OPERATIONAL PLAN

FOR THE

IMPLEMENTATION OF THE SADC HEADS OF STATE AND GOVERNMENT DECLARATION ON TB IN THE MINING SECTOR IN SOUTHERN AFRICA


TIMS
TB IN MINING SECTOR IN SOUTHERN AFRICA


AUDA-NEPAD
AFRICAN UNION DEVELOPMENT AGENCY

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ACRONYMS

ACDC	African Centres for Disease Control
ADPP Mozambique	A Mozambican Non-Governmental Association that works across Quality Education, Health and Well-being, Sustainable Agriculture and the Environment
ASM	Artisan and Small-Scale Mining
AU	African Union
AUDA-NEPAD	African Union Development Agency
CAP-TB	Common African Position on Tuberculosis
COVID-19	Respiratory illness caused by coronavirus 2 (SARS-CoV-2) Discovered in 2019
CFR	Case Fatality Ratio
CSOs	Civil Society Organizations
DFID	British Department for International Development
DMR	Department of Mineral Resources
DMRE	Department of Mineral Resources and Energy
DST	Drug Susceptibility Testing
ECSA-HC	East, Central and Southern African Health Community
Expert MTB/RIF	Molecular test equipment for identifying Rifampicin Resistant Bacilli
GDP	Gross Domestic Product
GFATM	Global Fund to Fight AIDS, TB and Malaria
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome

HIV/TB	Human Immunodeficiency Virus Related Tuberculosis
ILO	International Labour Organization
IPC	Infection Prevention and Control
LMICs	Low- and Middle-Income Countries
MDGs	Millennium Development Goals
MDR-TB	Multidrug Resistant Tuberculosis
MHSA	Mine Health and Safety Act
MHSC	Mine Health and Safety Council
MITHAC	Mining Industry TB and HIV Advisory Committee
M & E	Monitoring and Evaluation
ODMWA	Occupational Diseases in Mines and Works Act
OEL	Occupational Exposure Level
OH	Occupational Health
OHS	Occupational Health and Safety
OHSP	Occupational Health Services Centres
PEPFAR	President's Emergency Plan for AIDS Relief
SADC	Southern African Development Community
SAFAIDS	Southern Africa HIV and AIDS Information Dissemination Service
SATBHHSP	Southern African Tuberculosis and Health Systems Support Project
SDGs	Sustainable Development Goals
SOPs	Standard Operating Procedures
SWOT	Strengths, Weaknesses, Opportunities and Threats

TB	Tuberculosis
TIMS	Tuberculosis in the Mines Project
TWG	Technical Working Group
UHC	Universal Health Coverage
UN	United Nations
UNGA	United National General Assembly
UNHLM-TB	United Nations High Level Meeting on TB
WB	World Bank
WHO	World Health Organization
XDR-TB	Extensively Drug Resistant Tuberculosis

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CHAPTER ONE
BACKGROUND

1.1 The Heads of State and Government Declaration on TB in the Mining Sector

Recognizing a disproportionately high TB and TB/HIV burden in the mining sector, and the extent to which these and other occupational disease burdens, such as silicosis, have been eroding the potential contribution of the mining sector to the economic development of the region, at a summit held in August 2012 in Maputo, the Republic of Mozambique, Heads of State and Government of the Member States of the SADC Region[1] (Figure 1), adopted a Declaration on Tuberculosis (TB) in the Mining sector[2] whose aim is to combat the high burden of TB, HIV infections and other occupational diseases, in the mining sector, and mitigate their negative impacts on the potential contribution of the mining sector to the economic development of the region.

Figure 1: Member States of the Southern Africa Development Community (SADC)

The Declaration seeks to address key contributory factors to the TB and TB/HIV explosion in the mining sector, notably:

[1] Angola, Botswana, Comoros, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, United Republic of Tanzania, Zambia and Zimbabwe
[2] SADC, Declaration on Tuberculosis in the Mining Sector', 30 Aug 2012, Maputo.

i. Occupational and environmental conditions that fuel high rates of TB and HIV transmission,
ii. Missing people with TB and HIV within the mining community,
iii. Missing former mine workers who could have TB; and
iv. Lack of, or suboptimal, legal and regulatory frameworks that protect life and rights, and provides for legitimate compensation for occupational diseases among current and ex-miners.

1.2 Strategic goal of the Declaration

To help achieve zero new TB and HIV infections, silicosis and other occupational diseases; zero stigma and discrimination; and zero deaths from TB, HIV, Silicosis and other occupational diseases, through the creation of safe and healthy working and living environments for mine workers, ex-mineworkers, their families, and mine-linked communities.

1.3 Objectives of the Declaration

These are fourfold, namely:

1. To give operational guidance and strategic direction to Member States in their efforts to eliminate TB, HIV, Silicosis and other occupational diseases in the mines
2. To provide Member States with principles and minimum standards for the management of occupational TB, TB and HIV, Silicosis and other occupational respiratory diseases in the mining sector;
3. To provide Member States with a framework for consultations on effective measures to address the challenges of TB, HIV, Silicosis and other occupational respiratory disease in the mining sector; and
4. To provide Member States with an instrument for resource mobilization.

1.4 Recommended Priority Areas of Action

The Declaration identifies and recommends actions in six priority areas, namely:

1. Prevention of occupational TB, HIV, Silicosis and other occupational respiratory diseases
2. Screening and Testing for TB, HIV, Silicosis and other occupational respiratory diseases
3. Provision of HIV counselling services;

4. Treatment, care and support of persons with TB, HIV, Silicosis and other occupational respiratory diseases;
5. Provision of personal, environmental and administrative TB and HIV Infection Prevention and Control (IPC) services; and
6. Strengthening health information systems for monitoring and tracking the occurrence of TB, HIV, Silicosis and other occupational respiratory diseases.

1.5 Key strategic interventions

Six priority strategic interventions, and related critical outputs, as outlined below, are specified:

1.5.1 Strengthening Accountability, Coordination and Collaboration for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector at National and Regional Levels, with the following critical outputs

a) Regional and national frameworks for coordinating communicable diseases and occupational health and safety issues in the mines
b) Clear definition of roles and responsibilities of various stakeholders in the mining sector in line with the Tripartite and Tripartite Plus principles
c) Regional and country level Task Forces that provide oversight on coordination frameworks for Communicable diseases, Occupational Health and Mobile Populations Regional and national Ministerial Commissions (with highest level of membership from the Tripartite structures) that provide oversight for implementation of Regional and national frameworks, and
d) Independent National Focal Offices responsible for facilitating resolution of complaints related to health issues in the mining sector;

1.5.2 Promoting a supportive policy and legislative environment for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector with the following key interventions and critical outputs:

a) Harmonized Regional treatment policies and guidelines for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector,
b) Classification of TB and Silicosis acquired in the mines as occupational diseases;

c) National level policies and legislation on TB, HIV, Silicosis and other occupational respiratory diseases in the mining sector consistent with SADC minimum standards and international best practices;

d) Legislation on compulsory disaggregated reporting of TB, Silicosis and other occupational respiratory diseases

e) Legislative environment that supports compensation of mineworkers and ex-mineworkers that contract an occupational disease;

f) Defined Regional and National limits for cumulative exposure to silica dust in line with international conventions and benchmarks and best practices;

g) Regional and National Silica Occupational Exposure Limits (OEL) that are aligned with international best practices and benchmarks

1.5.3 Strengthening Programmatic Interventions for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector with the following critical outputs:

a) Existence of minimum standards and interventions packages for prevention, treatment, care and support of TB, HIV, Silicosis and other occupational respiratory diseases sufferers, and impact mitigation, in the mines;

b) Ownership by employers of the management of all occupational diseases, including TB cases associated with Silicosis, post-employment

c) Established interventions to ensure a safe working environment that minimizes exposure to silica dust for miners;

d) Existence of integrated wellness programmes for TB, HIV, Silicosis and other occupational respiratory diseases accessible to all mineworkers and ex-mineworkers, regardless of their contract status, and their families and mining communities

e) Conduct of supportive operational research on TB, HIV, Silicosis and other occupational respiratory diseases prevention and control,

1.5.4 Strengthening Surveillance System for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector with the following critical outputs:

a) Established mandatory requirements for occupational disease surveillance and reporting of disaggregated data for TB, HIV, Silicosis and other occupational respiratory diseases across SADC Member States;

b) Standardized system for reporting on TB, Silicosis and other occupational respiratory diseases across SADC Member States;

1.5.5 Strengthening Programme Monitoring and Evaluation (M & E) with the following critical outputs:

a) A common SADC Regional M & E Framework on TB in the Mining Sector
b) Standardized Regional indicators to monitor and evaluate TB, HIV, Silicosis and other occupational respiratory diseases in the mines
c) Regional and national regulations for monitoring compliance with control of prescribed diseases and dust exposure;
d) Tool for Monitoring and evaluating TB, HIV, Silicosis and other occupational respiratory diseases national budgeting, financing and spending, and
e) A Regional and national M & E framework for silica dust levels in the mines;

1.5.6 Strengthening Financing for TB, HIV, Silicosis and other occupational respiratory disease interventions in the Mines with the following critical outputs:

a) Evidence of sufficient funding from governments and mining companies for programmatic interventions for TB, HIV, Silicosis and other occupational respiratory diseases, and for compensation obligations;
b) National and international partnerships for resource mobilization to support programmes addressing TB, HIV, Silicosis and other occupational respiratory diseases in the Mining Sector

1.6: Justifications for the Declaration

1.6.1 Disproportionately high TB burden in the SADC Region

The African Region, and the SADC Region in particular, managed to halt and begin to reverse TB incidence by the end of the Millennium Development Goals (MDGs) era in 2015. In addition, recently, Zimbabwe and Angola have transitioned out of the global high TB burden and high TB/HIV burden countries, respectively.

Despite these achievements, latest available information[3] indicates that:

[3] Various WHO Global TB Reports

i. With only 26.0% of Africa's population (371,885,204 of 1,426,730,933), the SADC Region persistently contributes disproportionately to reported TB cases in the WHO African Region. The magnitude has varied up to over 60% of all notified TB cases, and over 90% of all notified drug resistant TB cases. In 2020, the SADC Region accounted for 69% of all notified TB cases in the WHO African Region.

ii. Twelve of the sixteen SADC member states (75%) are currently among 30 global high TB, TB/HIV and or MDR-RR burden countries.

iii. Democratic Republic of Congo, Mozambique, the Republic of South Africa, and Zambia remain high burden in all the three TB high burden categories. Zimbabwe and Angola remain among high TB/HIV and MDR-RR TB High burden countries, respectively. Zambia has recently joined the High MDR-RR TB list (Table 1).

Table 1: WHO global lists of high burden countries for tuberculosis (TB), TB/HIV and multidrug/rifampicin-resistant TB (MDR/RR-TB), 2021–2025[4]

List	The 30 high TB burden countries		The 30 high TB/HIV burden countries		The 30 high MDR/RR-TB burden countries	
Purpose and target audience	To provide a focus for global action on TB in the countries where progress is most needed to achieve the targets and milestones set in the WHO End TB Strategy, the political declaration of the UN high-level meeting on TB held in 2018 and the SDGs, to help build and sustain national political commitment and funding in the countries with the highest burden in terms of absolute numbers or severity, and to promote global monitoring of progress in a well-defined set of countries.		To provide a focus for global action on HIV-associated TB in the countries where progress is most needed to achieve targets and milestones set in the WHO End TB Strategy, the political declaration of the UN high-level meeting on TB held in 2018, the UNAIDS global strategy for HIV/AIDS and the SDGs, to help build and sustain national political commitment and funding in the countries with the highest burden in terms of absolute numbers or severity, and to promote global monitoring of progress in a well-defined set of countries.		To provide a focus for global action on the public health crisis of drug-resistant TB in the countries where progress is most needed to achieve targets and milestones set in the WHO End TB Strategy and the political declaration of the UN high-level meeting on TB held in 2018, to help build and sustain national political commitment and funding in the countries with the highest burden in terms of absolute numbers or severity, and to promote global monitoring of progress in a well-defined set of countries.	
Definition	The 20 countries with the highest estimated numbers of incident TB cases, plus the top 10 countries with the highest estimated TB incidence rate that are not in the top 20 by absolute number (threshold, >10 000 estimated incident TB cases per year).		The 20 countries with the highest estimated numbers of incident TB cases among people living with HIV, plus the top 10 countries with the highest estimated TB/HIV incidence rate that are not in the top 20 by absolute number (threshold, >1000 estimated incident TB/HIV cases per year).		The 20 countries with the highest estimated numbers of incident MDR/RR-TB cases, plus the top 10 countries with the highest estimated MDR/RR-TB incidence rate that are not in the top 20 by absolute number (threshold, >1000 estimated incident MDR/RR-TB cases per year).	
Countries in the list, based on 2019 estimates of the incidence of TB, HIV-associated TB and MDR/RR-TB published in the 2020 WHO global TB report	*The top 20 by estimated absolute number (in alphabetical order):* Angola Bangladesh Brazil China Democratic People's Republic of Korea Democratic Republic of Congo Ethiopia India Indonesia Kenya Mozambique Myanmar Nigeria Pakistan Philippines South Africa Thailand Uganda United Republic of Tanzania Viet Nam	*The additional 10 by estimated incidence rate per 100 000 population per year and with a minimum number of 10 000 cases per year (in alphabetical order):* Central African Republic Congo Gabon Lesotho Liberia Mongolia Namibia Papua New Guinea Sierra Leone Zambia	*The top 20 by estimated absolute number (in alphabetical order):* Brazil Cameroon China Democratic Republic of Congo Ethiopia India Indonesia Kenya Malawi Mozambique Myanmar Nigeria Philippines Russian Federation South Africa Thailand Uganda UR Tanzania Zambia Zimbabwe	*The additional 10 by estimated incidence rate per 100 000 population per year, and with a minimum of 1000 incident cases per year (in alphabetical order):* Botswana Central African Republic Congo Eswatini Gabon Guinea Guinea-Bissau Lesotho Liberia Namibia	*The top 20 by estimated absolute number (in alphabetical order):* Angola Bangladesh China Democratic People's Republic of Korea Democratic Republic of Congo India Indonesia Kazakhstan Mozambique Myanmar Nigeria Pakistan Peru Philippines Russian Federation Somalia South Africa Ukraine Uzbekistan Viet Nam	*The additional 10 by estimated rate per 100 000 population per year and with a minimum of 1000 incident cases per year (in alphabetical order):* Azerbaijan Belarus Kyrgyzstan Mongolia Nepal Papua New Guinea Republic of Moldova Tajikistan Zambia Zimbabwe
Share of global incidence in 2019	84%	2.3%	83%	5.3%	86%	3.7%
Lifetime of list	5 years (review criteria and included countries in 2025).		5 years (review criteria and included countries in 2025).		5 years (review criteria and included countries in 2025).	

[4] https://cdn.who.int/media/docs/default-source/hq-tuberculosis/who_globalhbcliststb_2021-2025

iv. Since the end of the MDG era, there is slow decline in TB incidence and death rates; low treatment coverage leading to limited access to TB, TB/HIV and other related diagnostic and management health services; treatment success rates below the recommended 90% target; and increasing incidence of drug resistant TB.

v. In recent years, there is emerging increase in TB associated with non-communicable diseases and risk factors such as diabetes, tobacco smoking, silicosis, alcohol and drug misuse, and malnutrition.

vi. Latest information (Global Tuberculosis Report 2021) shows that globally, funding for essential TB services fell below 50% of the target for 2020. Generally, funding in low- and middle-income countries (LMICs), that account for 98% of reported TB cases, falls far short of what is needed, and there was an 8.7% decline in spending between 2019 and 2020 (from US$ 5.8 billion to US$ 5.3 billion), back to the level of 2016. This is less than half (41%) of the global target of US$ 13 billion annually by 2022, and only 39% of the amount estimated to be required in 2020 in the Stop TB Partnership's Global Plan to End TB, 2018–2022, and

vii. The COVID-19 pandemic since 2020 has reversed some of the gains made in TB control indicators in the recent decades.

1.6.2 The significant economic value of the Mining sector in the Region

Mining accounts for over 60% of the Region's foreign exchange earnings and at least 10% of the region's GDP[5] and 5% of formal employment[6]. Fully harnessed, these properties are capable of propelling the region's economic wellbeing to higher heights. For a long time, the mining sector has played a significant role in the economic development of the SADC Region, notably of South Africa, rated as the world's third largest mining industry, contributing to about 8 percent of the country's total GDP in 2016[7].

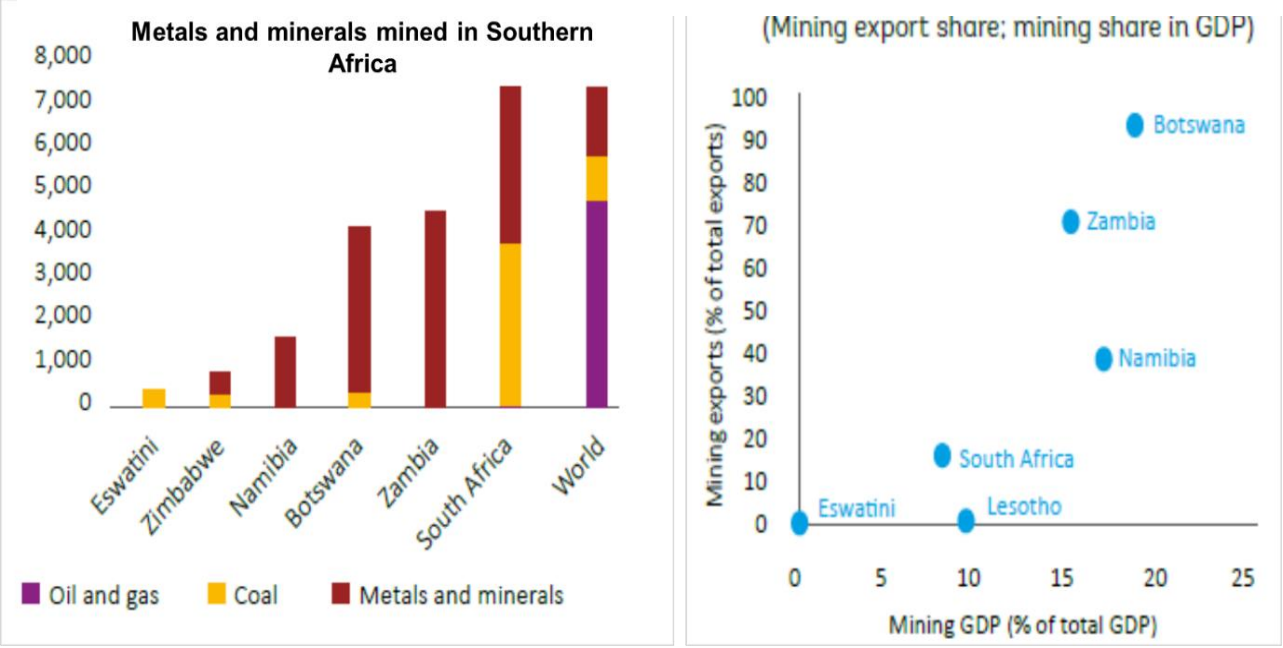
Further, the SADC region has mineral reserves estimated at $5 Trillion in value in over 3,000 active registered mines. In addition, the region has most of the world's chromium, vanadium, platinum and diamond. It accounts for 36% of gold and 20% of cobalt; and SADC Member

[5] https://sadcbc.org/status-of-mining-in-sadc/
[6] Mining Markets in Southern Africa Report, 2014
[7] The World Bank Group

States produce two-thirds of Africa's mineral exports by value[8] (Figure 2). The mining industry employs more than 500,000 mineworkers, and relies on migrant workers from rural areas and surrounding countries (labour supplying countries). Figure 2 below shows the estimated contribution of the mining sector to the economy of selected SADC Member States, confirming that mining is an important income generator for the region, and a number of countries rely heavily on mineral exports for sales of extracted resources. For instance, in Botswana, mining is estimated to account for 19% of GDP and 92% of exports, making it the dominant sector in the country.

The mining industry in the SADC Region includes large multinational mining companies that have roots in both Africa and abroad, such as BHP Billiton, Rio Tinto, Anglo American,

Figure 2: Metals and minerals mined in Southern Africa (Left) and Contribution of Mining to GDP of selected SADC Member States (Right). Source: World Bank 2019



GlencoreXstrata and Barrick, with a combined value of US$335 billion (Figure 3), on one hand, and artisanal and small-scale mining on the other. The artisanal and small-scale mining (ASM) ventures constitute significant livelihood economic activity for individuals and their communities, especially individuals that have limited means of income generation to earn a living. In a 2017 analysis, the population of ASM workers was estimated at 1.5 million in Tanzania, over 560,000 in Zimbabwe and 200,000 in Mozambique, among other SADC Member

[8] Mining Markets in Southern Africa Report, 2014

States. These ASMs typically operate in settings with weak to nonexistent policy and legal guidance; and where health and safety regulations are poorly complied with, putting the health of the mineworkers and their immediate and extended families at increased risk.

1.6.3 The threat of the high TB, HIV and other occupational diseases burden on the economic value of the mining sector in the SADC Region

While the SADC Region as a whole has a disproportionately high burden of TB relative to the rest of the WHO African Region, the mining sector within the SADC region harbors especially high rates of TB, TB/HIV and other occupational respiratory diseases. TB, HIV and TB/HIV co-infection rates among mineworkers and ex-mineworkers is at least three times higher than in the general population across national borders (Table 2), and mineworkers in the SADC Region have among the highest rates of tuberculosis (TB) in the world. In South Africa alone, TB rates within the mining workforce falls between 2,500-3,000 cases per 100,000 individuals, an incidence that is ten times the WHO threshold for a health emergency. Furthermore, many mineworkers are exposed to multiple TB risk factors, including HIV, health care disruptions, congregate living and challenging working environments.

The mining sector is also associated with significant levels of cross-country migrations. Of the estimated 500,000 mineworkers in the Republic of South Africa's mines, approximately 40% originate from Mozambique, Swaziland, and Lesotho. Mineworkers are also at a higher risk of contracting TB due to prolonged exposure to silica dust, poor living conditions, and high HIV prevalence in mining communities. Furthermore, circular movement of mineworkers across provincial and national borders in the sub-region, and a poor cross border health referral system, fuels infection rates, adversely affecting adherence to TB treatment, and contributes to the high incidence of drug resistant strains such as multidrug resistant (MDR) and extensively drug-resistant (XDR) TB[9].

[9] https://www.worldbank.org/en/programs/the-southern-africa-tb-in-the-mining-sector-initiative

Table 2: Estimated TB burden among mineworkers [Data source: Epidemiological data on Tuberculosis, Multi-Drug Resistant TB, Silicosis and HIV among Miners and Ex-miners in Southern Africa, 2017].

TB, TB/HIV And Silicosis Among Mineworkers										
Key indicators	**Botswana**	**Lesotho**	**Malawi**	**Mozambique**	**Namibia**	**South Africa**	**Eswatini**	**Tanzania**	**Zambia**	**Zimbabwe**
Size of mining population	29,043	15,911	54,000	174,906	19,000	493,921	2,520	1,500,000	68,473	632,025
TB prevalence general population (per 100,000)	385	852	227	551	561	834	733	269	406	278
TB prevalence in mining area (per 100,000)	1320	7200	No data	No data	859 - 1380	3000	5194	6600	700 - 840	No data
HIV prevalence in mining areas (%)	25-28	20-40	No data	26-42	13-24	12-47	20	9	7-18	16-20
Silicosis prevalence (%)	10.2	25-26	No data	No data	No data	22-32	No data	1.6	No data	0.1
% of TB patients who are HIV infected	60	72	54	52	44	61	79	31	73	68

In the absence of effective control actions, the persistently high rates of TB and HIV infections threaten to erode the positive economic contributions that accrue from the mining sector as a consequence of high levels of ill health, death and debilitating respiratory, and other life changing, disabilities, among mine workers and surrounding communities.

Recurrent analyses from the Southern African mining sector (performed at the behest of national governments, the SADC, the World Bank, and the mining industry) have repeatedly identified key negative determinants that contribute to the high disease burden in the sector, notably:

i. Poor or no access to health and social services for mine workers, ex-mineworkers, their families and communities

ii. Absence of effective cross-border medical referral mechanisms within the Southern African Region

iii. Non-harmonization of medicines and treatment regimens for managing both TB and HIV/AIDS among countries of the region

iv. Inadequate or lack of legal and regulatory frameworks to facilitate care, and to address the rights of mineworkers and ex-mine workers,

v. Inadequate or lack of legal frameworks and administrative mechanisms for financial compensation of mineworkers and ex-mineworkers with TB, Silicosis and other occupational respiratory diseases

vi. Lack of, or inadequate, medical surveillance programs and postemployment follow-up schemes, and

vii. Lack of information among mineworkers, ex-mineworkers, employers, trade unions and governments about their roles, rights and responsibilities.

CHAPTER TWO
TOWARDS IMPLEMENTING THE DECLARATION

2.1 The SADC Code of Conduct on TB in the Mining Sector

Towards operationalizing the Heads of State and Government Declaration, Member States will be guided by a SADC Council of Ministers approved Code of Conduct on TB in the Mining Sector[10]. The Code reaffirms Member States' commitment to eliminate TB in the region, and to improve environmental, health and safety practices and standards in the mining sector, in accordance with provisions of selected Regional and International Protocols[11]. In line with the Code, the following standard definitions and principles will be fundamental to the implementation of the Declaration.

2.1.1 Standard definitions

For purposes of this plan, the following standard definitions shall apply:

i. ***Occupational Disease*** as any disease contracted due to exposure to risk factors arising from work activity, and where there is existence of a causal relationship between exposure in a specific working environment, or work activity, and a specific disease, and the disease occurs with an above average frequency among exposed persons compared to the general population.

ii. ***The Mining Sector*** as an establishment that extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude petroleum; and gases, such as natural gas. These include establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis, and mining support activities that include establishments that perform exploration and/or other mining services on a contract or fee basis.

iii. ***The Mining Community*** as a mining town or camp created around a mine to house miners and their families; existing directly at the settlement or within the immediate area

[10] SADC Code of Conduct on TB in the Mining Sector

[11] the SADC Charter of Fundamental Social Rights, the SADC Framework on mobile Population and Communicable Diseases; the Millennium Development Goals; the World Health Assembly Resolution 61.17 on the health of migrants – (2008), the International Labour Organization (ILO) Conventions: Occupational Safety and Health Convention, 1981(No.155); Safety and Health in Mines Convention, 1995 (No. 176), and ILO Recommendation 200 of 2010.

of the mine, and the population relies on the mine economically. The mining community remains even after all the mining activities have ceased. Other key definitions are:

iv. ***Silicosis*** as a group of lung disorders called pneumoconioses, characterized by formation of lumps (nodules) and slowly progressive fibrotic changes in the tissues of the lungs, leading to progressive impairment of lung function. This is from occupational exposure to inhalable particles of silica dust, mostly from siliceous minerals mining and grinding such as coal, quartz and slate over a period of years.

v. ***A Mineworker*** as any person who works in a mine regardless of their immigration or employment status (fulltime/part time, contract, sub contract or casual); and

vi. ***An Ex-miner worker*** as any person who previously worked in a mine regardless of their contract or immigration status

2.1.2 Fundamental Principles

The following principles shall apply in implementing the stipulations of the Declaration:

i. the principle of **Variable Geometry** where a group of Member States may move faster in implementing certain activities, and the experiences learned replicated in other Member States;

ii. the principle of **subsidiarity** where all programmes and activities shall be undertaken at levels where they are best managed, entailing promoting and encouraging the use of institutions, authorities or agencies outside SADC structures to initiate and implement regional programmes using their own generated resources, ensuring that available capacity at the Secretariat focuses on policy development, harmonization, coordination and management

iii. the principle of **Non-Discrimination** where work shall be conducted in the spirit of decent work and respect for the human rights and dignity of persons with TB, HIV, Silicosis and other occupational respiratory diseases, meaning there should be no discrimination against workers on the basis of their real or perceived health status.

iv. the principle of **Confidentiality** where provision or access to personal data relating to a worker's health status shall be bound by the rules of confidentiality consistent with the ILO's code of practice[12] on the protection of workers' personal data, 1997.

[12] ILO Protocol of 2002 on the Occupational Safety and Health Convention, 1981

v. the principle of e**quitable access** where there will be fairness in the distribution of resources, particularly for those most in need and promoting people's rights to access to resources and services essential to meeting their basic needs and improving their quality of life

vi. the principle of **Gender Equity and inclusiveness** where there shall be respect for gender dimensions of TB, HIV, Silicosis and other occupational respiratory diseases, in order to ensure equitable distribution of resources that identify the similarities and differences in the needs of men and women in the workplace.

vii. the principle of **Tripartism** (and **Tripartism plus)** where there shall be consultation, negotiation, cooperation and trust between the three social partners in an economy, namely, government, Labour and business; on one hand, and requiring that the three social partners work with civil society in implementing the Code, and

viii. the principle of **Respect for Human Rights** which requires respect for human Rights including patient rights, rights to confidentiality, dignity and non-discrimination should be observed in the implementation of the Code

2.2 Evoking Global and Regional contexts in implementing the Declaration

2.2.1 Global Commitments

TB and HIV control in the Post MDG era is rooted in the spirit of the Sustainable Development Goals, and the End TB Strategy. Thus, implementing the Declaration shall be linked to these global commitments and guidance to which SADC Member states are party to.

I The Sustainable Development Goals and End TB Strategy

Tuberculosis is among the disease conditions slated for ending by 2030 according to Goal 3 of the Sustainable Development Goals[13]. The Goal incorporates two key targets for ending the TB epidemic:

a) Achieving Universal Health Coverage (UHC)[14], and
b) Ending the global tuberculosis (TB) epidemic by 2030[15].

[13] Resolution A/RES/70/1. Transforming our world: the 2030 Agenda for Sustainable Development. Seventieth Session of the General Assembly, 25 September 2015.

[14] *Goal 3, Target 3.8*

Earlier in May 2014, the 67th Session of the World Health Assembly[16] adopted the 'End TB Strategy' whose aim is to end the global TB epidemic by 2035. At regional level, the sixty-sixth session of the Regional Committee for Africa adopted a Framework for implementing the End TB Strategy in the African Region[17] urging Member States to expand TB diagnosis and treatment towards UHC and ending the TB epidemic.

Further, the top political leadership of the SADC Region was party to the "First Global Ministerial Conference on Ending TB in the Sustainable Development Era" in Moscow in November 2017, aimed at accelerating implementation of the WHO End TB Strategy. At the end of the Conference, a "Moscow Declaration" that informed the first ever UN General Assembly (UNGA) High-Level Meeting on TB held in September 2018 in New York was adopted. Thus, while pursuing the stipulations of the Declaration, ending the TB epidemic overall must be the overriding priority for all SADC Member states[18].

II Global Targets for Ending the TB Epidemic

In 2017, the World Health Organization (WHO) developed a framework for monitoring indicators in the United Nations (UN) Sustainable Development Goals (SDGs) and the End TB Strategy (Table 4) that are strongly associated with impacts on tuberculosis (TB) incidence and mortality. The TB-SDG monitoring framework comprises fourteen indicators under seven SDGs. For SDG 3, where TB belongs, the framework includes core indicators (Table 3), namely, TB incidence, TB Mortality, and proportion of the population with high household expenditures on health as a share of total household expenditure or income (catastrophic expenditures). Table 4 shows the full listing of top End TB Strategy Indicators to be monitored. Similarly, at global level, the UN has established a monitoring system for SDG indicators, and countries are to report data on an annual basis through appropriate UN agencies (including the WHO). Table 5 outlines the pillars and principles of the End TB Strategy.

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[15] *Goal 3, Target 3.3*

[16] Resolution WHA67.1. Global strategy and targets for tuberculosis prevention, care and control after 2015. In Resolutions and Decisions of the sixty-seventh World Health Assembly, Geneva, 19-24 May 2014. Document WHA67.1/2014/REC/1.

[17] Resolution AFR/RC66/R10, Framework for implementing the "End TB Strategy" in the African Region. In: Resolutions of the 66th session of the Regional Committee, Addis Ababa, Ethiopia, 19-23 August 2016, Document AFR/RC66/10, 10 pages

Table 3: SDG[19] and End TB Strategy impact indicators, targets and milestones[20]

	Indicator	Milestones		Targets	
		2020	**2025**	**SDG [2030]**	**END TB [2035]**
1	Reduction in absolute number of TB deaths compared with 2015 (%)	35%	75%	90%	95%
2	Reduction in TB incidence rate compared with 2015 (%)	20%	50%	80%	90%
3	Proportion of families suffering catastrophic costs due to TB	0%	0%	0%	0%

WHO[21] estimates that to reach the targets set out in the End TB Strategy, the annual decline in global TB incidence rates must first accelerate from 2% per year in 2015 to 10% per year by 2025. Secondly, the proportion of people with TB who die from the disease (the case-fatality ratio) needs to decline from a projected 15% in 2015 to 6.5% by 2025. These declines in deaths and incidence by 2025 while ambitious, are feasible with existing tools complemented by universal health coverage and social protection.

To sustain progress beyond 2025 and achieve the SDG* 2030 and End TB 2035 targets, additional tools must be available by 2025. In particular, a new vaccine that is effective pre- and post-exposure and a safer and more effective treatment for latent TB infection are needed to reduce the number of new TB cases arising from the approximately 2 billion people worldwide who are infected with M. tuberculosis, as well as better diagnostics and safer and easier treatments, including shorter drug regimens for TB disease. For new tools to be available by 2025, greatly enhanced and immediate investments in research and development are required. SADC member states shall need to strive to achieve these levels of performance to be on course to end the dual epidemics.

[19] Sustainable development goals [website]. New York: United Nations (https://sustainabledevelopment.un.org/topics/sustainabledevelopmentgoals).
[20] Global strategy and targets for tuberculosis prevention, care and control after 2015 (Resolution WHA67.1, Agenda item 12.1). Geneva: World Health Organization; 2014 (http://apps.who.int/gb/ebwha/pdf_files/WHA67/A67_R1-en.pdf).
[21] WHO/HTM/TB/2015.19

Table 4: The key End TB Strategy Indicators[22]

	Indicator	Recommended target level	Main rationale for inclusion
1	**TB treatment coverage** *Number of new and relapse cases that were notified and treated, divided by the estimated number of incident TB cases in the same year, expressed as a percentage.*	≥90%	High coverage of appropriate treatment is fundamental to achieving the milestones and targets of the End TB Strategy. Taken together, these are tracer indicators for monitoring progress towards universal health coverage (UHC)
2	**TB treatment success rate** *Percentage of notified TB patients who were successfully treated. The target is for drug-susceptible and drug-resistant TB combined, although outcomes should also be reported separately.*	≥90%	
3[23]	**Percentage of TB-affected households that experience catastrophic costs due to TB** *Number of people treated for TB (and their households) who incur catastrophic costs (direct and indirect combined), divided by the total number of people treated for TB.*	0%	A key marker of financial risk protection and social protection for TB-affected households.
4	**Percentage of newly notified TB patients tested using WHO-recommended rapid tests** *Number of newly notified TB patients diagnosed with WHO-recommended rapid tests, divided by the total number of newly notified TB patients.*	≥90%	Molecular tests are more sensitive and specific than microscopy
5	**DST coverage among new TB patients** *Number of new TB patients with DST results divided by the number of notified new cases in the same year, expressed as a percentage. DST coverage includes results from molecular (e.g. Xpert MTB/RIF) as well as conventional phenotypic DST results.*	100%	Testing for drug susceptibility is essential to provide the right treatment for every person diagnosed with TB. This is consistent with global call for universal DST
6	**DST coverage among previously treated TB patients** Number of previously treated TB patients with DST results divided by the	100%	DST coverage in previously treated TB cases is key to determining appropriate second line treatment regimes

[22] The End TB Strategy, 2015

[23] One of the End TB Strategy's three high-level indicators, a key marker of financial risk protection and social protection for TB-affected households.

	number of notified previously treated TB cases in the same year, expressed as a percentage. DST coverage includes results from molecular (e.g. Xpert MTB/RIF) as well as conventional phenotypic DST results.		
7	**Documentation of HIV status among TB patients** *Number of new and relapse TB patients with documented HIV status divided by the number of new and relapse TB patients notified in the same year, expressed as a percentage.*	100%	One of the core global indicators used to monitor collaborative TB/HIV activities. Documentation of HIV status is essential to provide the best care for HIV-positive TB patients, including ART.
8	**Case fatality ratio (CFR)** *Number of TB deaths (from a national VR system) divided by estimated number of incident cases in the same years, expressed as a percentage.*	≤5%	This is a key indicator for monitoring progress towards 2020 and 2025 milestones. A CFR of 6% is required to achieve the 2025 global milestone for reductions in TB deaths and cases.

III The End TB Strategy Pillars and components

In implementing the End TB Strategy, WHO has provided a triad of pillars and associated interventions to be pursued by all member states, namely:

A Integrated, patient-centered care and prevention

This includes the following interventions:

- Early diagnosis of tuberculosis including universal drug-susceptibility testing, and systematic screening of contacts and high-risk groups.
- Treatment of all people with tuberculosis including drug-resistant tuberculosis, and patient support.
- Collaborative tuberculosis/HIV activities, and management of co-morbidities.
- Preventive treatment of persons at high risk, and vaccination against tuberculosis.

B Bold policies and supportive systems

This includes the following interventions:

- Ensuring political commitment with adequate resources for tuberculosis care and prevention.
- Engagement of communities, civil society organizations, and public and private care providers.
- Universal health coverage policy, and regulatory frameworks for case notification, vital registration, quality and rational use of medicines, and infection control.
- Social protection, poverty alleviation and actions on other determinants of tuberculosis.

C Intensified research and innovation

This includes the following interventions**:**

- Discovery, development and rapid uptake of new tools, interventions and strategies.
- Research to optimize implementation and impact, and promote innovations.

2.3 Evoking other Continental and Regional Commitments to combating TB and HIV infections

Prior to the Moscow Conference, Ministers of Health of the SADC Region, solely, as well as in the capacity as members of the African Union, elaborated a number of regional and continental commitments that must be taken into account in implementing the Declaration. These include:

i. The Common African Position on TB (CAP-TB)[24]

[24] The CAP-TB commits to : Ω Leadership, country ownership, governance and accountability: Intensify and catalyze TB response through working with African leaders as champions which include, Heads of States and Government, parliamentarians, traditional leaders, to drive multi-sectorial action for TB care and prevention and address TB determinants; Intensify cross-sector partnerships across ministries, community based actors and parliaments to accelerate progress towards Universal Health coverage (UHC) and social protection; bolster oversight and accountability, and further improve TB programmes monitoring, evaluation and reporting; Declare Drug-Resistant-TB as a global health security threat

Ω Universal and equitable access to prevention, diagnosis, treatment, care and support: Scale up TB programmes to achieve 90 percent initiation of all people diagnosed with TB on treatment and social support with no exposure to catastrophic costs; MDR-TB to be declared a global emergency and health security threat so that it can be addressed properly in most affected countries; Establish multi-disciplinary crisis committee, incorporating WHO and other partners to urgently respond and address MDR-TB as a national public health threat; Promote effective implementation of Patient-centered TB interventions specifically targeting high-risk groups and vulnerable

ii. The 2016 African leaders Catalytic Framework to End AIDS, Tuberculosis and Eliminate Malaria in Africa by 2030[25].

iii. The 2012 African Union Roadmap on Shared Responsibility and Global Solidarity for AIDS, Tuberculosis and Malaria Response, and

iv. The Common Africa Position on the Post-2015 Development Agenda that, among other developmental and health agendas, directed African Union Member States, including SADC member States, to take concerted action to end the epidemic of TB.

2.4 TB Control in the era of the COVID-19 pandemic26

Following the first UN high-level meeting on TB in 2018 and a report on TB from the UN Secretary-General in 2020[27], a review of progress achieved by the end of 2022 will take place at the UN General Assembly in 2023. Meanwhile, latest Global TB reports show that progress towards TB milestones and targets has been hit hard by the COVID-19 pandemic. As a case in point, in 2020,

- the number of people dying from TB increased,
- previous declines in the annual number of people falling ill with TB slowed down,
- far fewer people were diagnosed and treated for TB or provided with TB preventive treatment compared with 2019, and

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populations such as healthcare workers, migrants, internally displaced persons, refugees, and prisoners, injecting drug-users, children and adolescents; Provide TB services to the people in over-congested settings, high risk including prisons and areas affected by conflict and humanitarian emergencies to help guarantee that no one is left behind; Support the development of community driven systems to expand health service delivery in particularly hard-to-reach areas; identify opportunities, bottlenecks, and key actions needed to address the TB/HIV integration, policy and strategies, enabling countries to meet agreed HIV/ TB

Ω Research and Innovation: Governments should strengthen collaboration with universities and research institutions to enhance innovation and evidence informed policies and programmes; African countries should increase investments in research and innovation to produce durable solutions for Africa health and development and strengthen preventing and curative measures to curb the spread of TB;

Ω Health financing: Increase domestic funding to Health; conduct policy reforms to eliminate catastrophic costs to patients and their households, including through the provision of social protection and psychosocial support; expand Social Health Insurance as a funding mechanism to widen health related social protection especially for vulnerable sections of the community.

[25] Catalytic Framework to End AIDS, TB and Eliminate Malaria in Africa by 2030. Stride towards sustainable health in Africa

[26] Impact of the COVID-19 pandemic on TB detection and mortality in 2020. Geneva: World Health Organization; 2021 (https://www.who.int/publications/m/item/impact-of-the-covid-19-pandemic-on-tb-detection-andmortality-in-2020).

[27]Report of the Secretary-General. Progress towards achieving global tuberculosis targets and implementation of the UN political declaration on tuberculosis. Seventy-fifth session. Agenda Item 132. Global health and foreign policy. United Nations; 2020 (https://undocs.org/en/A/75/236).

- Spending on essential TB services fell.

TB was second only to COVID-19 as a leading cause of death from a single infectious agent[28]. Modelling projections suggest that the impact of disruptions caused by the pandemic on the number of people developing TB and dying from the disease could be much worse in 2021 and 2022. Actions to mitigate and reverse the impact of the COVID-19 pandemic on TB are therefore needed. One immediate priority is to restore access to and provision of essential TB services[29] such that levels of TB case detection and treatment can recover to at least 2019 levels. In these contexts, WHO advises:

- leveraging expertise and experience of NTPs, especially in rapid testing and contact tracing, for the COVID-19 response;
- maximizing remote care and support for people with TB by expanding the use of digital technologies;
- minimizing the number of visits to health services that are required during treatment, including through the use of WHO-recommended, all-oral TB treatment regimens and community-based care;
- limiting the transmission of TB and COVID-19 in congregate settings and health care facilities by ensuring basic infection prevention and control for health staff and patients, cough etiquette and patient triage;
- supporting the provision of TB preventive treatment by building synergies with contact-tracing efforts related to COVID-19;
- providing simultaneous testing for TB and COVID-19 for individuals when indicated, including by leveraging TB laboratory networks and platforms; and
- ensuring proactive planning and budgeting for both conditions (including for the catch-up phase), procurement of supplies and risk management.
- maintaining essential health services and the role of community-based care during the COVID-19 pandemic

[28] Global Tuberculosis Report 2021
[29] Maintaining essential health services: operational guidance for the COVID-19 context. Geneva: World Health Organization; 2020 (https://www.who.int/publications/i/item/WHO-2019-nCoV-essential-healthservices-2020.1).

2.5 Implications of global and regional commitments to implementing the SADC Declaration

In addition to implementing the Declaration on TB in the Mining Sector, SADC Member States shall be bound to take into account all other active global and regional resolutions and commitments, in concert with the rest of the African continent. Approaches to be adopted will need to be compliant with the elements, targets and milestones of the SDG and End TB Strategy.

In practical terms, SADC Member States shall need to expand access to patient-centered care through the universal coverage approach; implement fully elements of: The Common Africa Position on TB;

the Catalytic Framework to End AIDS, Tuberculosis and Eliminate Malaria in Africa by 2030; the 2012 African Union Roadmap on Shared Responsibility and Global Solidarity for AIDS, Tuberculosis and Malaria Response; the Common Africa Position on the Post-2015 Development Agenda; increase financing for TB Control; and operationalize an accountability framework (Annex 1) to monitor and track progress towards the End TB and SDG targets and milestones, among other indicators

CHAPTER 3:
SITUATION ANALYSIS: REGIONAL INITIATIVES TO ADDRESS TB IN THE MINING SECTOR

3.1 Southern Africa Tuberculosis and Health Systems Support (SATBHSS) project

The World Bank provided $120 million to the Southern Africa Tuberculosis and Health Systems Support (SATBHSS) project with an overall objective of improving coverage and quality of key TB control and occupational lung disease services in four target countries, namely, Lesotho, Malawi, Mozambique and Zambia since December 2016.This project focused on interventions covering three overarching components:

(i) Innovative Prevention, Detection, and Treatment of TB;

(ii) Regional Capacity for Disease Surveillance, Diagnostics, and Management of TB and Occupational Lung Diseases; and

(iii) Regional Learning and Innovation, and Project Management.

The East, Central and Southern Africa Health Community (ECSA-HC) and New Partnership for African Development (NEPAD) Agency are the two Regional organizations that supported the four countries in a coordination role. In addition, the two regional bodies supported the project through galvanizing local, regional and global political support needed to tackle the TB and other health system challenges faced by the region. Critical to this is creation of synergies and complementary efforts with other regional bodies and regional initiatives such as the Southern African Development Community (SADC), the World Health Organization (WHO), The Africa Centres for Disease Control and Prevention (ACDC), and the TB in the Mines (TIMS) project to address the priority issues in the region.

3.2 The Southern Africa TB in the Mining Sector (TIMS) Initiative

The Southern Africa TB in the Mining Sector Initiative is one of the key initiatives led by the Southern Africa Knowledge Hub, an innovative multi-stakeholder effort involving government and civil society, and development and private sector partners aimed at combating TB in the mining sector in the Southern Africa region. With coordination led by the World Bank, the multi-sectoral initiative includes representatives from:

- the Departments of Health, Mineral Resources, and, Labor, of the Republics of South Africa, Kingdom of Eswatini, Kingdom of Lesotho and Mozambique;
- development agencies (UK Department for International Development, International Organization for Migration, and Stop TB Partnership);
- research institutes;
- mining companies;
- Ex mineworkers' associations; and labor unions.

Under this initiative, the Global Fund and the World Bank joined forces to pilot innovative initiatives to reduce the rate of TB in the mining sector across 10 countries in Southern Africa. ADPP Mozambique coordinated the regional pilot program to address some of the key challenges across 8 countries, namely, Zambia, Malawi, Botswana, Swaziland, Namibia, Mozambique, Lesotho and United Republic of Tanzania.

To reduce the incidence of TB in the mines, peri-mining communities and labor sending areas, the World Bank (WB) undertook a series of studies and projects covering three key focus areas, namely,

- Provision of support for better analytical underpinnings for implementation of effective TB interventions: This was in response to requests from ministers of health and minerals and mining companies in Lesotho, Mozambique, South Africa and Swaziland. One key output of the initiative was conduct of an economic and analytical activity that contributed towards addressing the causes and challenges of the TB epidemic among miners, ex-miners and mining communities.
- Harmonization of treatment protocols and funding to address the challenge**:** Involved signing of an agreement at the political level in 2014 to begin the process of harmonizing treatment protocols for TB across borders. The framework for the harmonized management of TB in the mining sector is in use in the target countries.
- Innovation and collaboration**:** The WB mobilized new resources and stakeholders including national governments, development partners (the Stop TB Partnership, DFID, the Global Fund to Fight AIDS, Tuberculosis and Malaria, etc.), private sector, civil society, research institutions and ex-miners associations to tackle the drivers of TB among mineworkers: living conditions, lifestyle factors, high-risk status, and limited

access. This initiative has been catalytic in mobilizing additional resources from the Global Fund ($30 million over two years) for scaling up effective interventions in 10 SADC Region countries through the TB in the Mines Project.

3.3 Status of key deliverables of the Declaration as at October 2022

3.3.1 Regional Level [SADC Secretariat]

The following are the key deliverables specified for the regional level**:**

i. Regional frameworks for coordinating communicable diseases and occupational health and safety issues in the mining sector
ii. Definition of roles of different stakeholders in line with Tripartite and Tripartite Plus principles
iii. Regional Ministerial Commissions that provide oversight on the implementation of Regional and national frameworks
iv. Harmonized Regional treatment policies and guidelines for TB, HIV, Silicosis and other occupational respiratory diseases
v. Regional minimum standards and packages of interventions for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support
vi. Standardized Regional recording and reporting (M & E) system for TB, Silicosis and other occupational respiratory diseases, and
vii. Standardized Regional indicators to monitor TB, HIV, Silicosis and other occupational respiratory diseases

The status of achievement of the key deliverables as at end of October 2022 is summarized in table 3.1 below.

Table 3.1: Status of achievement of key regional deliverables as at end of October 2022

	Envisaged Deliverable	Fully achieved	Partially achieved	Not achieved	Comments
1	Regional frameworks for coordination of communicable diseases and occupational health and safety issues in the mining sector				Not existent
2	Definition of roles of different stakeholders in line with Tripartite and Tripartite Plus principles	✓			Fully developed as part of Code of Conduct for the Declaration.
3	Regional Ministerial Commissions that provides oversight on the implementation of Regional and national frameworks	✓			There is a Council of Ministers that provides oversight on the implementation of various health related Regional frameworks
4	Harmonized Regional treatment policies and guidelines for TB, HIV, Silicosis and other occupational respiratory diseases		✓		A version of Harmonized Regional treatment policies and guidelines for TB and HIV was drafted with support of the World Bank but not endorsed and implemented by Member states
5	Regional minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support	✓			SADC Minimum standards for TB and HIV/AIDS management exist but require updating
6	Standardized Regional recording and reporting (M & E) system for TB, Silicosis and other occupational respiratory diseases			✓	Not existent
7	Standardized Regional indicators to monitor TB, HIV, Silicosis and other occupational respiratory diseases			✓	Not existent
8	Regional M & E framework for silica dust levels in the mines;			✓	Not existent

3.3.2 Member State level

The following are the key deliverables specified for member state level:

i. Existence of National Strategic Plan that incorporates TB control in the Mining Sector
ii. Existence of National Task Force on Communicable diseases, Occupational Health and Mobile Populations
iii. Existence of independent national office for resolution of mining sector heath issues
iv. Policy on classification of TB and Silicosis acquired in the mines as occupational diseases
v. Existence of legislation on compulsory reporting of TB, Silicosis and other occupational respiratory diseases
vi. Legislation to support compensation of mineworkers and ex-mineworkers that contract an occupational disease
vii. Existence of minimum standards and packages o interventions for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support
viii. National limits for cumulative exposure to silica dust; and Silica Occupational Exposure Limits (OEL) consistent with international best practice and benchmarks
ix. Existence of integrated wellness programmes for TB, HIV, Silicosis and other occupational respiratory diseases accessible to all mineworkers and ex-mineworkers
x. Evidence of conduct of operational research on TB, HIV, Silicosis and other occupational respiratory diseases
xi. National M & E framework for silica dust levels in the mines;
xii. Evidence of Government or partner funding line items for programmatic interventions for TB, HIV, Silicosis and other occupational respiratory diseases, and
xiii. Evidence of Government or partner funding line item for compensation obligations

The status of achievement of the key deliverables as at end of October 2022 is summarized in table 3.2 below.

Table 3.2: Status of achievement of key member state level deliverables as at end of October 2022

	Envisaged Deliverable	Fully achieved	Partially achieved	Not achieved	Comments
1	Existence of National Strategic Plan incorporating TB in the Mining Sector	✓			National Strategic Plans are generally compliant with the End TB Strategy that includes actions among key populations
2	Existence of National Task Force on Communicable diseases, Occupational Health and Mobile Populations		✓		Disease Specific Technical Working Groups exist in most countries, but not joint task forces for all Communicable diseases, Occupational Health and Mobile Populations. In some cases, Communicable Diseases and Occupational Health and Safety issues fall under separate Ministries
3	Existence of independent national office for resolution of mining sector heath issues	✓			Where mining activity exists, line Ministries responsible for mining activities take responsibility for issues involving the mining sector. But in some cases, aspects are shared between ministries
4	Classification of TB and Silicosis acquired in the mines as occupational diseases		✓		Most member states do not classify TB and Silicosis acquired in the mines as occupational diseases
5	Existence of legislation on compulsory reporting of TB, Silicosis and other occupational respiratory diseases		✓		Most member states have some routine reporting systems for TB, Silicosis and other occupational respiratory diseases under general HMIS but do not have legislation on compulsory reporting of TB, Silicosis and other occupational respiratory diseases
6	Legislation to support compensation of mineworkers and ex-mineworkers that contract an		✓		Legislation to support compensation of mineworkers and ex-mineworkers that contract an occupational disease is not a common practice except in member states with large mining activities and active mining workers

	occupational disease				unions
7	Existence of minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support		✓		Minimum standards and packages exist mostly for TB and HIV prevention, treatment, care and support; but mostly only treatment guidelines for Silicosis and other occupational respiratory diseases prevention, treatment, care and support
8	National limits for cumulative exposure to silica dust; and Silica Occupational Exposure Limits (OEL) consistent with international best practice and benchmarks				National limits for cumulative exposure to silica dust; and Silica Occupational Exposure Limits (OEL) consistent with international best practice and benchmarks mostly do not exist in the majority of countries as well as at regional level
9	Existence of integrated wellness programmes for TB, HIV, Silicosis and other occupational respiratory diseases accessible to all mineworkers and ex-mineworkers		✓		Exist in bigger mining companies as part of staff health services, but less as integrated wellness programmes accessible to all mineworkers and ex-mineworkers
10	Evidence of conduct of operational research on TB, HIV, Silicosis and other occupational respiratory diseases		✓		Evidence of incidence of operational research findings conducted by national programmes or in collaboration with research and academic institutions. But this is limited to a few with extensive mining activity

11	National M & E framework for silica dust levels in the mines;			✓	No evidence of its existence
12	Evidence of Government or partner funding line items for programmatic interventions for TB, HIV, Silicosis and other occupational respiratory diseases				Health services funded by government and collaborating partners exist in all member states as part of government responsibility for population health
13	Evidence of Government or partner funding line item for compensation obligations		✓		Exists in only a few major mining member states, especially the Republic of South Africa, that has extended coverage to eligible ex mine workers in labour supplying member states of the region, such as under The Employment Bureau of Africa (TEBA) arrangement.

CHAPTER FOUR:
THE OPERATIONAL PLAN

4.1 Strategic Focus

This operational plan takes into account the envisaged outputs specified in the Declaration, and the key strategic interventions and priority actions. Specifically, it focuses on the following six priority strategic interventions:

4.1.1 Strengthening Accountability, Coordination and Collaboration for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector at National and Regional Levels

4.1.2 Promoting a supportive policy and legislative environment for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector

4.1.3 Strengthening Programmatic Interventions for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector

4.1.4 Strengthening Surveillance Systems for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector:

4.1.5 Strengthening Programme Monitoring and Evaluation (M & E), and

4.1.6 Strengthening Financing for TB, HIV, Silicosis and other occupational respiratory disease interventions in the Mines

4.2 The Work Plan

Each of the strategic objectives in this plan is prefaced by a preamble that outlines the salient issues and justifications for proposed actions. The preamble for most of the strategic objectives apply equally at Regional and member state levels. Consequently, it will be presented once at the regional level and applied directly at member state level, except where the elements of the preamble differ on account of the peculiarities of the operational level.

4.2.1 Regional Level

4.2.1.1: STRATEGIC OBJECTIVE 1: Strengthening Accountability, Coordination and Collaboration for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector at Regional Level

Preamble

The SADC Secretariat has made significant strides in establishing and coordinating region wide commitments towards combating TB, HIV and AIDS, including passing of the Resolution on TB in the Mining Sector, and other pertinent resolutions and commitments, singly and in collaboration with other AU and UN member states. And in the Code of Conduct of the Declaration on TB in the Mining Sector, the SADC has demonstrated its commitment to rally Member States of the region to eliminate TB, and to improve environmental, health and safety practices and standards in the mining sector, in accordance with provisions of other Regional and International Protocols[30].

Strengths and opportunities

- Existence of a Regional Declaration on TB in the Mining Sector
- Existence of a code of Conduct for Implementing the Declaration
- Proven capacity to coordinate a number of multi-county initiatives for TB and HIV Control, including the Southern Africa Tuberculosis and Health Systems Support Project, and the World Bank supported TB in the Mines Project aimed at strengthening the health sector's response to Tuberculosis and occupational lung diseases, and
- Willingness and collaboration of donor partners

Weaknesses and gaps

- Absence of a Regional Plan for operationalizing the Declaration on TB in the Mining Sector

[30] the SADC Charter of Fundamental Social Rights, the SADC Framework on mobile Population and Communicable Diseases; the Millennium Development Goals; the World Health Assembly Resolution 61.17 on the health of migrants – (2008), the International Labour Organization (ILO) Conventions: Occupational Safety and Health Convention, 1981(No.155); Safety and Health in Mines Convention, 1995 (No. 176), and ILO Recommendation 200 of 2010.

- Absence of a regional framework for coordinating communicable diseases and occupational health and safety issues in general, and in the mining sector in particular

Key recommended Actions

- Develop a Regional Operational Plan for implementing the Declaration on TB in the Mining Sector
- Develop a Regional Framework for Coordinating Communicable and Occupational Diseases

4.2.1.2 STRATEGIC OBJECTIVE 2: Promoting a supportive policy and legislative environment for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector in the SADC Region

Preamble

Enabling Policies and Legislations are empowerment tools for implementation because they simplify decision-making, among other benefits. They provide standard operating procedures; they promote uniformity in handing similar activities across players; and they standardize responses and reduce uncertainty in day-to-day decision-making. Policies establish consistent pattern of managerial actions and reduce resistance to organizational strategies.

Strengths and opportunities

- Precedence of developing Regional Policy documents and guidelines
- Existence of other Regional policy and legislative documents and guidelines
- Existence of collaborating partners with robust capacity to develop / review policy documents and guidelines

Weaknesses and gaps

- Outdated Regional management Policy Guidelines for TB, HIV and other respiratory occupational diseases
- Lack of Regional Guidelines for cumulative exposure to silica dust and silica Occupational Exposure Limits (OEL)

Key recommended Actions

1) Develop Harmonized Regional management policies and guidelines for TB, HIV, Silicosis and other respiratory occupational diseases
2) Develop Regional Guidelines for cumulative exposure to silica dust and silica Occupational Exposure Limits (OEL)

4.2.1.3 STRATEGIC OBJECTIVE 3: Strengthening Programmatic Interventions for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector

Preamble

Strengthening High Impact Interventions for TB and HIV /AIDS are key to ending the two epidemics. This entails increasing access to timely precise diagnosis, and provision of minimum standards of effective treatment and care. It entails increasing coverage with high-quality integrated, decentralized and comprehensive HIV/TB services and HIV prevention, care and treatment; building the capacity of health teams and systems; and provision of mentorship and technical support to service providers and health systems. It also entails periodic process, administrative and economic evaluations in the development and application of interventions at implementation and utility levels.

Strengths and opportunities

- Existence of previous regional minimum standards of care for the management of TB, HIV and other communicable diseases
- Existence of Global policies and minimum standards of care for TB and HIV and AIDS
- Existence of global minimum standards and packages for Silicosis and other occupational respiratory diseases prevention and management
- Access to recommended latest global policy guidance on TB and HIV prevention, treatment and care

Weaknesses and Gaps

- Outdated versions of Regional minimum standards and packages for TB and HIV care
- Lack of Regional minimum standards and packages for Silicosis and other occupational respiratory diseases prevention, treatment, care and support

Key recommended Actions

1) Develop / Update Regional minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support
2) Support country adaptation of Regional and global minimum standards of care and management guidelines.

4.2.1.4 STRATEGIC OBJECTIVE 4: Strengthening Surveillance System for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector

Preamble

Strong and reliable surveillance systems will be critical for robust estimation of burden, and effective targeting and control of communicable diseases. This is to be achieved through measurement of indicators that assess system processes and outputs. This includes case detection, registration and confirmation of health-related events; reporting, analysis and interpretation of surveillance data; and outbreak response and feedback to surveillance system users and decision makers.

Basic and operational epidemiologic and behavioural studies will help to find better approaches to TB and HIV prevention, treatment and care, thereby strengthening focus, and coordinating tuberculosis (TB) programmatic research within and across member states. TB control trials aimed at conducting programmatically relevant research on the diagnostic, clinical management, and prevention aspects of TB infection and disease will help catalyse and domesticate modern advances in TB diagnosis, treatment and care with tremendous impact on the TB elimination efforts.

Behavioural research on the other hand will help to understand how behaviours of both patients and providers affect TB and HIV related care seeking, diagnosis, treatment success, and prevention; and to understand how other social, cultural, and environmental influences affect health seeking and treatment outcomes related to TB and HIV.

Economic research will provide useful information on how to cost-effectively allocate scare resources towards combating the TB, HIV and silicosis epidemics.

Strengths and opportunities

- Existence of reports of nationwide TB prevalence surveys and other burden estimation efforts
- Incidence of previous epidemiologic and economic studies on TB in the mines
- Documented support for studies on TB prevention among miners and ex-miners
- Participation of some SADC member states in ground breaking evaluation research on TB prevention and treatment
- Existence of collaborating research institutions with interest and focus on TB, HIV and silicosis research

Weaknesses and Gaps

- Lack of nationally representative survey findings on the magnitude of TB, HIV and Silicosis in some countries
- Lack of a region wide research agenda on TB, HIV, Silicosis and other respiratory occupational diseases
- Limited geographical coverage of previous epidemiologic and economic research studies on TB and other occupational diseases
- Incidence of TB surveillance systems in member states of the region that are not compliant with international surveillance systems standards and benchmarks

Key recommended Actions

1) Develop Regional Research and development agenda for TB, HIV, Silicosis and other occupational respiratory diseases interventions
2) Support Regional basic and implementation research on TB, HIV, Silicosis and other occupational respiratory diseases interventions

4.2.1.5 STRATEGIC OBJECTIVE 5: Strengthening Programme Monitoring and Evaluation (M & E)

Preamble

Monitoring and evaluation will be an integral part of the implementation of this operational plan. Regional and national disease control programs and projects require data for program planning, program management and assessing progress. Data collection systems and data sources are

needed to ensure data are available for routine monitoring and assessing impact of disease control efforts.

In the context of this plan, in addition to investments in data sources and collection methods, countries shall focus on the capacity to disaggregate, analyze and use data for program quality improvement and impact. It will be necessary to periodically assess programmes implementation and utility of interventions against TB, HIV and silicosis, including through systematic assessment of M & E systems and regular programme reviews.

Strengths and opportunities

- Existence of global M & E systems for monitoring progress towards ending the TB and HIV epidemics
- Availability of information of country level burden of TB and HIV and AIDS through prevalence surveys and or modelling
- Reports of country specific programme reviews

Weaknesses and Gaps

- Lack of information on TB and HIV disease burden in some countries
- Lack of a Regional M & E system for monitoring progress towards ending the TB and HIV epidemics in the region
- Lack of findings of TB surveillance systems assessment in some member states of the region

Key recommended Actions

- Support estimation of TB burden in eligible countries
- Develop a Regional M & E Framework for TB, HIV and Silicosis control
- Support conduct of assessments of TB, HIV and Silicosis M & E systems
- Support countries to develop and implement monitoring and evaluation plans

4.2.1.6 STRATEGIC OBJECTIVE 6: Strengthening Financing for TB, HIV, Silicosis and other occupational respiratory disease interventions in the Mines

Preamble

Universal Health coverage (UHC) seeks to overcome inequality in tackling the service provision gap and financial gap that populations face. It requires countries to ensure that all people have equitable access to needed quality health care services without experiencing financial risk, such as excessive out of pocket expenses for health. While there may be no consensus on the best way to finance UHC, a universal health system that provides core essential services to all is a key priority regardless of how it is financed. Key to this aim are:

- Raising sufficient resources for health,
- Removing financial risk and barriers to access,
- Promoting efficiency and eliminating waste, and
- Addressing inequalities in coverage.

There is consensus in the literature that achieving UHC requires a predominant reliance on compulsory or public funding for health services and is central to ensuring access to health services whilst also protecting individuals and families from potentially impoverishing levels of out of pocket expenses. Whilst private financing plays a role in all health systems, global evidence favors public financing for UHC[31],[32]. Evidence also shows that no country has attained UHC by relying on voluntary contributions to insurance schemes regardless of whether they are run by non-government, commercial or government entities[33].

[31] World Health Organization. Health systems financing: the path to universal health coverage. World Health Report 2010. Available from: http://www.who.int/whr/2010/en/.

[32] Jowett, J. and Kutzin, J. Raising revenues for health in support of UHC: strategic issues for policy makers. WHO Health Financing Policy Brief No.1. 2015. p.2. Available from: http://apps.who.int/iris/bitstream/10665/192280/1/WHO_HIS_HGF_PolicyBrief_15.1_eng.pdf

[33] Kutzin, J. Anything goes on the path to universal health coverage? No. 2012. Bulletin of the World Health Organization 90:867-
868. Available from: http://www.who.int/bulletin/volumes/90/11/12-113654/en/

10 World Health Organization. Health systems financing: the path to universal health coverage. World Health Report 2010 p.xiv.
Available from: http://www.who.int/whr/2010/en/.

In line with this concept, implementing this plan should be anchored in a holistic primary health care system. Given the high importance of adequate finances in attaining UHC, this plan recognizes five primary methods of funding healthcare systems, namely[34].

- general taxation to the state, county or municipality;
- social health insurance;
- voluntary or private health insurance;
- out-of-pocket payments; and
- donations of health charities

While the above provides the traditional financing methods for healthcare services, most developing countries use the two-tier healthcare system where a basic government-provided healthcare system provides basic, medical necessities while a secondary tier of care exists for those who can pay for additional, better quality or faster access. The basic needs are covered almost free by the government and any specialized treatment is funded, mostly by for-profit private sector through health insurance. Other variations are the "single-payer healthcare" where the state, rather than private insurers, pays for all healthcare costs. In this context, single-payer systems may contract for healthcare services from private organizations or may own and employ healthcare resources and personnel themselves.

The other is a "publicly funded healthcare" system that seeks to meet the cost of all or most healthcare needs from a publicly managed fund that may be a not-for-profit trust that pays out for healthcare according to common rules established by the members or by some other democratic form. Some innovations to UHC financing have emerged which member states may wish to consider in meeting the cost of TB/HIV and Silicosis services. These include "crowdfunding"[35] based on a philosophy of "one for all, all for one" and provides an insurance platform to help critically ill patients, who cannot bear high medical fees, by crowdfunding money from all of its users. In this case, a user diagnosed with one of agreed serious diseases like cancer, heart attack etc., pays only a small proportion of the total cost, while the bulk is absorbed by a pooled fund.

[34] *1. J. U. Palas, M. Asdhraf and P.Ray, Financing Universal Health Coverage: A Systematic Survey, The International Technology Management Review, Vol. 6 (2017), No. 4, 133-148*

[35] 2. Y. Shen, H. Wu and P. Ray, "Why is Crowdfunded Medical Aid so Popular and Successful in China?", Asian Hospital and Healthcare Management (2018) Issue 41, pp 30-33, https://www.asianhhm.com/medical-sciences, last accessed October 11, 2018

Strengths and opportunities

- Existence of government funded budget lines for TB, HIV and other communicable diseases control
- Existence of various health insurance schemes, in particular community insurance schemes, to cover TB, HIV and other public good diseases
- Availability of a Global Fund for TB, AIDS and Malaria

Weaknesses and Gaps

- Generally, grossly underfunded TB, HIV and Silicosis control programmes
- Lack of, or limited coverage with existing, health insurance schemes, in particular community insurance schemes, to cover TB, HIV and other public good diseases
- Relatively low absorptive capacity of GFATM grants by national programs

Key recommended Actions

- Advocate for increased domestic financing of TB, HIV and Silicosis services with Member States
- Support country initiatives to conduct patient cost surveys for TB and HIV services
- Advocate for implementation of legislated social protection programmes aimed at accelerating UHC to TB, HIV, silicosis and other occupational respiratory conditions, such as cash grants and in-kind support (mainly food basket).
- Advocate for extension of existing social protection programs to include TB, HIV and Silicosis patients while they are on active treatment and care.

4.2.2 Member State Level

4.2.2.1 STRATEGIC OBJECTIVE 1: Strengthening Accountability, Coordination and Collaboration for TB, HIV, Silicosis and other occupational RespiratoryDiseases Control in the Mining Sector

Preamble

Member States of the SADC region have made significant strides in establishing and coordinating national efforts towards combating TB, HIV and AIDS, including through support

for Regional, Continental and Global Resolutions and Commitments[36]. Virtually all Member States of the SADC Region managed to halt and begun to reverse TB incidence by the end of the Millennium Development Goals (MDGs) era in 2015, on the strength of effective national stewardship and technical and financial accountability to the populace, donors and partners. National programs have also successfully mobilized partners and stakeholders to the cause of a one national programme and single strategic plans and national guidelines.

Strengths and opportunities

- Existence of national TB and HIV Control programmes
- Existence of national strategic plans and national diagnostic and management guidelines for TB, HIV and other related diseases
- Proven capacity to coordinate a number of county stakeholders and non-state organizations in strengthening the health sector's response to Tuberculosis, HIV and occupational lung diseases.
- Willingness and collaboration of donor partners

Weaknesses and gaps

- Absence of national frameworks for coordinating communicable diseases and occupational health and safety issues in general, and in the mining sector in particular
- Absence of robust National Plans for operationalizing the Declaration on TB in the Mining Sector
- Lack of, or weak, national Task Forces on Communicable diseases, Occupational Health and Mobile Populations
- Lack of National Inter-ministerial Commissions on TB, HIV and Silicosis Control
- General lack of national offices for coordinating and facilitating resolution of health issues in the mining sector

[36] the SADC Charter of Fundamental Social Rights, the SADC Framework on mobile Population and Communicable Diseases; the Millennium Development Goals; the World Health Assembly Resolution 61.17 on the health of migrants – (2008), the International Labour Organization (ILO) Conventions: Occupational Safety and Health Convention, 1981(No.155); Safety and Health in Mines Convention, 1995 (No. 176), and ILO Recommendation 200 of 2010.

Key recommended Actions

1) Develop National Plan for operationalizing the Declaration on TB in the Mining Sector
2) Develop National framework for coordinating communicable diseases and occupational health and safety issues in the mining sector
3) Establish / Strengthen a national Task Force on Communicable diseases, Occupational Health and Mobile Populations
4) Establish / Strengthen a National Inter-Ministerial Commission on TB, HIV and Silicosis Control
5) Establish / designate a national office for coordinating and facilitating resolution of health issues in the mining sector

4.2.2.2: STRATEGIC OBJECTIVE 2: Promoting a supportive policy and legislative environment for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector in the SADC Region

Strengths and opportunities

- Precedence of developing disease control National Policy documents and guidelines
- Existence of other National policy and legislative documents and guidelines
- Existence of in country collaborating partners with robust capacity to develop / review policy documents and guidelines

Weaknesses and gaps

- Lack of, or weak National Policy Framework classifying TB and Silicosis acquired in the mines as occupational diseases;
- Lack of, or ineffective, National Legislation on compulsory reporting of TB, Silicosis and other occupational respiratory diseases
- General lack of National legislation that supports compensation of mineworkers and ex-mineworkers
- Lack of National M & E framework for silica and other dust levels in the mines

Key recommended Actions

1) Develop National Policy Frameworks classifying TB and Silicosis acquired in the mines as occupational diseases;

2) Develop / Strengthen National Legislation on compulsory reporting of TB, Silicosis and other occupational respiratory diseases
3) Enact / Strengthen legislation that supports compensation of mineworkers and ex-mineworkers
4) Develop National M & E framework for silica and other dust levels in the mines

4.2.2.3: STRATEGIC OBJECTIVE 3: Strengthening Programmatic Interventions for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector

Strengths and opportunities

- Existence of updated National diagnosis and treatment guidelines for AIDS, TB and malaria triad
- Access to recommended latest global policy guidance on TB and HIV prevention, treatment and care

Weaknesses and Gaps

- Lack of or outdated national minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support
- Lack of national guidelines to ensure a safe working environment that minimizes exposure to silica dust

Key Recommended Actions

1) Develop / update National minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, diagnosis, treatment, care and support
2) Develop / update national guidelines for ensuring a safe working environment that minimizes exposure to silica dust
3) Mobilize funding for implementation of TB, HIV, Silicosis and other respiratory diseases interventions
4) Conduct basic and operations research on models of care and effectiveness of TB, HIV, Silicosis and other occupational respiratory diseases interventions

4.2.2.4: STRATEGIC OBJECTIVE 4: Strengthening Surveillance System for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector

Strengths and opportunities

- General existence of recent findings of national TB prevalence surveys as baselines
- Existence of findings of some epidemiologic and economic studies on TB in the mines
- Existence of regular programme review reports
- Participation of some SADC member states in ground breaking evaluation research on TB prevention and treatment
- Existence of national and international collaborating research institutions with interest and focus on TB, HIV and silicosis research

Weaknesses and Gaps

- Lack of nationally representative survey findings on the magnitude of TB, HIV and Silicosis in some member states
- Lack of national research agenda on TB, HIV, Silicosis and other respiratory occupational diseases in some member states
- Incidence of TB surveillance systems that are not compliant with international surveillance systems standards and benchmarks

Key recommended Actions

1) Conduct / update national surveys on TB, HIV and Silicosis burdens
2) Develop / update National Research and development agenda for TB, HIV, Silicosis and other occupational respiratory diseases interventions
3) Support conduct of in country basic and implementation research on TB, HIV, Silicosis and other occupational respiratory diseases interventions
4) Establish mandatory requirement for occupational disease surveillance and reporting of gender or disaggregated data for TB, Silicosis and other occupational respiratory diseases;

4.2.2.5: STRATEGIC OBJECTIVE 5: Strengthening Programme Monitoring and Evaluation (M & E)

Strengths and opportunities

- Existence of global M & E systems for monitoring progress towards ending the TB and HIV epidemics
- Availability of information of country level burden of TB and HIV and AIDS through prevalence surveys and or modelling
- Reports of country specific programme reviews
- Existence of standard global indicators and targets
- Existence of global generic recording and reporting tools and systems for TB and HIV

Weaknesses and Gaps

- Lack of a national M & E framework for monitoring progress towards ending the TB and HIV epidemics
- Lack of findings of TB and HIV and AIDS surveillance systems assessment in some member states

Key recommended Actions

1) Pass / elaborate national regulations for monitoring compliance with control of prescribed diseases and dust exposure;
2) Assess TB and AIDS surveillance systems, and Develop /Strengthen national tools for Monitoring and evaluating progress towards ending the TB and HIV epidemics
3) Develop M & E framework for monitoring Silicosis and other occupational respiratory diseases
4) Standardize system for reporting on TB, Silicosis and other occupational respiratory diseases;
5) Develop national M & E framework for regulating silica dust levels in the mines;

4.2.2.6: STRATEGIC OBJECTIVE 6: Strengthening Financing for TB, HIV, Silicosis and other occupational respiratory disease interventions in the Mines

Strengths and opportunities

- Existence of government funded budget lines for TB, HIV and other communicable diseases control
- Existence of various health insurance schemes, in particular community insurance schemes, to cover TB, HIV and other public good diseases
- Availability of a Global Fund to fight AIDS, TB and Malaria

Weaknesses and Gaps

- Generally, grossly underfunded TB, HIV and Silicosis control programmes
- Lack of, or limited coverage with existing, health insurance schemes, in particular community insurance schemes, to cover TB, HIV and other public good diseases
- Low absorptive capacity of GFATM grants by national programs

Key recommended Actions

- Advocate for increased domestic financing of TB, HIV and Silicosis services
- Conduct patient cost surveys for TB and HIV services to estimate levels of catastrophic costs
- Advocate for implementation of legislated social protection programmes aimed at accelerating UHC to TB, HIV, silicosis and other occupational respiratory conditions, such as cash grants and in-kind support (mainly food basket).
- Advocate for extension of existing social protections programs to include TB, HIV and Silicosis patients while they are on active treatment and care

CHAPTER FIVE

WORK PLAN MATRIX, RESPONSIBLE ENTITY, TIMEFRAME, KEY OUTPUTS AND BUDGET

5.1 Regional Level

STRATEGIC OBJECTIVE 1: Strengthening Accountability, Coordination and Collaboration for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector at Regional Level							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	**Q4 2022**		
Develop Regional framework for coordination of communicable diseases and occupational health and safety issues in the mining sector	SADC Secretariat					Regional Framework	

STRATEGIC OBJECTIVE 2: Promoting a supportive policy and legislative environment for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector in the SADC Region							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	**Q4 2022**		
Develop / Review Harmonized Regional treatment policies and guidelines for TB, HIV and Silicosis	SADC Secretariat					Updated Regional Harmonized Regional treatment policies and guidelines for TB, HIV and Silicosis	
Develop Regional Guideline for cumulative exposure to silica dust and silica Occupational Exposure Limits (OEL)	SADC Secretariat					Regional Guideline for cumulative exposure to silica dust and silica Occupational Exposure Limits (OEL)	

STRATEGIC OBJECTIVE 3: Strengthening Programmatic Interventions for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	**Q4 2022**		
Develop Regional minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support[37]	SADC Secretariat					Regional minimum standards for TB, HIV, Silicosis prevention, treatment, care and support	
Develop Regional Research and development agenda on TB, HIV, Silicosis and other occupational respiratory diseases interventions	SADC Secretariat					Regional Research and development agenda on TB, HIV, Silicosis and other occupational respiratory diseases interventions	

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WHO consolidated guidelines on tuberculosis. Module 3: Diagnosis – rapid diagnostics for tuberculosis detection 2021 update. Geneva: World Health Organization; 2021 (https://www.who.int/publications/i/ item/9789240029415).
WHO consolidated guidelines on tuberculosis. Module 4: Treatment – drug-resistant tuberculosis treatment. Geneva: World Health Organization; 2021 (https://www.who.int/publications/i/item/9789240007048).
WHO consolidated guidelines on tuberculosis. Module 2: Screening – systematic screening for tuberculosis disease. Geneva: World Health Organization; 2021 (https://www.who.int/publications/i/item/9789240022676).

STRATEGIC OBJECTIVE 4: Strengthening Surveillance System for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	**Q4 2022**		
Develop Standardized Regional Recording and Reporting format(s) for TB, Silicosis and other occupational respiratory diseases	SADC Secretariat					Standardized Regional Recording and Reporting format(s) for TB, Silicosis and other occupational respiratory diseases	

STRATEGIC OBJECTIVE 5: Strengthening Programme Monitoring and Evaluation (M & E)							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	**Q4 2022**		
Develop Regional M & E Framework for TB, HIV, Silicosis, and other occupational respiratory diseases, including Standardized Regional indicators	SADC Secretariat					Regional M & E Framework for monitoring and evaluating TB, HIV, Silicosis and other occupational respiratory	
Develop a Regional M & E framework for silica dust levels in the mines	SADC Secretariat					Regional M & E framework for silica dust levels in the mines	

STRATEGIC OBJECTIVE 6: Strengthening Financing for TB, HIV, Silicosis and other occupational respiratory disease interventions in the Mines							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	**Q4 2022**		
Submit Regional funding proposals to international partners to support TB, HIV, Silicosis and other occupational respiratory diseases initiatives	SADC Secretariat					Regional funding proposals to international partners to support TB, HIV, Silicosis and other occupational respiratory initiatives	

5.2 Country Levels

STRATEGIC OBJECTIVE 1: Strengthening Accountability, Coordination and Collaboration for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector at national level							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	**Q4 2022**		
Develop National framework for coordination of communicable diseases and occupational health and safety issues in the mining sector	National programme(s) and partners					National Framework for coordination of communicable diseases and occupational health and safety issues in the mining sector	

Establish / Strengthen a national Task Force on Communicable diseases, Occupational Health and Mobile Populations	National programme(s) and partners					National Task Forces on Communicable diseases, Occupational Health and Mobile Populations	
Establish / Strengthen a National Ministerial Commission on TB, HIV and Silicosis Control	National programme(s) and partners					National Ministerial Commission on TB, HIV and Silicosis control	
Establish / designate a national office for facilitating resolution of health issues in the mining sector	National programme(s) and partners					National office for facilitating resolution of health issues in the mining sector	

STRATEGIC OBJECTIVE 2: Promoting a supportive policy and legislative environment for TB, HIV, Silicosis and other occupational Respiratory Diseases Control in the Mining Sector through the following strategic interventions							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	Q4 2022		
Develop National Policy Framework Classifying TB and Silicosis acquired in the mines as occupational diseases;	National programme(s) and partners					National Policy Framework classifying TB and Silicosis acquired in the mines as occupational diseases;	
Develop / Strengthen National Legislation on compulsory reporting of TB, Silicosis and other occupational respiratory diseases	National programme(s) and partners					National Legislation on compulsory reporting of TB, Silicosis and other occupational respiratory diseases	

Enact / Strengthen legislation that supports compensation of mineworkers and ex-mineworkers	Ministry of Justice in collaboration with National programme(s) and partners					Legislation that supports compensation of mineworkers and ex-mineworkers	
Develop National M & E framework for silica dust levels in the mines	National programme(s) and partners					National M & E framework for silica dust levels in the mines	

STRATEGIC OBJECTIVE 3: Strengthening Programmatic Interventions for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	Q1 2022	Q3 2022	Q4 2022		
Develop National minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support	National programme(s) and partners					National minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support	
Develop National Research and development agenda on TB, HIV, Silicosis and other occupational respiratory diseases interventions	National programme(s) and partners					National Research and development agenda on TB, HIV, Silicosis and other occupational respiratory diseases interventions	

Develop national guidelines to ensure a safe working environment that minimizes exposure to silica dust	National programme(s) and partners					National guidelines to ensure a safe working environment that minimizes exposure to silica dust	
Conduct operations research and development on TB. HIV, Silicosis and other occupational respiratory diseases interventions	National programme(s) and partners					Published Operations research on TB. HIV, Silicosis and other occupational respiratory diseases	

STRATEGIC OBJECTIVE 4: Strengthening Surveillance System for TB, HIV, Silicosis and other occupational respiratory Diseases Control in the Mining Sector							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	Q4 2022		
Established mandatory requirement for occupational disease surveillance and reporting of gender or disaggregated data for TB, Silicosis and other occupational respiratory diseases;	National programme(s) and partners					National minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support	
Standardized reporting of gender or disaggregated data on HIV across the SADC Member States;	National programme(s) and partners					Regional Research and development agenda on TB, HIV, Silicosis and other occupational respiratory diseases interventions	

Standardize system for reporting on TB, Silicosis and other occupational respiratory diseases;						Standard system for reporting on TB, Silicosis and other occupational respiratory diseases;	

STRATEGIC OBJECTIVE 5: Strengthening Programme Monitoring and Evaluation (M & E)							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	Q4 2022		
Pass / elaborate national regulations for monitoring compliance with control of prescribed diseases and dust exposure;	National programme(s) and partners					National regulations for monitoring compliance with control of prescribed diseases and dust exposure;	
Develop /Strengthen national tool for Monitoring and evaluating TB, HIV, Silicosis and other occupational respiratory diseases	National programme(s) and partners					National tool for Monitoring and evaluating TB, HIV, Silicosis and other occupational respiratory diseases	

Standardize system for reporting on TB, Silicosis and other occupational respiratory diseases;						Standard system for reporting on TB, Silicosis and other occupational respiratory diseases;	
Mobilize funding for implementation of TB, HIV, Silicosis and other respiratory diseases interventions						Adequate funding for implementation of TB, HIV, Silicosis and other respiratory diseases interventions	
Develop national M & E framework for regulating silica dust levels in the mines;						National M & E framework for regulating silica dust levels in the mines	

STRATEGIC OBJECTIVE 6: Strengthening Financing for TB, HIV, Silicosis and other occupational respiratory disease interventions in the Mines							
Major Activities	**Entities / Persons responsible**	**TIME FRAME**				**Key outputs**	**Budget (USD) & source of funding**
		Q4 2021	**Q1 2022**	**Q3 2022**	Q4 2022		
Mobilize funding for implementation of TB, HIV, Silicosis and other respiratory diseases interventions	National programme(s) and partners					Adequate funding for implementation of TB, HIV, Silicosis and other respiratory diseases interventions	

- **On the strength of completed national programmer questionnaires that were received**

CHAPTER SIX:
ANNEXES

Annex 6.1: SDG, End TB and UN High Level political Declaration on TB commitments and targets by 2030

SDG 3 target 3.3	By 2030, end the epidemics of AIDS, TB, Malaria and neglected tropical diseases, and combat hepatitis, water-borne and other communicable diseases
WHO End TB Strategy	80% reduction in the TB incidence rate (new and relapse cases per 100,000 population per year) by 2030, compared with 2015 • 2020 milestone: 20% reduction, 2025 milestone: 50% reduction
	90% reduction in the annual number of TB deaths by 2030, compared to 2015 • 2020 milestone: 35% reduction; 2025 milestone: 75% reduction
	No household affected by TB face catastrophic costs by 2020
UN high-level meeting on TB, 2018	40 million people treated for TB from 2018 to 2022, inducing: • 3.5 million children • 1.5 million people with drug resistant TB, including 115,000 children
	At least 30 million people provided with TB preventive treatment from 2018 to 2022, including: • million people living with HIV • 4 million children aged under 5 years, and • 20 million people in other age groups, who are household contacts of people affected by TB
	Funding of at least US$ 13 billion per year for universal access to TB prevention, diagnosis, treatment and care by 2022
	Funding of at least US$ 2 billion per year for TB research from 2018 to 2022

Annex 6.2 Status of implementation of TB in the Mines Initiatives in selected countries that submitted completed questionnaires

6.2.1 Angola

Angola has not participated in any of the Regional Initiatives on TB in the Mining sector since the Declaration was launched in 2012. Further, Angola, on its own, has not yet started implementing the key elements of the Declaration. Consequently, no Strategic, policy, regulatory or legislative documents exit in the country. Coordinating bodies are not yet established and there are no funding streams to finance TB in the Mining sector operations.

6.2.2Eswatini

Eswatini has made substantial progress in implementing various aspects of TB in the Mining sector since the inception of the Declaration, akin to phased but steady institutionalization of the initiatives. To date, it has conducted geo mapping of miners/ex-miners; has created a national data base of miners to assist in systematic TB screening and compensation; has been providing outreach services on scheduled dates to miners/ex-miners in one region (Hhohho) with support from a collaborating partner (URC); has established Occupational Health Service Centres (OHSCs) in two of four regions of the country (Shiselweni and Manzini) supported by Global Fund, Ministry of labour and Ministry of Health. It has also been implementing initiatives for demand creation on TB/HIV services supported by SAFAIDS covering all the four regions of the country, and wide sensitization of, and TB screening among miners/ex-miners and their families in collaboration with CSOs (SNEMA, SWAMMIWA, Kwakha indvodza) in three regions. It has been scaling up TB Preventive Treatment for miners/ex-Miners with silicosis supported by the Global Fund, WHO and PEPFAR-covering all four regions; has piloted electronic cross border referral system in three regions; and the country has recently formed a National TIMS technical working group.

On strategic policy and guidance documents, TPT policy is incorporated in the TB strategic plan, and is one of key deliverables for a recently formed technical working group (TWG). There are ongoing discussions between the Ministry of Health and Ministry of Labour on the establishment of an independent office for TIMS issues, and the parliamentary TB caucus has been engaged to lobby

with relevant departments for the establishment of this office. Matters of compensation are covered in a Workmen's Compensation (PNEUMOCONIOSIS) Regulations of 1983, and The Occupational Safety and Health Act, 2001, Section 32 provides for the notification of occupational diseases.

At technical level, there is a health service package for miners/ex-miners that includes TB screening, diagnosis and treatment; TB prevention; HIV testing, treatment and care. There is also involvement of peer educators among ex miners' children to conduct active screening at community level. Two occupational health service centres are available for the provision of these services. Furthermore, some public health care facilities such as Hospitals /Health centres provide wellness programmes, and the current TB screening tool used in health facilities has provision for screening miners and ex-miners, and reports are generated monthly. Technical guidance documents are available. Partner funding was available in TIMS 2 project between 2017 and 2020

6.2.3 Malawi

Malawi, like Eswatini has made substantial progress in implementing various aspects of TB in the Mining sector since the inception of the Declaration. TB in the Mining Sector initiatives are being implemented in 15 of 28 districts, guided by the level of mining, and burden of TB/HIV. Financial support for these initiatives has been largely from World Bank and Global Fund through the Southern Africa TB and Health Systems Support Project and TB in the Mining Sector (TIMS) Project. Technical support for these projects has been through AUDA-NEPAD and ECSA-HC.

Through these projects, Malawi has conducted identification and orientation of former groups of miners to provide community interventions and health education in all 15 districts under SATBHSSP; has integrated TB in the mines communication into school health programs targeting primary schools countrywide; has established sputum collection points in mining areas within the 15 districts under SATBHSSP; has developed and disseminated TB messages through the print and electronic media; has oriented health care workers on systematic TB screening. It has also established dedicated centres to provide OSH services in 7 hospitals across the country; has trained OSH professionals including 16 doctors/radiographers in X-ray reading, 15 nurses in OSH fundamentals, 18 inspectors in risk assessment, and 5 occupational hygienists; has developed a national Code of Practice for Occupational Lung

Diseases that is awaiting validation; has various versions of SoPs, National OHS Framework, National OSH Policy and others; provides services for screening of miners for TB and other lung conditions; conducts regular joint inspections of mining institutions to ascertain adherence to mining health guidelines; has procured mining inspection equipment; and has reviewed various legislative tools on OSH.

The NTP Strategic plan has included TB in mining with miners as a vulnerable population. There is no separate taskforce to tackle the listed groups. Rather these are included in several TWGs including the EHP TWG, TB TWG, EH TWG. The country has revamped and reconstituted Hospital Ombudsman office to handle compensation issues. These offices are supported by the National Ombudsman's office working hand in hand with MOH. Silicosis has been classified as occupational, however TB is yet to be classified as such as legislation is being reviewed. Collaboration is mostly with Ministry for Labour. Occupational health services are currently being provided in a number of hospitals including outreach mobile services. SATBHSS project supports most of the initiatives mentioned.

6.2.4 Zimbabwe

Zimbabwe has implemented a number of initiatives on TB in the Mining Sector since the Declaration, including TB in Mines Phase II 2019-2020 supported by the Global Fund support. Under this project, the countries is implementing key activities in 6 districts of the country (Bubi, Shurugwi, Mazowe, Sanyati, Hurungwe and Kwekwe), namely: TB screening and active case finding; training of community volunteers on TB screening and CSS toolkit; contact Tracing; initiatives to improve TB prevention, care and treatment behavior among key populations; raising awareness for ASMs and communities on minimum package of Occupational Health (OH) services which include prevention, medical screening, treatment, HIV prevention and Sexual Reproductive Health; and engaging Care providers and generating demand for available occupational health services (OHSC and other facilities).

The country is also implementing a Baines Occupational Health services under KNTB grant in 8 districts (Insiza, Gwanda, Shurugwi, Kwekwe, Gweru, Mwenezi, Zvishavane and Chirumanzu). Two OHSC clinics have been set up in Gwanda and Gweru providing occupational health services to artisanal and small-scale miners and capacity building of nurses and doctors to screen and diagnose

occupational lung diseases. Another initiative is being supported by the Global Fund Covid 19 grant 2022-2023 covering 10 districts (Mazowe, Bindura, Shamva, Sanyati, Bubi, Matobo, Hwange, Umguza, Chimanimani and Umzingwane). Funding is mainly for capacity building of nurses and doctors on screening and diagnosis of occupational lung diseases. TB in mines is addressed in the TB NSP, and an Obligation for compensation is covered through court decisions for Ex-Wenela miners. Current national minimum standards are covered in the TB NSP 2021-2025, and some Research on TB and Silicosis is being done by Baines Occupational Health services.

Partner funding includes Global Fund C19RM grant and the USAID KNTB grant. This funding supports capacity building of HCWs on TB, HIV, Silicosis, and other occupational respiratory diseases. The funding also supports Gwanda, Gweru, and Kadoma Occupational health service centres and there is a KNTB grant for Baines Occupational Health Services for the next 5 years. Government commitment and obligation for some domestic financing is now in place.

6.2.5 Zambia

Zambia is one of the countries that is actively implementing TB in the Mining Sector activities since the inception of the Declaration. It has been implementing the Southern Africa Tuberculosis Health System Strengthening (SATBHSS) Project with support from World Bank in collaboration with Zambia National Public Health Institute and Occupational Health and Safety Institute, and Tuberculosis in the Mining Sector project with support from World Bank in collaboration with Ministry of Mines and Occupational Health and Safety Institute.

National coordination of activities is located at Mines Safety Department under the Ministry of Mines through the SATBHSS project with support from World Bank in collaboration with Occupational Health and Safety Institute. Classification of TB and Silicosis acquired in the mines as occupational diseases is being fully implemented by the Occupational Health and Safety Institute. Existence of legislation on compulsory reporting of TB, Silicosis and other occupational respiratory diseases is implemented by the NTLP through the SATBHSS project with support from World Bank, again in collaboration with Occupational Health and Safety Institute.

The Occupational Health and Safety Institute recommends for compensation and Workers Compensation Fund Control Board does the compensation under Ministry of Labor.

There is evidence of conduct of operational research on TB, HIV, Silicosis and other occupational respiratory diseases. The NTLP, Ministry of Mines and Occupational Health and Safety Institute have conducted a number of operational researches on TB, HIV and Silicosis through the SATBHSS project with support from World Bank. Partner funding is available from the two projects, and funds for compensation are managed by the Workers Compensation Fund Control Board through the Ministry of Labor and Social Security. Technical guidance documents, including minimum standards of care, are included in various legislative and policy documents.

6.2.6 Seychelles

There are no active mining activities in Seychelles. Consequently, most TB in the Mining Sector specific interventions and provisions are not applicable. Practically, there is no TB and Silicosis acquired in the mines to talk about. As a result:

- There is no strategic document with reference to TB control in the Mining Sector.
- There is no National Task Force on Communicable diseases, Occupational Health and Mobile Populations, nor an independent national office for resolution of health issues in the mining sector.
- No legislation on compulsory reporting of TB, Silicosis and other occupational respiratory diseases; and no legislation to support compensation of mineworkers and ex-mineworkers that contract an occupational disease.
- There is no minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support; and no limits for cumulative exposure to silica dust, nor Silica Occupational Exposure Limits (OEL) consistent with international best practice and benchmarks as this is not applicable.

The lack of active mining activity notwithstanding, there is need for minimum standards for TB / prevention, treatment and care in the context of ending the TB and HIV epidemics.

6.2.7 Republic of South Africa

The Republic of South Africa is a major mining member of state in the SADC Region. For a long time, the mining sector has played a significant role in the economic development of the country, rated as the world's third largest mining industry, contributing to about 8 percent of the country's total GDP in 2016. Mineworkers and peri-mining communities are key populations identified in the National TB Strategic Plan. The DMRE Strategic Plan for 2020-2025 aims to reduce occupational diseases (including TB) and the Department of Health Annual Performance Plan 2022/23 has set key outputs and targets on certifications of mine workers, benefit payments and payment for loss of earnings during TB treatment.

A Mine Health and Safety Council (MHSC) was established under the Mine Health and Safety Act 29 of 1996, and a Mining Industry TB, HIV and AIDS Advisory Committee (MITHAC) advises MHSC on TB and HIV/AIDS related policies, and monitors implementation by the mining industry. A Mine Health and Safety Act (MHSA) and the Occupational Diseases in Mine and Works Act (ODMWA), Mine Health and Safety Act, Occupational Diseases in Mines and Works Act, and Notifiable Medical Conditions under the Health Act classifies TB and Silicosis acquired in the mines as occupational disease; and legislates for compulsory reporting of TB, Silicosis and other occupational respiratory diseases. There is on the Integrated Management and Reporting for HIV, AIDS, TB and Occupational Lung Diseases in the South African Mining Industry, MHSC 2016, and a DMR 164 template for reporting on TB and HIV used since 2014.

Legislation to support compensation of mineworkers and ex-mineworkers that contract an occupational disease exists through the Compensation for Occupational Injuries and Diseases Act, and Occupational Diseases in Mines and Works Act. Minimum standards and packages for TB, HIV, Silicosis and other occupational respiratory diseases prevention, treatment, care and support exists through a number of guidance documents, including a Guidance Note for management and control programme for Tuberculosis in the South African Mining Industry (Government Gazette No. 41839, 17 August 2018), Guidance Note on the management and control of HIV in the South African Mining Industry (Government Gazette No. 44427, 9 April 2021), and Policy on the Integrated Management and Reporting for HIV, AIDS, TB and Occupational Lung Diseases in the South African Mining Industry, MHSC 2016.

National limits for cumulative exposure to silica dust and Silica Occupational Exposure Limits (OEL) consistent with international best practice and benchmarks exists. There is a Statutory limit of 0.1mg/m^3, in line with ILO recommended OEL for levels, and country has set a 2024 milestone limit of 0.05mg/$m^{3.}$ Regulation 9.2(7) of the Mine Health and Safety Act, 1996 requires the mines in South Africa to submit statutory reports on personal exposure monitoring to occupational hygiene stressors (Hygiene Statutory Returns). Research has been part of the implementation process as evidenced by the existence of a MITHAC Compendium on TB Leading Practices, and Safety in Mines Research Advisory Committee Audit Tool is to roll out. The Mining industry, notably, big mines, fully fund medical care for programmatic interventions for TB, HIV, and Silicosis and other occupational respiratory diseases, and levies for non-compliance to dust levels go towards compensation fund.

However, there is no National Task Force on Communicable diseases, Occupational Health and Mobile Populations; no Government funding line items for programmatic interventions for TB, HIV, Silicosis and other occupational respiratory diseases in the mining sector; and no Government funding line items for compensation obligations related to TB, HIV, Silicosis and other occupational respiratory diseases in the mining sector.

SADC END TB ACCOUNTABILITY FRAMEWOK OF ACTION AND SCORE CARD

OCTOBER 2022 For SADC Secretariat

SADC END TB ACCOUNTABILITY FRAMEWORK OF ACTION AND SCORE CARD

1: Background

Tuberculosis is among the disease conditions slated for ending by 2030 according to Goal 3 of the Sustainable Development Goals adopted by the United Nations General Assembly in September 2015[38]. The Goal incorporates two key targets for ending the TB epidemic: achieving Universal Health Coverage (UHC)[39] and ending the global tuberculosis (TB) epidemic by 2030[40]. Earlier in May 2014, the 67th Session of the World Health Assembly[41] adopted the 'End TB Strategy' whose aim is to end the global TB epidemic by 2035. At regional level, the sixty-sixth session of the Regional Committee for Africa adopted a Framework for implementing the End TB Strategy in the African Region[42] requesting Member States to expand TB diagnosis and treatment towards UHC and ending the TB epidemic. Consequently, ending the TB epidemic is also among the priority commitments in the SADC Region[43].

The African Region and, the SADC Region in particular, managed to halt and begin to reverse TB incidence by the end of the Millennium Development Goals (MDGs) era in 2015. Despite this significant achievement, the latest available information[44] indicates that the SADC Region accounted for 69% TB cases notified in the African Region in 2020. And for over two decades now, especially since the advent of the negative impact of the HIV on TB incidence, the SADC Region has persistently accounted for the majority of TB and TB/HIV cases reported in the African Region, and between 70-95% of all confirmed RR/MDR-TB, and XDR-TB cases[45]

Twelve of the sixteen SADC member states (75%) are currently among global high TB, TB/HIV and or MDR-RR burden countries. On a positive note, overtime, Zimbabwe and Angola have transitioned out of the high TB burden and high TB/HIV burden countries,

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[38] Resolution A/RES/70/1. Transforming our world: the 2030 Agenda for Sustainable Development. Seventieth Session of the General Assembly, 25 September 2015.

[39] *Goal 3, Target 3.8*

[40] *Goal 3, Target 3.3*

[41] Resolution WHA67.1. Global strategy and targets for tuberculosis prevention, care and control after 2015. In Resolutions and Decisions of the sixty-seventh World Health Assembly, Geneva, 19-24 May 2014. Document WHA67.1/2014/REC/1.

[42] Resolution AFR/RC66/R10, Framework for implementing the "End TB Strategy" in the African Region. In: Resolutions of the 66th session of the Regional Committee, Addis Ababa, Ethiopia, 19-23 August 2016 , Document AFR/RC66/10, 10 pages

[43] ……..

[44] Global Tuberculosis Report 2021, WHO/HTM/TB/2017.23. *http://www.who.int/tb/publications/global_report/en/*

[45] Successive Global Reports 2013 - 2021

respectively. However, Zimbabwe and Angola remain among high TB/HIV and MDR-RR High burden countries, respectively. DRC, Mozambique, the Republic of South Africa, and Zambia remain high burden in all the three high burden lists. Zambia has recently joined the High MDR-RR list. Furthermore, there is slow decline in incident and deaths rates; low treatment coverage; treatment success rate still falls below the recommended 90% target; drug resistant TB cases have increased overtime; health systems remain weak by international standards and inadequate coverage and weak performance of health services limits access to high-quality Tuberculosis management services. Many private health providers are delinked from TB services, and there is increase in TB associated with non-communicable diseases and risk-factors. Ominously, according to latest available information, domestic financing towards the fight against TB accounts for only 26%, while 41% of essential TB Control needs in member states remain unfunded.

The top political leadership of the SADC Region was party to a "First Global Ministerial Conference on Ending TB in the Sustainable Development Era" in Moscow in November 2017, aimed at accelerating implementation of the WHO End TB Strategy. At the end of the Conference, a "Moscow Declaration" that informed the first ever UN General Assembly (UNGA) High-Level Meeting on TB held on September 2018 in New York[46] was adopted. Before the Moscow Conference, Ministers of Health of the SADC Region as members of the African Union Ministers of Health, under the ambit of the African Union Commission (AUC) and partners, elaborated a Common African Position on TB (CAP-TB)[47]. The CAP-TB's aim was to ensure a common African voice on concrete actions to

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47 The CAP-TB commits to : Ω Leadership, country ownership, governance and accountability: Intensify and catalyze TB response through working with African leaders as champions which include, Heads of States and Government, parliamentarians, traditional leaders, to drive multi-sectorial action for TB care and prevention and address TB determinants; Intensify cross-sector partnerships across ministries, community based actors and parliaments to accelerate progress towards Universal Health coverage (UHC) and social protection; bolster oversight and accountability, and further improve TB programmes monitoring, evaluation and reporting; Declare Drug-Resistant-TB as a global health security threat

Ω Universal and equitable access to prevention, diagnosis, treatment, care and support: Scale up TB programmes to achieve 90 percent initiation of all people diagnosed with TB on treatment and social support with no exposure to catastrophic costs; MDR-TB to be declared a global emergency and health security threat so that it can be addressed properly in most affected countries; Establish multi-disciplinary crisis committee, incorporating WHO and other partners to urgently respond and address MDR-TB as a national public health threat; Promote effective implementation of Patient-centered TB interventions specifically targeting high-risk groups and vulnerable populations such as healthcare workers, migrants, internally displaced persons, refugees, and prisoners, injecting drug-users, children and adolescents; Provide TB services to the people in over-congested settings, high risk including prisons and areas affected by conflict and humanitarian emergencies to help guarantee that no one is left behind; Support the development of community driven systems to expand health service delivery

end the TB epidemic by 2030; and had been endorsed by Ministers of Health, National TB Programme Managers, and the Africa Partnership and Coordination Forum on AIDS, TB and Malaria.

In 2016, African leaders endorsed the Catalytic Framework to End AIDS, Tuberculosis and Eliminate Malaria in Africa by 2030[48]. This reinforced the 2012 African Union Roadmap on Shared Responsibility and Global Solidarity for AIDS, Tuberculosis and Malaria Response and the Common Africa Position on the Post-2015 Development Agenda that, among other developmental and health agendas, directed African Union Member States, including SADC member States, to take concerted action to end the epidemic of TB.

Thus, towards achieving the End TB Goal, SADC Member States, in concert with the rest of the African continent will need to consistently achieve core End TB and SDG TB Control targets and milestones. Over and above implementing fully the Heads of State and Government Declaration on TB in the Mining Sector, member states should expand access to patient-centered care through the universal coverage approach; implement fully elements of the Common Africa Position on TB, the Catalytic Framework to End AIDS, Tuberculosis and Eliminate Malaria in Africa by 2030, the 2012 African Union Roadmap on Shared Responsibility and Global Solidarity for AIDS, Tuberculosis and Malaria Response, the Common Africa Position on the Post-2015 Development Agenda; increase financing for TB Control; and operationalize an accountability frameworks to monitor and track progress towards the End TB and SDG targets and milestones, among other indicators.

in particularly hard-to-reach areas; identify opportunities, bottlenecks, and key actions needed to address the TB/HIV integration, policy and strategies, enabling countries to meet agreed HIV/ TB

Ω Research and Innovation: Governments should strengthen collaboration with universities and research institutions to enhance innovation and evidence informed policies and programmes; African countries should increase investments in research and innovation to produce durable solutions for Africa health and development and strengthen preventing and curative measures to curb the spread of TB;

Ω Health financing: Increase domestic funding to Health; conduct policy reforms to eliminate catastrophic costs to patients and their households, including through the provision of social protection and psychosocial support; expand Social Health Insurance as a funding mechanism to widen health related social protection especially for vulnerable sections of the community.

[48] Catalytic Framework to End AIDS, TB and Eliminate Malaria in Africa by 2030. Stride towards sustainable health in Africa

This document, the SADC Region End TB Accountability Framework of Action[49] with an associated Score, will be used by the SADC Secretariat to monitor outcomes / outputs from implementing the various commitments of the SADC Region leaders, and systematically track progress of Member States towards achieving the core SDG and End TB Strategy indicators (Table 1), and other specified minimum indicators, from time to time. It identifies pertinent regional and global TB control commitments and resolutions on ending the TB epidemic, including envisaged salient outputs from implementing the Heads of State and Government Declaration on TB in the Mining Sector, then proposes selected high impact actions to achieve the various set objectives. Towards this goal, the Score card will be updated annually in concert with respective Global TB Reports. The annual scorecard will be presented to the SADC Council of Ministers of Health at their annual meetings. This will ensure political oversight towards full implementation of the SDG and End TB Strategy, to which the Heads of State and Government Declaration on TB in the Mining Sector fully subscribes. The Framework outlines proposed modes of review that will allow determination of outcomes and impacts over time. The Score Card identifies, quantifies and qualitatively assesses performance of each member state against the Global and Regional commitments. For impact indicators, percentage change will be determined against previous calendar year's levels, and color coded against desirable percentage change relative to the End TB Strategy and SDG targets milestones and targets.

2: Citation of Document:

SADC Regional End TB Accountability Framework of Action

3: Purpose of Document

To catalyze compliance by SADC Member States with Regional, Continental and Global Commitments and Resolutions to TB control by tracking progress with adoption of respective Strategies, and measuring specified key performance indicators and targets.

[49] . Multisectoral accountability framework to accelerate progress to end tuberculosis by 2030. Geneva: World Health Organization; 2019 (https://www.who.int/tb/WHO_Multisectoral_Framework_web.pdf).

4: The Framework for Action

Commitments & Resolutions

1. The 2012 SADC Heads of State Declaration on TB in the Mining Sector
2. 2012 African Union Roadmap on Shared Responsibility and Global Solidarity for AIDS, Tuberculosis and Malaria Response
3. African Union Catalytic Framework to End AIDS, Tuberculosis and Eliminate Malaria in Africa by 2030.
4. The SADC Health Strategy
5. The WHO End TB Strategy
6. The 2030 agenda for sustainable development (SDGs)
7. Common Africa Position on the Post-2015 Development Agenda
8. The UN High Level Meeting (UNHLM) on TB, 2018

Assessment Reviews

1. TB disease prevalence surveys;
2. Independent programme reviews;
3. Anti-TB drug resistance surveys;
4. TB Patient cost surveys;
5. Universal health coverage surveys

Monitoring and Reporting

1. National TB reports to WHO global database;
2. Monitoring and Reporting
3. Secretariat reports to Council of Ministers
4. Secretariat report to SADC Heads of State
5. Annual SADC TB Score Card;
6. Secretariat report to SADC Heads of State
7. Secretariat reports to other governing bodies

Major actions

1. Measuring / updating baseline burden of TB, resistance profiles and patient costs from TB
2. Strengtheing TB diagnostic laboratory networks, and scaling up accreditions
3. Implementing molecular testing as first line of TB diagnosis for all presumptive cases
3. Adopting short course, all-oral treatement regimes for all forms of TB
4. Scaling up integrated TB and HIV interventions among dually infected persons
5. Mobilising additional domestic and external resources for TB Control
5. Fully financing core TB control acitivies, commodities and supplies from domestic sources
7. Implementing catch up plans to increase TB case finding and treatment success rates
8. Strengthening TB surveillance: standards and bencchmarks assessment, establishig functional Vital registration systems in countries, and rolling out electronic recording and reporting systems for TB;
9. Developing / updating SADC Minimum standards of TB diagnosis and Care
10. Operationalise SADC TB Accoountability Framework and Score Card

5: Operationalizing the SADC End TB Accountability Framework

SADC Secretariat to coordinate production of an annual SADC End TB Score Card, primarily based on key SDG and End TB indicators, and any other indicators of SADC Region interest, as may be decided from time to time.

1) The Score card will track the two cardinal impact indicators specified in the SDG and global end TB Strategy, namely, ***TB incidence and TB deaths,*** in line with the targets and milestones set under the SDG and End Strategy [Table 1]. Absolute rates for these indicators will be presented as will the percentage rate change from one year to another, by country. This will allow profiling and quantification of the change on the milestone and end target scale.

Table 1: SDG and End TB Strategy impact indicators, targets and milestones

	Indicator	**MILESTONES**		**TARGETS**	
		2020	**2025**	**SDG [2030]**	**END TB [2035]**
1	Reduction in absolute number of TB deaths compared with 2015 (%)	35%	75%	90%	95%
2	Reduction in TB incidence rate compared with 2015 (%)	20%	50%	80%	90%
3	Proportion of families suffering catastrophic costs due to TB	0%	0%	0%	0%

2) In addition to the two impact indicators, the Framework will also track key outcome and programme performance indicators selected from the End TB Strategy top 10 indicators on the basis that they are feasible to generate and timeously access every year (Table 2).

Table 2: The End TB Strategy Key Indicators[50]

	Indicator	Recommended target level	Main rationale for inclusion
1	**TB treatment coverage** *Number of new and relapse cases that were notified and treated, divided by the estimated number of incident TB cases in the same year, expressed as a percentage.*	≥90%	High coverage of appropriate treatment is fundamental to achieving the milestones and targets of the End TB Strategy. Taken together, these are tracer indicators for monitoring progress towards universal health coverage (UHC)
2	**TB treatment success rate** *Percentage of notified TB patients who were successfully treated. The target is for drug-susceptible and drug-resistant TB combined, although outcomes should also be reported separately.*	≥90%	
3[51]	**Percentage of TB-affected households that experience catastrophic costs due to TB** *Number of people treated for TB (and their households) who incur catastrophic costs (direct and indirect combined), divided by the total number of people treated for TB.*	0%	A key marker of financial risk protection and social protection for TB-affected households.
4	**Percentage of newly notified TB patients tested using WHO-recommended rapid tests**	≥90%	Molecular tests are more sensitive and specific than microscopy

[50] The End TB Strategy, 2015
[51] One of the End TB Strategy's three high-level indicators, a key marker of financial risk protection and social protection for TB-affected households.

	Number of newly notified TB patients diagnosed with WHO-recommended rapid tests, divided by the total number of newly notified TB patients.		
5	**DST coverage among new TB patients** *Number of new TB patients with DST results divided by the number of notified new cases in the same year, expressed as a percentage. DST coverage includes results from molecular (e.g. Xpert MTB/RIF) as well as conventional phenotypic DST results.*	100%	Testing for drug susceptibility is essential to provide the right treatment for every person diagnosed with TB.
6	**DST coverage among previously treated TB patients** Number of previously treated TB patients with DST results divided by the number of notified previously treated TB cases in the same year, expressed as a percentage. DST coverage includes results from molecular (e.g. Xpert MTB/RIF) as well as conventional phenotypic DST results.		DST coverage in previously treated TB cases is key to determining appropriate second line treatment regimes
7	**Documentation of HIV status among TB patients** *Number of new and relapse TB patients with documented HIV status divided by the number of new and relapse TB patients notified in the same year, expressed as a percentage.*	100%	One of the core global indicators used to monitor collaborative TB/HIV activities. Documentation of HIV status is essential to provide the best care for HIV-positive TB patients, including ART.
8	**Case fatality ratio (CFR)**	≤5%	This is a key indicator for monitoring progress

	Number of TB deaths (from a national VR system) divided by estimated number of incident cases in the same years, expressed as a percentage.		towards 2020 and 2025 milestones. A CFR of 6% is required to achieve the 2025 global milestone for reductions in TB deaths and cases.

6: Dissemination and feedback

The score card will be produced annually in December following the release of the Global TB Report to enhance consistency of data, and published on the SADC Website for easy access

Summary of the key Score Card findings will be shared with the Council of Ministers of health at their annual meetings55

7: The SADC End TB Accountability Framework Score Card: Specified Year[52]

Member State	**Indicators**										
	TB treatment coverage:	**Treatment success rate**	**Total TB incidence rate *[Estimate per 100,000 population***	**Incidence Progress since last report *[*Percentage change from previous**	**Estimate of TB Mortality rate**	**TB Mortality rate progress since last report [Percentage change**	**DST coverage for new TB cases [Percentage of new TB cases tested with**	**DST coverage for previously treated TB patient**	**Documented HIV status among all TB patients**	**Proportion of HIV-positive TB patients on anti-retroviral therapy (ART)**	Proportion of TB expenditure that is funded domestically

[52] Data Source: Global TB database, http://www.who.int/tb/publications/global_report/en/

			according to latest Global TB Report]	**year's rate]**		**from previous year's rate]**	**molecular technology and or culture]**	**s**			
Angola											
Botswana											
Comoros											
DRC											
Eswatini											
Lesotho											
Madagascar											
Malawi											
Mauritius											
Mozambique											
Namibia											
Seychelles											

South Africa											
U R of Tanzania											
Zambia											
Zimbabwe											

Target achieved or performance on track towards target Performance on track, achieving target feasible Performance not on track. No data

8: The SADC End TB Accountability Framework Score Card guiding and explanatory notes

Indicator description	Green	Yellow	Red
Estimated TB incidence rate (per 100,000 population) for current Year	Estimated incidence less than the global average	Estimated incidence of more than the global average, but less than 150/100,000	Estimated incidence more than 150/100,000
% change in incidence compared to previous year's report	Decline of at least 4%	Decline of between 0-<4%	Any increase in estimated incidence
% change in incidence compared to 2015 baseline	Decline of at least 20%	Decline of between 5-20%	Increased incidence, or decline of less than 5%
% change in mortality	Decline of 5% or more	Decline of less than 5%	Any increase in estimated mortality

compared to that in immediate previous report			
% change in mortality compared to 2015 baseline	Decline by 35% or more	Decline of more than 20% but less than 35%	Increased mortality, or decline of less than 20%
TB treatment coverage	TB treatment coverage of 90% or more	TB treatment coverage of from 75% to less than 90%	TB treatment coverage of less than 75%
Proportion of new and relapse TB patients tested with rapid diagnostics at the time of diagnosis	Proportion tested with rapid diagnostics at time of diagnosis equal to or greater than 90%	Proportion tested with rapid diagnostics at time of diagnosis less than 90% but more than 75%	Proportion tested with rapid diagnostics at time of diagnosis is less than 75%
Percentage of TB cases that are bacteriologically confirmed among notified pulmonary TB cases	Coverage of bacteriological confirmation 56% or higher	Coverage of bacteriological confirmation at least 50% but less than 56%	Coverage of bacteriological confirmation less than 50%
DST coverage for new TB cases [Percentage of new TB cases tested with molecular technology and or culture]	DST coverage for new TB cases of at least 90%	DST coverage for new TB cases of at least 75% but less than 90%	DST coverage for new TB cases of less than 75%
Proportion of previously treated patients with a DST result to at least rifampicin	DST coverage for previously treated cases of at least 90%	DST coverage for previously treated cases at least 75% but less than 90%	DST coverage for previously treated cases less than 75%

Treatment success rate for new and relapse cases for immediate previous cohort	Treatment success rate of 90% or more	Treatment success rate of at least 80% but less than 90%	Treatment success rate less than 80%
Proportion of new and relapse TB patients with documented HIV status	HIV testing coverage equal to or greater than 90%	HIV testing coverage at least 75% but less than 90%	HIV testing coverage less than 75%
Proportion of HIV-positive TB patients on anti-retroviral therapy (ART) [Proportion of HIV-positive TB patients commenced or continued on ART during TB treatment]	ART coverage equal to or more than 90%	ART coverage at least 75% but less than 90%	ART coverage less than 75%
Proportion of newly enrolled PLHIV who started TB preventive therapy (TPT)	TB preventive therapy (TPT) coverage equal to or more than 75%	TB preventive therapy (TPT) coverage at least 50% but less than 75%	TB preventive therapy (TPT) coverage less than 50%
% of TB-affected households that experience catastrophic costs due to TB	TB cost survey conducted, and 0% catastrophic cost target achieved	TB cost survey, 0% catastrophic cost target not achieved	TB cost survey not conducted
Proportion of TB expenditure that is funded domestically	Domestic expenditure for immediate previous year equal to or more that 75% of total	Domestic expenditure for immediate previous year at least 50% but less than 75% of total	Domestic expenditure for immediate previous year less than 50% of total TB expenditure

	TB expenditure	TB expenditure	

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