



Republic Of Zambia

Ministry of Health

# ZAMBIA NEGLECTED TROPICAL DISEASES MASTER PLAN 2022 – 2026





## PREFACE

The Zambia Neglected Tropical Diseases (NTD) Master Plan has been developed in line with the Ministry of Health's vision to transform Zambia into a nation free from preventable diseases in accordance with the Sustainable Development Goals (SDGs), Vision 2030, Zambia National Health Strategic Plan and the 8<sup>th</sup> National Development Plan.

The Master Plan aims to guide the implementation of the NTDs through an integrated approach to maximize on health benefits. It was developed by the Ministry of Health with the support from the World Health Organization (WHO).

In Zambia, commonly occurring NTDs include Soil-Transmitted Helminth infections (STH – Ascariasis, Trichuriasis and Hookworm), Schistosomiasis (SCH), Scabies and other ectoparasites (Tungiasis), Podoconiosis, Rabies, Snakebite envenoming (SBE), Trachoma, Cysticercosis, Mycetoma, Lymphatic filariasis, Onchocerciasis and probably Human African Trypanosomiasis (HAT). All these neglected diseases are an obstacle to socio-economic development and quality of life of the Zambian people.

Under this plan, the country seeks to prevent, control and eliminate preventable NTDs based on Zambia's global, regional and national level commitments. This Plan will be implemented during the period 2022 to 2026.



## ACKNOWLEDGEMENTS

The Neglected Tropical Diseases National Master Plan is the main strategic dashboard for the NTD program prepared by the Ministry of Health in Zambia. In preparing the National Master Plan for the prevention, control and elimination of NTDs, the Ministry of Health seeks to provide a guiding framework applicable to a broad range of stakeholders at national and subnational levels. Further, it provides a comprehensive plan and roadmap guiding accelerated action towards reducing the heavy burden of NTDs in the country. The Ministry of Health is appreciative of the government's technical leadership and funding support that led to the development of this plan.

I want to reiterate MoH's firm commitment to guide the successful implementation of this Master plan and look forward to continued collaboration of stakeholders towards elimination of NTDs as public health concerns in Zambia.

Sincere appreciation goes to World Health Organization's country office, Line Ministry staff, other development partners, civil society organizations, local government (from Districts and Sectors), academic institutions, health facility staff and community health workers who contributed significantly to the development of NTD Master Plan with their insight and expertise.

In conclusion, I would like to express my gratitude to everyone who was actively involved in the processes of developing this NTDs Master Plan 2022-2026.

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## LIST OF ACRONYMS & ABBREVIATIONS

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<b>CM</b>	Case management
<b>Dra</b>	Dracunculiasis
<b>GDP</b>	Gross Domestic Product
<b>GNP</b>	Gross National Product
<b>GPW 13</b>	Thirteenth General Programme of Work 2019–2023
<b>HAT</b>	Human African Trypanosomiasis
<b>IRS</b>	Indoor residual spraying
<b>ITN</b>	Insecticide-treated net
<b>IVM</b>	Integrated vector management
<b>Leish</b>	Leishmaniasis
<b>LF</b>	Lymphatic filariasis
<b>MDA</b>	Mass drug administration
<b>MMDP</b>	Morbidity management and disability prevention
<b>NTD</b>	Neglected tropical diseases
<b>Oncho</b>	Onchocerciasis
<b>PCT</b>	Preventive chemotherapy
<b>PEST</b>	Political, Economic, Social and Technological Analysis
<b>PHC</b>	Primary Health Care
<b>SBCC</b>	Social and Behaviour Change Communication
<b>SCH</b>	Schistosomiasis
<b>SDGs</b>	Sustainable Development Goals
<b>STH</b>	Soil-transmitted helminthiasis
<b>SWOT</b>	Strengths, weaknesses, opportunities, and threats
<b>TAS</b>	Transmission Assessment Survey
<b>TIPAC</b>	Tool for Integrated Planning and Costing
<b>TOR</b>	Terms of Reference
<b>TRA</b>	Trachoma
<b>WASH</b>	Water, sanitation and hygiene
<b>WHO</b>	World Health Organization
<b>WHO/AFRO</b>	World Health Organization Regional Office for Africa

## KEY DEFINITIONS

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**Control:** Reduction of disease incidence, prevalence, morbidity and/or mortality to a locally acceptable level as a result of deliberate efforts; continued interventions are required to maintain the reduction. Control may or may not be related to global targets set by WHO.

**Elimination (interruption of transmission):** Reduction to zero of the incidence of infection caused by a specific pathogen in a defined geographical area, with minimal risk of reintroduction, as a result of deliberate efforts; continued action to prevent re-establishment of transmission may be required. Documentation of elimination of transmission is called verification.

**Elimination as a public health problem:** A term related to both infection and disease, defined by achievement of measurable targets set by WHO in relation to a specific disease. When reached, continued action is required to maintain the targets and/or to advance interruption of transmission. Documentation of elimination as a public health problem is called validation.

**Eradication:** Permanent reduction to zero of the worldwide incidence of infection caused by a specific pathogen, as a result of deliberate efforts, with no risk of reintroduction.

**Hygiene:** Conditions or practices conducive to maintaining health and preventing disability.

**Integration:** the process by which disease control activities are functionally merged or coordinated within multifunctional health-care delivery.

**Integrated vector management:** A rational decision-making process to optimize the use of resources for vector control.

**Mass drug administration:** Distribution of medicines to the entire population of a given administrative setting (for instance, state, region, province, district, sub district or village), irrespective of the presence of symptoms or infection; however, exclusion criteria may apply. (In this document, the terms mass drug administration and preventive chemotherapy are used interchangeably.)

**Morbidity:** Detectable, measurable clinical consequences of infections and disease that adversely affect the health of individuals. Evidence of morbidity may be overt (such as the presence of blood in the urine, anemia, chronic pain or fatigue) or subtle (such as stunted growth, impeded school or work performance or increased susceptibility to other diseases).

**Monitoring and evaluation:** Processes for improving performance and measuring results in order to improve management of outputs, outcomes and impact.

**Platform:** Structure through which public health programmes or interventions are delivered.

**Preventive chemotherapy:** Large-scale use of medicines, either alone or in combination, in public health interventions. Mass drug administration is one form of preventive chemotherapy; other forms could be limited to specific population groups such as school-aged children and women of childbearing age. (In this document, the terms preventive chemotherapy and mass drug administration are used interchangeably.)

# Part 1: NTD Situation Analysis

## Section 1.1. Assessment of National Priorities and the National, Regional and Global NTD Commitments

Neglected Tropical Diseases are a diverse group of 20 communicable diseases that are commonly found in tropical and subtropical regions in 149 countries. They affect more than one billion people with up to 1.74 billion people requiring interventions. NTDs pose large economic and health burdens costing developing economies billions of dollars in direct health costs, loss of productivity and reduced socioeconomic and educational attainment thereby perpetuating cycles of poverty. According to the Draft Continental Framework on the Control and Elimination of Neglected Tropical Diseases in Africa, 49 countries on the continent are disease endemic, accounting for 42% of the global NTD burden. Further, an estimated 600 million individuals are affected in NTD endemic countries in Africa. Zambia bears a high NTD burden as 16 of the 20 diseases recognized by WHO are found in the country (8 are known to be endemic and 8 are suspected.)

Neglected Tropical Diseases can be controlled and eliminated through the implementation of five evidence based strategies; preventive chemotherapy, innovative and intensified disease management, vector control, veterinary public health measures for zoonotic diseases and clean water, sanitation and hygiene facilities. Effective delivery of these interventions has been recognized as a marker of progress towards the realization of universal health coverage in the Sustainable Development Goals 2015-2030. This is exemplified through SDG 3.3.5 which measures the number of people requiring interventions against NTDs including preventive chemotherapy. The WHO Global Roadmap for Neglected Tropical Diseases 2021-2030 has proposed three strategic shifts to improve access to NTD interventions and facilitate progress towards disease control and elimination in endemic countries such as Zambia. These are; i) accelerating programmatic action with a focus on impact rather than progress measures; ii) intensifying cross cutting approaches and iii) changing operating models and culture to facilitate country ownership.

These shifts build upon the focus areas outlined in the 2012 London Declaration on Neglected Tropical Diseases and the previous NTD Roadmap 2015-2020. The roadmap alongside the addendums to the roadmaps that include a strategic framework for integrated control of skin NTDs and the global strategy on water sanitation and hygiene to combat NTDs 2021 to 2030. Moreover, the actions proposed by the New Global Roadmap are embodied in the vision of the Draft Continental Framework on the Control and Elimination of Neglected Tropical Diseases in Africa which is to have an Africa free of NTDs by 2030. A vision which can be accomplished through integrated implementation efforts that build on multisectoral approaches, promotion of harmonization of community-based initiatives, advocacy for the establishment of fully functional NTD programs and mainstreaming of NTD interventions within sectors relevant to NTD control and elimination.

These efforts also build upon other regional commitments such as the Accra Urgent Call to Action on NTDs, The Addis Ababa Neglected Tropical Diseases Commitment 2014 and the Regional Strategy for Neglected Tropical Diseases in the WHO Africa Region 2014- 2020. These documents promote tangible efforts to accelerate efforts to eliminate targeted NTDs through actions such as the development of national, multi-year integrated NTDs control and elimination plans, increase in domestic contribution to the implementation of NTD programs through the engagement of different sector actors and timely reporting and use of program data to monitor program progress. The major thrust of the measures is to reduce the huge burden of NTDs and contribute to poverty alleviation, increased productivity and improved quality of life for the affected people.

The Zambian Government is committed to the control, elimination and eradication of Neglected Tropical Diseases (NTDs) as they cause severe morbidity, disability and suffering amongst vulnerable and marginalised communities in the country. This is evident from the inclusion of NTDs in the National Health Policy, National Strategic Health Plan (ZNHSP 2022 – 2026) and the 8<sup>th</sup> National Development Plan (2022 – 2026) with specific budgetary allocations to disease control measures. The National Health Policy calls for strengthening and expanding preventive, promotional, diagnostic and curative services for neglected tropical diseases. It also provides for promotion of school health services as well as promotion of integrated preventive chemotherapy for neglected tropical disease through Mass Drug Administration (MDA). Additionally, one of the goals of the National Health Strategic Plan 2022 – 2026, is to eliminate all NTDs in the country by 2030. The 8<sup>th</sup> National Development Plan outlines the importance of access to safe drinking water and sanitary conditions for all, which is key to NTD prevention and control. Other policies from sectors that are key to the implementation of NTD interventions include the National Water Supply and Sanitation Policy under the Ministry of Water Development, Sanitation & Environmental Protection. This policy seeks to develop and maintain the capacity, systems and operational frameworks necessary for improved quality efficiency, security, sustainability and effectiveness of water supply, sanitation, hygiene promotion and solid waste management.

The National NTD Master Plan is a blueprint to guide the implementation of the five WHO recommended approaches in accelerating the elimination of NTDs by 2030. Zambia developed its first NTD Master Plan for the period 2013-2017. Subsequently, in order to align the NTD Master plan with renewed global 2015-2020 goals and milestones for elimination of NTDs, the NTD Master plan was reviewed and updated in November 2014 into NTD Master Plan 2015-2020. Following the implementation of the NTD Master Plan 2015 – 2020, the country successfully mapped the distribution of all Preventive Chemotherapy amenable NTDs endemic in the country and established an NTD unit in the Ministry of Health, Directorate of Public Health. The Master Plan also provided an annual budget allocation towards the NTD program activities. In view of the gains scored and support harnessed during the implementation of the NTD Master Plan 2015-2020 that focused on the reduction of the disease burden by controlling targeted NTDs, the focus was changed from control to elimination as guided by WHO. In line with this, the MOH developed a second NTD Master Plan for the period 2019-2023 to focus on elimination of NTDs amenable to preventive chemotherapy. This Plan was later revised in October 2021 to align it to the strategic shifts proposed in the WHO Global NTD Roadmap 2021-2030.

The current NTD Master Plan 2022 – 2026 was developed through a consultative process through the engagement of relevant NTD stakeholders such as departments of the MoH, line ministries, academic institutions and researchers, civil society organizations and the international community.



**Table 1: Global and Regional commitments to the prevention, control and elimination of NTDs.**

Strategy	Commitment
The 2021-2030 NTD Road Map (2020)	<p>The WHO Global Roadmap for Neglected Tropical Diseases 2021-2030 proposed three strategic shifts that will facilitate accelerated progress towards control, elimination (interruption of transmission, and where possible eradication of NTDs namely;</p> <ul style="list-style-type: none"> <li>• Accelerating programmatic action with a focus on impact rather than progress measures;</li> <li>• Intensifying cross cutting approaches</li> <li>• Changing operating models and culture to facilitate country ownership for NTD control.</li> </ul>
The Seventy-Third World Health Assembly, WHA73; 13 November 2020	<ul style="list-style-type: none"> <li>• To endorse, and urge Member States to implement, the new road map for neglected tropical diseases 2021–2030, “Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030”;</li> <li>• To request the Director-General to advocate for, and provide technical assistance and guidance to Member States and partners in the implementation of, the new road map for neglected tropical diseases 2021–2030 towards reaching Sustainable Development Goal target 3.3</li> </ul>
The 66.12 <sup>th</sup> World Health Assembly Resolution: WHA66.12, 2013	<ul style="list-style-type: none"> <li>• Recognizing that increased national and international investments in prevention and control of neglected tropical diseases have succeeded in improving health and social well-being in many countries,</li> <li>• Acknowledging the linkages between, and mutual supportiveness of, control and elimination of neglected tropical diseases and the global strategy and plan of action on public health, innovation and intellectual property;</li> <li>• Acknowledging also that expansion of activities to prevent and control neglected tropical diseases will need adequately resourced national programmes functioning within effective health, education and other sectors in order to provide for an uninterrupted supply and delivery of quality-assured commodities and services; among other key observations;</li> <li>• Recognizing also the diversity of neglected tropical diseases, their causative agents and relevant vectors and intermediate hosts, their epidemic potential (such as for dengue, Chagas disease, human rabies of canine origin and leishmaniasis), and their morbidity, mortality and associated stigmatization urged member states to:</li> <li>• To ensure continued country ownership of programmes for neglected tropical disease prevention, control, elimination and eradication;</li> <li>• To further strengthen the disease surveillance system especially on neglected tropical diseases targeted for eradication</li> </ul>

	<ul style="list-style-type: none"> <li>• To expand and implement, as appropriate, interventions against neglected tropical diseases to reach the targets agreed in the Global Plan to Combat Neglected Tropical Diseases 2008–2015, as set out in WHO’s roadmap for accelerating work to overcome the global impact of neglected tropical diseases and noting the London Declaration on Neglected Tropical Diseases by;</li> <li>• Ensuring that resources match national requirements and flow in a sustainable manner as a result of thorough planning and costing of prevention and control activities and detailed analysis of associated expenditures;</li> <li>• Enabling improvement of the management of the supply chain, in particular through forecasting, timely procurement of quality-assured goods, improved stock-management systems, and facilitating importation and customs clearance;</li> <li>• Integrating neglected tropical diseases control programmes into primary health care services and vaccination campaigns, or into existing programmes where feasible, in order to achieve greater coverage and reduce operational costs;</li> <li>• Ensuring appropriate programme management and implementation through the development, sustenance and supervision of a cadre of skilled staff (including other sectors than health) at national, district and community levels</li> </ul>
The London Declaration on NTDs (2012)	<ul style="list-style-type: none"> <li>• Sustain, expand and extend drug access programmes to ensure the necessary supply of drugs and other interventions by 2020 to control schistosomiasis, Chagas disease, soil transmitted helminthiasis, visceral leishmaniasis, and river blindness (leishmaniasis),</li> <li>• Advance Research and Development to through partnership and provision of funding to find next generation treatment and intervention of for neglected tropical diseases.</li> <li>• To enhance collaboration and coordination on NTDs at national and international level through public and private multilateral organizations to work more efficiently and effectively together.</li> <li>• Enable adequate funding with endemic countries to implement NTD programmes necessary to achieve these goals, supported by strong and committed health systems at national level;</li> <li>• Provide technical support and tools and resources to support NTD endemic countries to evaluate and monitor NTD programmes.</li> </ul>
The Addis Ababa NTD Commitment (2014)	<ul style="list-style-type: none"> <li>• Work to increase our domestic contribution to the implementation of NTD programs through the expansion of government, community and private sector commitments,</li> <li>• Promote a multi-sectoral approach in the implementation of NTD program goals that improves national coordination, facilitates partner</li> </ul>

	<p>collaboration, and improves the management of technical and financial contributions,</p> <ul style="list-style-type: none"> <li>• Ensure the adoption of both long-range strategic and annual implementation plans which are grounded by appropriate goals and detailed costs that drive and support NTD programs to achieve global targets,</li> <li>• Report and use program data in a timely fashion to follow progress against program goals and to inform program planning and execution,</li> <li>• Ensure that the implementation of NTD programs contribute to the strengthening the overall health system and vice versa.</li> </ul>
The Regional Strategy on Neglected Tropical Diseases in the WHO African Region (document afr/rc63/10); AFR/RC63/R6, Sept. 2013	<ul style="list-style-type: none"> <li>• To provide leadership and ensure ownership in establishing and strengthening integrated national NTD programmes and national NTD coordination mechanisms, while forging multisectoral collaboration to address functional gaps that constrain programme interventions, and promoting linkages between NTDs and other health programmes;</li> <li>• To strengthen planning and increase national financial commitments to achieving NTD targets and goals by including national NTD multi-year budgets into the national health sector budget, and promote the inclusion of NTDs in the post-2015 national development agenda;</li> <li>• To rapidly scale up interventions and strengthen health systems to tackle NTDs at all levels and ensure regular monitoring and tracking of progress;</li> <li>• To expand investment in research and development of medical products and the strategies to tackle NTDs;</li> <li>• It also urged Partners to mobilize increased resources including medicines, funds and logistics and confirm long-term commitments to country NTD programmes, aligning their support with national priorities and NTD coordination mechanisms and structures.</li> </ul>

### Purpose of the Master plan

The Zambia NTD Master Plan (2022-2026) governs the prevention, control and where feasible, elimination and eradication of neglected tropical diseases endemic in Zambia. It aligns with the Global WHO NTD Roadmap *‘Ending the neglect to attain the Sustainable Development Goals A road map for neglected tropical diseases 2021–2030.’* The Master Plan is a tool through which the Government of Zambia will implement all NTD programmes in the country. It will further facilitate alignment among partners and stakeholders to accelerate progress towards the prevention, control, elimination and eradication of all NTDs in Zambia.

The Master Plan outlines specific, measurable targets for 2026 for the eradication, elimination and control of NTDs endemic in Zambia, as well as cross-cutting targets aligned with WHO’s Thirteenth General Programme of Work 2019-2023 and the SDGs. Monitoring and evaluation of programme performance and outcome measures will be conducted at appropriate intervals by the Government and its partners. The Master plan will be the framework for coordination, harmonization, and alignment at both national and sub-national levels.

The Master Plan comprises of four key sections: -

1. **NTD Situation Analysis:** which describes the environment within which the NTD programme will be developed and implemented, including the national environmental and contextual factors that are critical in understanding the distribution of NTDs and their control
2. **Strategic Agenda, Purpose and Goals:** which provides an overview of the targets and milestones for all the NTDs that are endemic in the country, determined through a consultative process.
3. **Operational framework :** which describes how the three fundamental shifts in the approach to tackling NTDs will be realized specifically through; i.) increased accountability for impact by using impact indicators instead of process indicators; a move away from siloed, disease-specific programmes by mainstreaming programmes into national health systems and intensifying cross-cutting approaches centred on the needs of people and communities; and a change in operating models and culture to facilitate greater ownership of programmes by countries.
4. **Budgeting for Impact:** provides budgetary estimates and justifications for the included costs while also acting as a key management tool in planning and implementing activities.

## Section 1.2. National Context Analysis

### 1.2.1. Country analysis

#### i. Political environment

Zambia has been a regional model of peaceful and multi-party-political transitions. It is considered a stable country with successful democratic elections held every five years. These elections have been characterised by peaceful transition of power, making Zambia one of the most stable countries in Africa. Good governance and a stable political framework are necessary for sustainable development as they promote a conducive business environment, increased market confidence and attract foreign direct investment among others (8NDP). Political stability is projected to increase as economic growth accelerates due to a rise in the demand for and the price of copper (Zambia's main export) driven by international demand from emerging green industries such as the electric vehicle sector.

A direct relationship exists between poverty and prevalence of neglected tropical diseases (NTDs) as they are more prevalent among socio-economically disadvantaged communities particularly in rural areas than urban areas. The scourge of poverty and disease has been a recurring developmental concern, and a central theme of national development plans. To this end, the country has adopted social development interventions targeted at ensuring that no one is left behind. This is expected to enhance productive capacities by reducing social exclusion particularly in areas of education, health and water supply and sanitation (8NDP). Recently computed statistics on headcount multi-dimensional poverty show a reduction from 50 percent in 2016 to 44 percent in 2020. In rural areas, multidimensional poverty declined from 69 percent in 2016 to 59 percent in 2020 while in urban areas, poverty declined from 25 percent to 18 percent respectively, according to the Zambia 2020 Voluntary National Reviews.

While the larger percentage of the population lives in rural areas (55%), the country has had huge development deficits in rural areas in key sectors such as road networks, delivery of social services and access to electricity. The underdevelopment of rural areas was largely attributed to a highly centralised system of development delivery which did not allow for direct receipt of resources in these areas. Currently there is a

deliberate drive by the government to improve rural development by strengthening community participation in development through initiatives such as the increased allocations to the Constituency Development Funds.

This is supported by targets in both 8NDP and Vision 2030 which among others have the following strategic objectives:

- a) To diversify and make economic growth inclusive;
- b) To reduce poverty and vulnerability;
- c) To reduce developmental inequalities;
- d) To enhance human development.

The anticipated dual outcomes from these objectives are; i.) reduced number of the poor and vulnerable populations through targeted programmes such as hunger eradication and poverty reduction and ii.) the trickle-down effects coming from social assistance, labour market programmes, gender equality work, housing support, provision of free primary and secondary education, health care and health-related benefits for the poor and access to critical services.

## ii. **Economic environment**

Global events such as the Russia– Ukraine conflict, effects of the COVID-19 pandemic and tighter financial conditions have led to slower global economic growth. At country level, these effects resulted into weakening of the copper prices to an average of US \$7,422 per metric tonne from US \$9,550 per metric tonne. These developments have further led to the downward revision of global growth to 3.2% from 6.1% recorded in 2021. Consequently, during this period, Zambia’s ranking on the Human Development Index (HDI) dropped from 144 to 154 position out of 189 countries with a HDI score of 0.565% (2022 HDI Report). However, in 2022 GDP is projected to grow by 3.0% compared to a recovery of 4.6% in 2021. The slowdown in growth is mainly attributed to a lower output in agriculture due to late onset of rain, drought and flash floods in some parts of the country.

Despite the observed nominal increase in financing to the health sector, the share of health funding to the total public budget continues to decrease, from 8.9% in 2018 to 8.1% in 2021. Further, notwithstanding the government’s commitment to reach the Abuja target of 15% of public health allocation, there is still a long way to go.

Economic forces that can negatively affect NTD programming extend widely from national to subnational level. These include

- Domestic financing through government commitment to maintain/increase budget allocations to NTD elimination and overall programming
- Inadequate Donor funding inadequate to maintain level of support and intervention needed
- Fleeting exchange rates affect commodity/drug costs, which directly impacts programming and geographical coverage.
- Pharmaceutical companies are less willing to donate or cannot maintain supply to conduct MDAs. MDA is dependent on donated medicines which make it possible to treat large numbers. Without these free medicines the costs would be considerably higher from private entities.

Effective governance mechanisms need to be developed from current existing ones and should reflect transparency, accountability and promote trust. The measure of success in terms of financial support largely depends on a country's ability to attract sufficient resources, demonstrate a continued flow of donated drugs and the capacity to deliver them in-country. In addition to negative health outcomes, NTD control and elimination programs are a cost-effective public health measure. Such interventions include;

- *The Integrated service delivery which* promises to deliver even more value for money and maximise impact.
- *Regional coordination* such as cross border initiatives will not only ensure enhanced accountability, but also encourage equity, uniformity and continuum of prevention, management, and care.
- *De-worming and school feeding programmes* can lead to increased labour outputs, higher wages and better school attendance and performance.
- *Mass drug administration* programs are highly cost-effective and ensure last-mile distribution.
- *Private philanthropy models* such as the Collin Glasgow Foundation, GSK that allows the private sector to invest in NTD interventions for maximum impact.
- *Community education and sensitization* is a cost-effective measure as prevention is the bedrock of NTD elimination.

### iii. Social environment

NTDs have significant social impact leading to stigma and discrimination and can be affected by social factors such as migration. Analysis of the social factors which determine the effectiveness of interventions against NTDs are critical. Among the social aspects that affect NTDs are water and sanitation, housing and clustering, migration, poverty, disaster, attitudes and beliefs towards health interventions and gender .

**Water and Sanitation:** Poor water supply and inadequate sanitation creates a conducive environment for NTDs transmission and can hamper effective management of diseases such as trachoma and Schistosomiasis. Whereas national household access to improved water sources stands at 72% and urban household access is at 92%, the access in rural areas at 58% remains a challenge.

**Housing and clustering:** Population growth rate is projected at 3.2% per annum with an average family size of 6 persons. Population growth and overcrowding exposes people to NTDs such as trachoma, leprosy and scabies. The overcrowding is characterized by a large number of people living in a house or houses being too close to each other, particularly in peri urban and urban areas.

**Migration:** As of September 2022, Zambia was hosting 94,619 migrants (UNHCR Report, 2022). They were mainly from DRC, Rwanda, Burundi, Angola and Somalia. This influx of migrants may cause a serious health risk in Zambia as they may import the infection from their home countries to the new settlements, causing a risk to other migrants. Some are exposed to NTD infection at the refugee settlements. The risk continues in the settlements which may have limited access to safe water and sanitation facilities.

**Social economic :** Poverty due to inadequate income can contribute to the spread of NTD infection. For some poverty could be a consequence of NTDs.

**Climate change:** NTDs are known to be influenced by disasters and climate change. Events like floods and drought provide a enabling environment for breeding of vectors such as mosquitos, flies and snails.

Displacement of people due to disasters leads to overcrowding that results into an enabling environment for the spread of diseases like trachoma and schistosomiasis. In addition, disasters and climate change can predispose people to newer infections from the places they have migrated to or they equally can introduce diseases to those areas. Lack of productivity among displaced persons increase their vulnerability which further increases their likelihood of poverty and thereby perpetuating the poverty cycle.

**Attitudes and beliefs:** Attitudes and beliefs shape health seeking behavior specifically perception towards the health interventions. Recent evidence from the study on health beliefs and health seeking behavior towards Lymphatic Filariasis (LF) morbidity management and disability prevention services in Luangwa District in Zambia revealed that communities perceive diseases like LF are hereditary or arises from witchcraft. Further, there was preference for traditional medicine than modern conventional interventions such as surgery due to cultural beliefs (Maritim et al 2021).

**Gender:** Gender roles exposes individuals to different NTDs e.g. women with more exposure to water bodies have higher risk of female genital schistosomiasis infection. In order to curb stigma and discrimination against the poor and marginalized population, there is need to effectively communicate to the general population on the need to support the affected people. It is also important to create awareness of the effects of stigma and discrimination of the people infected with NTDs. To curb stigma and discrimination against the poor and marginalized population, there is need to effectively communicate to the general population on the need to support the affected people. It is also important to create awareness of the effects of stigma and discrimination on the people infected with NTDs.

#### iv. Technological environment

SMART Zambia instituted under an Act of parliament, is a division under Office of The President mandated to coordinate and implement electronic services for citizens, businesses and within government for improved service delivery established under gazette notice No 836 of 2016. The Government also has an ICT Policy in place which aims at expanding ICT to most parts of Zambia. The Country has three mobile service providers (Zamtel, Airtel and MTN) that have both urban and rural reach on voice and data. However, there is still need for increased number of transmitters in network particularly in rural areas.

The Ministry of Health has a web-based Health Information Management System (HMIS) used for data capturing, transmission, analysis and reporting. Strengthening GIS data collection for NTDs provides platform for risk mapping and prediction of diseases.

#### 1.2.2. Health Systems analysis

##### Health system goals and priorities

The Government of Zambia has prioritized health as a key economic investment to spur the country to become a prosperous middle – income country by 2030. The National Health Strategic Plan (NHSP) (2017 - 2021) is anchored on a National Transformation Agenda, which recognizes the importance of the health sector in improving national productivity. Investments in the health sector are treated as inputs toward raising overall productivity thereby contributing to economic growth. The NHSP focuses on attaining Universal Health Coverage using the primary health care approach. The Zambian Government has continued to support the NTD control and elimination programme in an effort to achieve the targets set out by the WHO for the African Region by the year 2030 as outlined in the NHSP 2017 - 2021.



Health systems in Zambia is based on the six building blocks namely, service delivery, human resources for health, health information, medical products including vaccines and technologies, financing, leadership and governance. The system is decentralized where health services and infrastructure are distributed at the national, regional, district and sub-district levels.

### Service delivery

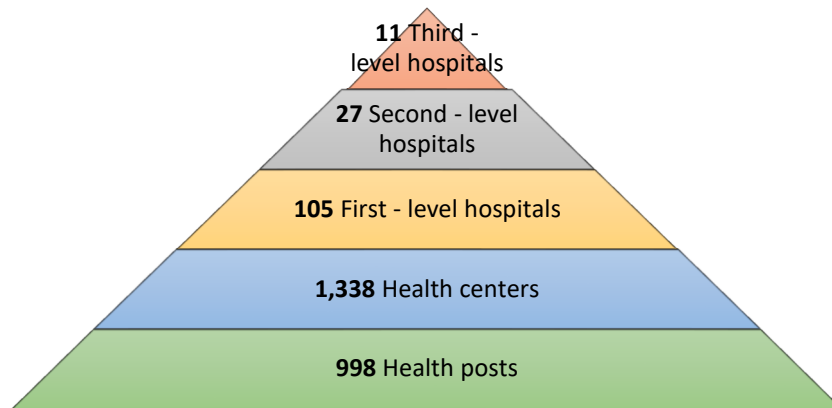
The National Health Sector Plan (NHSP) is operationalized through the processes and systems of the Government's Mid Term Expenditure Framework and the annual budgets and plans. These action plans are jointly developed and implemented by the MOH and its cooperating partners (CP). All the structures from the central level, provinces, hospitals, districts, and training schools have annual action plans, which are independently implemented. Additionally, there are complementary oversight institutions such as Tropical Disease Research Centre, Health Professions Council of Zambia, Zambia Flying Doctor Services and Zambia Occupational Health and Safety Association.

The MOH and its CPs use health sector indicators for performance monitoring and evaluation (M&E) at all levels. A Sector Wide Approach (SWAp) model is operationalised through technical working groups (TWGs), policy meetings, sector advisory group meetings and annual consultative meetings. The review of sector performance takes place on an annual basis through the Joint Annual Reviews (JAR). Further, assessments are undertaken through mid-term reviews and final evaluations. Provincial Health Offices, tertiary and secondary hospitals, DHOs, training schools and statutory bodies receive funds directly from Ministry of Finance (MOF) whereas the districts receive funding through the MOH.

The health service delivery system mirrors the political administrative structure. Health services in Zambia are managed through Provincial Health Offices (PHOs) and District Health Offices (DHOs). The PHO acts as a link between the national and district level/ community service delivery. It facilitates co-ordination, supervision and management of health services. The DHO is responsible for coordination of district hospitals and/or health facilities within the district and implementation of health promotion, preventive, curative, rehabilitative services and referral services.

The health services in Zambia are provided by four main players, namely the Government, faith - based (not – for - profit) providers, the mines and private (for - profit) providers. Approximately 90% of patients seek care in facilities owned and run by the Government (MOH, 2017, health facility list, 2017). At national level, the functions of the Ministry of Health (MoH) include resource mobilization and budgeting, policy formulation and policy dialogue with health development partners. It also includes strategic planning, regulation, advising other ministries on health matters, setting standards and quality assurance, capacity development and technical support as well as epidemic control.

There are 11 third - level hospitals, 27 second - level hospitals, 105 first - level hospitals, 1,338 health centres and 998 health posts. All third - level hospitals are Government owned while 26 of the second - level hospitals are Government owned, and 8 are owned by the Faith Based Organisations (FBOs). Additionally, there are XX private health facilities.



**Figure 1: Number of Health Facilities in Zambia**

## Health Workforce

Human resources for health is critical for the provision of health services including the control and elimination of NTDs. In this regard the MOH has continued to recruit health workers as evidenced by the recent recruitment and re-distribution of staff during the period 2019-2022. The continued efforts to recruit health workers and position them in rural areas will help in management of patients with NTDs. According to the 2020 WHO report, the Zambia doctor patient ratio was pegged 1 to 12,000, compared to the ideal doctor patient ratio of 1 to 5,000. Further, the report revealed that the nurse to patient ratio was 1 to 14,960 compared to the ideal of 1 to 700 (NHSP 2022). The Community Health Workers (CHWs) or Community Distributors (CDs) are available at the implementation level to provide various health services. For them to effectively provide services, the NTD package is used to orient them on effective service delivery.

**National workforce policies and investment plans:** The Ministry of Health has a mandate to employ trained health worker at all levels. The employed workers provide health serves needed by the community. At all levels the existing workforce is providing health services including NTD. Leadership and governance are central to the success of the NTD control and elimination programme. Under the MOH leadership and governance has well defined structure from the central level to peripheral. The implementation of the NTD elimination Master Plan will be anchored in the existing structure for enhanced co-ordination, supervision, mentoring and collaboration. This will be done with deliberate policy to observe the rule of law, transparency, responsiveness of institutions, equity, effectiveness, efficiency, accountability and ethics.

**National health policy:** The NTD elimination programme is being implemented within the confine of the National Health Policy which sets out the guidelines for directing the implementation of national health strategies. This is cardinal in enhancing community participation and ownership in the control and elimination of NTD.

## Health information systems

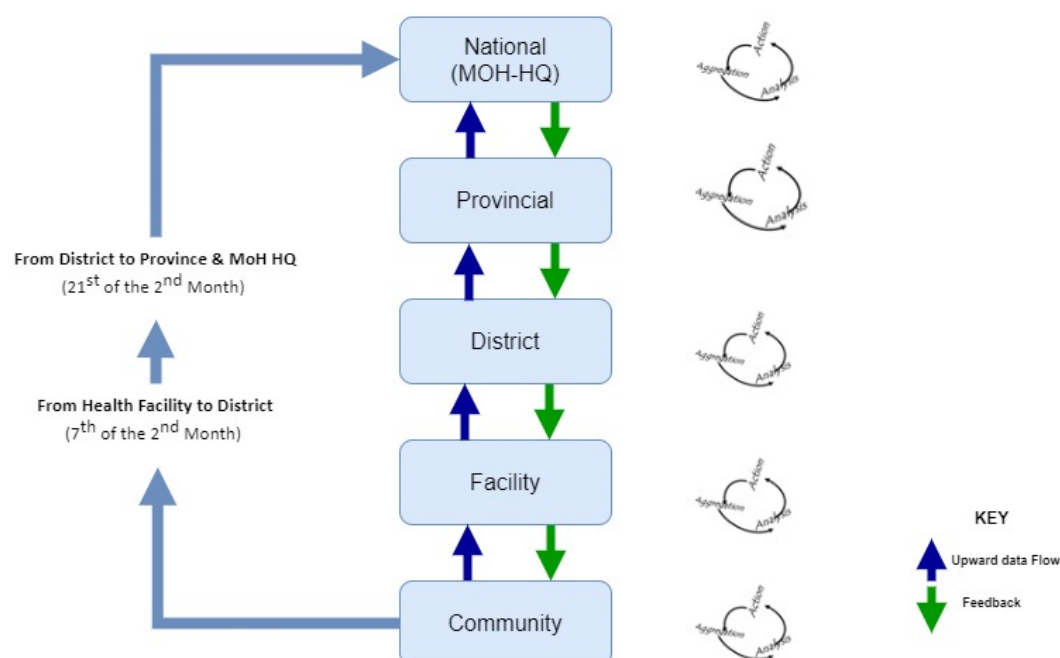
The health information system provides a framework for decision-making and has four key functions: data generation, compilation, analysis and synthesis as well as communication and use. The health information system collects data from the health sector and other relevant sectors, analyses the data and ensures their overall quality, relevance and timeliness, and converts data into information for health-related decision-making. Despite having different user and uses, information generated through these systems is used to gauge the performance of the health system including NTD programme implementation by different stakeholders.

Efforts have been made to enhance health information to guide planning and decision making at district and hospital levels countrywide. This has been extended to the community level through the introduction of community health information systems. The HMIS should be strengthened to report NTD data. In Zambia, NTD data is obtained through the main stream DHIS2 and supplemented through MDA campaigns reports.

Health information system usage: Health information systems serve multiple users and a wide array of purposes that can be summarized as the generation of information to enable decision-makers at all levels of the health system to identify problems and needs, make evidence-based decisions on health policy and allocate scarce resources optimally. Data from different sources are used for multiple purposes at different levels of the health care system.

- **Individual** level data about the patient's profile, health care needs, and treatment serve as the basis for clinical decision-making. Health care records provide the basis for sound individual clinical care. Problems can arise when health workers are overburdened by excessive data and reporting demands from multiple and poorly coordinated subsystems.
- **Health facility** level data, both from aggregated facility-level records and from administrative sources such as drug procurement records, enable health care managers to determine resource needs, guide purchasing decisions for drugs, equipment and supplies, and develop community outreach. Data from health facilities can provide immediate and ongoing information relevant to public health decision-making but only if certain conditions are met. The data must be of high quality, relate to all facilities (public and private), and be representative of the services available to the population as a whole.
- **Population** level data are essential for public health decision-making and generate information not only about those who use the services but also, crucially, about those who do not use them. Household surveys have become a primary source of data in developing countries where facility-based statistics are of limited quality. But household surveys are needed everywhere because they are the only good source of information on individual beliefs, behaviours and practices that are critical determinants of health care use and of health status.
- **Public health surveillance** brings together information from both facilities and communities with a focus mainly on defining problems and providing a timely basis for action. This is especially so when responses need to be urgent, as in the case of epidemic diseases. The need for timeliness of reporting and response, and the requirement for effective linkages to those in authority with the responsibility for disease control, impose additional requirements on health information systems.

## Data flow structure



**Figure 2: Data flow structure**

## Medical Products

To ensure commodity (drugs and medical supplies) security in the country, the government introduced the Zambia Medicines and Medical Supplies Agency (ZAMMSA) act in January 2021 to provide for an efficient and cost-effective system for the procurement, storage and distribution of medicines and medical supplies. With support from government and cooperating partners, seven regional hubs in line with Government's decentralization policy were commission across the country. These are Eastern Province (Chipata), Southern Province (Choma), Western Province (Mongu), North-Western Province (Kabompo), Muchinga Province (Mpika), Luapula Province (Mansa) and Copper-belt Province (Luanshya). In 2018, with USAID support, 10 additional prefabricated storage units were procured and installed, with an additional 40 proposed. These infrastructure are used for storage and delivery of NTD donated medicine to all levels of the health systems and community and to eliminate drug stock-outs in public health institutions.

## Health financing

The health sector in Zambia is financed through the government system and cooperating partners. To improve health care financing, the Government of Zambia has established the National Health Insurance Scheme (NHI) to promote universal access to quality health care services. The NTD control and elimination programme activities are financed by government budget and co-operating partners.

According to the 2022 National budget, the health sector was allocated 8% compared to the intended 15% in line with the Abuja declaration of 2001. From the 2022 National budget of K13.9 billion the NTD

program was allocated K271,772. The NTD program largely depends on donor support from WHO, ESPEN and the Task Force for Global Health.

### Leadership and Governance

Leadership and governance are central to the success of the NTD control and elimination programme. The MOH has well defined leadership and governance structures from the central level to peripheral. The implementation of the NTD elimination Master Plan will be anchored in the existing structure for enhanced co-ordination, supervision, mentoring and collaboration. This will be done with deliberate policy to observe the rule of law, transparency, responsiveness of institutions, equity, effectiveness, efficiency, accountability and ethics.

The NTD elimination programme will be implemented within the confines of the National Health Policy (NHP) which sets out the guidelines for directing the implementation of national health strategies. The NTD elimination program will be implemented through the National Health Strategic Plan (NHSP) which is guided by the NHSP. Among the Health Reforms being undertaken by the Ministry of Health is the devolution of primary health services to Local government which will be cardinal in enhancing community participation and ownership in the control and elimination of NTDs.

Zambia is committed to control and eliminate the NTDs through implementation of both community- and school-based interventions (ZNHSP 2017-2021) with a goal to eliminate NTDs by 2030. The MOH will employ the five WHO recommended approaches; namely preventive chemotherapy, case management, vector control, provision of Safe Water, Sanitation and Hygiene and veterinary Public Health (NTD Masterplan 2019-2023).

**Multisectoral collaboration with government ministries and sectors:** The health sector alone cannot address the multi-faceted determinants of NTDs, to this end the Ministry of health is working on collaboration with other relevant institutions and higher learning institutions in the control of NTDs using a One Health approach. It is with this realization that the control of NTDs requires moving beyond preventive chemotherapy to address the root social, ecological, environmental, animal and human factors. Line Ministries involved in health in general and NTDs in particular include; Water development and Sanitation, Local Government and Rural development, Green economy and environment, Tourism, Agriculture, Fisheries and Livestock and Education. Ministry of Education plays a key role in a number of health programmes by availing schools as service delivery sites and advocating and mobilizing students through the School Health and Nutrition programme. It also facilitates incorporation of NTDs in school curricula and dissemination of key messages. With 45.7% of the Zambian population being aged under 15 years, this includes the age groups at greatest risk of infection with NTDs. The age group can be therefore be reached for intervention using schools' environment and the community. To enhance the collaboration with ministries and sectors involved in health activities, the Ministry of Health embarked on the process of developing a framework for collaboration in NTD control.

### Section 1.3. Gap assessment

Active implementation of NTD control measures begun in 2003 with a focus on 9 NTDs using Mass Drug Administration and case management as the major control strategies. The Neglected Tropical Disease Unit under the Directorate of Public Health at the Ministry of Health has been responsible for coordinating NTD activities in the country using the NTD 2019-2023 Master Plan as a guide. The four strategic priorities on

which the 2019-2023 NTD Master Plan has been anchored are to; (i) ensure universal access to NTD chemotherapy, (ii) accelerate efforts towards environmental and vector control and harness research and innovation of NTD-free status, (iii) transform NTD Surveillance into a core intervention and (iv) strengthening the resource mobilization, coordination, and inter-sectoral collaboration, for the elimination of NTDs.

The NTD control program in Zambia has had several dimensions of challenges which have affected its performance. At community and primary healthcare level, especially in low resource settings, the success of NTD control program is dependent upon availability of point-of-care diagnostic tools, equitable access to interventions and involvement of NTD affected communities in programme design to address issues on behavioral change, MDA scheduling and treatment. All prioritized NTDs in Zambia have no point -of care diagnostics for early detection at community and health facility level and there have been challenges in serving the hard-to-reach populations and the marginalized in society due to poor road networks and finances. Development of BCC materials following KAP Surveys has not been done.

The Zambia NTD program has an appropriate country governance and commitment for programme management and effective delivery, through the NTD Unit in the Directorate of Public Health at Ministry of Health. There is, however, limited collaboration in planning and implementation for NTDs at country level. Coordination, and inter-sectoral collaboration necessary for the elimination of NTDs in Zambia has not been realized fully. Specifically, this involves alignment and coordination of work among relevant stakeholders to achieve overall goals and milestones, based on a strategic plan as well as having clear stakeholder responsibilities and effective, coordinated working processes to implement relevant interventions. Coordination mechanisms and stakeholder responsibilities as well as effective coordination and working processes to implement relevant interventions such as One Health approaches and integrated vector management are not yet fully established. However, there has been an insignificant shift into an inclusiveness, where stakeholders in NTDS can collaboratively plan and agree to implement collectively prioritized NTD activities within their respective sectors to enhance synergies. Furthermore, research and innovation towards NTDs has been hampered due to inconsistencies in funding because the success of the program in the past and present has been donor dependent. Strategies for resource mobilization to address the funding challenge have not yet been developed.

Forecasting is one of the main challenges experienced in quantifying for NTD related commodities. This is on account of disparities between headcount population and the official population figures. To mitigate these disparities, an additional buffer stock is normally provided. From the experiences learnt from the procurement of NTD commodities, there is need for sustained capacity building in forecasting, procurement and management of NTD commodities. Further, there is need to improve communication processes amongst stakeholders involved in the clearance of NTD commodities to avoid incurring extra expenses that may arise from penalties. There is also need of budget allocation for transportation of drugs and related bundled supplies in the MDA budgets to ensure timely last mile distribution and reverse logistics.

**Table 2: Gap assessment of current NTD programme action in Zambia.**

Thematic Areas	Dimensions	Disease Name														
		HATs	Leprosy	LF	Rabies	SCH	STH	Snakebite envenoming	Trachoma	Onchocerciasis	Taeniasis and Cysticercosis	Dengue and Chikungunya	Echinococcosis	Foodborne trematodiasis	Mycetoma	Scabies
Technical	Scientific	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
	Diagnostics	Green	Green	Yellow	Red	Yellow	Yellow	Green	Green	Red	Yellow	Red	Red	Red	Yellow	Yellow
	Effective Intervention	Yellow	Yellow	Red	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Yellow	Yellow
Strategy and Service Delivery	Operational and normative guidance	Green	Green	Green	Green	Green	Green	Red	Green	Red	Red	Red	Red	Red	Red	Red
	Planning, governance and programme implementation	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
	Monitoring and Evaluation	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
	Access and Logistics	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Red	Red	Red	Red	Red	Red
	Health care infrastructure and workforce	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Enablers	Advocacy and Funding	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
	Collaboration and multisectoral action	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
	Capacity- and awareness building	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red	Yellow	Red	Yellow	Red	Red	Yellow
Key																
		Yellow							Red							
No hindrance towards Target	Little hindrance								Critical action required to reach target Critical action required to reach target							



## 1.4. Programme Context Analysis

### 1.4.1. Current NTD Programme organization and status

Zambia is endemic or suspected to be endemic to 16 of the 20 NTDs. Categorized as follows: those targeted for elimination (interruption of transmission) are two (2); targeted for elimination as a public health importance are seven (8); and those targeted for control are eight (8). The 16 NTDs can further be categorized as Preventive Chemotherapy amenable-NTDs (5) and Case Management-NTDs (12). The Ministry of Health has been leading the coordination and implementation of all the Neglected Tropical Diseases (NTDs) interventions in Zambia. Interventions that are currently being implemented include Mass Drug Administrations (MDA), Morbidity Management and Disability Prevention (MMDP), and Water Sanitation and Hygiene (WASH) activities for the endemic NTDs. These interventions are aimed at reducing the negative impact of NTDs on individuals as they reduce the risk of prolonged ill health, reduced life expectancy, reduction in productivity and economic viability of infected individuals.

**PC Amenable NTDs:** In the recent past, Zambia has focused on delivering preventive chemotherapy NTDs (PC-NTDs) interventions focusing on schistosomiasis, trachoma, soil transmitted helminths and lymphatic filariasis. Multiple rounds of Mass Drug Administration have been conducted periodically from 2012 to 2021. Five rounds of MDA for Lymphatic filariasis have been conducted successfully with all implementation units reaching effective epidemiological coverage of 65% and above in all rounds. Further, Lymphedema/hydrocele case identification has been integrated into the MDA campaigns to establish the number of suspected hydrocele and lymphedema patients in the targeted districts.

Mass drug administration for Schistosomiasis were implemented through a phased approach starting in selected districts and reaching 100% geographical coverage in the implementation period 2017-2021. In regard to MDAs for Soil Transmitted Helminths, their implementation has been integrated into either LF or SCH MDA and through bi-annual Child health weeks under the Expanded Programme for Immunization (EPI). Trachoma MDAs were conducted from 2012 to 2022 with some IU reaching elimination thresholds and other on-going implementation in IUs. The decision to stop MDA in these IUs has been informed by impact assessment results which indicate that they have attained elimination status and are under surveillance. Trachoma MDA campaigns were conducted in line with the SAFE (Surgery, Antibiotics, Facial cleanliness, and Environmental cleanliness) strategy and about 9 million individuals were treated through rounds of MDAs. Further, more than 3,600 sight saving trichiasis trachoma (TT) surgeries were conducted to beef up with PC in elimination of Trachoma.

**Case Management:** Additionally, case management (CM NTDs) interventions have been implemented in Zambia to effectively manage Human African Trypanosomiasis (HAT), Cysticercosis, snake bite envenoming and rabies.

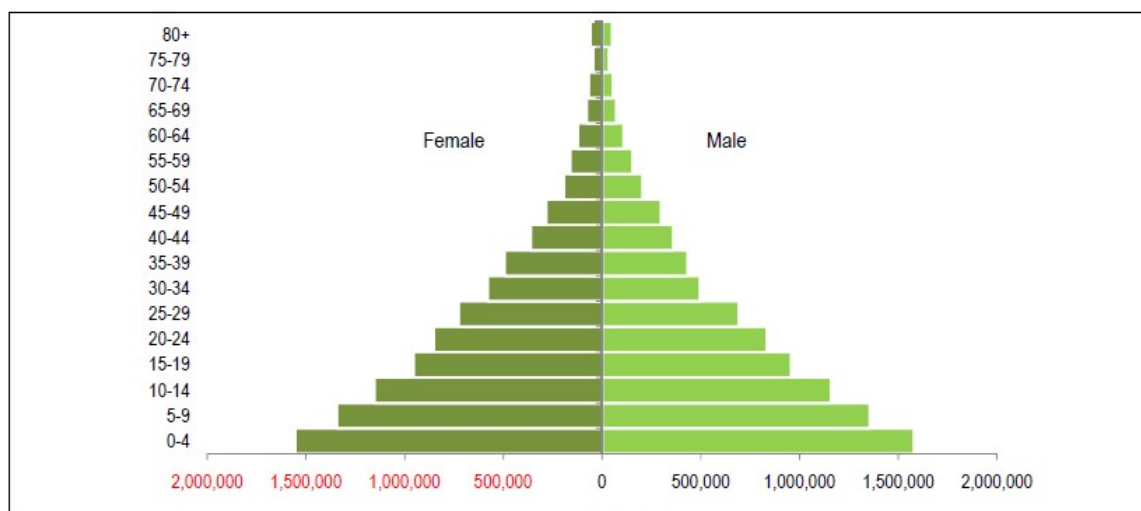
**Skin NTDs:** Among the 16 NTDs in Zambia, four are skin NTDs. These include LF, Leprosy, Scabies and Mycetoma. LF and Leprosy have been mapped while Scabies and mycetoma are yet to be mapped.

**Mapping:** In addition to the existing known NTDs, the NTD program plans to further determine the endemicity of the following NTDs; Leishmaniasis, Onchocerciasis, Dengue, Echinococcoses, Foodborne trematodiasis, Mycetoma, chromoblastomycosis and other deep mycoses, Snakebite envenoming, Taeniasis and cysticercosis

**Table 3: NTDs that are endemic or suspected to be endemic in Zambia categorized by disease control or elimination status**

Targeted for elimination (interruption of transmission)	Targeted for elimination as a public health importance	Targeted for control
1. Leprosy	1. HATs	1. Dengue and Chikungunya
2. Onchocerciasis	2. Leishmaniasis visceral	2. Echinococcosis
	3. Lymphatic Filariasis	3. Foodborne trematodiasis
	4. Rabies	4. Mycetoma, chromoblastomycosis and other deep mycoses
	5. Schistosomiasis	5. Snakebite envenoming
	6. Soil Transmitted Helminths	6. Taeniasis and cysticercosis
	7. Trachoma	7. Leishmaniasis Cutaneous
		8. Scabies

The 2010 population census indicated that the population of Zambia was 13.1 million people with a current growth rate projected at 3.2% per annum. The projected population for Zambia in 2021 according to the ZPDP, 2011-2035 is 18,383,955 with provincial population ranging from 3.36 million people in Lusaka to 0.9 million people in North-Western province. In Zambia, the urban population is projected at 42.5% by province ranging from 86% for Lusaka to 12.1% in Western provinces. This indicates that majority of the population in Zambia lives in rural areas. The male: female ratio is 1.04:1.07. Median age 17.6 and fertility rate of 4.6. About 45.7% of the population is aged under the age of 15 years, with 17.8% aged between 0-4 years and 27.9% are aged 5-14 years (Figure 5). These two age groups are at greatest risk of infection with NTDs and they should be targeted for interventions. The age group can be reached for intervention using community and schools' channels. The availability of primary schools and peripheral Health facilities provide structures for mobilization, medicine delivery and medicine administration for the most at-risk population for NTDs. About 46% of the population is aged between 15-50 years and only 7.7% of the population is aged above 50 years. The average population density for Zambia is 17.3 persons per square kilometres. The most populated province is Lusaka with a density of 100.4 persons per square kilometre whereas North-western province has the least with 5.6 persons per square kilometre. The official language of Zambia is English and the main vernacular languages are Bemba, Nyanja, Tonga, Lozi, Kaonde, Luvale and Lunda.



Source: Zambia Population and Demographic Projections, 2011-2035

The Life expectancy is 64 years, infant mortality rate is 41.8 deaths/1000 live births and 13.5% of children under 5 years are underweight (2018). The proportion of the Zambian population using an improved water sources is 64% and the proportion using an improved sanitation facility was 33% in 2018. These relatively poor sanitation levels provide a conducive environment for the endemicity of NTDs especially soil-transmitted helminthiasis (STH), Trachoma and schistosomiasis.

Zambia is among the southern African countries which host several refugees from Democratic Republic of Congo, Rwanda, Burundi and Angola. Most of the refugees are settled in Northern, Luapula, Western and North-Western provinces. There is need to pay attention to the refugees in relation to NTDs.

The table 3 below shows number of district by province and population segregated by age groups including number of schools and health facilities by province.

**Table 4: National population data, schools, and health facilities at provincial level**

Province	Number of Districts	Number of IUS	Total Population	Under-5 (Pre-School)	5-14 years (School Age)	Above 15 (Adults)	No. Primary Schools	No.fo Peripheral Health Facilities		
								Referral	IU Level	Health Centre
Central	11	11	1,789,323	234,000	499,757	1,008,463	1,168	2	9	309
Copperbelt	10	10	2,183,334	286,672	611,201	1,233,345	985	7	14	368
Eastern	14	14	2,687,799	352,101	750,702	1,514,844	1,019	2	11	315
Luapula	12	12	1,292,450	169,311	360,983	728,424	642	0	13	229
Lusaka	8	8	3,528,308	462,209	985,456	1,988,554	787	8	16	199
Muchinga	9	9	1,203,154	157,613	336,041	678,098	686	0	7	141
Northern	12	12	1,546,775	202,628	432,015	871,762	694	2	9	256
North-Western	11	11	974,636	127,677	272,216	549,304	886	1	12	285
Southern	13	13	2,348,552	307,662	655,950	1,323,644	1,130	1	11	359
Western	16	16	1,096,296	143,484	305,915	617,308	970	0	12	282
<b>Total</b>	<b>116</b>	<b>116</b>	<b>18,650,627</b>	<b>2,443,357</b>	<b>5,210,236</b>	<b>10,513,746</b>	<b>8,967</b>	<b>23</b>	<b>114</b>	<b>2,743</b>

A review of the previous NTD Master plan has shown that whereas eight NTDs were mapped and receiving attention, there are nine NTDs whose status of endemicity needs to be determined.

**Table 5: Known disease distribution in Zambia**

Endemic NTD	Total no of Districts	No. of districts endemic/suspected	No. of districts mapped	No. of districts remaining to be mapped or assessed for endemicity status
Lymphatic filariasis	116	96	116	0
Schistosomiasis	116	114	116	0
Soil Transmitted Helminths	116	116	116	0
Trachoma	116	56	116	0
Leprosy	116	73	116	0
Human African trypanosomiasis	116	12	12	0
Taeniasis/Cysticercosis	116	116	0	116
Rabies	116	103	116	0
Echinococcosis	116	116	0	116
Dengue and chikungunya	116	116	0	116
Snake bite envenoming	116	116	0	116
Leishmaniasis visceral	116	116	0	116
Leishmaniasis Cutaneous	116	116	0	116
Onchocerciasis	116	116	0	116
Foodborne trematodiasis	116	116	0	116
Scabies	116	116	0	116
Mycetoma, chromoblastomycoses and other deep mycoses	116	116	0	116

Eight of the 16 have been mapped while the endemicity of the other eight is yet to be determined. Moreover, mapping for Trachoma, Schistosomiasis (SCH), Soil Transmitted Helminths (STH), Lymphatic Filariasis (LF) has been completed. NTDs such as Lymphatic Filariasis, Schistosomiasis and Soil Transmission Helminths tend to be co-endemic.

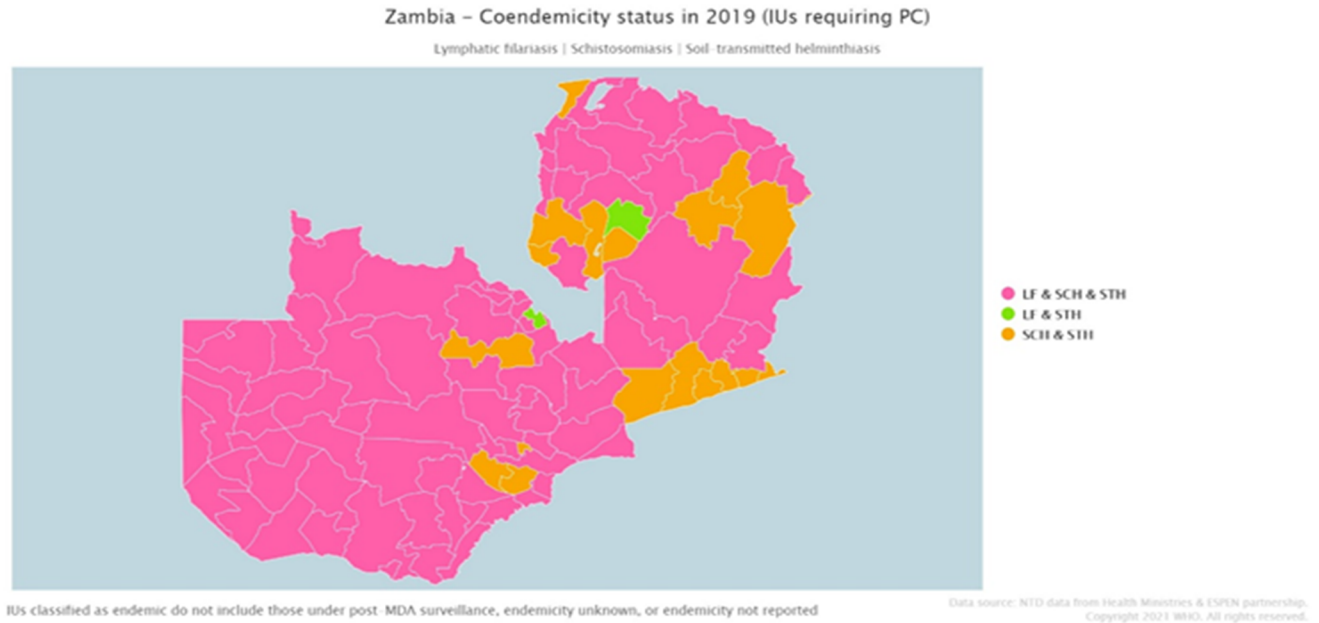


Figure 3. Co-endemicity of Lymphatic Filariasis, Schistosomiasis and Soil Transmission Helminths tend to be co-endemic.

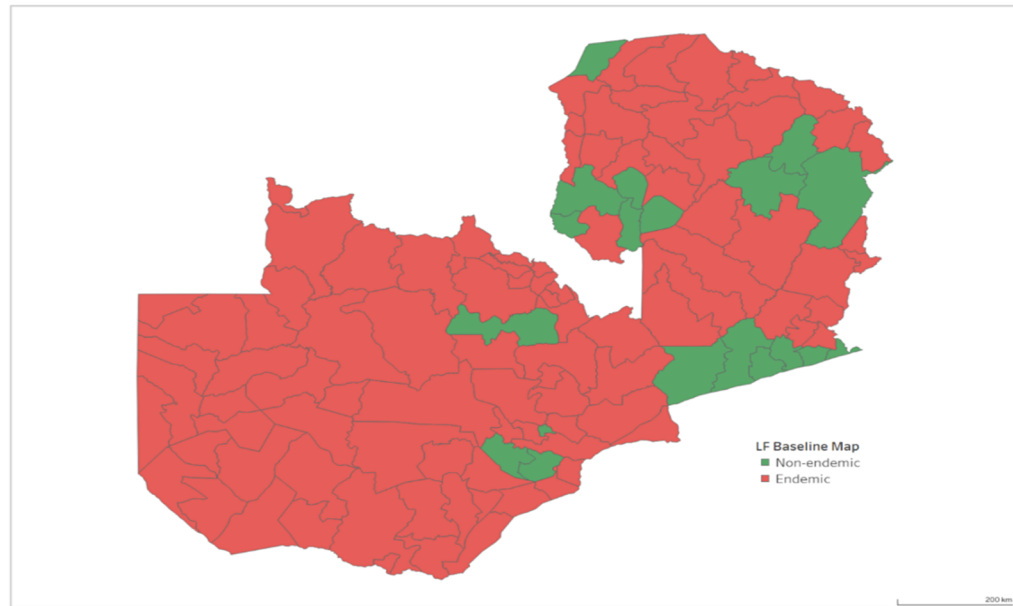
#### 1.4.2. NTD Programme Performance

##### Preventive chemotherapy amenable Neglected Tropical Diseases

##### Lymphatic filariasis

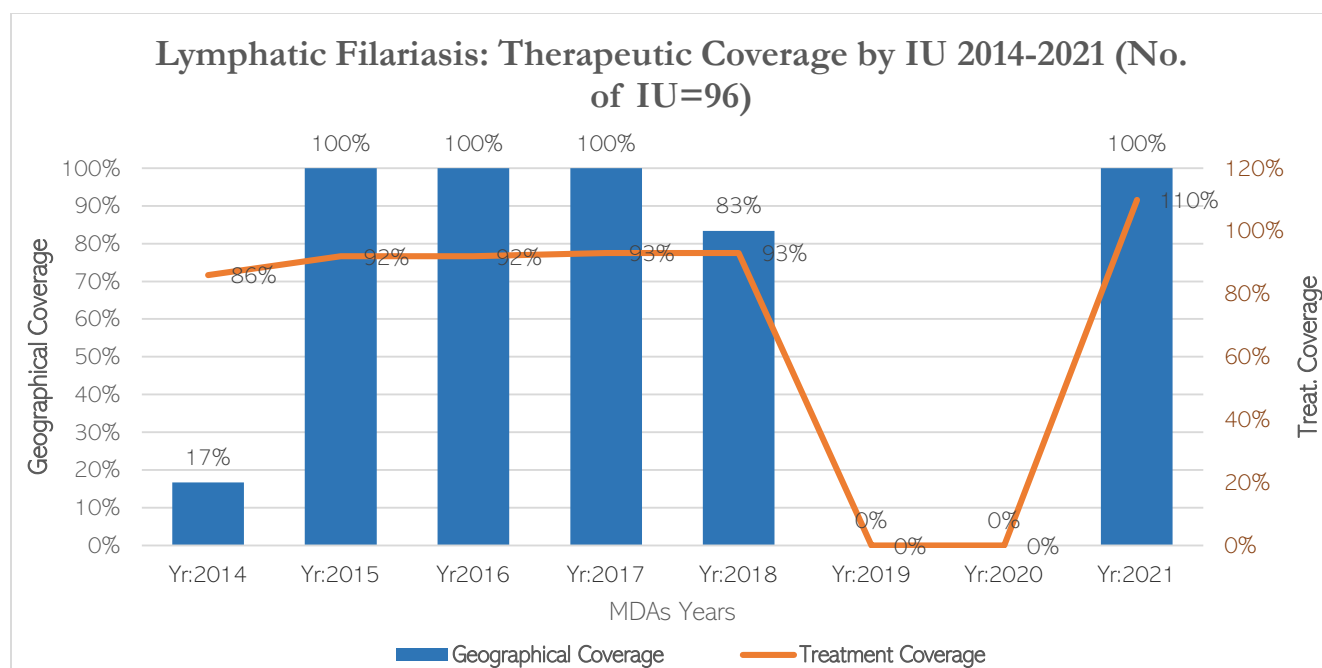
Lymphatic Filariasis is a debilitating disease that is estimated to affect 856 million people in 52 countries worldwide. It is caused by the filarial worm *Wuchereria bancrofti* and transmitted by mosquitoes of the genus *Culex* and *Anopheles*. Once infection occurs, disease symptoms may not manifest for several years (up to 20 years) and when they do they cause debilitating morbidities namely; lymphedema which is characterized by swelling of the extremities including breasts, legs and/or arms of both men and women which causes irreversible damage and hydrocele (scrotal swelling).

In 2003, the Government of Zambia through Ministry of Health started a programme to eliminate LF as a public health problem by mapping the distribution of the disease. Prevalence mapping was conducted between 2003 and 2011 using the rapid immunochromatographic test (ICT) card. The overall prevalence rate was 7.4% (range 0-54%). Following the mapping, 85 (currently 96) districts across the 9 (currently 10) provinces were found to be endemic and everyone living in endemic districts was at risk of acquiring the infection. As a result, mass drug administration was instituted in all the endemic districts. Informed by baseline surveys that were conducted between 2012 and 2014, the first round of MDA was conducted in 2014 in Western Province and was scaled-up to the other nine (9) provinces in 2015 and it is still on-going.



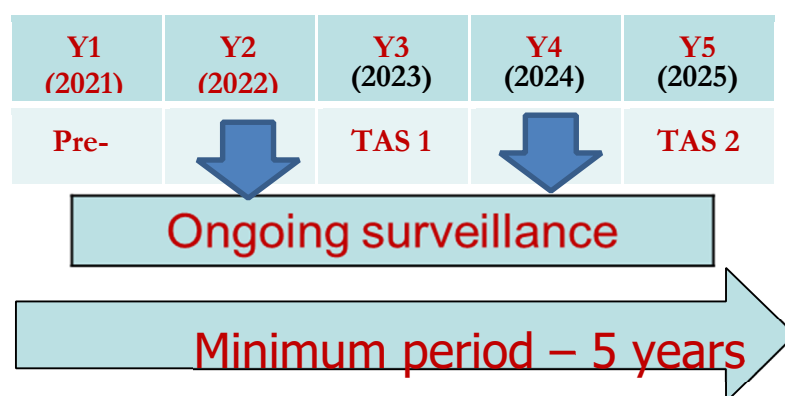
**Figure 4: Distribution of lymphatic filariasis in Zambia, 2021.**

**Mass drug administration:** The drugs used for Mass Drug Administration (MDA) are Albendazole (ALB) and Diethylcarbamazine (DEC). MDA campaigns employ two modes of drug distribution which include door to door distribution and static point distribution. Treatment is done through directly observed treatment (DOTs) method and is carried out by volunteer Community Drug Distributors (CDDs). The LF MDA has had the largest distribution of NTD drugs in Zambia with around 12 million people being treated for LF during each MDA. The last round (5th round) of MDA was conducted as per WHO criteria in 2020/2021 and this has allowed Zambia to move towards pre-TAS, TAS and enhanced LF surveillance activities. The table below shows the treatment coverage rates between 2014 and 2021. Currently, the LF program has implemented a total of 5 successful rounds of MDA in all the endemic districts between 2014 and 2021 as shown below.



**Figure 5. Coverage of mass drug distribution rounds for Lymphatic filariasis between 2014-2021.**

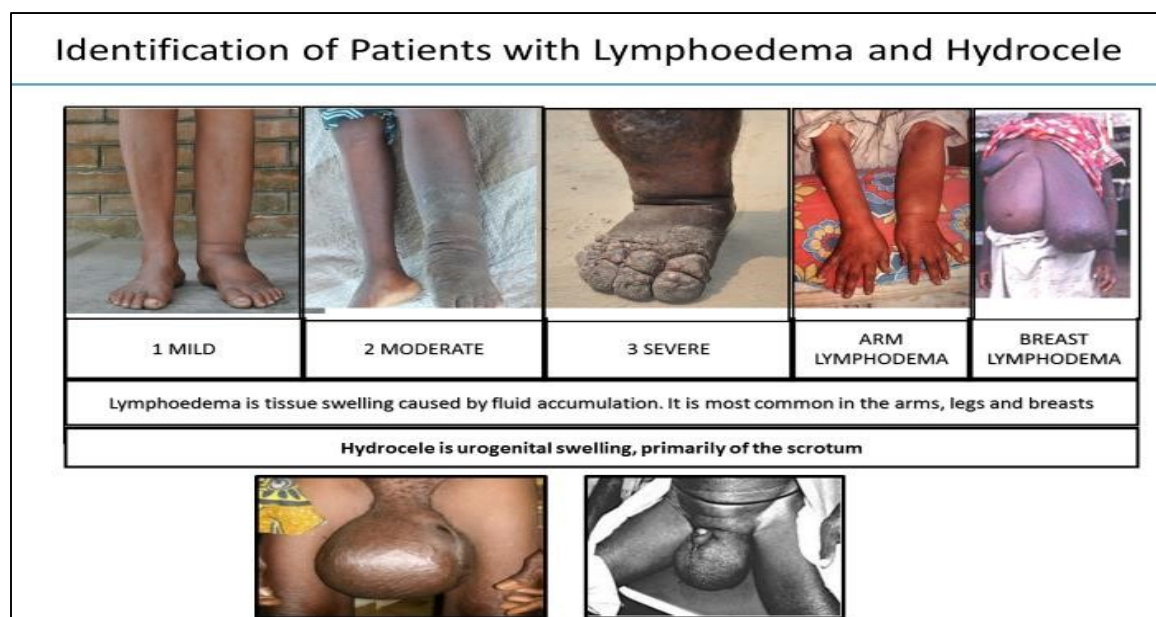
All the five LF MDAs carried out to date, have been validated by an independent coverage surveys. The coverage rates have been between 87-92%, which is above the 65% threshold of WHO. Mid-point sentinel site surveys in 2017 indicated 0% antigen prevalence. Figure 6 shows the future activities of lymphatic filariasis elimination programme.



**Figure 6. Post MDA activities for lymphatic filariasis.**

**Morbidity Management and Disability prevention services:** Morbidity identification for LF was conducted during the LF MDA implementation by Community Drug Distributors who are provided with a visual aid.





**Figure 7. Lymphatic filariasis case identification card used by CDDs during mass drug administration.**

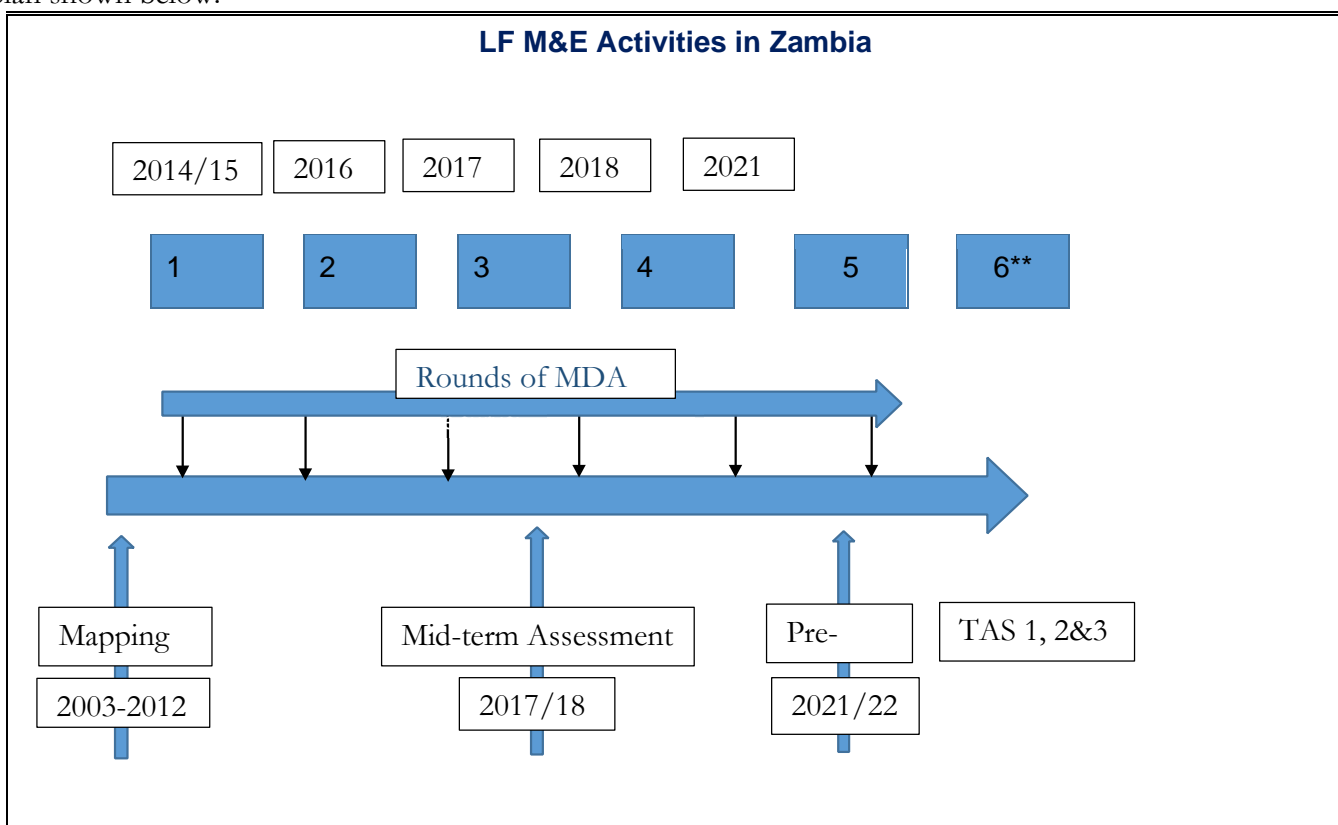
The development of a Morbidity Management Plan is an essential element of LF elimination and will be developed as part of the activities under the current Master Plan. This MMDP plan will provide guidance on the services that will be delivered to patients identified through morbidity mapping.

**Table 6: Lymphatic filariasis patients identified during MDA between 2015-2021.**

Province	Morbidity condition	2015	2016	2017	2018	2020/2021
Northern	Lymphoedema	2	40	77	15	85
	Hydrocele	7	36	37	13	69
Copperbelt	Lymphoedema	28	22	0	5	83
	Hydrocele	33	72	0	30	30
North-Western	Lymphoedema	41	18	19	0	47
	Hydrocele	17	3	35	0	50
Eastern	Lymphoedema	63	85	13	17	39
	Hydrocele	29	25	16	21	65
Central	Lymphoedema	13	3	47	46	78
	Hydrocele	25	12	205	34	70
Lusaka	Lymphoedema	47	47	0	0	48
	Hydrocele	18	18	0	0	68
Southern	Lymphoedema	38	0	0	6	76
	Hydrocele	23	0	0	14	30
Western	Lymphodema	17	23	0	323	TBD
	Hydrocele	17	17	0	254	TBD

Luapula	Lymphodema	0	96	0	62	61
	Hydrocele	0	62	59	28	89
Muchinga	Lymphodema	123	5	0	8	5
	Hydrocele	20	9	0	21	15

**Monitoring and evaluation:** During the life span of Master Plan, the Monitoring and Evaluation (M&E) activities of LF just like other NTDs will be of paramount importance and will be conducted as per the plan shown below.



**Figure 8. Monitoring and evaluation plan for lymphatic filariasis**

### Schistosomiasis

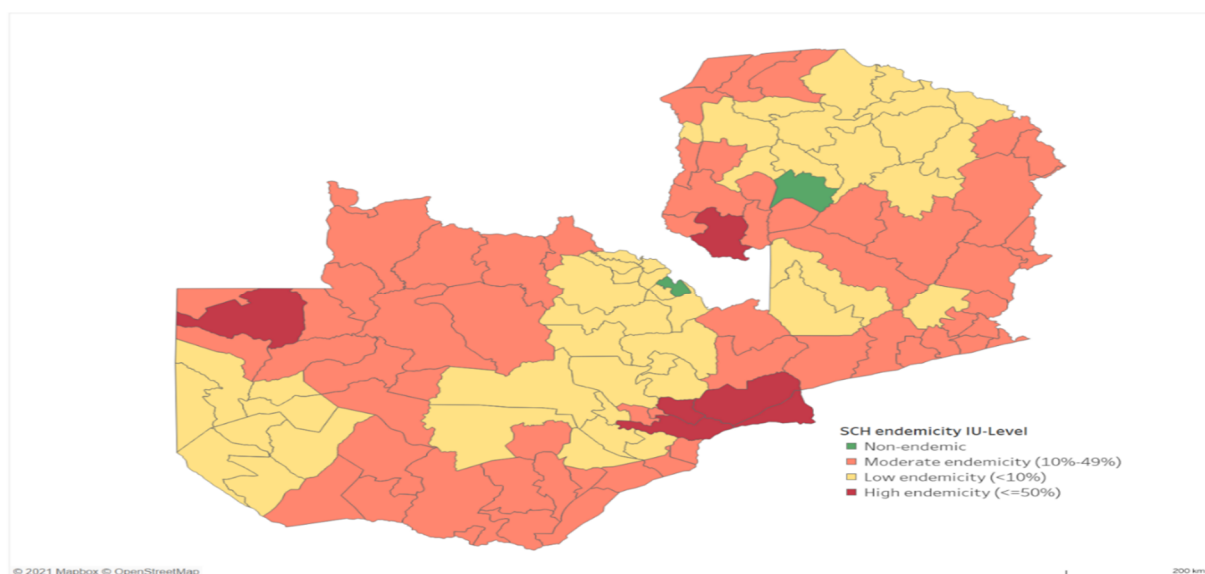
In Africa, most cases of human schistosomiasis are caused by infections with *S. haematobium* or *S. mansoni*, which cause urinary or intestinal schistosomiasis respectively. Schistosomiasis affects the poorest communities and infections are particularly common among people living in rural or deprived urban or peri-urban settings. These populations typically have low socio-economic status with limited access to clean water and poor sanitation. Fishing, farming and collection of water from snail infested sources are the major risk factors for infection. Urogenital schistosomiasis is also considered to be a risk factor for HIV infection, especially in women. Inadequate hygiene and contact with infected water make children especially vulnerable to infection. A recent metanalysis, estimates the pooled prevalence of *Schistosoma haematobium* that causes urogenital schistosomiasis in Zambian adults to be 53.8% with a steady increase in the number of cases reported between 2011 and 2019 (Kalinda et al, 2020). Moreover, a study evaluating the presence of

schistosome specific antibodies at the main referral hospital in Zambia, the University Teaching Hospital in Lusaka found that 59% of adults have had a history of infection, with a higher proportion of men having had an infection compared to women (Wall, 2018).

The morbidity caused by schistosomiasis is associated with moderate to heavy egg infection intensities. School age children are the most vulnerable groups to developing overt disease and to harbor larger number of worms. Intestinal schistosomiasis can result in abdominal pain, diarrhoea, and blood in stool. Hepatosplenic morbidities is frequently associated with an accumulation of fluid in the peritoneal cavity due to increased blood pressure (hypertension) of the abdominal blood vessels.

The classic sign of urogenital schistosomiasis is haematuria (blood in urine). Fibrosis of the bladder and ureter, and kidney damage are sometimes diagnosed in advanced cases. Bladder cancer is another possible complication in the later stages. In women, urogenital schistosomiasis may present with genital lesions, vaginal bleeding, pain during sexual intercourse, and nodules in the vulva which increase the risk of HIV transmission. In men, urogenital schistosomiasis can induce pathology of the seminal vesicles, prostate, and other organs including other long-term irreversible consequences, such as infertility.

In Zambia, schistosomiasis is endemic in all except two districts (Chilubi and Ndola) with prevalence across the country ranging from <1% in Ndola to 88.6% in Kafue district. The disease prevalence is  $\geq 50\%$  in Chongwe, Luangwa, Rufunsa and Milenge districts. An estimated 4 million people are infected with schistosomiasis in Zambia. Between 2004 - 2009, mapping and MDA was conducted in Eastern and Southern provinces by Ministry of Health and Ministry of Education. In 2010, it was scaled-up to other remaining provinces.

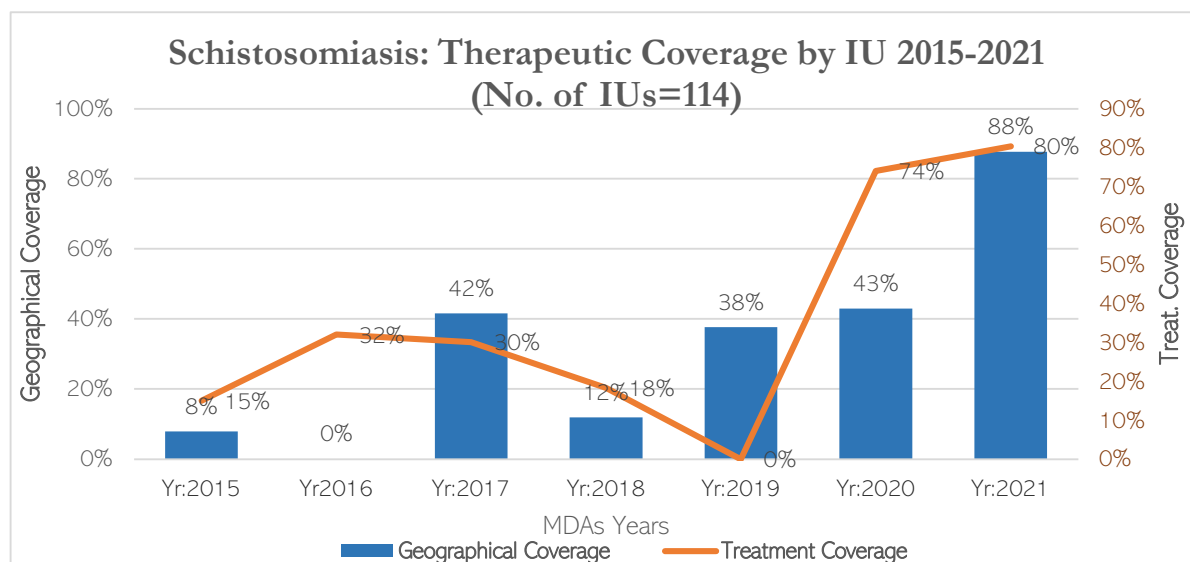


**Figure 9. Distribution of schistosomiasis in Zambia, 2021.**

**Mass drug administration:** Praziquantel is used for MDA and is mainly delivered within school and community settings according to the WHO guidelines for treatment of schistosomiasis. MDA target school aged children 5-14 years. In high-risk areas where the prevalence is above 50%, the MDA includes adult population, and the exercise is supported by the government. Both school-and-community-based treatment approaches are directly observed by the teacher or community drug distributors. Prevalence re-mapping conducted between 2012-2013 using Kato Katz and urine filtration methods led to the implementation of MDAs in the years 2020 in 49 districts (Southern, Luapula, Central, Northwestern and Lusaka provinces) and 2021 in 57 districts (Western, Eastern, Northern, Muchinga and Copperbelt). The MDAs implementation has been inconsistent due to financial constraints.

**Table 7: Total number of people reached and provided with treatment during MDA rounds for schistosomiasis.**

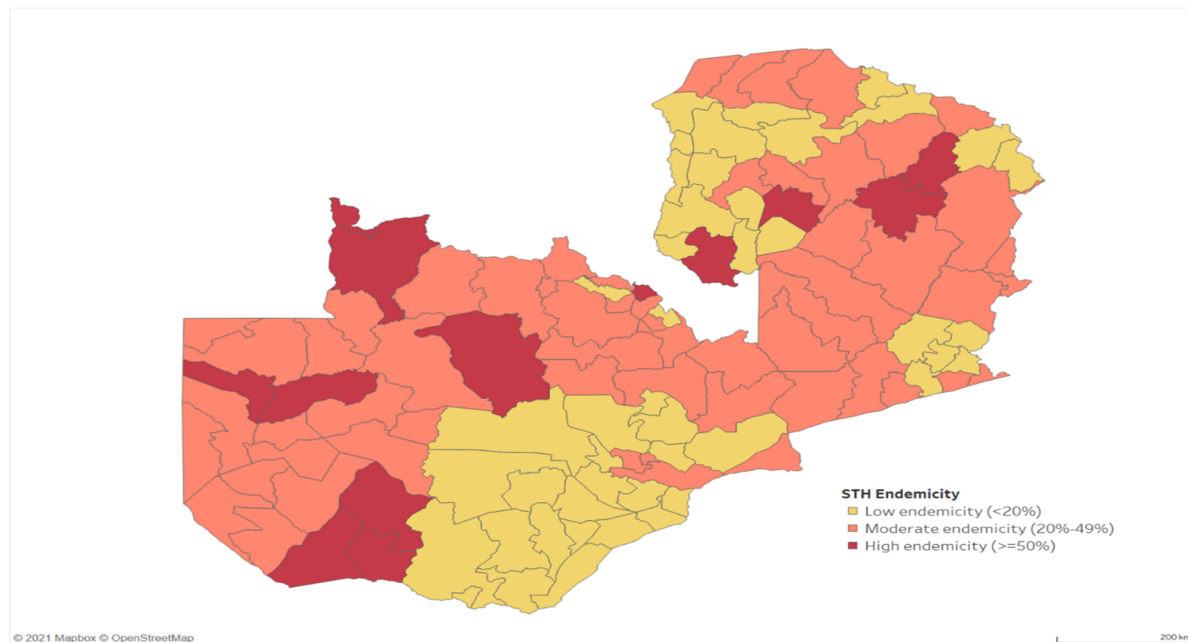
Year	Month Implemented	Number districts	of Target Population	Total treated*	Percentage
2015	Jan	49	2,186,473	896,454	41%
2016	July	23	944,932	907,135	96%
2017	May	8	486,936	160,689	33%
2017	November	16	295,730	238,172	85%
2018	October	15	572,920	492,711	86%
2020	May	49	2,430,639	1,677,141	69%
2021	June	41	2,215,663	1,772,530	80%



**Figure 10. Coverage of mass drug distribution rounds for Schistosomiasis between 2015-2021.**

### Soil-transmitted helminthiasis

In Zambia, there are four soil-transmitted helminths (STH) of public health importance: *Ascaris lumbricoides* (roundworm), *Trichuris trichiura* (whipworm), *Ancylostoma duodenale* and *Necator americanus* (hookworms). An estimated 1.8 million people are infected with STH, with prevalence ranging from 0.84% to 54.56%. STHs are endemic in all districts in the country. Mapping was done between 2012- 2013 (Figure 14).

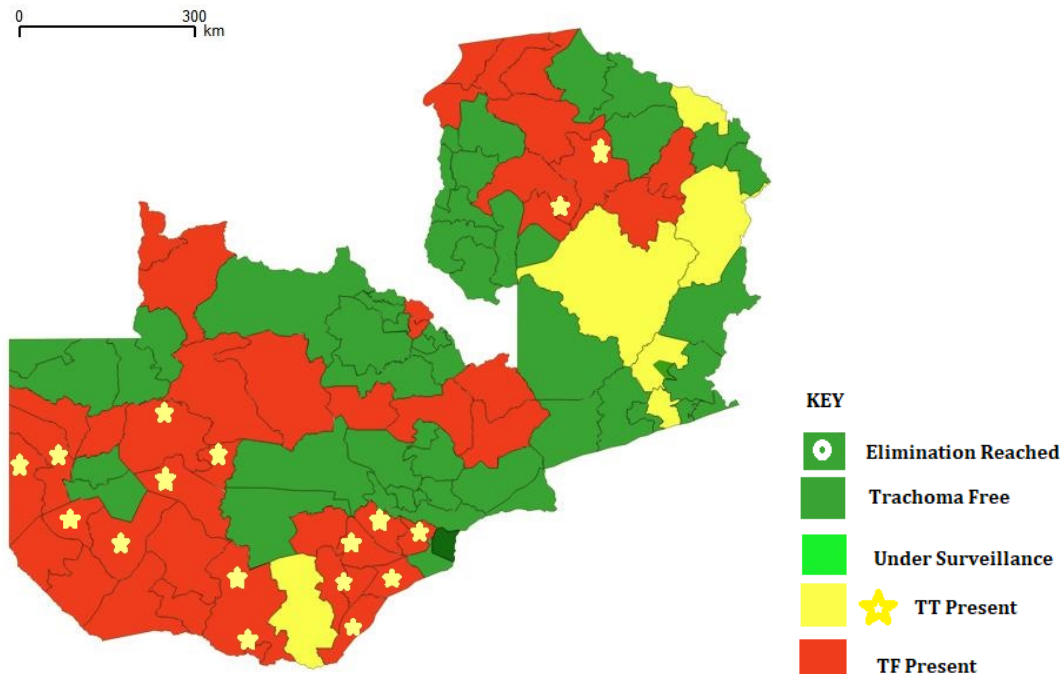


**Figure 11. Distribution of soil transmitted helminths in Zambia, 2021.**

**Mass drug administration:** Mass drug administration for STH is integrated into LF and SCH MDA implementation. STH treatment is also integrated in the mainstream primary health care services and is done during Child Health week which takes place bi-annually.

### Trachoma

Trachoma is an infectious eye disease caused by bacterium *Chlamydia trachomatis* and spread by contact with infected person by eye-seeking flies, dirty fingers and contaminated cloth. The disease morbidity progresses through trachomatous follicular (TF) inflammation of the eye lids scarring (IS) then Trachomatous Trichiasis (IT) and leads to corneal opacity (CO) and eventual blindness if not treated. From 2007 to 2018, the MOH with the support of partners conducted baseline surveys to identify trachoma endemic areas and 56 districts were found to be endemic to trachoma (47 with active trachoma and 9 with trichiasis).



**Figure 12. Distribution of trachoma in Zambia, 2019.**

The WHO recommends the use of the multifaceted SAFE strategy approach; Surgery for persons that have reached the blinding stage of trachoma, Antibiotic treatment for population with an active trachoma prevalence of above 5%, and behaviour change that prioritizes Facial cleanliness and Environmental improvement to reduce the transmission of trachoma.

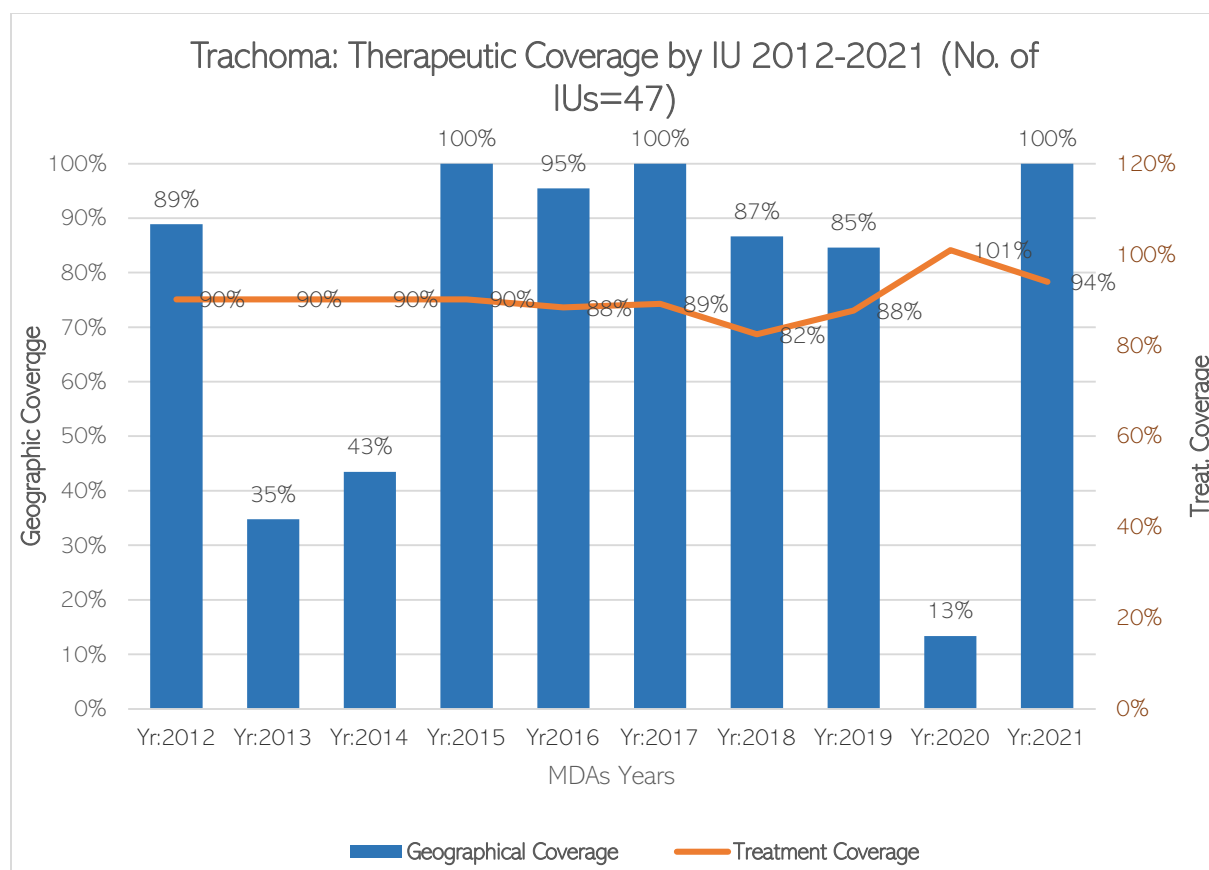
**Surgery for trichiasis:** In terms of Trichomatous Trichiasis (TT) surgeries a lot of progress has been achieved to date. However, from the year 2020 no programmatic interventions have been implemented in the TT endemic districts due to lack of funds hence the backlog has not been cleared.

Table 8: Number of TT surgeries conducted and backlog to be cleared by 2024.

Province	Districts	Cases Managed							Cases to be Managed	Total Cases to be Managed by 2024	Backlog as at the most recent survey
		2015	2016	2017	2018	2019	2020 to 2021	Cumulative			
Eastern	Mambwe	-	-	-	30	-	1	31	94	125	125
Eastern	Katete	-	-	-	13	-	-	13	394	407	407
Muchinga	Chama	-	-	-	143	13	-	156	420	576	576
Muchinga	Mpika / Kachibiya / Lavushimanda	-	-	-	70	20	12	102	454	556	556
Muchinga	Nakonde	-	-	-	-	-	-	-	223	223	223
Northern	Chilubi	-	-	-	-	-	-	-	129	129	129
Northern	Kasama	-	-	-	39	3	20	62	427	489	489
Northern	Mungwi	-	-	-	-	-	4	4	288	292	292
Southern	Choma	-	-	-	25	-	-	25	-	-	0
Southern	Mazabuka	10	26	39	9	1	-	85	-	-	0
Southern	Chikankata	-	-	8	-	-	-	8	-	-	0
Southern	Monze	49	90	54	17	2	-	212	-	-	0
Southern	Gwembe	847	281	72	-	-	-	1,200	-	-	0
Southern	Namwala	68	226	-	-	-	-	294	-	-	0
Southern	Kalomo	-	6	17	-	2	-	25	-	-	0
Southern	Zimba	29	-	-	-	-	-	29	-	-	0
Southern	Livingstone	29	4	2	-	-	-	35	-	-	0
Southern	Kazungula	-	-	75	32	-	-	107	-	-	0
Southern	Sinazongwe	70	-	-	-	-	-	70	-	-	0
Western	Kalabo/Sikongo	-	-	93	56	-	-	149	-	-	0
Western	Kaoma/Luampa/Nkeyema	-	-	153	103	130	5	391	37	428	428
Western	Senanaga / Nalolo	-	-	154	131	116	17	418	8	426	426
Western	Shango'ombo / Sioma	-	-	-	-	243	8	251	351	602	602
<b>Total</b>		<b>1,102</b>	<b>633</b>	<b>667</b>	<b>668</b>	<b>530</b>	<b>67</b>	<b>3,667</b>	<b>2,825</b>	<b>4,253</b>	<b>4,253</b>

**Mass drug administration:** Zambia commenced trachoma elimination interventions through mass drug administration in the year 2012 and adopted the full SAFE strategy in 2015. To date over 9 million people have received antibiotic treatment through mass drug administration and over 3,660 sight saving surgeries have been conducted. Despite the challenges experienced mainly attributed to the funding gap MDAs have been conducted consistently and successfully over the years. In some years however, MDAs were not conducted in all endemic districts.



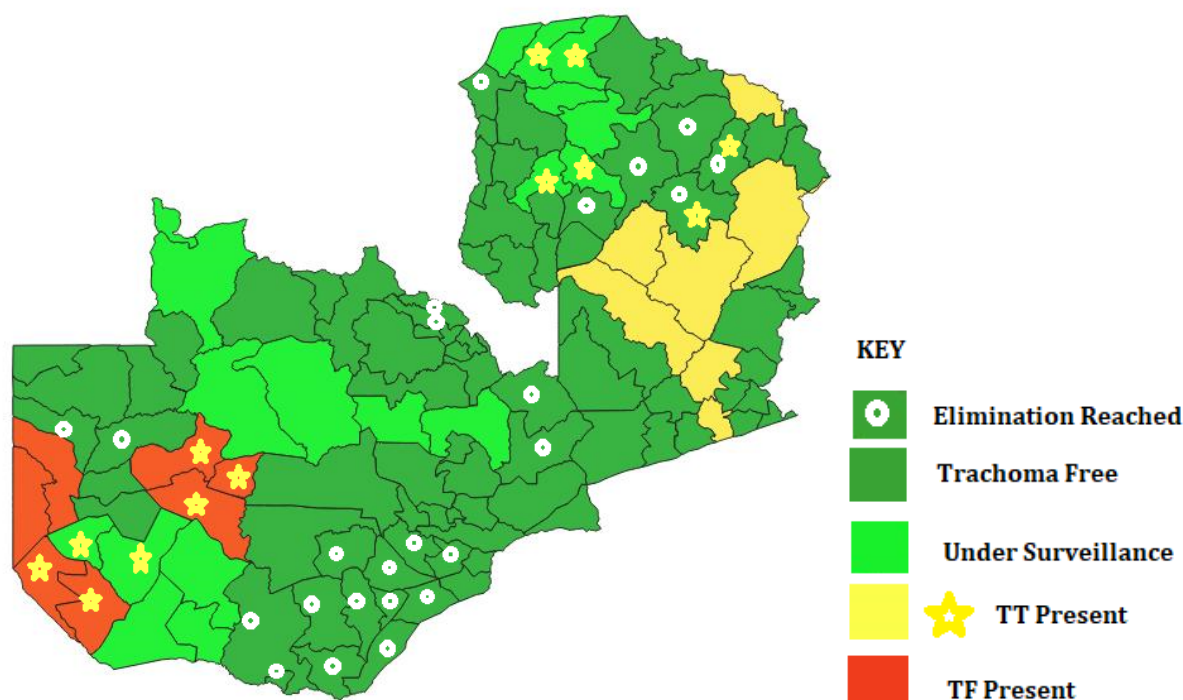


**Figure 13. Coverage of mass drug distribution rounds for Trachoma between 2015-2021**

**Facial cleanliness and Environmental improvement:** Facial cleanliness and environmental improvement have been integrated into the Community Led Total Sanitation (CLTS) programme under the Ministry of Water, Sanitation and Environmental Protection. In the Southern Province of Zambia, the super school of five programme targeting children in lower primary schools aimed at enhancing face and hand washing behaviour was implemented in five districts namely Chikankata, Mazabuka, Monze, Livingstone and Kazungula. The activities were integrated into the School Health and Nutrition (SHN) program.

**Monitoring and evaluation:** Following implementation of the SAFE strategy, 24 districts have since reached elimination while 18 have to surveillance following successful elimination of trachoma at impact survey. The 18 districts will conduct surveillance surveys in 2023 and 2024.





*Figure 16: Map of Zambia showing trachoma endemic districts in June 2022*

The elimination threshold for active trachoma (infectious stage of trachoma), is a prevalence of less than 5% in children aged 1 to 9 years in an evaluation unit (usually defined as a district); whereas the elimination threshold for trichiasis (in turned eye lashes that rub the cornea and eventually lead to blindness if not treated), is less than 0.2% in persons aged 15 years and older. Zambia is expected to reach elimination by the year 2026 (Figure 16) and currently MDA for trachoma has been stopped in 40 districts. To get to elimination of trachoma by 2026, the following needs to be done;

- a. Provision of trichiasis surgeries in 20 districts
- b. Integrate F&E behaviour change communications within Zambia's health education and health promotion platforms for sustained nationwide delivery
- c. Advocate for improved sanitation and water supply through the Ministry of Water, Sanitation and Environmental Protection, Ministry of Local Government, especially for Western Province.
- d. Conduct impact and surveillance surveys to confirm elimination

A summary of the current activities targeted towards the Preventive chemotherapy NTDs described in the preceding sections is provided in Table 8 below.

**Table 9: Summary of interventions for the PC amenable NTDs**

NTD	Date programme started	Total districts targeted to date	No. of districts covered (geographical coverage)	Total population in target district	No. (%) covered	Key strategies used	Key partners
LF	2003	96	96 (100%)	12,810,245	100%	MDA,	WHO
SCH	2005	103	100%	8,756,373	8,756,373 (100%)	MDA	WHO
STH	2013	47	72%	1,660,486	100%	MDA	WHO
TRA	2012	64	74%	6,639,680	4,997,248	MDA, surgery	ITI/LIAZ

## Case Management (CM) Neglected Tropical Diseases

### Human African Trypanosomiasis

Human African Trypanosomiasis (HAT) commonly referred to as sleeping sickness is one of the Neglected Tropical Diseases in Zambia targeted for elimination as a public health problem. Human African Trypanosomiasis is caused by *Trypanosoma brucei gambiense* (Gambian sleeping sickness) and *T.b. rhodesiense* (Rhodesian form of sleeping sickness). The Gambian form of sleeping sickness is chronic while the Rhodesian one is acute. HAT is transmitted through the bite of an infected tsetse fly (Genus: Glossina). In Zambia, the acute form caused by *Trypanosoma brucei rhodesiense* is experienced in communities that live in or near National Parks and Game Management Areas. It has been earmarked for elimination as a public health problem defined as <1 case/10000 people/year in each health district of the country over the previous five years period.

**Table 10: Number of Human African Trypanosomiasis cases reported in Zambia between 2010-2021**

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Cases	8	3	6	6	12	8	2	3	5	14	6	2

### Onchocerciasis

Onchocerciasis is caused by a nematode parasite, *Onchocerca volvulus*, and transmitted by bites of Simulium blackflies which breed near fast-flowing rivers. In humans, thousands of microfilariae (immature worms) migrate to the skin and eyes where they cause pathology. Historically, much research was devoted to the serious effect of blindness, from which the disease earns its alternative name of 'river blindness'. Zambia has not been participating in the global onchocerciasis programs which have been taking place in the affected countries, including some of its neighbors (Democratic Republic of Congo, Angola, Malawi, Mozambique and Tanzania), for over four decades now. This has been due to the fact that Zambia has been considered

to be non-endemic to the disease. Information on past studies on onchocerciasis in Zambia is scanty. Global control and elimination programs of human onchocerciasis are nearing the end. It is prudent that Zambia ascertains the presence or absence of the disease thereby minimizing the risk of Zambia being a source of new onchocerciasis infections for the region. Mapping of Human Onchocerciasis will be particularly done in the border areas with countries endemic to the disease. The results of the Mapping will be availed for use in the decision making on the disease together with the Ministry of Health.

## Leprosy

Leprosy is a chronic infectious disease of the skin and nerves usually presenting with skin lesions and nerve enlargement. The condition is caused by *Mycobacterium leprae*. The mode of transmission is uncertain but is believed to be spread by droplet inhalation or ingestion of infected fluids through sneezing or coughing. The disease mainly presents with hypopigmented skin lesions with definite loss of sensation, enlarged or tender peripheral nerves at the site of predilections. Leprosy is a special public health problem, owing to the permanent disabilities it causes as well as social consequences such as discrimination and stigma.

Leprosy which was eliminated in Zambia after the prevalence had fallen from 2.73/10,000 in 1991 to 0.67/10,000 in 2000. However, the World data atlas has revealed that the leprosy cases for Zambia was 206 in 2019.

## Taeniasis/cysticercosis

Human (neuro) cysticercosis, an infection caused by the metacestode larval stage of the pork tapeworm *Taenia solium*, is a serious but neglected zoonotic disease and a major public health problem in many developing countries, including Zambia. It is an emerging disease with serious public health and veterinary health concerns. Humans are the definitive hosts harboring the adult tapeworm (leading to taeniasis). Carriers of the tapeworm shed eggs into the environment that are infective not only to the pig intermediate host (leading to porcine cysticercosis) but also to humans who then act as an accidental intermediate host leading to human cysticercosis. When the larval stages invade the nervous system, they cause neurocysticercosis (NCC), which is the most important parasitic disease affecting the nervous system and contribute to epilepsy cases in endemic areas. In terms of Disability Adjusted Life Years (DALYs), the global burden of epilepsy is estimated at 7.8 million DALYs with 6.5 million of these occurring in *T. solium* endemic regions of the world. There is evidence to suggest that cysticercosis could be endemic in Zambia. Cysticercosis prevalence has been reported to range from 5.8% to 14.5%.

## Snake bites.

Snakebite envenoming was formally listed as a high priority NTD in June 2017 by WHO and in May 2019 the WHO Strategic Road map on snakebite envenoming was launched. Following the launch of the Strategic Roadmap, there is need to undertake baseline survey to establish the magnitude of the problem that will form the basis for a comprehensive strategic plan for Snakebite envenoming in Zambia. This is on account that the Ministry of Health through the HMIS has been recording cases of snake bites across all the districts

in Zambia which have not been validated. Validation of these cases will assist in understanding how Zambia will contribute to the global goals that seek a 50% reduction in mortality and disabilities caused by snakebite envenoming by 2030 using four strategic objectives of: Empower and engage the community, ensure safe, effective treatment, strengthen health systems and increase partnerships, coordination and resources.

## Rabies

Rabies is one of the major public health problems mostly affecting developing countries in Africa and Asia where 99.9% of all rabies related human deaths are recorded each year (Twabela et al., 2016). It is caused by RNA virus of the Rhabdoviridae family from the genus *Lyssavirus*. Rabies is transmissible between all warm-blooded species such as dogs, cats, cattle, wolves, foxes, jackals, bats. It is transmitted by saliva through bites and scratches of infected animals. Domestic dogs are responsible for the transmission of most of the human rabies cases with over 90% of the rabies cases being transmitted via dog bites. Following bites, the virus invades the central nervous system and death is mainly due to respiratory failure or cardiac arrest. The disease is fatal if not treated and more fatal once signs of encephalitis appear. In Zambia, rabies is regarded as one of the endemic scheduled or notifiable disease. Dogs are important reservoirs of rabies, that kills thousands of people in Asia and Africa annually (Chidumayo, 2018). There are indications that rabies is endemic in all the provinces in the country where an approximately 15,000 dog bites are reported annually.

### 1.4.3. Performance of other programmes that are closely related to NTD programmes

#### Vector control

Lymphatic filariasis, Human African Trypanosomiasis and schistosomiasis are transmitted by vectors. These vectors are mosquitoes (*Anopheles* mosquitoes) for LF, Tsetse fly (*Glossina morsitans*) for HAT and snails (*Bulinus* spp. or *Biomphalaria* spp.) for schistosomiasis. Vector control interventions may be similar for different or vary depending on how they manifest in a patient or communities. Further, they could also be integrated into already existing initiatives, For instance, LF and malaria are caused by similar species of mosquitoes and elimination or eradication of one single type of vector may imply the elimination or eradication of two or more types of diseases. The National Malaria Elimination Programme (NMEP) and the President's Malaria Initiative (PMI) Vector Link Project for example have been conducting malaria control in Zambia through indoor residual spraying (IRS) and the use of insecticide-treated nets (ITN). This is in line with the National Malaria Elimination Strategic Plan (NMESP) 2017-2021, launched in 2017 whose main objective is to move Zambia from malaria control to malaria elimination. Between 2017 and 2019, notable activities done by NMEP include spraying of 634,410 structures in 2017, 579,490 in 2018 and in 2019, 536,983 structures were sprayed.

For ITNs, 80% of Zambians have access to at least one ITN and 65% of households reported having used an ITN the previous night according to Zambia Malaria Indicator Survey (MIS) for 2018. The combination of ITNs and IRS has led to the reduction of malaria prevalence in children from 17% in 2015 to 9% in 2018. It has also been associated with a decline in the occurrence of LF. As such, there is an opportunity for integrated vector control in Zambia as shown in the table below.

**Table 11: Opportunities for integrated vector control for different neglected tropical disease.**

Activity	Mosquitoes		Other Vectors	
			Snails	Tsetse fly
	Lymphatic filariasis	Malaria	Schistosomiasis	Human African Trypanosomiasis
ITN	X	X		
IRS	X	X		
Space Spraying				X
Larviciding	X	X		
Traps				X
Prevention/treatment of breeding sites	X	X	X	

### One-Health

One Health approaches have the potential to play a critical role in the management, control and elimination of NTDs such as HAT, rabies and food-borne zoonoses, which are endemic in Zambia, by promoting the development of collaborative and interdisciplinary strategies that take into account the human-animal-environment interface. These strategies could facilitate the elimination of NTDs among human populations through interruption of transmission, diagnosis and treatment of human and animal cases and the adoption of behaviours that limit contact between humans and disease-causing vectors to inhibit future transmission. One health strategies can be integrated into NTD programmes through veterinary public health measures, disease surveillance, planning processes and social and behaviour change communication. However, despite the potential benefits of using such an approach, its application in NTD control in Zambia has been limited.

### Water Sanitation and Hygiene (WASH)

#### Access to safe and sustainable water sources

**Household level:** According to the 2018 Zambia Demographic and Health Survey (ZDHS), household access to improved water sources stands at 72%. Access to improved water sources is higher in urban areas than rural areas. Only 58% households have access to improved water sources in rural areas while in urban areas, household access is at 92%. Urban households are more likely to have piped water into their dwellings or that of their neighbors while rural water supply is mainly from tube wells, boreholes or dug wells.

**Schools:** According to JMP 2019 report access to basic water services in schools is at 79% with a higher proportion being accessed by Secondary schools (94%) compared to primary schools (76%). The report indicates that 17% of schools lack access to safe water services.

**Health facilities:** According to the JMP 2019, 84 % of health facilities in Zambia have access to an improved source of water. Results reflect that proportion of health facilities with access to safe water is higher in hospitals compared to non-hospitals (clinics and health posts).

### **Access to basic Sanitation**

**Household level:** The 2018 ZDHS reports that 33% of households in the country have access to basic sanitation services. Percentage access to basic sanitation stands at 41% in urban areas and 28% in rural areas. The most common sanitation facilities in urban households are improved or shared toilet facilities whereas rural households are more likely to have unimproved or no facilities and more households in urban areas have improved sanitation facilities compared with rural areas.

**Schools:** Based on the Educational Statistical Bulletin 2016, Ministry of General Education in the JMP 2019 report, proportion of schools with access to basic sanitation in Zambia is 66%.

**Health facilities:** The ZDHS 2018 report indicates that only 23.5% of the Zambian population have access to basic handwashing facilities. Urban areas have a higher proportion of households with access to basic sanitation (36%) as compared to those in rural areas (15%).

### **Existing WASH structures in the country**

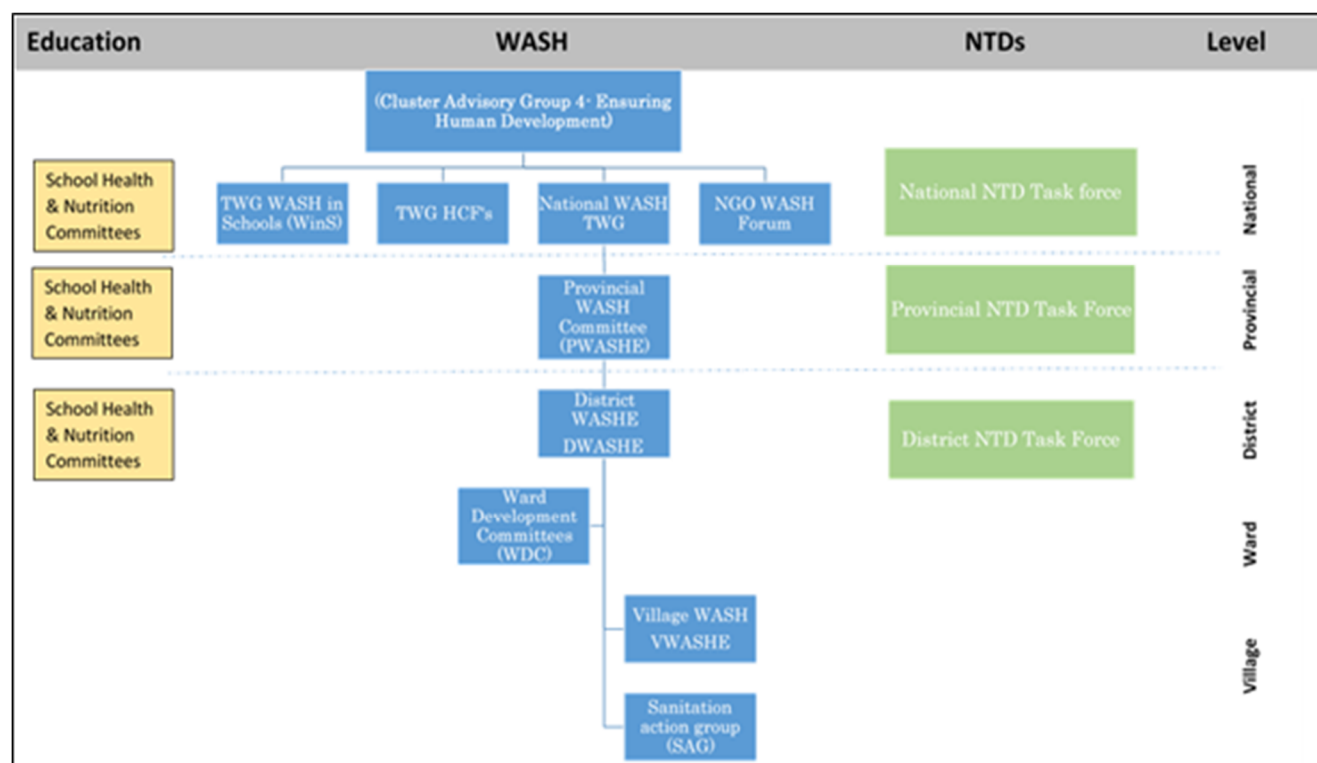
The Government of the republic of Zambia recognizes the critical role of WASH in prevention and control of NTDs as reflected in the National NTD masterplan 2019-2023 which recognizes the need for an integrated approach to control and elimination of NTDs where WASH programming forms part of the key control strategies alongside interventions such as preventive chemotherapy, case management and vector control. Governments continued commitment to intensifying cross cutting approaches in the attainment of NTD elimination goals is reflected in the alignment of national NTD elimination goals to global strategic goals for NTD control and elimination outlined in the 2021-2030 Roadmap which calls for the adoption of cross cutting approaches that bring together actors across multiple sectors for concerted efforts to control and eliminate NTDs.

The policy framework provisions for the implementation of WASH & NTD interventions form a strong basis for integrated NTD/WASH programming. Our Vision 2030 and the Seventh National Development Plan recognize the value of WASH and the importance of the control of communicable diseases. The National Health Policy sets out both WASH and NTD related objectives such as promotion of school health services for neglected tropical diseases and strengthening the provision of adequate safe water supply and appropriate sanitary facilities in urban and rural areas. Other policies and strategic documents include the National Water Supply, Sanitation and Solid Waste Management Policy, the Open Defecation Free Zambia Strategy 2018-2030, the National Health Strategic Plan, the National Urban and Peri-Urban sanitation Strategy 2015-2030 and the National Water, Sanitation and Hygiene (WASH) Communication Strategy 2019–2030.

The programmatic approach to delivery of WASH and NTD interventions has largely been siloed by sector programs with limited coordination between the two sectors. This is largely due to the absence of functional coordination mechanisms to allow for joint planning, implementation, monitoring and evaluation of interventions. Nevertheless, key actors in the WASH sector such as the Ministry of Water Development, Sanitation and Environmental Protection, the Ministry of Local Government and Housing, the Ministry of General Education and UNICEF have been involved in some NTD control initiatives such as the implementation of the SAFE strategy and the roll out of Mass drug administration campaigns in conjunction with the Ministry of Health.

### NTD Coordination structures

**Neglected Tropical Diseases Taskforces:** The NTD taskforces are established at national provincial and district levels. The National level taskforce is chaired by the Ministry of Health and is made up of organizations involved in the implementation of NTDs. Members meet quarterly to review performance and develop action plans. At district and provincial level, the taskforces are instrumental in promoting joint planning and implementation of activities. Membership includes local organizations and relevant line ministries. Below is a layout of the coordination structures for NTDs, WASH and Education sectors



### Performance of the key WASH indicators in the country

#### WASH and NTD intervention integration

The fundamental role of enhanced multisectoral coordination in the attainment of WASH and NTD control targets is well articulated in core national and global strategic documents. Zambia is cognizant of the need



to move away from siloed programmatic approaches and to adopt holistic cross cutting approaches in order to realize effective integration of WASH and NTD interventions.

The Government through the Ministry of Health recognizes the of challenge of limited coordination across the WASH and NTD sectors which results from various factors including but not limited to the absence of clear guidelines for the identification of linkages across the sectors and failure to leverage existing institutional and policy frameworks to promote joint collaboration and coordination in implementation of NTD control initiatives. In order to address this gap, the Ministry of Health embarked on the development and establishment of a coordination mechanism and communication strategy for WASH and NTDs that will foster joint action across the two sectors that will contribute to actualizing the benefits of strengthened coordination of the two sectors.

## Health Promotion

Health promotion in Zambia has evolved over the years. It is coordinated by the Department of Health Promotion Environment and Social Determinants to escalate health promotion efforts at all levels from national to the community level through strategic collaboration with other departments and Technical Working Groups (TWGs) from multiple sectors. Health promotion is cross-cutting; therefore, it is conducted in all health programs which include NTDs. A variety of actors have roles and responsibilities for health promotion at the national, provincial and district/community level. At national level, various documents have been developed to guide the provision of health promotion activities. Some of the documents are Health Promotion Communication Strategy and Health Promoting Schools Communication Strategy.

**Guiding principles of Health promotion:** The guiding principles that act as a vehicle to effective communication are, building healthy public policies, creating supportive environment, strengthen community action, developing personal skills and re-orient health services.

**Focus of Health promotion:** The focus is to promote good health and prevent the spread of infection at community level by empowering the community with information to help them make informed decision on their health. Conducting community engage meetings as a means of sensitising communities on the provision and benefit of the health services. In order to effectively empower people with information on NTD program there is need to have a coordination mechanism within and outside Ministry of Health.

**Social Behavioural Change Communication:** Social Behavioural Change Communication (SBCC) efforts advance and sustain positive behavioural through the use of various methods. SBCC works at one or more levels: the behavior or action of an individual, collective actions taken by groups, social and cultural structures, and the enabling environment. It contains three key elements:

- Communication—target audience’s needs and preferences addressed in appropriate channels and themes



- Behaviour change—improving and protecting health outcomes by making health actions easier, more feasible, and closer to the ideal
- Social change—increasing the accuracy of the definitions of key issues, individual participation, and engagement, as well as the policies, gender norms, and interpersonal relations relevant to the health outcome

To have an increased participation of all individuals in creating social change for control over and improvement of their health. Effective SBCC remains an important strategy for educating and informing millions of Zambians about the risk of exposure to NTDs, the benefits of adhering to preventive measures and the need to access health service early. The strategy will guide on the provision of Risk Communication and Community Engagement specifically for NTDs. The gaps in Social and Behaviour change communication for NTDs

- There is no NTD communication strategy which should guide the implementation of SBCC activities at all levels of care, so there is need to develop the document.
- There is minimum collaboration between Health Promotion and NTD units therefore there is need to strengthen the collaboration.

### **Behavior Change & cross cutting themes**

The absence of an NTD Communication strategy to provide for mechanisms for the integration of cross cutting sectors such as WASH and vector control creates a challenge in the effective delivery of behavior change interventions. The development of an integrated behavior changes communication strategy for NTDs, WASH and vector control will promote coordination among the sectors and enhance joint planning, implementation and monitoring and evaluation of behavior change initiatives. The most common avenues utilized by MoH to raise awareness and promote participation of targeted audiences on NTD programs such as Mass Drug administration's include community and social mobilizations, mass media primarily TV/Radio Spots where officials create disease awareness, importance of taking part in the MDA and highlight prevention and treatment measures including IEC materials, public announcements, Drama. There is need for development of new IEC materials with integrated messages and to expand communication approaches to utilize social media platforms. Participatory Behavior change approaches used in WASH programming such as CLTS, School led total sanitation and Participatory Hygiene and Sanitation Transformation (PHAST) are vehicles on which integration of NTDs can be done.

Behaviour change communication for WASH is anchored on the Zambia National Water, Sanitation and Hygiene (WASH) Communication Strategy 2019–2030 which aims to improve knowledge, perceptions, transform social norms and change behaviors in order for all Zambians to attain better quality of life through sustainable and equitable access and utilization of WASH services by 2030 through; advocacy, public outreach, community mobilization, social marketing and capacity building approaches.

## Pharmacovigilance

Pharmacovigilance relates to the detection, assessment, understanding and prevention of adverse effects or any other drugs related problem. The Zambian Government has recognized this need and under the Medicine and Allied Substances Act (No.3) of 2013 of the Laws of Zambia, a statutory body called the Zambia Medicines Regulatory Authority (ZAMRA) was established. In 2006, ZAMRA established the National Pharmacovigilance unit to be responsible for day-to-day spearheading and coordination of pharmacovigilance (safety-monitoring) activities. This was done with objective of reducing, morbidity and mortality caused by drug use through early detection, management and prevention of ADRS. In its quest to decentralize and help bring services closer to the people, ZAMRA has opened up regional offices in Northern, Southern, Eastern, North-Western and Copper Belt provinces whose functions among others include post-marketing surveillance and adverse drug reaction monitoring.

By Law, the Zambia Medicines Regulatory authority is mandated to manage pharmacovigilance activities in Zambia. With this mandate, the NPVU has established the following goals to support the pharmacovigilance system, these include:

- Reducing risks of morbidity and mortality due to drug use by early detection of drug safety problems;
- Improvement of patient care and safety in relation to the use of medicines;
- Contributing to risk-benefit analysis of medicines and promote safe, rational and cost-effective use of medicines;
- Promotion of understanding, education and training in pharmacovigilance and provision of effective communication with health professionals and the general public.

Zambia Medicines Regulatory Authority (ZAMRA) through NPVU has introduced a mobile phone application for reporting Adverse Drug Reaction called Med Safety on play store which is available on android and iOS devices and can be used to submit a report to NPVU. Other forms of reporting include submission of hard copy ADR forms to the nearest health facility, via email to ZAMRA, telephone or using the online e-reporting form on ZAMRA website. Working closely with the Expert Review Panel, the NPVU is responsible for the review, categorization and follow up of reports. The NPVU through the Expert Advisory committee advises the ZAMRA Board on matters related to pharmacovigilance. In addition, they serve as a repository for any research findings relevant to pharmacovigilance. Other Specific functions include:

- a. Collection, collation, review and evaluation of all ADR, product quality problem and medication error reports received.
- b. Maintenance of databases for ADRs, product quality problems and medication errors.
- c. Provision of feedback to reporters.
- d. Transmission of the assessed reports to the global database hosted at WHO-Uppsala Monitoring Centre (UMC).
- e. Identification and investigation of signals.
- f. Communication of relevant safety information to the national authorities, healthcare workers, pharmaceutical companies and other relevant stakeholders.
- g. Advise healthcare providers and consumers on medicines safety issues.
- h. Information sharing at regional and global levels.

- i. Assess the regulatory information relating to safety in order to determine what action, if necessary, needs to be taken to improve safe use of medical products.
- j. Development/updating of Information Education Communication (IEC) Materials, guidelines and training manuals

Below the structure of the pharmacovigilance system around ZAMRA.

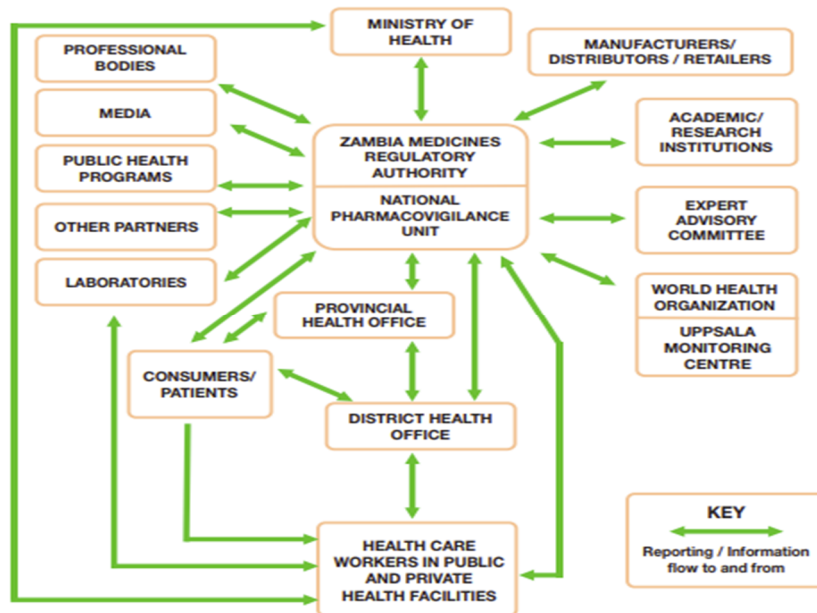


Table 12: Summary of intervention information on existing NTD programmes

Endemic NTD	Date programme started	No. of districts targeted	No. of districts remaining to be mapped or assessed for endemicity status	Total population in target districts	No. (%) Covered	No. (%) districts with required number of effective treatment rounds	No. (%) districts that have stopped MDA	Key strategies used	Key partners
LF		96	0	12,810,245	100%	0	96(100%)	MDA, MMDP, WASH	WHO
SCH		114	0	8,756,373	8,756,373(100%)	114	0	MDA, MMDP, WASH	WHO
STH		116	0	1,660,486	100%	116	0	MDA, MMDP, WASH	WHO
TRA		56	0	6,639,680	4,997,24	47	47 (100%)	MDA, MMDP, WASH	Sightsavers, Lions Aid Zambia
Leprosy		73	0					MDA, WASH, Vector control	WHO
HAT		12	0		0	12	0	One Health Approach	WHO
Taeniasis/Cysticercosis		116	116	18,650,627	0	116	0	Mapping, MDA	WHO
Rabies		103	0					One Health Approach	WHO
Echinococcosis		116	116	18,650,627	0	116	0	Mapping, case management	WHO
Dengue and chikungunya		116	116	18,650,627	0	116	0	MDA	WHO
Snake bite envenoming		116	116	18,650,627	0	116	0	Mapping, case management	WHO

Leishmaniasis visceral		116	116	18,650,627	0	116	0	Mapping, case management	WHO
Leishmaniasis Cutaneous		116	116	18,650,627	0	116	0	Mapping, case management	WHO
Onchocerciasis		116	116	18,650,627	0	116	0	Mapping, MDA	WHO
Foodborne trematodiasis		116	116	18,650,627	0	116	0	Mapping, MDA	WHO
Mycetoma, chromoblastomycoses and other deep mycoses		116	116	18,650,627	0	116	0	Mapping, MDA	

National target	Disease	Objective	Year	Strategy
Targeted for elimination as a public Health problem	Lymphatic filariasis	To reach elimination threshold	2026	Mass Drug Administration, Morbidity Management and Disability Prevention and surveillance WASH, Community awareness
	Leprosy	To sustain elimination status	2025	Active surveillance, contact tracing, case management, rehabilitation. WASH, Promote good hygiene, Community awareness
	Human African trypanosomiasis (rhodesiense)	To interrupt transmission of HAT	2025	One health approach to strengthen surveillance, diagnosis, case management, Community awareness and vector control.
	Leishmaniasis (visceral)	To establish endemicity of Leishmaniasis in the country	2030	Mapping, case management and Community awareness
	Schistosomiasis	To interrupt transmission of Schistosomiasis	2030	Mass Drug Administration, MMDP, WASH, Vector control and Community awareness
	Soil-transmitted helminthiasis	To interrupt transmission of Soil-transmitted helminthiasis	2030	
	Trachoma	To reach elimination threshold	2026	
	Rabies	To achieve zero human deaths from Rabies	2030	Intensify one health approach to disease management and Community awareness
Targeted for control	Snakebite envenoming	To reduce incidence of snakebite by achieving reduction of mortality by 50%	2030	Baseline survey, Case management and rehabilitation, Health worker training, Community awareness
	Leishmaniasis (cutaneous)	To establish endemicity of Leishmaniasis in the country	2030	Mapping, case management and Community awareness
	Echinococcosis	To establish endemicity of Leishmaniasis in the country		
	Taeniasis and cysticercosis	To establish magnitude of endemicity	2030	Mapping, Mass Drug Administration, Community awareness and conducting targeted interventions in areas of high endemicity.
	Foodborne trematodiasis			
	Onchocerciasis			
	Dengue and chikungunya			
	Mycetoma, chromoblastomycosis and other deep mycoses			

## Section 1.5 Building on NTD Programme Strengths

### 1.5.1. Opportunities and Threats

**Table 13: Opportunities and threats to current programme approaches**

Opportunities	Threats
Existence of effective policy dialogue and advocacy to mobilize support for interventions in national and district health care delivery plans	Limited Involvement of communities at risk and affected communities in programme design
Existence of adequate international funding which ensures sustainability of programmes	Limited existence of collaborative mechanisms among stakeholders across different levels and sectors with clear accountability to ensure an effective, synergetic approach to delivering interventions
Availability of clearly defined endpoints and operational approach to achieve and sustain elimination threshold status.	Lack of point-of-care diagnostics usable at community level and in low-resource settings
Availability of technical guidelines, e.g. for validation or verification	Inconsistence in funding leading to delay in conducting surveys to establish program performance
Effective, affordable interventions for prevention, treatment, case management, rehabilitation and care provided by WHO and ESPEN	
Understanding of the non-target effects of interventions	
Availability of Publications and guidelines for thorough understanding of disease epidemiology and pathology	

### 1.5.2. Strengths and weaknesses

**Table 14: Strengths and weakness of current programme approaches**

Strength	Weakness
Availability of skilled staff across levels of care	Inconsistencies in funding leading to delays in conducting surveys to establish program performance
Existence of laboratory capacity and network to support NTD programmes	Coordination mechanisms to strengthen One Health approach are not yet fully established
Presence of robust health systems and primary health care infrastructure for delivering NTD interventions in models of integrated patient care	Limited coordination in planning and implementation for NTDs at all levels
Availability of efficient supply chain for effective allocation and distribution of medicines	Inadequate data collection tools for NTDs to feed into the HMIS
Adequate supply of affordable, quality-assured medicines	Limited representation of different sectors in NTD taskforce inhibiting the effectiveness of NTD planning and implementation

Existence of NTDs indicators in the HMIS	Lack of developed BCC materials to educate and inform endemic communities, e.g. on behavioural changes, MDA scheduling, treatment
Availability of structures and regulations to support safe administration of treatment, diligent monitoring and response	Lack of point-of-care diagnostics usable at community level and in low-resource settings
Existence of country governance and commitment for programme management and effective delivery at all levels	Limited involvement of communities at risk and affected communities in programme design
	Challenges in servicing hard-to-reach and marginalized population due to poor road networks and seasonal factors
	Non integration of the MMDP and rehabilitative services into the mainstream health care system

### 1.5.3 Gaps and Priorities

**Table 15: Potential gaps and priorities for programmatic action**

	Gaps	Priorities
Planning,	<ul style="list-style-type: none"> <li>• Coordination mechanisms to strengthen One Health approach are not yet fully established</li> <li>• Limited representation of different sectors in NTD taskforce inhibiting the effectiveness of NTD planning and implementation</li> <li>• Inconsistencies in funding leading to delays in conducting surveys to establish program performance</li> <li>• Non integration of the MMDP and rehabilitative services into the mainstream health care system</li> </ul>	<ul style="list-style-type: none"> <li>• Development, adoption and distribution of MMDP tools and plans for case management of NTDs.</li> <li>• Development of joint action plans for NTD programming.</li> </ul>
Partnership, Coordination and Management	<ul style="list-style-type: none"> <li>• Limited coordination in planning and implementation for NTDs at all levels</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthening of the multisectoral NTD taskforce.</li> </ul>



Implementation of interventions	<ul style="list-style-type: none"> <li>• Lack of developed BCC materials to educate and inform endemic communities, e.g. on behavioural changes, MDA scheduling, treatment</li> <li>• Lack of point-of-care diagnostics usable at community level and in low-resource settings</li> <li>• Limited involvement of communities at risk and affected communities in programme design</li> <li>• Challenges in servicing hard-to-reach and marginalized population due to poor road networks and seasonal factors</li> </ul>	<ul style="list-style-type: none"> <li>• Develop BCC materials for all NTDs</li> <li>• Integrate people centered NTD services into the mainstream Health System</li> <li>• Establishing a grievance mechanism for all NTDs</li> </ul>
Surveillance (M&E)	<ul style="list-style-type: none"> <li>• Inadequate data collection tools for NTDs to feed into the HMIS</li> </ul>	<ul style="list-style-type: none"> <li>• Develop data collection tools for NTDs to feed into the HMIS</li> </ul>

## PART 2: STRATEGIC AGENDA: PURPOSE & GOALS

This NTD Master Plan 2022-2026 will act as a guide for Zambia's progress towards the control and elimination of NTDs by 2030 and sustainment of disease elimination status thereafter. It is aligned to the WHO NTD Global Roadmap 2021-2030.

### Section 2.1 NTD Programme Vision and Mission

**Vision:** To have an NTD free Zambia

**Mission:** To accelerate the elimination of NTDs as a public health problem in Zambia.

### Section 2.2 Strategic Goals, Milestones and Targets

#### 2.2.1 Targets

##### Overarching targets

By 2026 Zambia sets out to achieve the following overarching targets:-

- i. 90% reduction in people requiring interventions against neglected tropical diseases
- ii. 75% reduction in the disability adjusted life years related to neglected tropical diseases.
- iii. Elimination of at least one neglected tropical disease (LF and Trachoma).

##### Cross cutting targets

The intended cross cutting targets that will guide overall national programme includes:-

**Table 16: Neglected Tropical Disease Programme's cross cutting targets.**

Area	Target
Integrated approaches	75% reduction in the number of deaths from vector borne neglected tropical diseases to achieve WHO's global vector control response goal.
	75% integrated treatment coverage index for preventive chemotherapy.
	Adoption and implementation of integrated skin neglected tropical disease strategy.
Multisectoral coordination	100% access to at least basic water supply, sanitation and hygiene in areas endemic for neglected tropical diseases to achieve targets 6.1 and 6.2 of Sustainable Development Goals
	Neglected tropical diseases integrated and maintained in national health strategies and plans as well as Education, WASH & Vector control related policy documents.

	90% of the populations at risk protected against catastrophic out of pocket health expenditure due to neglected tropical diseases to achieve target 3.8 of Sustainable Development Goals.
Universal Health Coverage	Inclusion of Neglected tropical diseases interventions in the package of essential services and allocation of budgets for them.
	Presence of guidelines for management of neglected tropical disease related disabilities within national health systems.
Country ownership	Reporting on endemic neglected tropical disease
	Collection and reporting data on neglected tropical diseases disaggregated by gender.

## Disease Specific targets

**Table 17: Neglected Tropical Disease Specific targets**

Disease	Indicator	2022	2023	2024	2025	2026
<b>Targeted for elimination (interruption of transmission)</b>						
Human African trypanosomiasis (gambiense) Number of countries verified for interruption of transmission	Number of districts verified for interruption of transmission	0	2(16%)	4(33%)	6(50%)	8 (66%)
Leprosy	Number of districts with sustaining elimination status	100%	100%	100%	100%	100%
<b>Targeted for elimination as a public health problem</b>						
Human African trypanosomiasis (rhodesiense)	Number of districts validated for elimination as a public health problem (defined as infection sustained below transmission assessment survey thresholds for at least four years after stopping mass drug administration; availability of essential package of care in all areas of known patients)	0	2(16%)	4(33%)	6(50%)	8 (66%)
Lymphatic filariasis	Number of districts validated for elimination as a public health problem (defined as	100%	100%	100%	100%	100%

	infection sustained below transmission assessment survey thresholds for at least four years after stopping mass drug administration; availability of essential package of care in all areas of known patients)					
Rabies	Number of districts having achieved zero human deaths from rabies	0% No baseline data	17 (20%)	34 (40%)	52 (60%)	69 (80%)
Schistosomiasis	Number of districts validated for elimination as a public health problem (currently defined as <1% proportion of heavy intensity schistosomiasis infections)	0	1 (1%)	2(2%)	3(3%)	4(4%)
Soil-transmitted helminthiasis	Number of districts validated for elimination as a public health problem (defined as <2% proportion of soil-transmitted helminth infections of moderate and heavy intensity due to <i>Ascaris lumbricoides</i> , <i>Trichuris trichuria</i> , <i>Necator americanus</i> and <i>Ancylostoma duodenale</i> )	0	1 (1%)	2(2%)	3(3%)	4(4%)
Trachoma	Number of districts validated for elimination as a public health problem (defined as (i) a prevalence of trachomatous trichiasis “unknown to the health system” of <0.2% in ≥15-year-olds in each formerly endemic district; (ii) a prevalence of trachomatous inflammation—follicular	24 (43%)	41(73%)	49(88%)	56(100%)	

	in children aged 1–9 years of <5% in each formerly endemic district; and (iii) written evidence that the health system is able to identify and manage incident cases of trachomatous trichiasis, using defined strategies, with evidence of appropriate financial resources to implement those strategies)					
Mycetoma, chromoblastomycosis and other deep mycoses	Number of districts in which mycetoma, chromoblastomycosis sporotrichosis and/or paracoccidioidomycosis are included in national control programmes and surveillance systems	116 (100%)	116 (100%)	116 (100%)	116 (100%)	116 (100%)
Scabies and other ectoparasitoses	Number of districts having incorporated scabies management in the universal health coverage package of care	116 (100%)	116 (100%)	116 (100%)	116 (100%)	116 (100%)
Snakebite envenoming	Number of districts having achieved reduction of mortality by 50%	0 (0%) No baseline data	17(20%)	34(40%)	54(60%)	69 (80%)
Taeniasis and cysticercosis	Number of districts with intensified control in hyperendemic areas	0%	2 (2%)	18(20%)	43 (40%)	53(60%)

## 2.2.2. National Milestones for targeted Preventive Chemotherapy amenable NTDs

**Table 18.1: Lymphatic filariasis elimination milestones**

Indicators	2021	2022	2023	2024	2025	2026
1. Complete mapping of LF and determination of LF endemic areas and the populations at risk	96(100%)					
2. Implementation of LF MDA having begun in IUs requiring LF MDA	96(100%)					
3. Geographical coverage of LF MDAs	96(100%)					
4. Districts (IUs) with evidence of LF transmission reduced through adequate MDAs	96(100%)					
5. Number of IUs that have conducted more than 5 rounds of MDA with coverage more than 65%	96(100%)					
6. Number of IUs that have conducted Pre-TAS activities after at least 5 rounds of MDA	0	80(83%)	16(100%)			
7. Number of IUs that have conducted and passed at least 1 TAS activities	0	0	80(83%)	16(100%)		
8. Number of IUs that have conducted and passed at least 2TAS activities	0	0	0	80(83%)	16(100%)	
9. Number of IUs that have started passive surveillance and vector control activities	0	0	80(83%)	96(100%)	96(100%)	96(100%)
10. Presentation of the dossier for verification of absence of LF transmission	0%	0%	0%	0%	0%	0%
11. Proportion and number of IUs where there is full coverage of morbidity management services and access to basic care	0%	0%	48(50%)	96(100%)	96(100%)	96(100%)
12. Proportion and number of IUs where hydrocele cases have benefitted from appropriate surgery	0%	0%	48(50%)	96(100%)	96(100%)	96(100%)

**Table 18.2: Schistosomiasis elimination milestones**

Indicators	2021	2022	2023	2024	2025	2026
1. Complete mapping of SCH and determination of areas above intervention thresholds and the endemic populations	114(100%)					

2. Implementation of school-based/community-based treatments having begun in endemic districts.	114(100%)					
3. Achieving 100% geographical coverage of MDA in SCH endemic districts	114(100%)					
4. Number of IUs that have conducted 3-5 years of consecutive treatments with coverage <b>more than 75%</b>	0%	0%	55%	75%	85%	100%
5. First impact assessment activities conducted in at least 50% of SCH endemic districts after at least 3 years of consecutive treatments	0%	100%	100%	100%	100%	100%
6. Number of endemic districts achieving moderate morbidity control	0%	0%	100%	100%	100%	100%
7. Number of endemic districts achieving advanced morbidity control	0%	0%	100%	100%	100%	100%
8. Number of endemic districts achieving elimination of schistosomiasis as a public health problem	0%	0%	10%	50%	75%	100%

**Table 18.3. Soil Transmitted Helminths elimination milestones**

Indicators	2021	2022	2023	2024	2025	2026
1. Complete mapping of STH and determination of areas above intervention thresholds and the endemic populations	116(100%)					
2. Implementation of school-based/community-based treatments having begun in endemic districts.	116(100%)					
3. Achieving 100% geographical coverage of MDA in STH endemic districts	116(100%)					
4. Number of IUs that have conducted 3-5 years of consecutive treatments with coverage <b>more than 75%</b>	57(88%)					
5. First impact assessment activities conducted in at least 50% of STH endemic districts after at least 3 years of consecutive treatments	0	0%	116(100%)			
6. Number of endemic districts achieving moderate morbidity control	0%	0%	100%	100%	100%	100%
7. Number of endemic districts achieving advanced morbidity control	0%	0%	100%	100%	100%	100%

**Table 18.4. Trachoma elimination milestones**

Indicators	2021	2022	2023	2024	2025	2026
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1. Completed mapping of trachoma and determination of areas above intervention thresholds and the endemic populations	56(100%)					
2. . Implementation of school-based/community-based treatments having begun in endemic districts.	56(100%)					
3. Achieving 100% geographical coverage of MDA in trachoma endemic districts	47(100%)	47(100%)				
4. Number of IUs that have conducted 3-5 years of consecutive treatments with coverage of more than 75%	15(100%)	7(100%)				
5. . First impact assessment activities conducted in at least 50% of trachoma endemic districts after at least 3 years of consecutive treatments	16(100%)					
6. Started passive surveillance in at least 75% of IUs	17(30%)	42 (74%)		60%	75%	100%
7. Presentation of the dossier for verification of absence of Trachoma transmission	0%	0%	0%	0%	0%	1(100%)
8. Proportion and number of target districts where there is full coverage of case management services	7(26%)	13(48%)	21(80%)	27(100%)	100%	100%



## Case management NTDs

**Table 18.5. Milestones for NTDs targeted through intensified and innovative disease management.**

Indicators	2021 (Base)	2022	2023	2024	2025	2026
1. Active case detection in 100% highly endemic districts	40%	50%	70%	80%	90%	100%
2. Passive case detection in 100% of other endemic districts	30%	40%	50%	70%	100%	100%
3. Management of all patients in peripheral health facilities	10%	20%	40%	60%	80%	100%
4. Referral of severe and complicated cases for management at district hospitals and reference centres	100%	100%	100%	100%	100%	100%
5. Achievement 100% SAFE in Trachoma target districts	40%	40%	60%	80%	100%	100%
6. Achievement of 100% treatment coverage in at least 50% of target districts for CM-NTDs targeted for elimination (HATs and Leprosy)	100%	100%	100%	100%	100%	100%
7. Achievement 100% treatment coverage of identified cases for other CM-NTDs	100%	100%	100%	100%	100%	100%
8. Started sentinel surveillance in at least 50% of target districts for CM-NTDs	100%	100%	100%	100%	100%	100%
9. Target districts that sustained elimination of leprosy and achieving elimination of HATS	100%	100%	100%	100%	100%	100%

## PHASE

**Table 18.6. PHASE Milestones**

Indicators	2021 (Base)	2022	2023	2024	2025	2026
1. Proportion and number of endemic districts with adequate access to clean water for SCH Control	50%	60%	70%	80%	90%	100%
2. Proportion and number of endemic districts with adequate access to sanitation manipulation for SCH Control	50%	60%	70%	80%	90%	100%
3. Proportion and number of endemic districts with adequate environmental manipulation for SCH Control	50%	60%	70%	80%	90%	100%

4. Proportion and number of endemic districts with adequate access to clean water for STH Control	65%	70%	75%	80%	90%	100%
5. Proportion and number of endemic districts with adequate access to sanitation manipulation for STH Control	65%	70%	75%	80%	90%	100%
6. Proportion and number of endemic districts with adequate environmental manipulation for STH Control	65%	70%	75%	80%	90%	100%

## Section 2.3 Guiding Principles

The guiding principles underpinning the implementation of the Zambia NTD master Plan 2022-2026 include: -

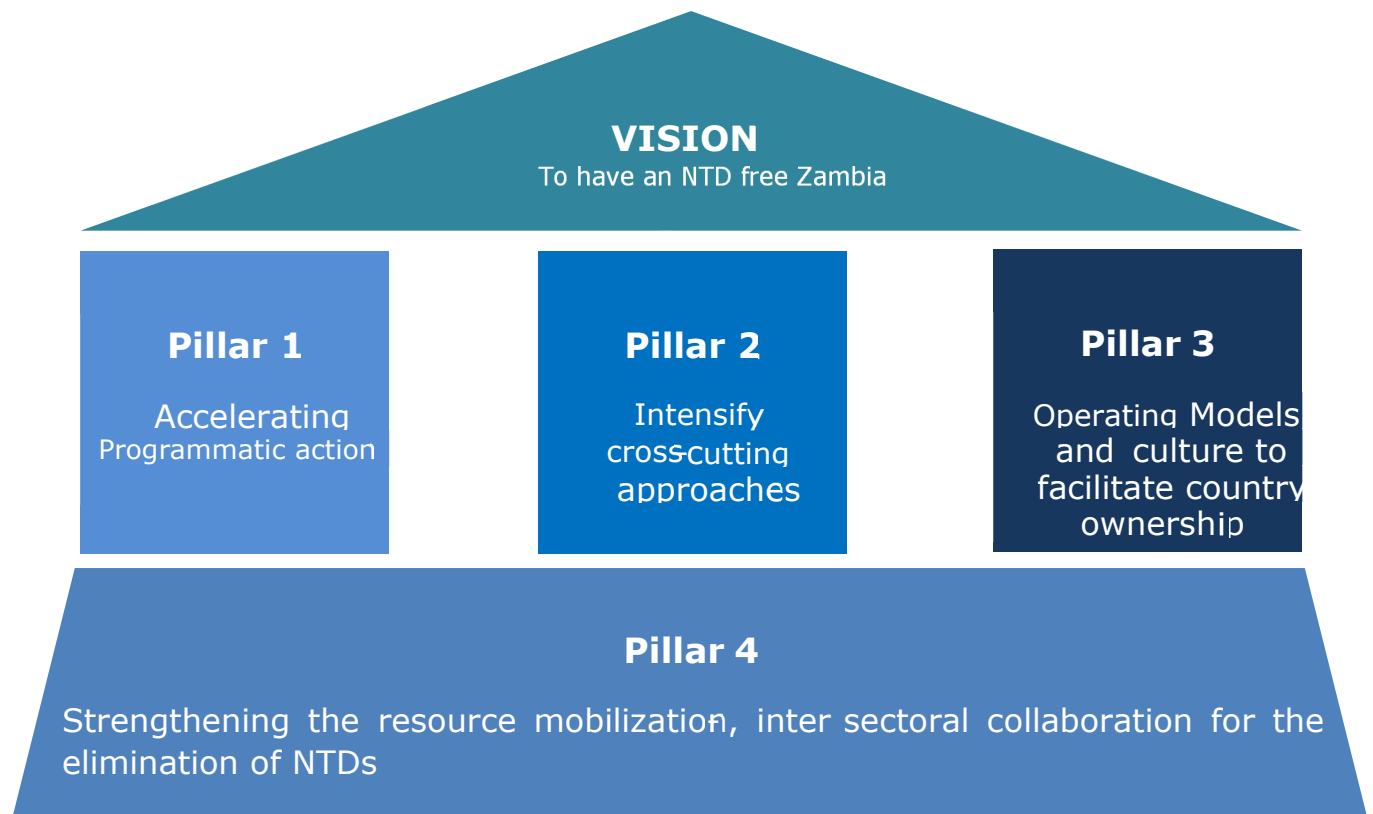
**Table 19: Guiding principles**

Guiding principles
<ul style="list-style-type: none"> <li>• Promotion of National leadership and country ownership of NTD programmes.</li> <li>• Commitment to collaboration and sharing of resources.</li> <li>• Mutual accountability of national authorities and partners to ensure greater transparency and accountability,</li> <li>• Enhanced Community engagement and participation</li> <li>• Ensuring the safety of communities by: ‘Doing no harm’ while providing health benefits</li> <li>• Universal Access to NTD services to ensure that no one is left behind.</li> </ul>

## Section 2.4 Strategic Pillars and Strategic Objectives

### 2.4.1. Programme strategic pillars

The guiding principles and priorities are based on three strategic pillars:-



## 2.4.2 Strategic priorities

**Table 20: Strategic Priorities for the Elimination of neglected Tropical Diseases in Zambia.**

Strategic Pillar	Strategic Priorities
<b>SP1: Accelerating programmatic action</b>	1. Scale up of integrated preventive chemotherapy to achieve 100% geographic coverage and treatment access for PC-NTDs.
	2. Scale - up integrated case-management-based disease interventions for PC and IDM diseases
	3. Prioritize and strengthen monitoring and evaluation to track progress and decision making towards the 2030 goals
	4. Ensure timely, safe and effective supply chain management of quality assured NTD Medicines and other products up to the last mile
<b>SP2: Intensify cross-cutting approaches</b>	1. Strengthen identified platforms with similar delivery strategies and interventions (MDAs, Skin NTDs, Morbidity management, SBCC, WASH etc) for integrated approaches across NTDs
	2. Mainstream NTD delivery platforms within the national health system
	3. Integrate safety across NTD planning, implementation, and monitoring
<b>SP3: Changing Operating Models and culture to facilitate country ownership</b>	1. Promote and strengthen country ownership and leadership through organizational structures at national and local government with dedicated funding
	2. Empower local government and authorities in social mobilization, risk and crisis communication, behavioural change and building local support for NTD interventions
<b>SP4: Strengthening the Resource Mobilization, Coordination and Inter-sectoral Collaboration for the Elimination of NTDs</b>	1. Promote community involvement and ownership of the program for optimal use of available resources
	2. Promote improved communication and awareness at the community level for a successful elimination of endemic NTDs

## 2.4.2 Programme Strategic Agenda Logic Map

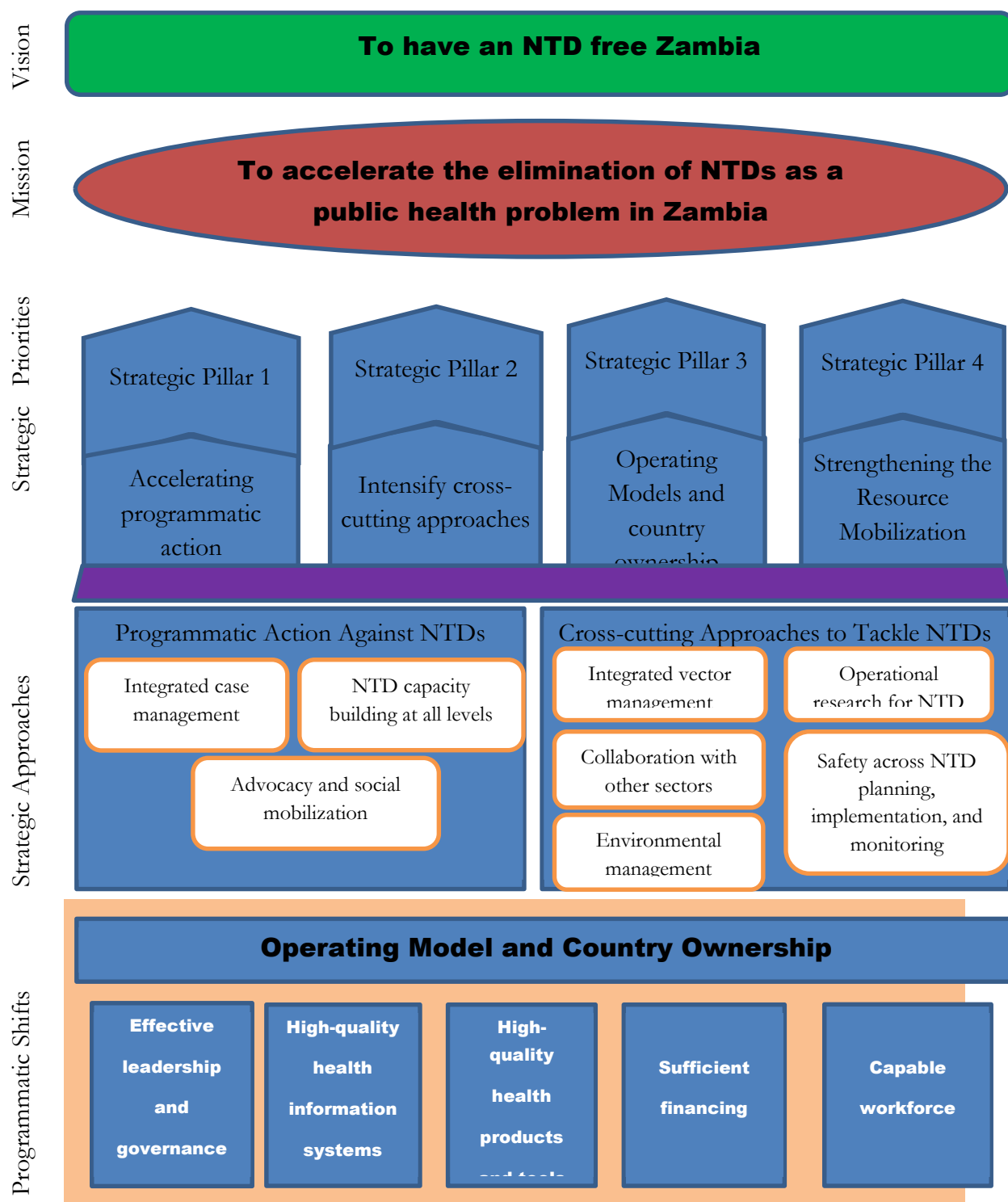


Figure 15. Neglected Tropical Diseases programme logic map.

## PART 3: NTD OPERATIONAL FRAMEWORK

This section describes how the Zambian Health sector will implement the planned activities what the country's capacity needs are, how resources will be mobilized, potential risks addressed, and how programme sustainability will be achieved. At the core of all activities are the three strategic pillars proposed by the 2021- 2030 NTD Global Roadmap; first, an increased focus on accountability for impact by using impact indicators instead of process indicators, as reflected by the targets and milestones in Part II and supporting acceleration of programmatic action; secondly, a move away from siloed, disease-specific programmes by mainstreaming programmes into national health systems and intensifying cross-cutting approaches that are centered on the needs of people and communities: and thirdly, changing operating models and cultures to facilitate greater ownership of programmes at country level.

### Section 3.1 Strategic initiatives and strategic activities

**Table 21: Key strategic priorities and activities under the NTD Masterplan 2022-2026.**

STRATEGIC PILLAR 1 ACCELERATING PROGRAMMATIC ACTION			
Strategic Priorities	Key Activities	Time frame	Resources needed
STRATEGIC PILLAR 1: Accelerating programmatic action			
<b>Strategic Priority 1.1:</b>	<ul style="list-style-type: none"> <li>To provide preventive chemotherapy through MDAs: LF, STH, SCH, Trachoma</li> </ul>	2022-26	Human resources, Finances, vehicles, medication
<b>Strategic Priority 1.2:</b>	<ul style="list-style-type: none"> <li>To develop integrated guidelines in NTD Case management</li> <li>To train health-workers &amp; Community in social mobilization, active case detection and management</li> </ul>	2022-26	Human resources, Finances

<b>Strategic Priority 1.3:</b> <b>To p</b>	To conduct surveys: <ul style="list-style-type: none"> <li>• To map presence /distribution of: Onchocerciasis, Dengue &amp; Chikungunya, Taeniasis/Cysticercosis, Foodborne trematodiasis, Mycetoma, Leishmaniasis, Echinococcosis &amp; Snakebite envenoming</li> <li>• To decide when to stop MDA: Trachoma, STH, LF &amp; SCH</li> <li>• To determine elimination: Surveillance - Trachoma</li> <li>• To development of integrated monitoring tools</li> <li>• To develop integrated information systems to ensure reliable reporting and responses, including mapping to identify overlap</li> </ul>	2022-26	Human resources, Finances, Diagnostics, vehicles
<b>Strategic Priority 1.4:</b> <b>En</b>	<ul style="list-style-type: none"> <li>• To conduct timely NTD Drugs forecasting</li> </ul>	2022-26	Human Resources, Financial resources, vehicles
	<ul style="list-style-type: none"> <li>• To provide technical support and supervision to strengthen Pharmacovigilance and implement quality assurance and control for NTD medicines</li> </ul>	2022-26	Human Resources, Financial resources, vehicles
<b>STRATEGIC PILLAR 2: Intensifying cross-cutting approaches</b>			

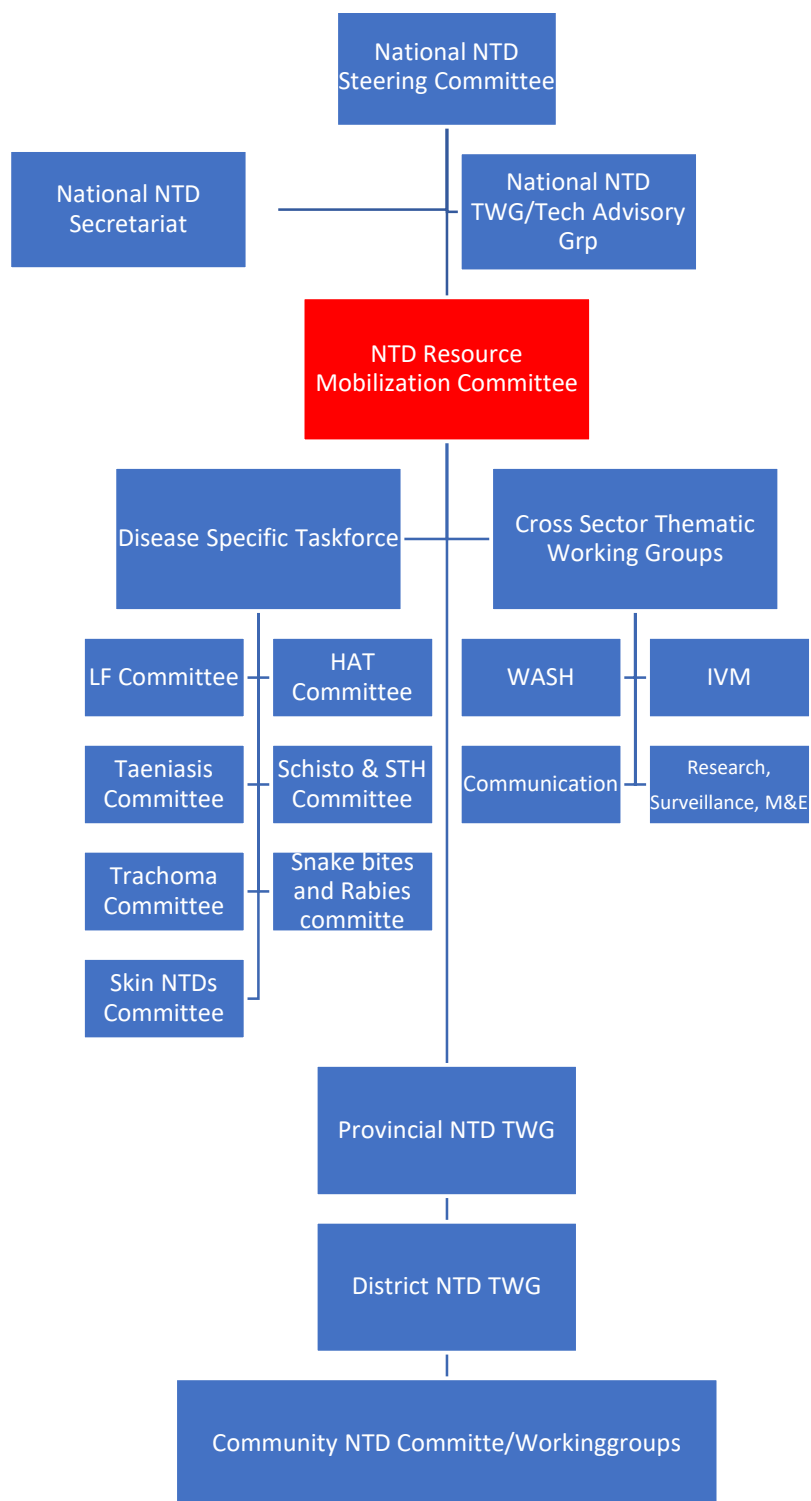
	<ul style="list-style-type: none"> <li>To hold Technical Working Group meetings for joint planning, program delivery and monitoring</li> </ul>	2022-2026	Human Resources, Financial resources
	<ul style="list-style-type: none"> <li>To develop standard package of care for NTDs</li> <li>To conduct trainings for health care workers</li> </ul>	2022-2026	Human Resources, Financial resources Budget
	<ul style="list-style-type: none"> <li>To provide technical support to facilities providing primary and secondary care in integration of NTDs in prevention, diagnosis, treatment, care and rehabilitation, interventions.</li> </ul>	2022-26	Human Resources, Financial resources
	<ul style="list-style-type: none"> <li>To provide technical support to implementing units and facilities to strengthen pharmacovigilance and safety.</li> </ul>	2022/30	Human Resources, Financial resources
<b>STRATEGIC PILLAR 3: Changing operating Models and culture to facilitate country ownership</b>			
	<ul style="list-style-type: none"> <li>To develop an integrated coordination mechanism for NTD Planning, budgeting, and implementation at all levels of governance</li> </ul>	2022	Human Resources, Financial resources



	<ul style="list-style-type: none"> <li>To develop risk communication and community engagement strategies.</li> </ul>	2022	Human Resources, Financial resources
<b>STRATEGIC PILLAR 4: Strengthening the Resource Mobilization, Coordination and Inter-sectoral Collaboration for the Elimination of NTDs</b>			
<b>promote community involvement and ownership of the program for optimal use of available resources.</b>	<ul style="list-style-type: none"> <li>To develop integrated annual plans and budgets for NTD interventions at local levels</li> </ul>	2022-26	Human Resources, Financial resources, vehicles
<b>To promote improved communication and awareness at the community level for a successful elimination of endemic NTDs</b>	<ul style="list-style-type: none"> <li>To conduct Knowledge Attitude and Practice (KAP) Survey</li> <li>To develop an integrated NTD communication strategy</li> <li>To develop integrated NTD IEC materials</li> </ul>	2022-26	Human Resources, Financial resources, vehicles

### **Section 3.2 Towards Programme sustainability: intensifying coordination and partnerships**

The coordination of NTDs in Zambia has been primarily through NTD Taskforces which mainly operated as disease specific coordination platforms. These Taskforces were established at national, provincial and district levels to promote joint planning, implementation and monitoring of NTD programs such as MDAs. Their membership included MoH, lead organizations in the implementation of NTD programs, local organizations and other community actors. Zambia is in the process of developing a more robust coordination mechanism which will facilitate enhanced coordination and collaboration within the sector and at a multisectoral level. The approach in creating these NTD coordinating structures within the Ministry of Health will be more centered on creating functional synergies rather than creation of new roles.



**Figure 16. Programme coordination platform**

Entity	Membership	Terms of Reference
<b>National NTD Steering Committee</b>		
Meeting frequency:	Quarterly	Annex
Chair:	NTD Manager	
Host:	Ministry of Health	
<b>National NTD Secretariat</b>		
Meeting frequency:	Monthly	Annex
Chair:	NTD Manager	
Host:	Ministry of Health	
<b>National NTD Technical Advisory Group</b>		
Meeting frequency:	Bi- annually	Annex
Chair:	To be nominated	
Host:	Ministry of Health	
<b>Provincial NTD Secretariat</b>		
Meeting frequency:	Quarterly	Annex
Chair:	Provincial Health Director	
Host:	Ministry of Health	

**Fig 11. Membership and Terms of Reference – Programme Coordination Mechanism**

**Table 22: Partnership matrix**

NTDs	Veterinary	WASH	IVM	One Health	Education	Malaria
Ministry of Health	Ministry of Fisheries and Livestock	Ministry of Health	Ministry of Health	Zambia National Public Health Institute (one Health Surveillance Platform)	MOH	National Malaria Elimination Centre
Ministry of Education	UNZA-School of Veterinary Sciences	Ministry of Local Government and Rural Development	National Malaria Elimination Centre		Ministry of General Education	
Ministry of Community Development	Enhanced Smallholder		WHO		Healthy Learners	Path-Malaria Control and Elimination Partnership in Africa

and Social Service	Livestock Investment Project (E-SLIP)	Ministry of Water Development and Sanitation		UNZA-School of Veterinary Sciences	Global Partnership for education (GPE COVID response plan)	Malaria Institute at Macha
Ministry of Water Development and Sanitation	Zambia Aquaculture Enterprise Development Project (ADB)	UNICEF		UNZA – School of Public Health	USAID – Lets Read Project	Vector Link (PMI)
Ministry of Local Government and Rural Development	Climate Resilient Livestock (ADB)	Child Fund		FAO	JICA	USAID
Ministry of Fisheries and Livestock	Zambia Dairy Transformation Programme	Village Water		OIE	UNICEF	Private Sector Mopane, KCM, FQM, Lumwana, Zambia Sugar Company
Sight-savers		World Vision		WHO	Zambia National Education Coalition	End Malaria Council
AKROS	Livestock Infrastructure Support Project (LISP) ADB	SNV		Global Alliance for Rabies Control	Save the Children	FLAME Zambia
Lions Aid Zambia (LIAZ)		Habitat for Humanity			Child Fund	Elimination8
ORBIS International	Livestock Development and Animal Health Project (LDAHP) World Bank	Water-Aid			Plan International	Isdell Flowers Cross Border Malaria initiative
Operation Eyesight Universal		WSUP			Flemish Association for Development (VVOB)	MaMaZ Against Malaria
Liverpool School of Tropical Medicine and Hygiene	Global Alliance for Livestock Veterinary Medicine – Bill and Melinda Gates Foundation	BORDA Zambia			Irish Embassy	
Schistosomiasis Control Initiative (SCI Foundation)	Global Alliance for Rabies control	Water for Kids				
		Water and Sanitation for the Urban Poor				
		Red-Cross				

### 3.3 Assumptions, Risks and Mitigations

Risk is the process of examining how likely risk will arise in the implementation of NTD programme. It also involves examining how the programme outcome and objectives might change due to the impact of the risk. The impact could be in terms of schedule, quality and cost.

Risk mitigation is the process of developing options and actions to enhance opportunities and reduce threats to the programme objectives. Risk mitigation progress monitoring includes tracking identifiable risks, identifying new risks, and evaluation risk process effectiveness throughout the programme period.

**Table 23: Risk Assessment**

Potential Risk	Before risk mitigation			Risk Mitigation	After risk mitigation		
	Likelihood of occurrence	Impact	Score		Likelihood of occurrence	Impact	Score
	Certain =5 Likely =4 Possible =3 Unlikely =2 Rare =1	Severe =5 Major =4 Moderate =3 Minor =2 Insignificant =1	Likelihood x Impact		Certain =5 Likely =4 Possible =3 Unlikely =2 Rare =1	Severe =5 Major =4 Moderate =3 Minor =2 Insignificant =1	Likelihood x Impact
<i>Risk Type</i> Strategic and programmatic risks							
Unpredictable donor funding	5	5	25	Risk Transfer Engage and consult with donors to receive committed/pledged contribution early in the calendar year. Promote multi-year commitments Advocate potential donors to increase availability of funding  Enhance the domestic resource base	3	4	12
Implementation delays due to low technical capacity in specialized fields	4	4	16	Control risk  Strengthen collaborative partnerships to enhance technical support to NTD program	3	3	9
Implementation delays due to COVID 19	5	5	25	Control/Monitor and review risk  Ensure compliance to national COVID-19 prevention guidance to reduce the risk of COVID-19 transmission during implementation, travel  Regular review and monitor the situation	3	4	12
Poor uptake of NTD programs by community	5	5	25	Control Risk  Implement health promotion and BCC	2	3	6

due to COVID myths and cultural barriers				programs prior to program implementation to promote uptake			
<i>Risk Type</i> Coordination and partnerships risks							
Delays in establishment of coordination mechanism	4	5	20	Control	3	3	9
Poor engagement and participation of stakeholders in coordination structures	4	5	20	Control risk Encourage active participation of secretariat and promote timely reports, feedback and meeting schedules Continuous engagement of stakeholders	3	4	12
Limited/poor information sharing among partners	4	4	16	Control risk Establish information sharing platforms	2	4	8
<i>Risk Type</i> Financial/economical							
Inflationary effects	5	5	25	Control/ Accept risk Build in contingency on cost	4	4	16
Error in budget estimates	4	5	20	Diligent tracking and early flag off of errors Build in contingency on cost	3	3	9

Risk Rating (Likelihood x Impact)			
	19 – 25 Severe		7 – 12 Moderate
	13 – 18 Major		0 – 6 Minor

### Mitigation

Managing risk means mitigating the threats or capitalizing on the opportunities that uncertainty presents to expected results. Failure to identify risks and failures to come up with risk mitigation strategies can and do kill projects. If no mitigation strategy can help, then *change* your strategy and project approach.

**Table 24: Risk mitigation**

<b>Avoid</b>	Change plans to circumvent the problem
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<b>Control</b>	Reduce threat impact or likelihood (or both) through intermediate steps
<b>Share</b>	Outsource risk (or a portion of the risk) to a third party or parties that can manage the outcome.
<b>Accept</b>	Assume the chance of the negative impact
<b>Monitor</b>	Monitor and review process in which risk management is in place

### 3.4 Performance and Accountability Framework

**Table 25: Performance indicators for the 4 strategic pillars of the Masterplan**

	<b>STRATEGIC PILLAR 1 ACCELERATING PROGRAMMATIC ACTION</b>			
Strategic Pillar	Strategic Priorities	Performance Indicators	Target	Date
STRATEGIC PILLAR 1 ACCELERATING PROGRAMMATIC ACTION	Strategic Priority 1.1: <b>To Scale up of integrated preventive chemotherapy to achieve 100% geographic coverage and treatment</b>	<ul style="list-style-type: none"> <li>Number of implementation units achieving elimination target by disease</li> </ul>	100%	2022-2026
	Strategic Priority 1.2: <b>To scale up integrated case-management-based diseases interventions for PC and IDM diseases</b>	<ul style="list-style-type: none"> <li>An integrated guideline in NTD case management developed</li> </ul>	1	2022-2026
		<ul style="list-style-type: none"> <li>Number of health facilities with trained staff in integrated case management of PC and CM NTDs</li> </ul>	100%	



	Strategic Priority 1.3: <b>To prioritize and strengthen monitoring and evaluation to track progress and decision making towards the 2030 goals</b>	<ul style="list-style-type: none"> <li>Number of districts with known distribution of: Onchocerciasis, Dengue &amp; Chikungunya, Taeniasis/Cysticercosis, Foodborne trematodiasis, Mycetoma, Leishmaniasis, Echinococcosis, Snakebite envenoming mapped</li> </ul>	50%	2026
		<ul style="list-style-type: none"> <li>Number of NTD morbidities captured in the DHIS2</li> </ul>	100%	2022-2026
	Strategic Priority 1.4: <b>Ensure timely, safe, and effective supply chain management of quality assured NTD Medicines and other products up to the last mile</b>	<ul style="list-style-type: none"> <li>To conduct timely NTD Drugs forecasting</li> </ul>		
		<ul style="list-style-type: none"> <li>Number of technical support supervision conducted per year</li> </ul>	quarterly	2022-2026
STRATEGIC PILLAR 2 INTENSIFY CROSS-CUTTING APPROACHES	Strategic Priority 2.1: To strengthen identified platforms with similar delivery strategies and interventions (MDAs, Skin NTDs, Morbidity management, SBCC, WASH etc) for integrated approaches across NTDs.	<ul style="list-style-type: none"> <li>Number of TWG meetings held</li> </ul>	Quarterly	2022-2026
	Strategic Priority 2.2: <b>To mainstream delivery platforms within the national health system.</b>	<ul style="list-style-type: none"> <li>Number of NTD standard package of care developed</li> </ul>		
		<ul style="list-style-type: none"> <li>Number of health care workers trained in NTD standard package of care</li> </ul>		

		<ul style="list-style-type: none"> <li>• Number of technical support and supervision visits conducted</li> </ul>	Quarterly	2022-2026
	Strategic Priority 2.3: <b>To integrate safety across NTD planning, implementation, and monitoring</b>	<ul style="list-style-type: none"> <li>• Number of Severe Adverse Effects reported</li> </ul>	Annually	2022-2026
STRATEGIC PILLAR 3 OPERATING MODELS AND CULTURE TO FACILITATE COUNTRY OWNERSHIP	Strategic Priority 3.1: <b>To promote and strengthen country ownership and leadership through organizational structures at national and local government with dedicated funding</b>	<ul style="list-style-type: none"> <li>• Existence of an NTD multi sectoral coordination mechanism strategy</li> </ul>	1	2022-2026
	Strategic Priority 3.2: <b>To empower local governments and authorities in social mobilization, risk and crisis communication, behavioural change and building local support for NTD interventions</b>	<ul style="list-style-type: none"> <li>• Existence of risk communication and community engagement strategy</li> </ul>	1	2022-2026
STRATEGIC PILLAR 4 STRENGTHENING THE RESOURCE MOBILIZATION, COORDINATION AND INTER-	Strategic Priority 4.1: <b>To promote community involvement and ownership of the program for optimal use of available resources.</b>	<ul style="list-style-type: none"> <li>• To develop integrated annual plans and budgets for NTD interventions at local levels</li> </ul>	1	2022-2026
	Strategic Priority 4.2: <b>To promote improved communication and awareness at the community level for a</b>	<ul style="list-style-type: none"> <li>• Number of Knowledge Attitude and Practice (KAP) Survey conducted</li> </ul>	1	2022-2026

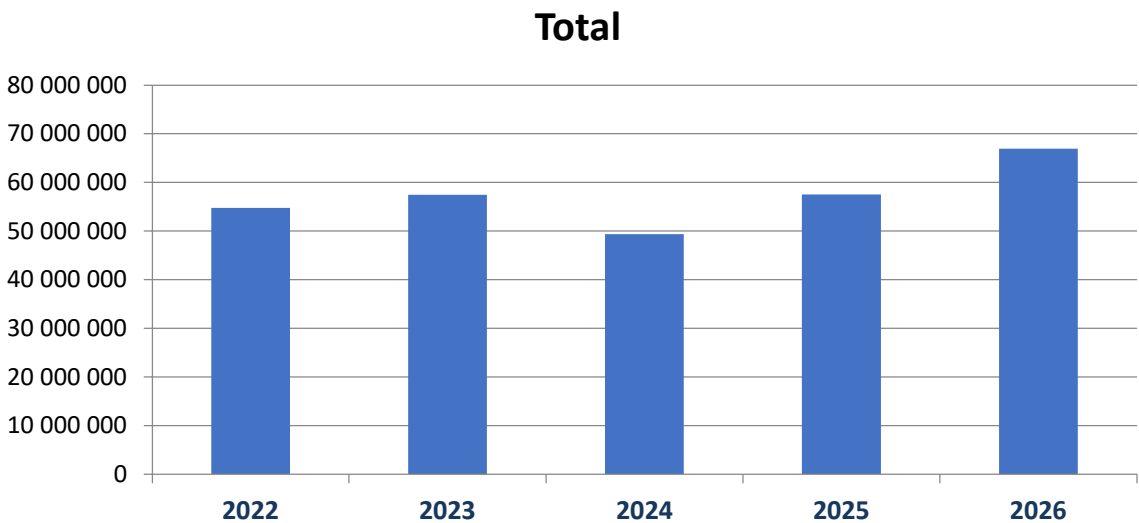
	<p><b>successful elimination of endemic NTDs</b></p>	<ul style="list-style-type: none"> <li>• Number of integrated NTD IEC materials developed</li> </ul>		
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## PART 4: BUDGETING FOR IMPACT: ESTIMATES AND JUSTIFICATIONS

A budget is a plan for future activities and is a key management tool. It is essential for the national NTD programme to have a simple yet comprehensive budgetary plan in line with the NTD strategic plan. The budget estimates below are what would cost to effectively implement the NTD Elimination Master Plan.

### Five-year cost projections

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## Five-year cost projections

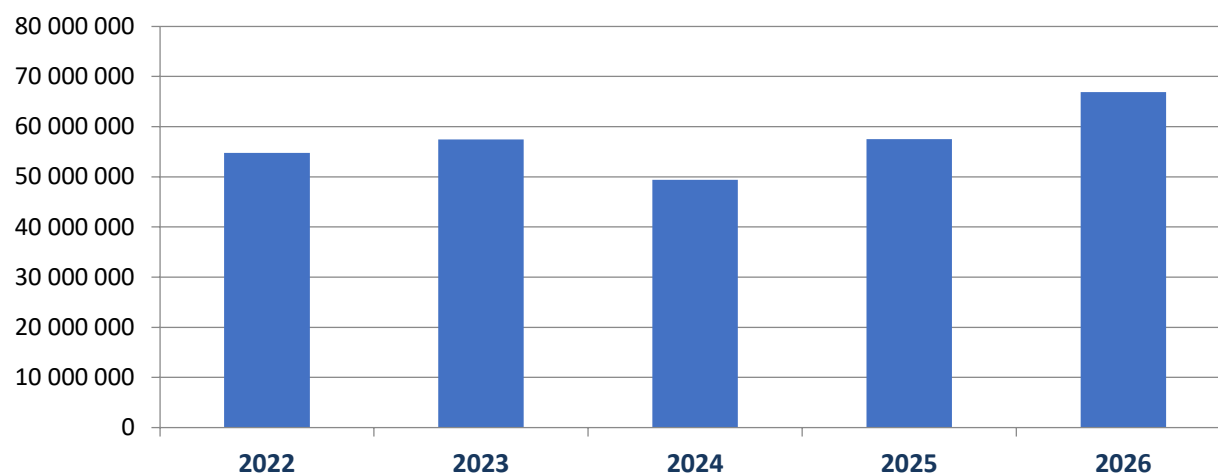
Activity	2022	2023	2024	2025	2026	TOTAL
<b>Total</b>	<b>54,781,775</b>	<b>57,446,350</b>	<b>49,386,291</b>	<b>57,485,643</b>	<b>66,913,288</b>	<b>286,013,347</b>
Strategic Pillar 1-Accelerating programmatic action	50,652,075	52,639,379	43,790,977	50,972,697	59,332,220	257,387,348
Strategic Pillar 2- Intensify cross-cutting approaches	3,167,760	3,687,273	4,291,985	4,995,871	5,815,194	21,958,083
Strategic Pillar 3- Operating models and culture to facilitate country ownership	471,920	549,315	639,403	744,265	866,324	3,271,226
Strategic Pillar 4-Strengthening the resource mobilization, coordination and inter-sectoral collaboration for elimination of NTDS	490,020	570,383	663,926	772,810	899,551	3,396,690

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Inflation rate 16.4% Category: Implementation costs Operational costs

## Five-year cost projections

### Total



## Five-year cost projections

Sub-activity	2022	2023	2024	2025	2026	TOTAL
<b>Total</b>	<b>54,781,775</b>	<b>57,446,350</b>	<b>49,386,291</b>	<b>57,485,643</b>	<b>66,913,288</b>	<b>286,013,347</b>
<b>Strategic Pillar 1-Accelerating programmatic action</b>	<b>50,652,075</b>	<b>52,639,379</b>	<b>43,790,977</b>	<b>50,972,697</b>	<b>59,332,220</b>	<b>257,387,348</b>
MDAs: LF	12,426,804	14,464,800	16,837,027	19,598,299	22,812,421	86,139,351
MDA: SCH	12,018,440	10,676,170	12,427,062	14,465,100	16,837,376	66,424,148
Impact surveys - SCH	10,905,022	9,687,103	11,275,788	13,125,017	15,277,520	60,270,451
To develop integrated guidelines in NTD case management	1,139,110	1,325,924	0	0	0	2,465,034

To Train health-workers & community in case management	1,161,600	1,352,102	1,573,847	1,831,958	2,132,399	8,051,907
To map presence/distribution of Onchocerciasis	11,763,179	13,692,340	0	0	0	25,455,519
Development of integrated monitoring tools	655,340	762,816	887,918	1,033,536	1,203,036	4,542,645
To develop integrated information systems to ensure reliable reporting and responses, including mapping to identify	109,860	127,877	148,849	173,260	201,675	761,521
To conduct timely NTD drugs forecasting	228,060	265,462	308,998	359,673	418,660	1,580,852
To conduct technical support supervision to strengthen pharmacovigilance and implement quality assurance and control for NTD medicines	244,660	284,784	331,489	385,853	449,133	1,695,919
<b>Strategic Pillar 2- Intensify cross-cutting approaches</b>	<b>3,167,760</b>	<b>3,687,273</b>	<b>4,291,985</b>	<b>4,995,871</b>	<b>5,815,194</b>	<b>21,958,083</b>
To conduct TWG meetings for joint planning, program delivery and monitory	166,800	194,155	225,997	263,060	306,202	1,156,214
To develop of standard packgae of care of NTDs	390,740	454,821	529,412	616,236	717,298	2,708,507
To conduct trainings for health care workers	2,120,380	2,468,122	2,872,894	3,344,049	3,892,473	14,697,919
To conduct technical support to facilitate providing primary and secondary care in prevention, diagnosis, treatment, care and rehabilitation interventions	244,920	285,087	331,841	386,263	449,610	1,697,721
To conduct technical support to IUs and facilities to strengthen pharmacovigilance and safety	244,920	285,087	331,841	386,263	449,610	1,697,721
<b>Strategic Pillar 3- Operating models and culture to facilitate country ownership</b>	<b>471,920</b>	<b>549,315</b>	<b>639,403</b>	<b>744,265</b>	<b>866,324</b>	<b>3,271,226</b>
To develop an integrated coordination mechanism for NTD planning, budgeting, implementation at all levels of governance	235,960	274,657	319,701	372,132	433,162	1,635,613

To develop a risk communication and community engagement	235,960	274,657	319,701	372,132	433,162	1,635,613
<b>Strategic Pillar 4-Strengthening the resource mobilization, coordination and inter-sectoral collaboration for elimination of NTDS</b>	<b>490,020</b>	<b>570,383</b>	<b>663,926</b>	<b>772,810</b>	<b>899,551</b>	<b>3,396,690</b>
To develop integrated annual plans and budgets for NTD interventions at local levels	290,100	337,676	393,055	457,516	532,549	2,010,897
To develop integrated NTD IEC materials	199,920	232,707	270,871	315,294	367,002	1,385,793

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Inflation rate 16.4% Category: Implementation costs Operational costs



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# ANNEXES

## Annex 1: Baseline results for Lymphatic filariasis Mapping conducted between 2012-2014

Pre-MDA Baseline Results from 2012 to 2014						
Province	District	Total Surveyed	Antigen Individuals	Positive	MF Positives	
		Grand Total	Total Antigen Positive Individuals	Total Tested (%)	Grand Total of those tested for MF (%)	Grand Total (%)
Western	Kalabo	312	0	0%		0.00%
Western	Shang'ombo	305	0	0%		0.00%
Western	Senanga	194	0	0%		0.00%
Western	Kaoma	189	0	0%		0.00%
Luapula	Kawambwa	300	15	5%	12	4.00%
Luapula	Milenge	248	1	0%		0.00%
Luapula	Mwense	300	0	0%		0.00%
Luapula	Nchelenge	299	13	4%	8	2.68%
Muchinga	Chinsali	299	0	0%		0.00%
Muchinga	Isoka	300	0	0%		0.00%
Northern	Luwingu	300	0	0%		0.00%
Muchinga	Mpika	599	3	1%	3	0.50%
Northern	Mpulungu	300	0	0%		0.00%

Northern	Mungwi	300	0	0%		0.00%
Muchinga	Nakonde	300	0	0%		0.00%
North-Western	Chavuma	296	2	1%	0	0.00%
North-Western	Kasempa	151	0	0%	0	0.00%
North-Western	Mufumbwe	244	0	0%		0.00%
North-Western	Solwezi	291	0	0%		0.00%
Copperbelt	Luanshya	300	0	0%		0.00%
Copperbelt	Lufwanyama	299	0	0%		0.00%
Copperbelt	Mpongwe	300	0	0%		0.00%
Copperbelt	Mufulira	274	0	0%		0.00%
Southern	Itezihitezhi	304	0	0%		0.00%
Central	Kabwe	191	0	0%		0.00%
Central	Kapirimposhi	305	0	0%		0.00%
Central	Mumbwa	228	1	0%	0	0.00%
Central	Serenje	306	29	9%	0	0.00%
Lusaka	Chongwe	277	1	0%	0	0.00%

Lusaka	Kafue	300	0	0%		0.00%
Lusaka	Luangwa	315	5	2%	1	0.32%
Eastern	Chipata	301	1	0%	1	0.33%
Eastern	Lundazi	255	0	0%		0.00%
Eastern	Mambwe	300	1	0%	0	0.00%
Eastern	Nyimba	313	0	0%		0.00%
Southern	Gwembe	301	0	0%		0.00%
Southern	Kazungula	305	0	0%		0.00%
Southern	Namwala	300	0	0%		0.00%

## Annual work plan matrix and timeline - FY 2021

Activities - Sub-activities - Districts	Timeline for implementation												Estimate d cost	Fundin g	Gap	Partner s
	Jan 21	Feb 21	Mar 21	Apr 21	May 21	Jun 21	Jul 21	Aug 21	Sep 21	Oct 21	Nov 21	Dec 21	ZMK	ZMK	ZMK	
<b>Strategic Pillar 1-Accelerating programmatic action</b>													<b>50,652,075</b>	<b>0</b>	<b>50,652,075</b>	
MDAs: LF													12,426,804	0	12,426,804	
To develop integrated guidelines in NTD case management													1,139,110	0	1,139,110	
To Train health-workers & community in case management													1,161,600	0	1,161,600	
To map presence/distribution of Onchocerciasis													11,763,179	0	11,763,179	
Development of integrated monitoring tools													655,340	0	655,340	
To develop integrated information systems to ensure reliable reporting and responses, including mapping to identify													109,860	0	109,860	
To conduct timely NTD drugs forecasting													228,060	0	228,060	

To conduct technical support supervision to strengthen pharmacovigilance and implement quality assurance and control for NTD medicines													244,660	0	244,660	
MDA: SCH													12,018,440	0	12,018,440	
Impact surveys - SCH													10,905,022	0	10,905,022	
<b>Strategic Pillar 2- Intensify cross-cutting approaches</b>													<b>3,167,760</b>	<b>0</b>	<b>3,167,760</b>	
To conduct TWG meetings for joint planning, program delivery and monitory													166,800	0	166,800	
To develop of standard packgae of care of NTDs													390,740	0	390,740	
To conduct trainings for health care workers													2,120,380	0	2,120,380	
To conduct technical support to facilitate providing primary and secondary care in prevention, diagnosis, treatment, care and rehabilitation interventions													244,920	0	244,920	
To conduct technical support to IUs and facilities to strengthen pharmacovigilance and safety													244,920	0	244,920	

Strategic Pillar 3- Operating models and culture to facilitate country ownership													471,920	0	471,920	
To develop an integrated coordination mechanism for NTD planning, budgeting, implementation at all levels of governance													235,960	0	235,960	
To develop a risk communication and community engagement													235,960	0	235,960	
Strategic Pillar 4-Strengthening the resource mobilization, coordination and inter-sectoral collaboration for elimination of NTDS													490,020	0	490,020	
To develop integrated annual plans and budgets for NTD inteventions at local levels													290,100	0	290,100	
To develop integrated NTD IEC materials													199,920	0	199,920	

**Annex 3: [Trachoma National Status](#)**

Row #	Region	District	Status at baseline	Status
1	Central	Kapiri Mposhi	TF	Under Surveillance
2	Central	Luano	TF	Under Surveillance
3	Central	Mkushi	TF	Elimination Reached
4	Central	Ngabwe	TF	Elimination Reached
5	Copperbelt	Kitwe	TF	Elimination Reached
6	Copperbelt	Mufulira	TF	Elimination Reached
7	Luapula	Chienge	TF	Under Surveillance
8	Luapula	Nchelenge	TF	Elimination Reached
9	Muchinga	Chinsali	TF	Elimination Reached, TT Present
10	Muchinga	Shiwangandu	TF	Elimination Reached, TT Present



11	Northern	Chilubi	TF/TT	Elimination Reached
12	Northern	Kaputa	TF	Under Surveillance, TT Present
13	Northern	Kasama	TF/TT	Elimination Reached
14	Northern	Luwingu	TF	Under Surveillance, TT Present
15	Northern	Lupososhi	TF	Under Surveillance, TT Present
16	Northern	Mporokoso	TF	Under Surveillance
17	Northern	Lunte	TF	Under Surveillance
18	Northern	Mungwi	TF	Elimination Reached
19	Northern	Nsama	TF	Under Surveillance, TT Present
20	North Western	Ikelenge	TF	Under Surveillance
21	North Western	Kasempa	TF	Under Surveillance
22	North Western	Mufumbwe	TF	Under Surveillance
23	North Western	Mwinilunga	TF	Under Surveillance
24	Southern	Chikankata	TF/TT	Elimination Reached
25	Southern	Choma	TF/TT	Elimination Reached
26	Southern	Gwembe	TF/TT	Elimination Reached
27	Southern	Kazungula	TF/TT	Elimination Reached
28	Southern	Livingstone	TF/TT	Elimination Reached
29	Southern	Mazabuka	TF/TT	Elimination Reached
30	Southern	Monze	TF/TT	Elimination Reached
31	Southern	Namwala	TF	Elimination Reached
32	Southern	Pemba	TF/TT	Elimination Reached
33	Southern	Sinazongwe	TF/TT	Elimination Reached
34	Western	Kalabo	TF/TT	TF Present
35	Western	Kaoma	TF/TT	TF Present, TT Present
36	Western	Luampa	TF/TT	TF Present, TT Present
37	Western	Lukulu	TF	Elimination Reached

38	Western	Mitete	TF	Elimination Reached
39	Western	Mulobezi	TF	Under Surveillance
40	Western	Mwandi	TF	Under Surveillance
41	Western	Nalolo	TF/TT	Under Surveillance, TT Present
42	Western	Nkeyema	TF/TT	TF Present, TT Present
43	Western	Senanga	TF/TT	Under Surveillance, TT Present
44	Western	Sesheke	TF	Under Surveillance
45	Western	Shang'ombo	TF	TF Present, TT Present
46	Western	Sikongo	TF/TT	TF Present
47	Western	Sioma	TF	TF Present, TT Present
48	Muchinga	Mpika	TT Present	TT Present
49	Muchinga	Lavushi Manda	TT Present	TT Present
50	Muchinga	Kanchibiya	TT Present	TT Present
51	Muchinga	Nakonde	TT Present	TT Present
52	Muchinga	Chama	TT Present	TT Present
53	Eastern	Mambwe	TT Present	TT Present
54	Eastern	Katete	TT Present	TT Present
55	Southern	Kalomo	TT Present	Elimination Reached
56	Southern	Zimba	TT Present	Elimination Reached

## Summary

Summary at baseline		Current Summary	
TF only	29	TF only	2
TF/TT	18	TF/TT	5
TT only	9	TT only	7
	<b>56</b>	Elimination Reached	22
		Elimination Reached/ TT Present	2
		Under Surveillance	12
		Under Surveillance/ TT Present	6
		<b>56</b>	