	Screen for TB priority populations using the X-ray mobile units purchased for the national TB prevalence survey	Field visit for TB screening with X-ray mobile unit	NTLP Central Unit, DHTM	16		4	4	4	4
Strategy 1.5: Strengthen the capacity of the village health workers									
1.5.1									
1.5.1.1	Revise the TB curriculum and material for the training of VHW	Training package for VHW developed	TB/HIV Advisory Committee	1		1			

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
1.5.1.2	Train the VHWs according to the revised TB curriculum	VHW trained	NTLP Central Unit	2,000		500	1,000		500
1.5.2									
1.5.2.1	1.5.2.1: Provide VHWs with identity cards with MOH logo	MOH logo	DHTM	2,000		500	1,000		500
1.5.2.2	Revise and distribute a simple form for reporting all TB activities to the health centre (10 forms/year/VHW)	TB reporting form	TB/HIV Advisory Committee	60,000		15,000	15,000	15,000	15,000
1.5.2.3	1.5.2.3: Support at the health centre monthly meetings with all village health workers	Monthly meeting with VHW	DHTM	480		120	120	120	120
1.5.2.4	1.5.2.4: Provide performance based financial incentives to village health workers (for each TB patient detected)	Financial incentive	DHTM	14,600		3,800	3,800	3,600	3,400
Strategy 1.6: Register and report all diagnosed TB cases									
1.6.1	Supply regularly all health facilities with TB registers (25 hospitals	Annual supply of TB registers	NTLP Central Unit	125	25	25	25	25	25
	Supply regularly all health facilities with TB cards	Annual supply of TB cards	NTLP Central Unit	36,450	7,400	7,600	7,500	7,200	6,750
1.6.2	Train on TB recording and reporting the staff of all health facilities in charge (5-day training, 2 staff per 25 facilities	Staff trained	NTLP Central Unit	100		50	50		
1.6.3									
1.6.3.1	Print new form for patient referral with return slip	Patient referral form (1 pad of 100 slips)	NTLP Central Unit	160		40	40	40	40
1.6.3.2	Support telephone communication of health centres with district hospitals (10 hospitals, airtime 100 LSL/month)	Monthly allowance for telephone communication	NTLP, DHLM	480		120	120	120	120

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
Strategy 1.7: Increase TB awareness in the general population									
1.7.1	Develop the protocol and questionnaire for a KAP survey	International TA (see Annex D)	NTLP Central Unit	2		Jun			Jan
	Implement the KAP survey	KAP survey (10 people, 30 days, transport, accommodation)	NTLP Central Unit	2		1			1
1.7.2	Based on the results of the KAP survey, develop a national strategy and action plan for ACSM	International TA (see Annex D)	NTLP Central Unit	1		Dec			
1.7.3			NTLP Central Unit						
1.7.3.1	Publish through mass media: newspapers, radio, TV (4 outputs/quarter)	Output in mass media	NTLP Central Unit	80	16	16	16	16	16
1.7.3.2	Organize public events: school competitions, sports, other (4 events/quarter)	Public event	NTLP Central Unit	80	16	16	16	16	16
1.7.3.3	Celebrate the World TB Day (every year)	World TB Day celebrated	NTLP Central Unit	5	1	1	1	1	1
1.7.3.4	Advocate for TB with policy makers and stakeholders (1-day meeting, 50 people, annually)	Annual event in Maseru (50 participants)	NTLP Central Unit	5	1	1	1	1	1
1.7.4									
1.7.4.1	Develop written annual plans of collaboration with the Ministry of Education (2-day meeting, 20 people, annually)	Annual plan with the Ministry of Education	NTLP Central Unit, Ministry of Education	4		1	1	1	1
1.7.4.2	Develop TB specific educational material for children, families and teachers	Meeting of the TB/HIV Advisory Committee and the Ministry of Education	TB/HIV Advising Committee, Ministry of Education	6		6			

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
		TB booklet printed	NTLP Central Unit	3,000		3,000			
Objective 2: To treat successfully 90% of all drugs-susceptible TB patients, irrespectively of their HIV status									
Strategy 2.1: Supervise and support the treatment of all TB patients, including eDOT									
2.1.1	Provide performance based incentives to VHWs/DOT supporters for each TB patient treated successfully	Financial incentive provided	DHTM	25,450		6,100	6,750	6,500	6,100
2.1.2	2.1.2: Support the use of eDOT in difficult-to-access areas (cell phone + annual subscription, 100 patients/year)	TB patient supported with eDOT	NTLP central Unit, DHTM	350		50	100	100	100
Strategy 2.2: Improve health workers' attitude and user-friendly delivery of TB services									
2.2.1	Give an award every year to the health facility and healthcare worker with the best programme outcome indicators (1 ceremony/year with 2 trophies and)	Official ceremony with 2 trophies	NTLP Central Unit	4		1	1	1	1
2.2.2	Promote patients' anonymous feedback and include its mandatory discussion during the monthly meetings of the DHMT	Monthly discussion at district level	DHLM	600	120	120	120	120	120
2.2.3	Train all health staff in communication with TB patients and their families	Staff trained	DHMT	2,000		500	1,000	500	
2.2.4	2.2.4: Include among the indicators used for the Performance Base Funding (PBF) the patients' waiting time for receiving TB services	Monthly analysis	DHMT	600	120	120	120	120	120
2.2.5	2.2.5: Conduct Clients' Satisfaction Surveys (20 health facilities/district every 2 years)	Health facility surveyed	DHMT	400			200		200
Strategy 2.3: Support TB treatment adherence and provide social protection									

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
2.3.1	Provide food/hygiene packages to all TB patients as incentives for treatment adherence (weekly, 1 sachet of plumpy soy daily, 26 weeks/patient)	Weekly food/hygiene package	NTLP, partners	947,700		197,600	195,000	187,200	175,500
2.3.2	Conduct home visits to TB affected households in need in collaboration with the Ministry of Social Development (monthly, 6 months, 10% of TB patients)	Home visit	NTLP, Ministry of Social Development, DHMT	21,870		4,560	4,500	4,320	4,050
2.3.3									
2.3.3.1	Develop a checklist for social assessment and protection of TB patients	National TA (see Annex D)	TB/HIV Advisory Committee, Ministry of Social Development	1		May			
2.3.3.2	Assess the social needs of each TB patients and facilitate access to existing social support schemes	Patient assessed for social needs	Ministry of Social Development, DHMT	36,450		7,600	7,500	7,200	6,750
2.3.3.3	Establish working relationship with the Ministry of Social Development at central and districts levels	Meeting of coordination with Ministry of Social Development	NTLP, Ministry of Social Development	8		2	2	2	2
2.3.3.4	Provide psycho-social support to TB patients (monthly, 6 months)	Monthly psycho-social support	NTLP, DHMT	218,700		45,600	45,000	43,200	40,500
2.3.4	Further strengthen community-based TB activities (e.g. Engage TB)	Annual support to community activities	NTLP	36,450	7,400	7,600	7,500	7,200	6,750
	Print and disseminate the promoting use of the Patient's Charter for TB Care (50 copies per community, 150 communities)	Patient's Charter for TB Care brochure printed and disseminated	TB/HIV Advisory Committee	15,000		7,500		7,500	
2.4: Provide regular supply of quality anti-TB and ancillary medicines									

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
2.4.1	Monitor the stock levels of anti-TB medicines and TB laboratory reagents (25 central and district hospitals, quarterly)	Quarterly report on stock levels	NTLP Central Unit	400		100	100	100	100
2.4.2	Supervise quarterly the storage and stock levels of TB commodities at district and peripheral level	Supervision visit	NTLP Central Unit, District TB Coordinators		532	752	1,112	1,112	1,112
2.4.3	Update the essential list of anti-TB medicines and incorporate fixed-dose combinations	Essential list of anti-TB medicines updates	Department of Pharmaceutical Services, NTLP Central Unit, GDF	1		1			
2.4.4	Conduct a training course on forecasting and quantification of anti-TB medicines through QuanTB	International TA (see Annex D)	Department of Pharmaceutical Services, NTLP Central Unit, GDF	1		Apr			
2.4.5	Procure and manage the supply of the first-line anti TB and ancillary medicines	Centralized annual procurement and supply management	Department of Pharmaceutical Services, NTLP Central Unit, GDF	5	1	1	1	1	1
2.4.6	Maintain regular communication and collaboration with GDF	International TA by GDF (see Annex D)	Department of Pharmaceutical Services, NTLP Central Unit, GDF	4		1	1	1	1
Strategy 2.5: Improve nutritional care of undernourished TB patients									
2.5.1	Develop NTLP guidelines on nutritional care for TB patients	International TA (see Annex D)				Mar			
2.5.2	Train healthcare workers on the NTLP guidelines on nutritional care (2-day training of 30 trainers in Maseru)	Trainers among staff trained in childhood TB screening	NTLP Central Unit	60		30		30	

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
	Train healthcare workers on the NTLP guidelines on nutritional care (2-day training in each district of 2 staff per facility)	Staff trained	DHLM	2,000		500	1,000	500	
2.5.3	Provide therapeutic food supplementation to all TB in/outpatients in need (therapeutic food supplement per week, 8 weeks, 10% of new/relapse TB patients)	Weekly therapeutic food packange	NTLP, partners	29,160	5,920	6,080	6,000	5,760	5,400
2.5.4	Advocate for inclusion of nutritional care costs to TB patients under the budget of the MOH	Meeting	NTLP	4		2	2		
Objective 3: To find 90% of the incident drug-resistant TB cases, place all of them on appropriate treatment and successfully treat 755 of them, irrespectively of their HIV status									
Strategy 3.1: Establish effective airborne infection control measures in all health settings									
3.1.1	Revise the NTLP guidelines on infection control and prepare job aids	International TA (see Annex D)	NTLP Central Unit	1		Jul			
	Infection control guidelines job aids printed	Job aids printed	NTLP Central Unit	700		500		200	
3.1.2									
3.1.2.1	Survey with TB infection control assessment of all health facilities		NTLP Central Unit	1		1			
3.1.2.2	Provide training on infection control to all the staff of the health facilities (3-day training for 20 people/district)	Training course on TB infection control	NTLP Central Unit, DHMT	20		10		10	
3.1.2.3	Develop district plans for TB infection control	District plan for TB infection control developed	NTLP Central Unit, DHMT	10		5	5		

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
3.1.2.4	Education on infection control practices in all MDR/RR patients' households (1 hour orientation, handout)	Handout printed and distributed with instructions for MDR/RR-TB infection control	NTLP Central Unit	3,550	450	600	750	850	900
3.1.3	Advise on technical specifications and installation of ultraviolet germicidal irradiation lamps	International TA (see Annex D)	NTLP Central Unit	1		Jul			
	Purchase ultraviolet germicidal irradiation lamps and spare parts	Ultraviolet germicidal irradiation lamp with spare parts	NTLP Central Unit	15		15			
	Purchase particulate respirators (N95) masks	Particulate respirators (N95) masks	NTLP Central Unit	1,295,750	164,250	219,000	273,750	310,250	328,500
	Purchase simple facial masks	Simple facial masks	NTLP Central Unit	6,652,250	1,350,500	1,387,000	1,368,750	1,314,000	1,232,000
3.1.4	Include infection control in the comprehensive checklist for supervision	Checklist for supervision with TB infection control section	TB/HIV Advisory Committee	1		1			
3.1.5									
3.1.5.1	Provide international training on TB infection control (2-week training for at least two staf)	Staff trained internationally on TB infection control	NTLP Central Unit	2		2			
3.1.5.2	Ensure minor civil work in health facilities for the improvement of TB infection control measures (20 facilities every year)	Health facility with improved TB infection control measures	NTLP Central Unit, DHMT	80		20	20	20	20
Strategy 3.2: Provide prompt and effective treatment with quality anti-drug resistant TB and ancillary medicines									

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
3.2.1	Update the current NTLP guidelines for the treatment of drug resistant TB	International TA (see Annex D)	TB/HIV Advisory Committee			Mar			
	Meeting of the TB/HIV Advisory Committee	Meeting	TB/HIV Advisory Committee	5		3	2		
3.2.2									
3.2.2.1	Advise on national legislation for procurement, registration and ethical use of new and repurposed anti-TB medicines	National TA (see Annex D)	NTLP Central Unit	1		Jun			
3.2.2.2	Revise the needs of anti-TB medicines according to the new regimens for MDR/RR-TB patients	Revised needs of medicines for MDR/RR-TB	TB/HIV Advisory Committee, GDF	1		1			
3.2.2.3	Procure and manage the supply of adequate quantities of quality anti-TB medicines of Group A, B and C	Annual procurement and supply management	Department of Pharmaceutical Services, GDF	5	1	1	1	1	1
3.2.3	Development of a policy and recording/reporting system for aDSM	International TA (see Annex D)	NTLP Central Unit	1		Apr			
Strategy 3.3: Strengthen the programmatic management of drug resistant TB decentralized at regional level									
3.3.1	Maintain and strengthen the central MDR TB Hospital in Maseru to provide care for critically ill DR TB patients	Central MDR/RR-TB Hospital in Maseru functional during the year	NTLP, partners	5	1	1	1	1	1
3.3.2	Maintain and expand the temporary housing in Maseru for MDR/RR-TB patients newly enrolling on MDR TB treatment and patients with complications not requiring hospitalization but not suitable for community-based TB care	Housing for MDR/RR-TB patients in Maseru functional during the year	NTLP, partners	5	1	1	1	1	1

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
3.3.3	Maintain and strengthen the central clinical MDR TB team (6 physician, 1 nurse, 1 pharmacy technician)	Staff working in the MDR/RR-TB Hospital in Maseru	NTLP, partners	40	8	8	8	8	8
3.3.4	Refurbish the MDR-TB wards in the district hospital of Leribe and Mohale's Hoek earmarked as regional MDR/RR-TB referral centres	MDR-RR-TB regional center of reference functional	NTLP, partners	2		2			
3.3.5	Establish and support the National TB Consilium (6 staff meeting monthly in Maseru)	Monthy meeting of the National TB Consilium	NTLP, partners	42		6	12	12	12
3.3.6	Supervise monthly all MDR/RR-TB centres and provide written feedback	Supervision visit	NTLP Central Unit, partners	78		6	24	24	24
3.3.7	Print and disseminate guidelines for programmatic management of drug resistant TB	Guidelines printed and disseminated	NTLP	600		500		100	
	Train staff on PMDT (3-day training for 10 people in each district)	Staff trained	NTLP Central Unit	150		50	50		50
3.3.8	Revise the standard operating procedures for timely communication of drug-resistant TB laboratory results to the clinicians	Standard operating procedures revised	NTLP Central Unit, partners	1		1			
Strategy 3.4: Strengthen the care of drug-resistant TB patients at community level									
3.4.1	3.4.1: Train DOT supporters and VHW on drug-resistant TB care	VHW trained on drug resistant TB care	NTLP Central Unit	2,000		500	1,000		500
3.4.2	Maintain financial incentives to the DOT supporters (500 LSL/month, 20 months/patient)	Monthly incentive	DHMT	69,300	8,600	11,800	14,600	16,700	17,600
3.4.3	Provide food/hygiene packages to all MDR/RR-TB patients (each month, 20 months/patient)	Monthly food/hygiene package	DHMT	60,700		11,800	14,600	16,700	17,600

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
3.4.4	Provide transport reimbursement to all MDR/RR-TB patients (monthly, 20 months/patient)	Monthly transport reimbursement	DHMT	60,700		11,800	14,600	16,700	17,600
3.4.5	3.4.5: Conduct home visits for MDR-TB affected households in need (87 weeks/patient, 5% of patients)	Home visit	DHMT	13,202	0	2,567	3,176	3,632	3,828
3.4.6	3.4.6: Provide psycho-social support to the MDR-TB patients in need (monthly, 20 months/patient)	Monthly psycho-social support	DHMT	69,300	8,600	11,800	14,600	16,700	17,600
Objective 4: To find 90% of the incident TB cases in vulnerable populations, place all of them on appropriate treatment and successfully treat 90% of them									
Strategy 4.1: People living with HIV									
4.1.1	Ensure coordination between NTLP and NAP (quarterly meetings at central and district level)	Quarterly meeting	NTLP, National HIV/AIDS Programme	220	44	44	44	44	44
4.1.2	Collaborate with the National HIV/AIDS Programme to intensify the diagnosis of TB (including LF-LAM) and LTBI among PLHIV	PLHIV screened for TB and LTBI	National HIV/AIDS Programme	1,355,000	237,000	259,000	275,000	287,000	297,000
4.1.3	Coordinate with the National HIV/AIDS Programme for the full access to LTBI treatment among the HIV target populations	PLHIV treated for LTBI	National HIV/AIDS Programme, NTLP	39,500	10,500	10,000	8,000	6,000	5,000
4.1.4	Coordinate with the National HIV/AIDS Programme for the full access to HIV counselling and testing among all TB patients	TB patient receving HIV counselling and testing	NTLP, National HIV/AIDS Programme	36,050	7,000	7,600	7,500	7,200	6,750
	Coordinate with the National HIV/AIDS Programme for the full access to ART among the TB patients living with HIV	TB/HIV patient receiving ART	NTLP, National HIV/AIDS Programme	24,400	4,400	5,000	5,250	5000	4,750

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
4.1.5	Provide co-trimoxazole preventive therapy to the TB patients living with HIV	TB/HIV patient receiving co-trimoxazole preventive therapy	NTLP	25,220	4,900	5,320	5,250	5,000	4,750
Strategy 4.2: Children <5 years									
4.2.1	Develop specific guidelines for childhood TB	International TA (see Annex D)	NTLP Central Unit	1		Mar			
4.2.2	Screen all children <5 living in the households affected by TB	Child screened for TB and LTBI	All health facilities	5,800	400	800	1,200	1,600	1,800
4.2.3	Promote the TB screening of all children coming to health facilities through training of trainers (2-day training of 30 trainers in Maseru)	Trainers among staff trained in childhood TB screening	NTLP Central Unit	60		30		30	
4.2.4	Support the TB diagnosis among children through training of staff at district level (2-day training in each district of 2 staff per facility)	Staff trained	DHLM	2,000		500	1,000	500	
4.2.5	Provide LTBI treatment to all household children and others eligible	Children treated for LTBI	DHMT	5,800	400	800	1,200	1,600	1,800
4.2.6									
4.2.6.1	Meeting of the TB/HIV Advisory Committee	Meeting	TB/HIV Advisory Committee	1		1			
4.2.6.2	Procure and manage the supply of quality anti-TB medicines for paediatrics use	Child <5 treated with anti-TB medicines of paediatric formulation	DHMT	1,874	148	304	450	432	540
4.2.7	Train VHWs on LTBI and TB diagnosis and treatment in children (1-day training in each district of all VHWs)	VHW trained	DHMT	6,400		3,000	3,000	200	200

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
Strategy 4.3: Healthcare workers									
4.3.1	Healthwise project in Year 1 then repeated year 4	Healthwise project implemented annually	MOH	5	1	1	1	1	1
4.3.2	NTLP recording system revised and reporting annually TB among health workers	NTLP reporting on TB among health workers	NTLP Central Unit, DHTM	4		1	1	1	1
Strategy 4.4: Miners and peri-mining communities									
4.4.1	Develop specific guidelines for TB prevention and control in mines and peri-mining communities	Specific guidelines developed	TB/HIV Advisory Committee	1		1			
4.4.2	Collaborate with mine companies to intensify the diagnosis of TB and LTBI among miners and their families	Miners and family contacts screened for TB and LTBI	NTLP Central Unit	190,000	35,000	35,000	40,000	40,000	40,000
4.4.3	Support annually two clinics specifically serving miners and peri-miners communities in collaboration with the Employment Bureau of Africa (TEBA)	Clinic annual support	NTLP Central Unit	10	2	2	2	2	2
4.4.4	Coordinate with Medical Bureau for Occupational Diseases and Compensation (MBOD) for claim compensations and occupational health services to miners and ex-miners	Annual coordination	NTLP Central Unit	5	1	1	1	1	1
4.4.5	Cross-border communication for continuation of supervised anti-TB treatment and evaluation of treatment outcome	Annual cross-border communication	NTLP Central Unit	5	1	1	1	1	1

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
4.4.6	Inform/educate miners and their households on TB	Specific education material for miners and their families printed and distributed	NTLP Central Unit	55,000	35,000	10,000		10,000	
4.4.7	Engage NGO to track and trace ex miners to facilitate submission of documents for financial compensation	Annual contract with NGOs	NTLP Central Unit	5	1	1	1	1	1
Strategy 4.5: Inmates									
4.5.1	Conduct a TB prevalence survey in the inmate population	TB prevalence survey in one prison	MOJCS, NTLP Central Unit	10		5	5		
4.5.2	Screen all inmates for TB (at entry and every six months); provide ongoing access to TB diagnosis	Inmate screened per year	MOJCS, NTLP Central Unit	3,200		800	800	800	800
4.5.3	Provide effective anti-TB treatment with quality medicines during detention	TB cases treated annually in prison	MOJCS, NTLP Central Unit	80	22	18	16	13	10
4.5.4	Engage NGO to ensure effective TB referral between penitentiary and civilian system	Annual contract with NGOs	MOJCS, NTLP Central Unit	5	1	1	1	1	1
4.5.5	Establish effective airborne infection control measures in prisons	Infection control measures established in one prison	MOJCS, NTLP Central Unit	10		5		5	
4.5.6	Coordinate with the MOJCS for joint recording and reporting of all TB cases	NTLP recording and reporting set of forms and registers given to prisons every year	MOJCS, NTLP Central Unit	40		10	10	10	10
4.5.7									

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
4.5.7.1	Organize quarterly meetings of coordination with representatives of the MOJCS	Quarterly meeting	MOJCS, NTLP Central Unit	16		4	4	4	4
4.5.7.2	Train healthcare workers and other staff working in prisons on NTLP guidelines (3-day training for 20 persons in each district)	Training course	MOJCS, NTLP Central Unit	20		10		10	
4.5.7.3	Conduct jointly supervisory visits quarterly in all prisons	Supervision visit	MOJCS, NTLP Central Unit	160		40	40	40	40
Strategy 4.6: Mobile population									
4.6.1	Specific follow up of TB cases among migrant workers (monitoring register, telephone communication, home visits)	Specific follow up of TB cases among migrant workers	NTLP Central Unit, DHMT	4		1	1	1	1
4.6.2	Provide outreach TB services to refugee camp	Outreach services quarterly	NTLP Central Unit	12		4	4	4	4
Strategy 4.7: People with diabetes mellitus and other populations at risk									
4.7.1	Coordinate with the relevant services for the treatment of diabetes mellitus among TB patients	Annual coordination	NTLP Central Unit, MOH, partners	5	1	1	1	1	1
4.7.2									
4.7.2.1	Screen for TB the population in Mohlomi Mental Hospital (60 people, annually)	People screened for TB in Mohlomi Mental Hospital	NTLP Central Unit	240		60	60	60	60
4.7.2.2	Support implementation of TB infection control measures in mental institutions (UV lamps, natural ventilation)	TB environmental control measures established	NTLP Central Unit, MOH	1		1			
4.7.3									

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
4.7.3.1	Collaborate with other services for TB screening of their patients at risk for TB and LTBI treatment (1-day orientation workshops with other services every year)	Orientation workshop with other health departments	NTLP Central Unit, MOH	4		1	1	1	1
4.7.3.2	Collaborate with other services for the management of TB and coexisting pathologies	Annual consultation with other specialists	NTLP Central Unit, MOH	5	1	1	1	1	1
Objective 5: To increase the workload capacity of the TB laboratory services to more than 67,000 Xpert MTB/RIF tests per year									
Strategy 5.1: Increase access to rapid and accurate detection of TB and drug-resistant TB									
5.1.1	Develop an action plan for the NTRL and its network	International TA (see Annex D)	NTLP Central Unit	1		Jan			
5.1.2									
5.1.2.1	Support the process of accreditation as NTRL	International TA (see Annex D)	STRL, NTRL	1		Jun			
5.1.2.2	Participate in TB laboratory relevant international meetings and training courses (at least 2 staff every year in regional or extra-regional event)	NTRL staff participating in TB laboratory relevant international meetings and trainings	NTRL	16		10	2	2	2
5.1.2.3	Improve the NTRL store for laboratory commodities (equipped container)	Container adapted for storage of TB laboratory items	NTRL	1		1			
5.1.3									
5.1.3.1	Procure and manage the supply of LPA consumables	Annual procurement and supply management	NTRL	5	1	1	1	1	1

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
5.1.3.2	Procure personal protective equipment and other biosafety measures	Annual procurement and supply management	NTRL	5	1	1	1	1	1
5.1.4	Establish and maintain 13 mini TB laboratories in difficult-to-reach areas	Mini TB laboratory in function	NTRL	13		6	7		
5.1.5									
5.1.5.1	Provide regular service and maintenance of all TB laboratory equipment through contract service	Annual contract for service of laboratory equipment	NTRL	5	1	1	1	1	1
5.1.5.2	Procure and manage the timely supply of Xpert MTB/RIF cartridges	Xpert MTB/RIF cartriges purchased	NTRL	410,000	76,000	120,000	75,000	72,000	67,000
5.1.5.3	Procure and maintain the GX Alert application software for remote monitoring of Xpert MTB/RIF assays	Xpert MTB/RIF assays monitored monthly through GX Alert application software	NTRL	30		24	30	30	30
5.1.6	Advocate for maintaining the present capacity in culture and drug sensitivity testing	Set of advocacy activities	NTRL, NTLP	5	1	1	1	1	1
5.1.7									
5.1.7.1	Procure spare containers for the safety transport of biological samples	Container for transport of biological samples	NTRL	100		100			
5.1.7.2	Support maintenance and running costs of 10 motorbikes run by Riders for Health	Motorbike in use annually	NTLP	10	10	10	10	10	10

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
5.1.7.3	Maintain contract services with Riders for Health	Annual contract for services of Riders for Health	NTLP	5	1	1	1	1	1
5.1.7.4	Ensure transport of TB samples with various means (horses, private courier services)	TB laboratory served by various transportation means	NTLP Central Unit, DHTM	30	18	24	30	30	30
5.1.7.5	Pilot and possibly expand the use of drones and other technologies for transportation of samples	Laboratory served by drones	NTLP Central Unit, DHTM	5			1	2	2
5.1.8	Develop the protocol for countrywide anti-TB drug resistance survey and analyse its results	International TA (see Annex D)	NTRL, NTLP Central Unit	2		Feb			Feb
	Conduct the countrywide anti-TB drug resistance survey	Countrywide anti-TB drug resistance survey	NTRL, NTLP Central Unit	2		1			1
Strategy 5.2: Strengthen the quality of TB laboratory services									
5.2.1	Monitor routinely the main TB laboratory performance indicators (monthly reports from each TB laboratory)	TB laboratory reports submitted and analysed monthly	NTRL, NTLP Central Unit	1,488	204	204	360	360	360
5.2.2	Expand the NTLP supervision checklist to include a laboratory component	NTLP supervision checklist with laboratory component	NTRL, NTLP Central Unit	1		1			
5.2.3	Conduct joint supervision visits quarterly to all TB laboratories	Supervision visit to laboratory	NTRL, NTLP Central Unit	496	68	68	120	120	120
5.2.4	Ensure external quality assurance with the STRL in Kampala, Uganda (annual shipment of specimen panels for cross-checking, telephone communication)	Annual crosschecking of specimen panel	STRL, NTRL	5	1	1	1	1	1

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
5.2.5	Procure and management the supply of TB laboratory reagents	Central procurement and supply management of TB laboratory reagents	NTRL	5	1	1	1	1	1
5.2.6	Provide regular service and maintenance of all TB laboratory equipment through contract service	Annual contract for service of laboratory equipment	NTRL	5	1	1	1	1	1
	Repair broken TB laboratory equipment	Purchase of spareparts for laboratory equipment	NTRL	5	1	1	1	1	1
Strategy 5.3: Strengthen human resource capacity for TB laboratory diagnosis									
5.3.1	Advocate for development of a national human resources development plan for laboratory staff	National human resources development plan for TB laboratory	MOH	1		1			
5.3.2	Recruit and retain 3 additional lab technician for central level	Annual salary of additional laboratory TB technicians	MOH	12		3	3	3	3
5.3.3	Provide refresher training to laboratory technicians every 3 years (5-day training in Maseru, 36 laboratory technicians)	Staff trained	MOH	72		36			36
Objective 6: To enhance stewardship in the NTLP and maximize resources for the achievement of the strategic objectives									
Strategy 6.1: Strengthen the programme management at central level									
6.1.1									

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
6.1.1.1	Establish the NTLP Central Unit composed by 7 staff with salary: programme manager, TB/HIV coordinator, MDR-TB coordinator, infection control coordinator, training and supervision coordinator, procurement and supply management officer, monitoring and evaluation officer	Annual staff salary	MOH	28		7	7	7	7
	TB consultant from international partner	Annual salary	MOH	4		1	1	1	1
6.1.1.2	Support the work of the NTLP Central Unit with office equipment, consumables, etc.	Annual support	MOH	5	1	1	1	1	1
6.1.2	Develop for the MOH clear terms of references and lines of authority for the proposed NTLP Central Unit	NTLP Central Unit terms of reference	NTLP Central Unit	1		1			
6.1.3	Provide training on health management to NTLP staff (7-day training in South Africa, 6 people every 2 years)	Staff trained on health management	NTLP Central Unit	12		6		6	
6.1.4	Participate in TB relevant international meetings and training courses (2 staff every year in regional or extra-regional event, e.g. WHO, UNION, etc.)	Staff participating in TB relevant international meetings and trainings	NTLP Central Unit	8		2	2	2	2
6.1.5	Conduct a comprehensive external review of NTLP	International TA (see Annex D)	NTLP Central Unit, partners	1					Jan
Strategy 6.2: Strengthen TB recording and reporting system for the regular and timing monitoring of programme activities and performances according to international standards									
6.2.1	Provide additional pay monthly for the function of District TB Coordinator and of TB Officer	Annual additional payments	MOH	80		20	20	20	20

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
6.2.2	Conduct every 6 month a NTLP staff retreat in Maseru (60 people, 30 with accommodation, hire hall, meals, etc.)	NTLP staff retreat	NTLP Central Unit	8		2	2	2	2
6.2.3	Hold coordination quarterly meetings with DHMTs, Health Centers Committee and Community Council Committee (per district, 206 health facilities, 1 day)	Coordination quarterly meeting	DHMTs	3,776		944	944	944	944
Strategy 6.3: Strengthen the supervision of TB services at all levels									
6.3.1	Revise the existing supervision checklist to support the comprehensive assessment of all activities during the same visit	Supervision checklist revised	TB/HIV Advisory Committee	1		1			
6.3.2	Develop annual plans of supervision	Annual plan for supervision	NTLP Central Unit	4		1	1	1	1
6.3.3									
6.3.3.1	Supervise quarterly all facilities at district level and provide written feedback	Supervision visit	NTLP Central Unit		44	44	44	44	44
6.3.3.2	Supervise quarterly all health facilities at preipheral level and provide written feedback	Supervision visit	District TB Coordinators		532	752	1,112	1,112	1,112
Strategy 6.4: Strengthen the capacity of healthcare workers at all levels for the effective management of the TB patients and the programme									
6.4.1	Identify the TB training needs for each level of staff based on current job descriptions and task analysis	International TA (see Annex D)	NTLP Central Unit	1		Aug			
6.4.2	Revise/develop TB training methodology and material for each level of staff	TB training package (methodology and material) for doctors, nurses, field workers	TB/HIV Advisory Committee	3		3			

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
6.4.3	Design annually a national TB training action plan for in-service training and continuous training	TB training action plan	NTLP Central Unit	4		1	1	1	1
Strategy 6.5: Undertake research to optimize implementation and promote innovation									
6.5.1	Create and update a national TB-related research database	National TB-related research database updated	NTLP Central Unit	4		1	1	1	1
6.5.2	Develop every year a TB research agenda to be included into the National Health Research Agenda	Annual TB research agenda	NTLP Central Unit, MOH	4		1	1	1	1
6.5.3	Two 14-day training courses in South Africa for 2 people per year	People fully trained in SORT-IT	NTLP Central Unit, MOH	8		2	2	2	2
6.5.4	Conduct clinical trials and operational research studies	Clinical trial/operational research published	NTLP	14		2	3	4	5
6.5.5									
6.5.5.1	Develop the protocol for a country-wide representative TB prevalence survey and analyse its results	International TA (see Annex D)	NTLP Central Unit	2	1		1		
6.5.5.2	Conduct a country-wide representative TB prevalence survey	TB prevalence survey	NTLP Central Unit	1	1/3	2/3			
Strategy 6.6: Strengthen TB recording and reporting system for the regular and timing monitoring of programme activities and performances according to international standards									
6.6.1	Improve the application software for data processing and analysis	International TA (see Annex D)	NTLP Central Unit	1		May			
6.6.2	3-day workshop in each district for 10 people	Workshop	NTLP Central Unit, DHMT	20		10		10	
6.6.3	DHMT meeting quarterly to present and discuss TB data	Quarterly meeting	DHMT	160		40	40	40	40

Strategy/ intervention	Description	Unit	Responsible for implementation	Total quantity	Quantity/ timeline				
					2018	2019	2020	2021	2022
Strategy 6.7: Establish effective mechanisms of coordination between all national and international partners for the joint implementation of the programme activities towards the strategic goals									
6.7.1									
6.7.1.1	Secretariat support to the Parliamentary Caucus on TB	Secretariat support (lump sum)	NTLP Central Unit	4		1	1	1	1
6.7.1.2	1-day workshop in MOH for 50 people, every year	Workshop	NTLP Central Unit	4		1	1	1	1
6.7.2									
6.7.2.1	Participation of 2 NTLP staff in relevant meetings	Meeting	NTLP Central Unit	2		2			
6.7.2.2	Secretariat support to the Multisectoral Coordination Committee on Health	Secretariat support (lump sum)	NTLP Central Unit	4		1	1	1	1
Strategy 6.8: Maximize the available funds and establish innovative funding for long-term sustainability of the activities									
6.8.1	Two NTLP staff participating in relevant meetings with potential private partners	Meeting for fundraising	NTLP Central Unit	7		1	2	2	2
6.8.2	Two NTLP staff participating in relevant MOH meetings	MOH meeting	NTLP Central Unit	20	4	4	4	4	4
6.8.3	Two NTLP staff participating in 2 relevant international events every year	NTLP staff participating in relevant international event	NTLP Central Unit	18	2	4	4	4	4

Annex D: Technical assistance plan, 2018-2022

Objective/ strategy	Intervention	Deliverable	Timeline	Expertise		
				Type	Quantity	Cost (US$)
Objective 1: To find 90% of all incident TB cases and place all of them on appropriate treatment						
Strategy 1.1: Update the NTLP guidelines						
1.1.1.1 Comprehensive NTLP diagnostic algorithm	Develop a new NTLP diagnostic algorithm jointly with NTRL	NTLP diagnostic algorithm finalized	Mar 2019	International	7 days x 625 US$ 5 days x 110 US$ per diem 2000 US$ travel	6,925
1.1.2.1 NTLP manual guidelines	Update the NTLP manual guidelines	NTLP manual guidelines updated	Mar 2019	International	20 days x 625 US$ 5 days x 110 US$ per diem 2000 US$ travel	
Strategy 1.3: Involve all heath providers						
1.3.2.1 Public-private partnership	Situation analysis and mapping of the main TB private providers; development of standard memorandum of understanding	1) Situation analysis with map of the main TB private providers in most relevant districts; 2) standard text of memorandum of understanding finalized	Jun 2019	International	15 days x 625 US$ 5 days x 110 US$ per diem 2000 US$ travel	
Strategy 1.4: Intensify active TB case finding among TB contacts and high-burden TB areas						
1.4.2.1: Treatment of latent TB infection	Update policy on treatment of latent TB infection	Updated regimen for the treatment of latent TB infection	Mar 2019	International	5 days x 625 US$ 3 days x 110 US$ per diem (to be added to 1.1.2.1)	
Strategy 1.7: Increase TB awareness in the general population						
1.7.1: KAP survey	Develop the protocol and questionnaire for a KAP survey	Protocol developed, questionnaire developed and tested	Jun 2019 Jan 2022	International	For each KAP survey: 20 days x 625 US$ 10 days x 110 US$ per diem 2000 US$ travel	

Objective/ strategy	Intervention	Deliverable	Timeline	Expertise		
				Type	Quantity	Cost (US$)
1.7.2: National ACSM strategy and action plan	Based on the results of the KAP survey, develop the national strategy and action plan for ACSM	KAP survey report developed; ACSM national strategy and action plan developed	Dec 2019	International	20 days x 625 US$ 5 days x 110 US$ per diem 2000 US$ travel	
Objective 2: To treat successfully 90% of all drug-susceptible TB patients, irrespectively of their HIV status						
Strategy 2.2: Improve health workers' attitude and user-friendly delivery of TB services						
Strategy 2.3: Support TB treatment adherence and provide social protection						
2.3.3.1: Social assessment and protection of TB patients	Develop a checklist for social assessment and protection of TB patients	Checklist developed and tested	May 2019	National	10 days x 270 US$	
Strategy 2.4: Provide regular supply of quality anti-TB and ancillary medicines						
2.4.4: Anti-TB medicines forecasting and quantification	Conduct a training course on forecasting and quantification of anti-TB medicines through QuanTB	Training course delivered	Apr 2019	International	10 days x 400 US$ 5 days x 110 US$ per diem 2000 US$ travel	
Strategy 2.5: Improve nutritional care of undernourished TB patients						
2.5.1: NTLP guidelines on nutritional care	Develop NTLP guidelines on nutritional care	Guidelines developed	Mar 2019	International	20 days x 625 US$ 5 days x 110 US$ per diem 2000 US$ travel	
Objective 3: To find 90% of the incident drug-resistant TB cases, place all of them on appropriate treatment and successfully treat 75% of them, irrespectively of their HIV status						
Strategy 3.1: Establish effective airborne infection control measures in all health settings						
3.1.1: TB infection control	Revise the NTLP guidelines on infection control and prepare job aids	Job aids developed	Jul 2019	International	20 days x 625 US$ 5 days x 110 US$ per diem 2000 US$ travel	
3.1.3: Tools for environmental	Advise on technical specifications and	Report with recommendations	Jul 2019	International	2 days x 625 US$ (to be added to 3.1.1)	

Objective/ strategy	Intervention	Deliverable	Timeline	Expertise		
				Type	Quantity	Cost (US$)
control and individual protection	installation of ultraviolet germicidal irradiation lamps					
Strategy 3.2: Provide prompt and effective treatment with quality anti-TB and ancillary medicines						
3.2.1: Programmatic management of drug resistant TB	Update the current NTLP guidelines for the treatment of drug resistant TB	Guidelines updated	Mar 2019	International	10 days x 625 US$ 5 days x 110 US$ per diem 2000 US$ travel	
3.2.2.1: Procurement of second line anti-TB medicines, including new and repurposed medicines	Advise on the national legislation for procurement, registration and ethical use of new and repurposed anti-TB medicines	Report with specific recommendations given	Jun 2019	National	15 days x 270 US$	
3.2.3: aDSM	Development of a policy and recording/reporting system for aDSM	aDSM policy and tools designed	Apr 2019	International	15 days x 500 US$ 5 days x 110 US$ per diem 2000 US$ travel	
Objective 4: To find 90% of the incident TB cases in vulnerable populations, place all of them on appropriate treatment and successfully treat 90% of them						
Strategy 4.2: Children <5 years						
4.2.1: Guidelines for childhood TB	Develop specific guidelines for childhood TB	Guidelines developed	Mar 2019	International	10 days x 625 US$ 5 days x 110 US$ per diem 2000 US$ travel (to be added to 1.1.2.1)	
Objective 5: To increase the workload capacity of the TB laboratory services in supporting the achievement of the strategic goals						
Strategy 5.1: Increase access to rapid and accurate detection of TB and drug-resistant TB						

Objective/ strategy	Intervention	Deliverable	Timeline	Expertise		
				Type	Quantity	Cost (US$)
5.1.1: TB laboratory action plan	Develop an action plan for the NTRL and its network	Action plan finalized and approved	Feb 2019	International	20 days x 625 US$ 12 days x 110 US$ per diem 2000 US$ travel	
5.1.2.1: Accreditation as NTRL	Support the accreditation process as NTRL	NTRL accredited by independent body	Jun 2019	International	20 days x 625 US$ 18 days x 110 US$ per diem 3 x 2000 US$ travel	
5.1.8: Countrywide anti-TB drug resistance survey	Conduct one countrywide anti-TB drug resistance survey every 3 years	Protocol developed and analysis conducted	Feb 2019 Feb 2022	International	15 days x 625 US$ 6 days x 110 US$ per diem 2000 US$ travel	
Objective 6: To enhance stewardship in the National TB Programme and maximize resources for the achievement of the strategic goals						
Strategy 6.1: Strengthen the programme management at central level						
6.1.5: External review of NTLP	Conduct a comprehensive external review of NTLP	External review conducted and report published	Jan 2022	International	6 experts x 20 days x 625 US$ 6 x 12 days x 110 US$ per diem 6 x 2000 US$ travel	
Strategy 6.4: Strengthen the capacity of healthcare workers at all levels for the effective management of the TB patients and the programme						
6.4.1: TB training of staff at all levels	Identification of TB training needs for each level of staff based on current job descriptions and task analysis	Task analysis performed and training needs identified	Aug 2019	International	20 days x 625 US$ 12 days x 110 US$ per diem 2000 US$ travel	
Strategy 6.5: Undertake research to optimize implementation and promote innovation						
6.5.5.1: TB prevalence survey	Develop the protocol for a country-wide representative TB prevalence survey and analyse its results	Survey protocol developed and analysis conducted	Jun 2018 Jan 2020	International	20 days x 625 US$ 12 days x 110 US$ per diem 2 x 2000 US$ travel	

Objective/ strategy	Intervention	Deliverable	Timeline	Expertise		
				Type	Quantity	Cost (US$)
Strategy 6.6: Strengthen TB recording and reporting system for the regular and timing monitoring of programme activities and performances according to international standards						
6.6.1: Electronic TB data entry and processing	Improve the electronic processing of TB data to ensure user-friendly data entry, easy transmission to other levels, standardized quarterly reports	Application software finalized	May 2019	International	20 days x 400 US$ 12 days x 110 US$ per diem 2 travels x 2000 US$	

Annex E: Costs (LSL) estimated for each objective and strategy by year, 2018-2022

Objective/ strategy	2018	2019	2020	2021	2022	Total
Goals: To reduce the overall mortality and incidence of TB by 75% and 50% respectively	**252,939,595**	**140,710,376**	**159,552,842**	**150,707,248**	**156,967,813**	**860,877,873**
Objective 1: To find 90% of all incident TB cases and place all of them on appropriate treatment	34,080,792	1,692,333	6,347,757	1,383,615	6,825,816	50,330,312
Strategy 1.1: Update the NTLP guidelines	545,977	0	46,725	0	0	592,702
Strategy 1.2: Strengthen TB case detection among patients seeking care in all health facilities at all levels	25,096,795	21,424	237,736	23,172	257,135	25,636,262
Strategy 1.3: Involve all heath providers	422,134	438,048	134,984	26,997	492,744	1,514,907
Strategy 1.4: Intensify active TB case finding among TB contacts and high-burden TB areas	415	424	433	443	453	2,168
Strategy 1.5: Strengthen the capacity of the VHWs	0	0	0	0	0	0
Strategy 1.6: Register and report all diagnosed TB cases	4,131,648	375,731	4,468,791	406,391	4,833,444	14,216,005
Strategy 1.7: Increase TB awareness in the general population	3,883,823	856,705	1,459,088	926,612	1,242,040	8,368,269
Objective 2: To treat successfully 90% of all drug-susceptible TB patients, irrespectively of their HIV status	41,449,391	34,776,303	40,320,743	35,485,761	33,036,333	185,068,531
Strategy 2.1: Supervise the treatment of all TB patients, including eDOT	393,680	420,493	472,118	471,363	459,579	2,217,233
Strategy 2.2: Improve health workers' attitude and user-friendly delivery of TB services	52,400	2,080	56,676	2,250	61,301	174,706
Strategy 2.3: Support TB treatment adherence and provide social protection	21,235,847	21,813,826	21,592,678	20,827,284	19,678,854	105,148,489
Strategy 2.4: Provide regular supply of quality anti-TB and ancillary medicines	19,446,429	12,210,192	17,873,896	13,872,505	12,543,763	75,946,785
Strategy 2.5: Improve nutritional care of undernourished TB patients	321,036	329,712	325,374	312,359	292,837	1,581,318

Objective/ strategy	2018	2019	2020	2021	2022	Total
Objective 3: To find 90% of the incident drug-resistant TB cases, place all of them on appropriate treatment and successfully treat 75% of them, irrespectively of their HIV status	27,971,747	34,487,453	39,127,715	44,040,552	47,127,267	192,754,733
Strategy 3.1: Establish effective airborne infection control measures in all health settings	1,430,003	1,656,441	1,453,201	1,637,938	1,717,872	7,895,455
Strategy 3.2: Provide prompt and effective treatment with quality anti-TB and ancillary medicines	8,726,152	12,019,562	13,483,888	15,259,629	16,288,815	65,778,046
Strategy 3.3: Strengthen the programmatic management of drug resistant TB decentralized at regional level	8,404,258	8,220,429	8,549,246	8,891,215	9,246,864	43,312,012
Strategy 3.4: Strengthen the care of drug-resistant TB patients at community level	9,411,334	12,591,022	15,641,380	18,251,770	19,873,716	75,769,221
Objective 4: To find 90% of the incident TB cases in vulnerable populations, place all of them on appropriate treatment and successfully treat 90% of them	27,895,165	14,314,651	16,149,157	8,258,720	9,814,608	76,432,300
Strategy 4.1: People living with HIV	3,062,720	3,185,229	3,312,638	3,445,143	3,582,949	16,588,679
Strategy 4.2: Children <5 years	1,428,365		1,544,919		1,670,985	4,644,269
Strategy 4.3: Healthcare workers	396,000			428,314		824,314
Strategy 4.4: Miners and peri-mining communities	3,754,663	3,904,850	4,061,044	4,223,485	4,392,425	20,336,466
Strategy 4.5: Inmates	19,253,417	7,224,573	7,230,556	161,778	168,249	34,038,573
Strategy 4.6: Mobile population	0	0	0	0	0	0
Strategy 4.7: People with diabetes mellitus and other populations at risk	0	0	0	0	0	0
Objective 5: To increase the workload capacity of the TB laboratory services to more than 67 000 Xpert MTB/RIF tests per year	46,337,224	27,587,439	28,606,981	31,756,383	29,139,579	163,427,605
Strategy 5.1: Increase access to rapid and accurate detection of TB and drug-resistant TB	42,473,828	26,882,405	25,985,320	30,993,818	26,303,991	152,639,362

Objective/ strategy	2018	2019	2020	2021	2022	Total
Strategy 5.2: Strengthen the quality of TB laboratory services	1,593,316	159,945	166,343	172,996	179,916	2,272,516
Strategy 5.3: Strengthen human resource capacity for TB laboratory diagnosis	2,270,080	545,089	2,455,318	589,568	2,655,672	8,515,727
Objective 6: To enhance stewardship in the National TB Programme and maximize resources for the achievement of the strategic goals	75,205,276	27,852,197	29,000,490	29,782,217	31,024,210	192,864,391
Strategy 6.1: Strengthen the programme management at central level	5,068,371	5,128,897	5,481,951	5,547,415	5,929,278	27,155,911
Strategy 6.2: Strengthen the programme management at district and lower level	4,782,426	4,973,723	5,172,672	5,379,579	5,594,762	25,903,162
Strategy 6.3: Strengthen the supervision of TB services at all levels	13,009,440	13,529,818	14,071,010	14,633,851	15,219,205	70,463,323
Strategy 6.4: Strengthen the capacity of healthcare workers at all levels for the effective management of the TB patients and the programme	0	0	0	0	0	0
Strategy 6.5: Undertake research to optimize implementation and promote innovation	51,960,663	4,200,000	4,254,307	4,200,000	4,258,739	68,873,709
Strategy 6.6: Strengthen TB recording and reporting system for the regular and timing monitoring of programme activities and performances according to international standards	308,375	0	0	0	0	308,375
Strategy 6.7: Establish effective mechanisms of coordination between all national and international partners for the joint implementation of the programme activities towards the strategic goals	76,000	19,760	20,550	21,372	22,227	159,910
Strategy 6.8: Maximize the available funds and establish innovative funding for long-term sustainability of the activities	0	0	0	0	0	0