

REPUBLIC OF KENYA



MINISTRY OF HEALTH



THE STRATEGIC PLAN FOR CONTROL OF LEISHMANIASIS 2021 - 2025

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FOR

CONTROL OF LEISHMANIASIS

2021 - 2025

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LIST OF ABBREVIATIONS

ACSM	Advocacy Communication and Social Mobilization
BTS	Breaking Transmission Strategy
CHV	Community Health Volunteer
CEC	County Executive Committee
COG	Council of Governors
CL	Cutaneous Leishmaniasis
DALYs	Disability Adjusted Life Years
DNDi	Drugs for Neglected Diseases Initiative
DHIS 2	District Health Information System
DVBNTD	Division of Vector Borne and Neglected Tropical Diseases
EPR	Epidemic Response
GoK	Government of Kenya
HE	Health Education
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HCW	Health Care Workers
HW	Health Workers
IDSR	Integrated Disease Surveillance and Response
IEC	Information Education and Communication
IRS	Indoor Residue Spraying
ITMs	Insecticide Treated Materials
IVM	Integrated Vector Management
LLINs	Long Lasting Insecticide Treated Nets
KHIS	Kenya Health Information System
KRA	Key Result Area
KEMSA	Kenya Medical Supplies Agency
MCL	Muco-Cutaneous Leishmaniasis
MOH	Ministry of Health
NFD	Northern Frontier District
NPHLS	National Public Health Laboratory Services
NTD	Neglected Tropical Diseases
PKDL	Post Kala-Azar Dermal Leishmaniasis
PM	Paromomycin
RDTs	Rapid Diagnostic Tests

SEP	Strategic Engagement Plan
SSG	Sodium Stibogluconate
TAG	Technical Advisory Group
TWG	Technical Working Group
VBDC	Vector Borne Diseases Control
VL	Visceral Leishmaniasis
WHO	World Health Organisation

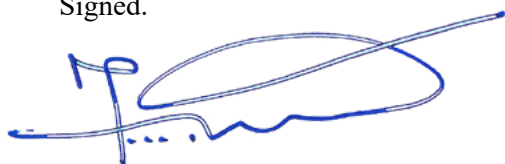
FOREWORD

The development of the Leishmaniasis Control Strategic Plan 2021-2025 is guided by Kenya's Vision 2030 and the Universal health coverage (UHC) roadmap. It acknowledges that improved health is a critical driver to the achievement of this vision. Kenya's Vision 2030 aims to transform Kenya into a globally competitive and prosperous country with a high quality of life by 2030 by transforming the country into an industrialized, middle-income economy.

The strategic plan also mirrors the aspirations of the 2010 Constitution which guarantees the highest attainable standard of health as a right for all while devolving governance to ensure improved service delivery, greater accountability, improved citizen participation and equity in the distribution of resources. The plan is further guided by the Kenya Health Policy 2012-2030 which targets to attain a level and distribution of health commensurate with that of a middle-income country, through the attainment of specific health impact targets. The plan has been developed using a consultative approach involving all the key stakeholders in leishmaniasis programmes in national and devolved systems of health governance.

The Ministry of Health is thankful to its staff, partners and other health stakeholders who contributed to various efforts in shaping the development of this plan. The Ministry is also committed to the full realization of this plan. It has developed a robust monitoring framework to track the achievement of milestones in a way that is responsive and accountable to the health needs of the affected communities in Kenya. We look forward to working collaboratively across the national and county governments, partners and all other stakeholders to ensure successful implementation.

Signed.



Sen. Mutahi Kagwe, EGH
CABINET SECRETARY
MINISTRY OF HEALTH

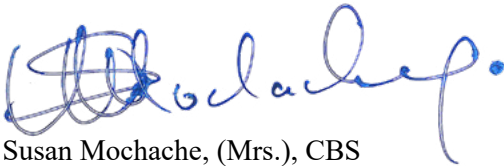
PREFACE

This Strategic Plan seeks to accelerate the gains achieved in the control of leishmaniasis in the past 10 years as well as halt the resurgence of leishmaniasis that has been witnessed in the past 5 years with frequent outbreaks.

The implementation of the Strategic Plan specifically for the control of leishmaniasis will require significant financial commitments. Also, it will require intensive training and support of County Health teams who are expected to implement the various strategies outlined in the document as well as sustain the achievements. The expected resources required will be mobilized from internal and external sources in partnership with other stakeholders in health as well as the County Governments. Coordination of the Strategic Plan will be through the Ministry of Health at the National Level in conjunction with the respective County Departments of Health involved. The coordination mechanism and management structures will be agreed upon with participating counties before the launch of interventions to ensure clear accountability. Division of Vector-Borne and Neglected Tropical Diseases will serve as the secretariat for national coordination of this Strategic Plan.

It is anticipated that the plan will be adequately resourced to allow for the uninterrupted rollout of much-needed interventions to accelerate the control of leishmaniasis within the specified time, for the benefit of the affected communities.

Signed.

A handwritten signature in blue ink, appearing to read 'Susan Mochache', with a stylized flourish at the end.

Susan Mochache, (Mrs.), CBS

PRINCIPAL SECRETARY

ACKNOWLEDGEMENTS

This the First Kenya National Strategic Plan for Control of Leishmaniasis 2021- 2025. The strategic plan has been developed through an elaborate consultative process involving stakeholders, including development and implementing partners, research institutions, and County health teams. I would like to appreciate the acting Director General of Health Dr. Patrick Amoth supported by acting Head of Public Health Dr. Francis Kuria and the Head, Division of Vector-Borne and Neglected Tropical Diseases (NTD) Dr. Sultani Matendecheo for providing stewardship.

The MoH is grateful for the invaluable contributions of various stakeholders in the development of the Leishmaniasis Control Strategy 2021-2025. Special thanks are extended to Accelerating the Sustainable Control and Elimination of Neglected Tropical Diseases (ASCEND) for providing financial and technical support in the development of the strategy. We highly appreciate the contribution of Prof. Simon Croft and Mr. Duncan Ochol, Country Lead, ASCEND for all the inputs and guidance during the development process of the strategy. The technical inputs and guidance from WHO are also appreciated. We also recognize all the participants who participated during these crucial meetings and follow-up input into the various drafts that have led to the finalized strategy. We are grateful to the County Leishmaniasis focal points of Wajir, Isiolo, Marsabit, Turkana, West Pokot, Garissa, Baringo, Kitui, Nakuru, and Nyandarua and all the people who provided information and inputs in these counties. We also appreciate the inputs and comments from the various stakeholders and partners that led to the enrichment of the strategy. The following persons are especially appreciated for planning, consulting, and drafting the strategy: Dr. Sultani Matendecheo, Head of the DVBNTD programme; Dr. Bernahards Ogutu; Dr. Daniel Masiga; Dr. Esther Kinyeru; Dr. Damaris Matoke; Dr. Denver Mariga; Dr. Emmanuel Okunga; Dr. Tina Patel; Dr. Benjamin Onger; Mr. Joseph Njau; Ms. Hellen Nyakundi; Mr. Daniel Mwiti; Mr. Charles Magiri; Mr. Wyckliff Omondi; Ms. Joy Malongo; Ms. Donna Ogeto; Ms. Joyce Kyalo; Mr. Amos Kioko and Dr. Daniel Mwai.

Lastly, the Ministry is greatly indebted to the supporting partners, especially ASCEND for facilitating the development of this strategy. We thank the officers representing these institutions for providing the much-needed technical inputs and logistical support to the team that was tasked with the development of the strategy.

Signed.



Dr. Patrick Amoth, EBS

Ag. DIRECTOR GENERAL OF HEALTH

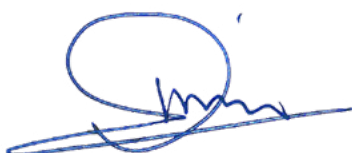
EXECUTIVE SUMMARY

This is the first National Strategic Plan for Control of Leishmaniasis (2021-2025).

Under the new Constitutional dispensation, the National Ministry of Health is charged with the responsibility of formulation and implementation of health policy, capacity building, and technical assistance to the counties, standards, and regulation and management of national referral health facilities. County governments are responsible for the implementation of primary healthcare services and management of county health facilities.

Leishmaniasis is one of some 20 neglected tropical diseases (NTDs) of which several are found in Kenya (MOH NTDs Strategic Plan). Since 2012, there has been a renewed global momentum towards eliminating and eradicating some of the NTDs. Visceral leishmaniasis is targeted for elimination as a public health problem in Southeast Asia and control in Eastern Africa by 2022. The main strategic approaches during this period will focus on the rapid scale-up of access to interventions, enhanced planning for results, resource mobilization and financial sustainability. Other strategic approaches will be strengthening advocacy, coordination, national ownership, improved monitoring and evaluation, surveillance and research. The need to develop a new leishmaniasis strategic plan aligned to the global approaches for accelerated scaled-up control will move the country towards future elimination of the disease as a public health concern. By the end of 2025 people living in endemic areas will be relieved of the burden and suffering brought about by leishmaniasis that will eventually lead to improved economic productivity and improved health.

Signed.



Dr. Francis Kuria

Ag. HEAD DIRECTORATE OF PUBLIC HEALTH

INTRODUCTION

BACKGROUND

Vector-borne diseases (VBDs) continue to significantly contribute to the burden of communicable diseases in Kenya resulting in poor health of communities, compromising productivity and impoverishing families. Leishmaniasis is one of the VBDs caused by diverse *Leishmania* parasite species. In Kenya, leishmaniasis remains a public health problem mainly distributed in more than 20 sub-counties in the arid and semi-arid regions. These are generally marginalized areas with high levels of poverty and vulnerability, with poor health and development infrastructure.

There are four forms of leishmaniasis; visceral leishmaniasis (VL), cutaneous leishmaniasis (CL), mucocutaneous leishmaniasis (MCL) and post kala-azar dermal leishmaniasis (PKDL).^{1, 2} Kenya is endemic for VL, CL, and PKDL. The accurate disease burden is unknown as information on the prevalence, burden and spatial distribution of the disease is inadequate. Because of the low index of suspicion by health providers, late diagnosis and case management, the true level of morbidity and death is unknown. Management of leishmaniasis is hindered by the lack of data, cost and access.

In 2016, the Ministry of Health (MOH) of Kenya together with partners released new guidelines for *Diagnosis, Treatment, and Prevention of Visceral Leishmaniasis (Kala-Azar)*. The new guidelines play an important role in directing health workers and other partners in the diagnosis, treatment, and prevention of the Kala-azar in endemic areas. Under these guidelines, VL diagnosis is through clinical signs and parasitological or serological tests; the rk39 is the approved rapid diagnostic test. The MOH recommends the use of combination therapy (Sodium Stibogluconate [SSG] + Paromomycin [PM]) as the first-line drug for VL treatment as it significantly reduces treatment to 17 days period from 30 days under SSG monotherapy. Currently, there are no guidelines for the management of CL cases in Kenya which impedes proper management of CL cases. A trained workforce is paramount for the management of this disease.

Kenya has no strategy to guide the control and elimination of leishmaniasis with the disease expanding to new foci. This strategic plan will therefore guide MoH and all partners working on leishmaniasis in controlling the disease and work towards its elimination as a public health problem. The main goal of this strategic plan is to reduce morbidity due to leishmaniasis in Kenya by 60% by 2025 and also reduce the occurrence of leishmaniasis outbreaks in Kenya by 50%. The strategy will guide the control and management of leishmaniasis with a focus on disease ecology and mapping, case identification and management, health systems strengthening, surveillance and vector control. The strategic plan includes the implementation of the hitherto neglected concept of 'Integrated Vector Management' to address multiple vectors in the same setting in line with the World Health Organization's Global Vector Control Plan of 2017-2030.

¹ World Health Organization. Control of the leishmaniasis. WHO Technical Report Series, 949.

² Report of a meeting of the WHO Expert Committee on the Control of Leishmaniasis, Geneva, 22–26, March 2010.

All activities proposed in this strategic plan will be implemented together with the County Departments of Health. Division of Vector Borne and Neglected Tropical Diseases (DVB-NTDs) at the national level will provide technical and initial financial support and participating counties will facilitate the implementation and continuous monitoring through their health structures and partners. Participating counties will also be expected to contribute towards funding some aspects of the activities as part of joint responsibilities and in anticipation of sustaining the gains accrued beyond the strategic plan period.

CHAPTER ONE

OVERVIEW OF LEISHMANIASIS

1.0 Disease Definition

The leishmaniasis are caused by a protozoa parasite from over 20 *Leishmania* species, which are transmitted by the bite of infected female phlebotomine sandflies.³ Over 90 sandfly species are known to transmit *Leishmania* parasites. Leishmaniasis can be classified as anthroponotic or zoonotic depending on whether the natural reservoir of the parasite is human or animal. Leishmaniasis is a highly focal disease with widely scattered foci. The disease affects some of the poorest people on earth and is associated with malnutrition, population displacement, poor housing, a weak immune system, poor health systems and lack of financial resources. Leishmaniasis is linked to socio-ecological changes such as land-use change, climate change and migration. The disease has four main forms, depending on the parasite species and the cellular immune system of the patient:

1.1 Visceral Leishmaniasis (VL)

Visceral leishmaniasis, also known as Kala-azar, is a chronic and potentially fatal parasitic disease of the viscera (particularly the liver, spleen, bone marrow and lymph nodes) due to infection by the *Leishmania* parasite transmitted by the bite of the female sandfly.

The typical manifestations of VL include irregular bouts of fever for more than two weeks, weight loss, enlargement of the spleen and liver, anaemia and changes in skin colour (and hence it is called Kala-azar, meaning 'black fever' in Hindi).⁴ Poor prognosis signs include bleeding, jaundice, oedema and co-morbidities. The incubation period ranges from 10 days to 34 months, however, most infected individuals develop symptoms after 3 to 8 months.⁵ However, the incubation period in non-immune hosts could be as short as 2 weeks, which could result in an epidemic. The parasite may survive for decades in asymptomatic infected people, who are of great importance for the transmission since they can spread visceral leishmaniasis indirectly through the sandflies.⁶ Unlike the cutaneous forms of leishmaniasis, VL attacks vital internal organs leading to their failure. The case fatality rate, usually within 2 years, approximates 95% if the disease is left untreated. Death is mainly due to organ failure, anaemia or secondary bacterial infections.⁷ The majority of patients are children living in rural areas (at least 50% are children <15 years). Males predominate (with a male to female ratio of 1.2: 2.2). About 6 to 18% are women of reproductive age.⁸ Factors that increase the risk of developing the disease include young age, malnutrition, immunosuppressive diseases such as HIV, malignancies and organ transplantation. Visceral leishmaniasis can cause large-scale epidemics with high case fatality due to accumulation of risk factors such as civil unrest, disruption of health systems, malnutrition, underlying diseases and absence of diagnostic facilities and first-line drugs at the local level.⁹

³ A new perspective on cutaneous leishmaniasis implications for global prevalence and burden of disease

⁴ World Health Organization. Control of the leishmaniasis. World Health Organ Tech Rep Ser. 2010;(949):22-26. doi:10.1038/nrmicro1766.

⁵ Wamai RG, Kahn J, McGloin J, Ziaggi G. Visceral Leishmaniasis: A Global Overview. *J Glob Health Sci.* 2020;2:e3.

⁶ WHO/CDS/CSR/ISR/2000.1; WHO REPORT ON GLOBAL SURVEILLANCE OF EPIDEMIC-PRONE INFECTIOUS DISEASES

⁷ World Health Organization. Control of the leishmaniasis. World Health Organ Tech Rep Ser. 2010;(949):22-26. doi:10.1038/nrmicro1766.

⁸ Ruiz-Postigo JA, Grouta L, Jaina S. *Global leishmaniasis surveillance, 2017–2018, and first report on 5 additional indicators.* WER. 2020;95(25): 265–280

⁹ LEISHMANIASIS WHO/CDS/CSR/ISR/2000.1; WHO REPORT ON GLOBAL SURVEILLANCE OF EPIDEMIC-PRONE INFECTIOUS DISEASES

1.2 Cutaneous Leishmaniasis (CL)

Cutaneous leishmaniasis (oriental sore), is a neglected tropical immune-mediated skin pathology caused by the bite of sandflies infected with the *Leishmania* parasite.

It is characterized by ulcerative skin lesions and occasionally nodular, psoriasiform and verrucous lesions.

CL is the most common form of leishmaniasis globally.¹⁰ It is a disfiguring and stigmatizing disease that is characterized by skin lesions, mainly ulcers, on exposed parts of the body, leaving life-long scars and serious disability. CL can either be localized or diffuse whereby the lesion/skin ulcer can be limited to a single part of the skin or may produce a large number of lesions. Because cutaneous leishmaniasis is not fatal, it receives little attention from pharmaceutical companies, funding agencies and local health systems. Current treatments are costly and often require weeks of painful injections of toxic drugs called antimonials. Despite their severe side effects, these drugs have been used to treat the disease for over 60 years.¹¹

1.3 Mucocutaneous Leishmaniasis (MCL)

This form of leishmaniasis causes partial or total destruction of mucous membranes of the nose, mouth, and throat.¹² Like other disfiguring diseases, MCL not only affects the physical well-being of the individual but also significantly affects their psychological, social and economic well-being. Hence, reconstructive surgery of deformities is an important part of therapy.¹³ The characteristics of the lesions and the clinical management depend on the immune status and the age of the patients.¹⁴

1.4 Post Kala-azar Dermal Leishmaniasis (PKDL)

PKDL is a skin condition that occurs after treatment for VL in 5 to 20% of cases and less frequently in individuals who report no history of prior VL. It is characterized by skin lesions of differing severity and parasite load, ranging from macules and papules (least severe, lowest load) to nodules (most severe, highest load), usually on the face, upper arms, trunks and other parts of the body.¹⁵ The clinical manifestations are driven by the immune response to the parasite. It usually appears 6 months to 1 or more years after kala-azar has been cured, but can occur earlier. It is an intermediate disease state between VL and the cure of VL. It is mainly endemic in East Africa and on the Indian subcontinent. In Asia, PKDL follows VL with an interval of 0 to 3 years and the PKDL peak follows that of VL with an offset of 2 years.¹⁶ In Africa (Sudan) the interval is 0–12 months. While it is not life-threatening, PKDL can be disfiguring and stigmatizing, especially when lesions present on the exposed parts of the body. People with PKDL can still transmit visceral leishmaniasis, complicating control efforts. Anecdotal reports are suggesting that sporadic PKDL cases may trigger VL outbreaks. The risk factors for PKDL include incomplete treatment, treatment with substandard drugs, low doses, young age, high IL-10 levels in the skin and high C-reactive protein levels in the blood. Incomplete clearance of parasites also plays a role.¹⁷ It is also more severe in people co-infected with HIV.¹⁸

¹⁰ World Health Organization. Control of the leishmaniases. World Health Organ Tech Rep Ser. 2010;(949):22-26. doi:10.1038/nrmicro1766.

¹¹ <https://dndi.org/diseases/cutaneous-leishmaniasis/>

¹² Mucocutaneous leishmaniasis in Kenya (With a note on penicillin treatment).

¹³ Yanik M, Gurel MS, Simsek Z, Kati M. The psychological impact of cutaneous leishmaniasis. Clin Exp Dermatol. 2004;29:464–467. [PubMed] [Google Scholar]

¹⁴ Garrido-Jareño, M., Sahuquillo-Torralba, A., Chouman-Arcas, R. et al. Cutaneous and mucocutaneous leishmaniasis: experience of a Mediterranean hospital. Parasites Vectors 13, 24 (2020). <https://doi.org/10.1186/s13071-020-3901-1>

¹⁵ D. Mondal et al., Quantifying the infectiousness of post-kala-azar dermal leishmaniasis toward sandflies. Clin. Infect. Dis. 69, 251–258 (2019).Google Scholar

¹⁶ Zijlstra, E.E., Kumar, A., Sharma, A. et al. Report of the Fifth Post-Kala-Azar Dermal Leishmaniasis Consortium Meeting, Colombo, Sri Lanka, 14–16 May 2018. Parasites Vectors 13, 159 (2020). <https://doi.org/10.1186/s13071-020-04011-7>

¹⁷ WHO: March 2, 2020. <https://www.who.int/news-room/fact-sheets/detail/leishmaniasis>

¹⁸ Ritmeijer K, Dejenie A, Assefa Y, Hundie TB, Mesure J, Boots G, den Boer M, Davidson RN. A comparison of miltefosine and sodium stibogluconate for treatment of visceral leishmaniasis in an Ethiopian population with high prevalence of HIV infection. Clin Infect Dis. 2006;43:357–64

1.5 Disease Etiology and Transmission

Leishmania parasites are transmitted through the bites of infected female phlebotomine sandflies, which feed on blood to produce eggs. Comprising 500–800 species, only about 90 are known to transmit *Leishmania*. *Leishmania donovani* and *Leishmania infantum*, the latter is also known as *L. chagasi* are the primary parasites in the Old World whereas *L. infantum* is the dominant one in the New World.¹⁹ The epidemiology of leishmaniasis depends on the characteristics of the parasite and sandfly species, the local ecological characteristics of the transmission sites, current and past exposure of the human population to the parasite and human behaviour. Some 70 animal species, including humans, have been found as natural reservoir hosts of *Leishmania* parasites.²⁰

1.6 Disease Epidemiology

1.6.1 Global Situation

According to the World Health Organization and previous reports, leishmaniasis is endemic in nearly a hundred low and middle-income countries where there are approximately 350 million people at risk. Furthermore, it is estimated that 2 million cases of the disease occur annually and the current number of infections is about 12 million.²¹

About 90% of the global burden for VL is found in just 7 countries, 4 of which are in Eastern Africa (Sudan, South Sudan, Ethiopia and Kenya), 2 in Southeast Asia (India, Bangladesh) and Brazil, which carries nearly all of the cases in South America. An estimated incidence of 202,000–389,100 cases occur per year with an overall annual case fatality rate of 20,000–40,000 and 3.3 million disability-adjusted life years (DALYs). There are several limitations to the VL data reported due to gaps in surveillance and underreporting,^{22, 23} African region with a reporting rate of 38%, the Eastern Mediterranean region at 78%, while both the Americas and European regions had 100%.²⁴

CL is endemic in the Mediterranean, Afghanistan, Middle East, West and North Africa, Kenya, Ethiopia, Central America and Amazon. Over 95% of new CL cases occur in 6 countries: Afghanistan, Algeria, Brazil, Colombia, Iran, Iraq and the Syrian Arab Republic. In the new world *L. mexicana* complex and *L. braziliensis* complex are the causes of CL, while in the old world, CL is caused by *L. aethiopica*, *L. major*, and *L. tropica*, all found in Kenya. Over 90% of MCL cases occur in Bolivia, Brazil, Ethiopia and Peru.²⁵

The PKDL rate (i.e. the proportion of cases where PKDL follows VL) is less than 5% in Nepal, 10% in India and 20% in Bangladesh, while it is up to 60% in Africa (Sudan) and 20% in Ethiopia.

¹⁹ Wamai RG, Kahn J, McGloin J, Ziaggi G. Visceral Leishmaniasis: A Global Overview. J Glob Health Sci. 2020;2:e3.

²⁰ Tonui WK. Situational analysis of leishmaniases research in Kenya. Afr J Health Sci. 2006 Jan-Jun;13(1-2):7-21. PMID: 17348738.

²¹ Owino BO, Matoke-Muhia D, Alraey Y, Mwangi JM, Ingonga JM, et al. (2019) Association of Phlebotomus guggisbergi with Leishmania major and Leishmania tropica in a complex transmission setting for cutaneous leishmaniasis in Gilgil, Nakuru county, Kenya. PLOS Neglected Tropical Diseases 13(10): e0007712. <https://doi.org/10.1371/journal.pntd.0007712>

²² Ruiz-Postigo JA, Grouta L, Jaina S. Global leishmaniasis surveillance, 2017–2018, and first report on 5 additional indicators. WER. 2020;95(25): 265–280

²³ Wamai RG, Kahn J, McGloin J, Ziaggi G. Visceral Leishmaniasis: A Global Overview. J Glob Health Sci. 2020;2:e3.

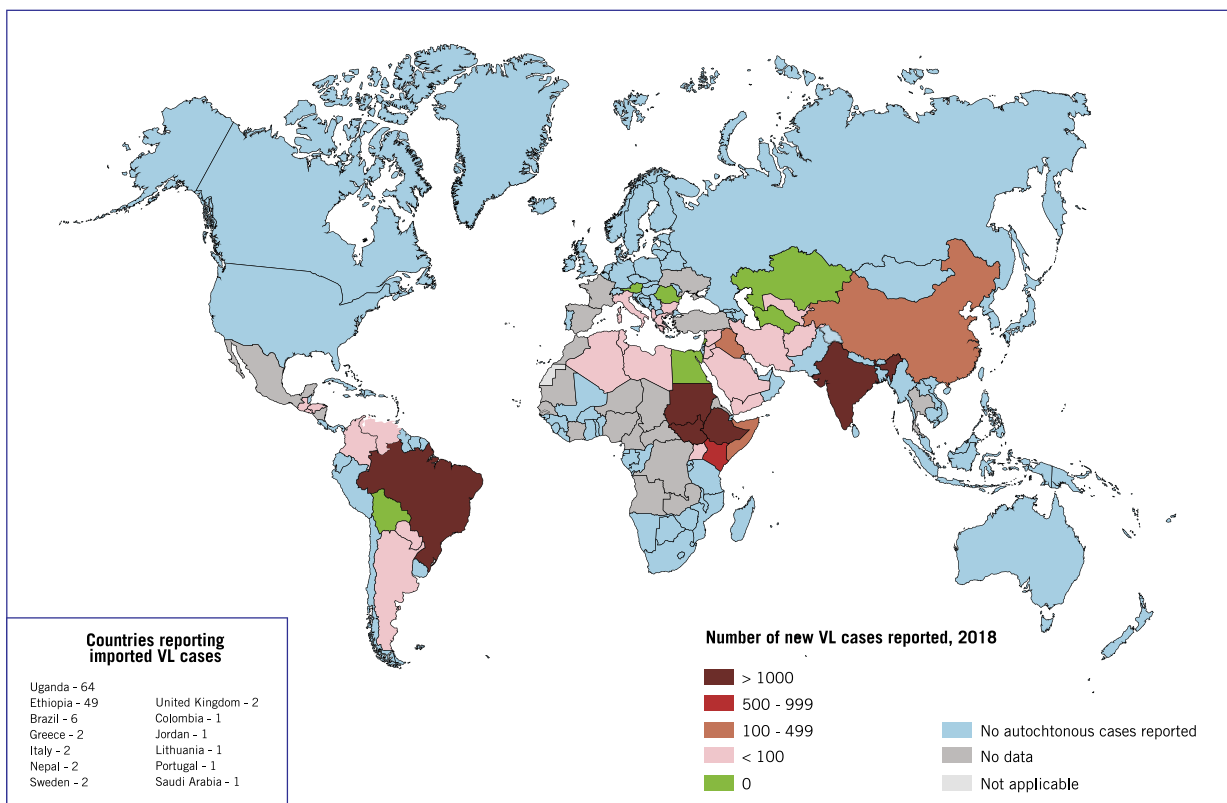
²⁴ World Health Organization. Surveillance of leishmaniasis in the WHO European Region, 2016 and Global leishmaniasis surveillance update, 1998–2016. Wkly Epidemiol Rec 2018;40(93):521–40.

²⁵ Leishmaniasis Worldwide and Global Estimates of Its Incidence Alvar J, Vélez ID, Bern C, Herrero M, Desjeux P, et al. (2012) Leishmaniasis Worldwide and Global Estimates of Its Incidence. PLOS ONE 7(5): e35671. <https://doi.org/10.1371/journal.pone.0035671>

HIV is a risk factor for more frequent and more severe disease. In Asia, PKDL is commonly macular, while in Africa the papulo-nodular form is more common. Self-healing is common in Sudan (85% in 12 months), while it is assumed to be rare in Asia where all patients are treated. In 2007 the World Health Assembly passed Resolution 60.13 which called for “control” of leishmaniasis and in 2012 the disease was targeted for elimination as a public health problem by 2020.

Fig 1.1 Map showing Global Endemicity of Visceral Leishmaniasis (Source WHO 2018)

Status of endemicity of visceral leishmaniasis worldwide, 2018



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitations of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. ©WHO 2019. All rights reserved.

Data Source: World Health Organization
Map Production: Control of Neglected Tropical Diseases (NTD)
World Health Organization



1.6.2 Leishmaniasis in East Africa

Leishmaniasis is a major public health problem in the East African region with 5 of the 7 countries contributing the highest-burden of VL as per the WHO report 2015. These countries are Ethiopia, Sudan, South Sudan, Kenya and Somalia. Recurrent outbreaks of CL have been reported in Kenya, Ethiopia and South Sudan

The current morbidities and mortalities are likely to underestimate the current burden in the region due to the lack of comprehensive epidemiological data for both CL and VL. The burden in the region is increasing due to increasing migration, regional climate change and impaired immunity resulting from malnutrition and HIV. Cross-border transmission occurs at the border points endemic for VL due to nomadic tribe migration, trade, political and social unrest.

The VL transmission cycle in East Africa is generally considered to be anthroponotic (AVL) with the reservoir being comprised of humans.

However, some studies have suggested that a second zoonotic VL (ZVL) cycle is also present in some areas, in which dogs or rodents are also major animal reservoirs.²⁶ CL transmission is both anthroponotic and zoonotic.

Currently, there are no reliable estimates on the prevalence of cutaneous leishmaniasis in the East Africa region. There is a relative scarcity of published data on the extent, burden, and risk factors except in Ethiopia where *L. aethiopica* has been studied over many years. Annual incidence varies considerably from year to year due to social unrest, forced displacements, migration, climate patterns, deforestation, poverty, and malnutrition, each contributing to emerging or re-emerging outbreaks.

Management of VL and CL is usually suboptimal and usually conducted in response to epidemics. Recurrent stock outs of commodities to manage the disease hinders optimum management. Routine surveillance is limited to passive case detection in few health facilities with the capacity to diagnose the disease.

1.6.3 Country Situation

In Kenya, VL is endemic mainly in arid and semi-arid regions in the Rift Valley, Eastern, and North Eastern. There is inadequate information on the prevalence, burden and spatial distribution of the disease. In the Eastern Region, foci have been documented in Isiolo, Kitui, Machakos, Makueni, Marsabit, and Tharaka Nithi counties. In Rift Valley, the disease is more common and has been documented in Baringo, Pokot, Turkana, Samburu, Kajiado and Laikipia Counties. The most important transmission foci currently are; Baringo, Isiolo, Marsabit, West Pokot, Turkana, Kitui, Garissa and Wajir counties. Sporadic cases have also been reported in Kajiado and Tharaka Nithi Counties. The disease foci may change to areas previously not known to be endemic as a result of climate change and population movements. There have been several outbreaks of the disease in Kenya as noted in; Isiolo, Marsabit, Wajir and Baringo Counties in 2008, 2011, 2013, 2014, 2017 and 2019.²⁷

Table 1 showing different forms of leishmaniasis found in Kenya and suspected reservoir hosts

Disease	Parasite	Vectors	Reservoirs host
Visceral leishmaniasis	<i>Leishmania donovani</i>	<i>P. martini</i> , <i>P. orientalis</i>	Human
Cutaneous leishmaniasis	<i>L. major</i> , <i>L. tropica</i>	<i>P. duboscqi</i> , <i>P. guggisbergi</i>	Rodents, Hyrax
	<i>L. aethiopica</i>	<i>P. pedifer</i> , <i>P. aculeatus</i>	Hyrax, gerbils

The MOH NTDs Strategic Plan 2016–2020 states that no clear information on the number of cases managed for Leishmaniasis exist but previous estimates indicated that about 6.81 million people are at risk of the infection. The Leishmaniasis country profile 2016, for Kenya published by WHO in August 2020 had only 692 cases and no data was available about age. In 2019 there were 1,463 cases reported.²⁸

The majority of reported cases are children aged >5 years and young adults. Risk factors for VL have been studied and a good correlation was established between the proximity of houses or temporary settlements to

²⁶ Aysheshm Kassahun, Jovana Sadlova, Petr Benda, Tatiana Kostalova, Alon Warburg, Asrat Hailu, Gad Baneth, Petr Volf, Jan Votupka, Natural infection of bats with Leishmania in Ethiopia, 2015 Acta Tropica, Volume 150.

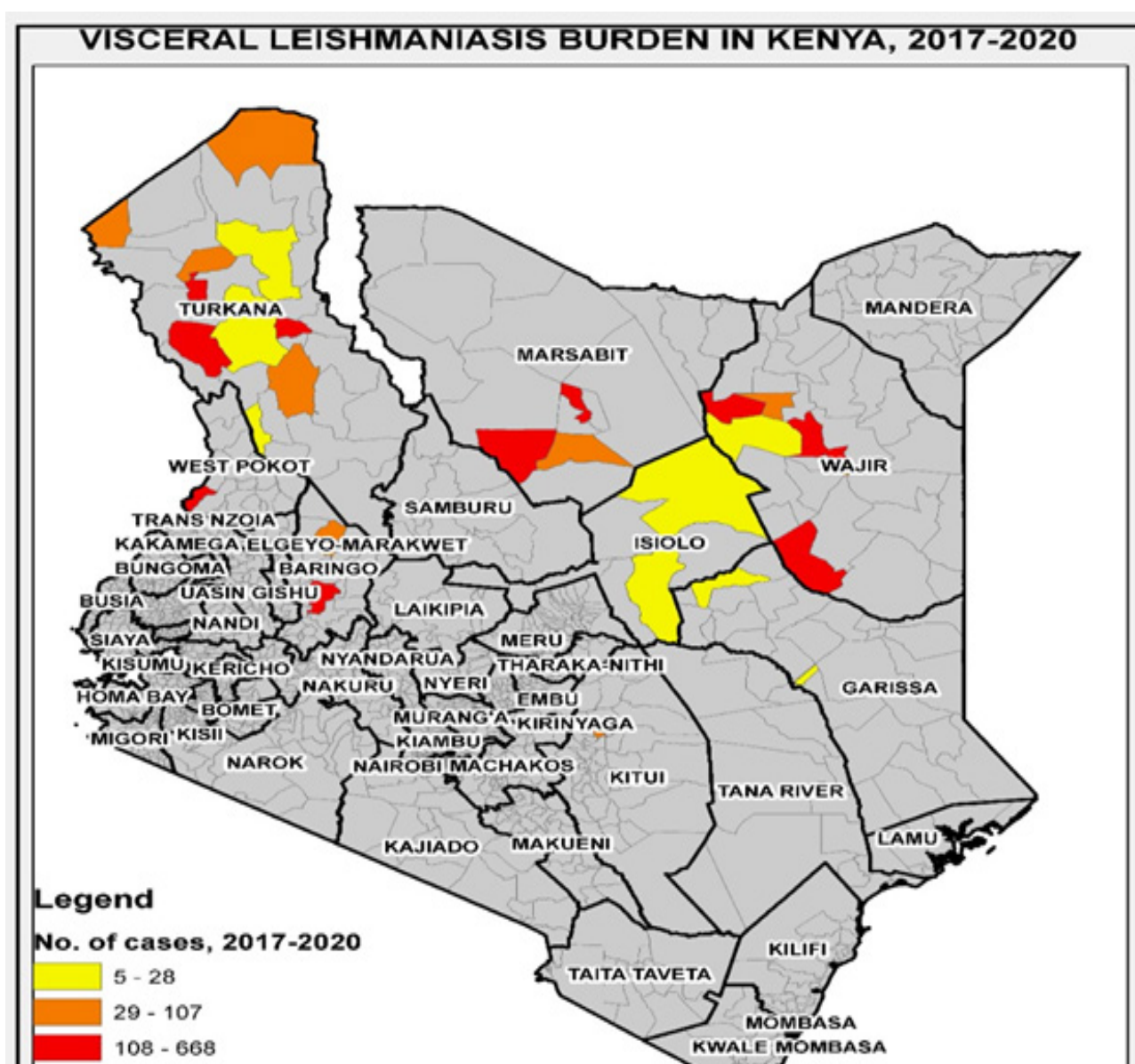
²⁷ Kanyina EW. Characterization of visceral leishmaniasis outbreak, Marsabit County, Kenya, 2014. BMC Public Health. 2020;20, 446.

²⁸ ODHS2.

termite hills and the risk of transmission. Having a low socio-economic status was also identified as a risk factor for VL as well as sleeping near animals and not owning a mosquito net.²⁹

In Kenya CL has been reported in Mt Elgon region, Nakuru and Nyandarua Counties. In the Rift Valley alone, more than 50 cases of CL especially in Gilgil were reported during the 2009 epidemics.³⁰ In 2016 an outbreak was reported in Nakuru and Nyandarua counties and over 500 cases were identified of which 55.7% of the cases were females. Villages bordering rocky cliffs infested with rock hyrax were the most affected.³¹

Fig 1.2 Map showing VL cases reported in Kenya at Ward level in each of the endemic counties 2017-2020 (Source DHIS 2 data)



²⁹ Van den Bogaart E, Berkhout MMZ, Adams ER, Mens PF, Sentongo E, et al. (2012) Prevalence, Features and Risk Factors for Malaria Co-Infections amongst Visceral Leishmaniasis Patients from Amudat Hospital, Uganda. PLoS Negl Trop Dis 6(4): e1617. doi:10.1371/journal.pntd.0001617

³⁰ Njau J. Leishmaniasis control in Kenya: Current challenges and future strategies. 2010

³¹ Owino BO, Matoke-Muhia D, Alraey Y, Mwangi JM, Ingonga JM, et al. (2019) Association of Phlebotomus guggisbergi with Leishmania major and Leishmania tropica in a complex transmission setting for cutaneous leishmaniasis in Gilgil, Nakuru county, Kenya. PLoS Neglected Tropical Diseases 13(10): e0007712. <https://doi.org/10.1371/journal.pntd.0007712>

Fig 1.3 Map showing occurrence of CL in Kenya. (Source WHO 2015)

Cutaneous Leishmaniasis Endemic Regions

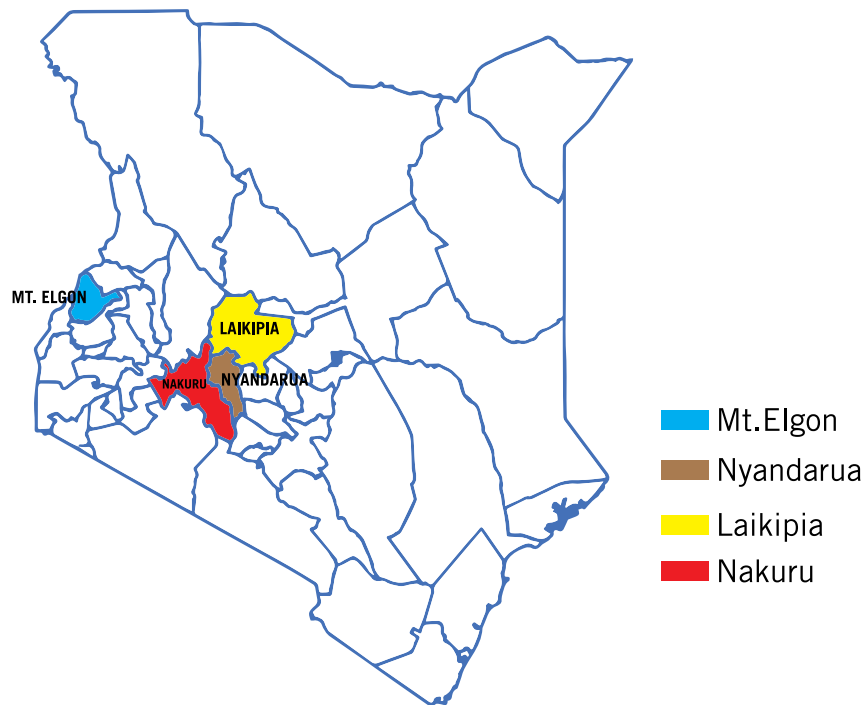
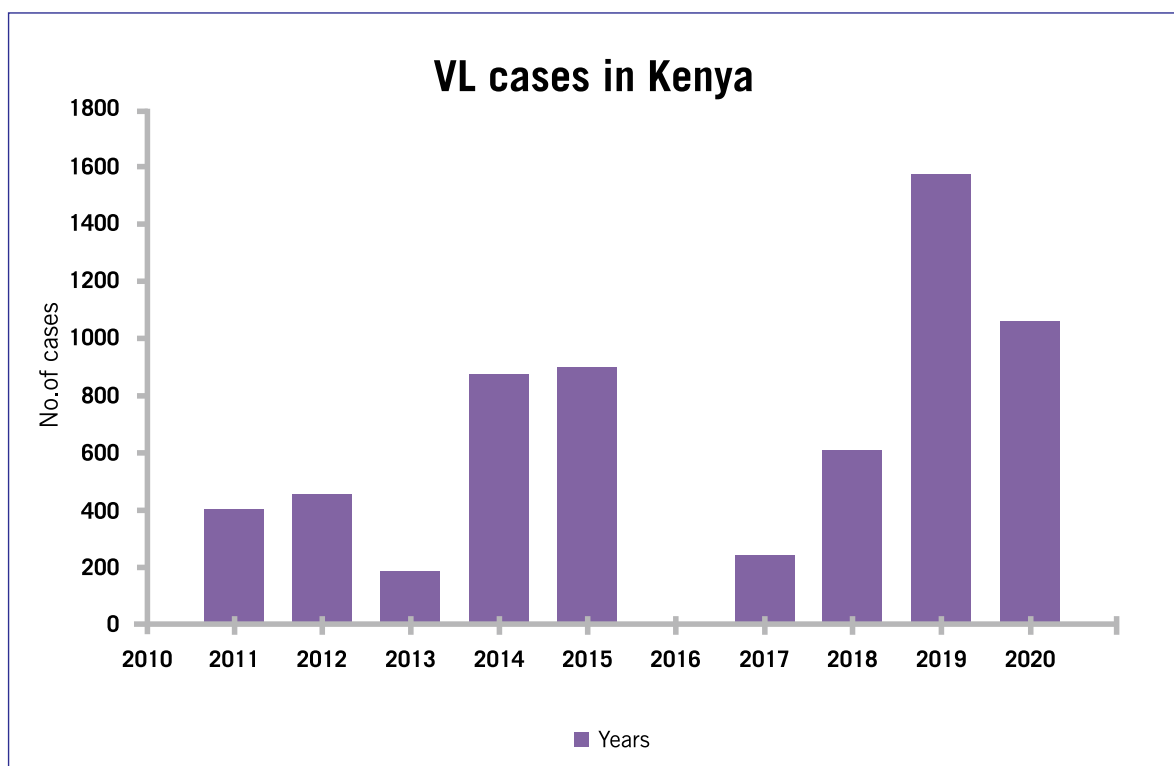


Fig. 1.4 Graph showing number of new VL cases in Kenya 2010-2020 (Source VL DHIS 2)



CHAPTER TWO

BASIS OF THE STRATEGY

2.1 Justification

For the past five years, Kenya has noted a marked increase in the number of leishmaniasis cases reported. In 2019, 1,463 cases were reported for VL compared to 2018 where only 607 cases were reported. Outbreaks of VL and CL have been reported in endemic Counties (see the previous chapter). Additionally, new areas are having re-emergence of the disease, notably Kitui County with sporadic cases being reported from Tharaka Nithi and Kajiado Counties.

Division of Vector Borne Diseases and Neglected Tropical Diseases together with partners revised the diagnosis and treatment guidelines in 2016 for health workers and rolled out the DHIS 2 reporting system for health workers at 14 treatment centres across the country which improved on reporting. Health workers training has also been conducted in endemic areas but the number of health workers trained needs to be increased and new treatment centres opened due to the geographical expansion of the disease to new areas that were not previously reported cases.

Despite the various measures undertaken by the Ministry of Health, leishmaniasis remains a public health problem. Several factors have been attributed to the frequent and persistence of the outbreaks and include:

1. Lack of multi-disciplinary leishmaniasis outbreak response teams at the National and County and levels.
2. Inadequate leishmaniasis outbreak coordination structures (multi-sectoral stakeholders) especially at the county levels.
3. Shortage of staff and limited training on case management of leishmaniasis.
4. Low positivity rate between the number of suspected cases and the number of cases testing positive by rk39 rapid diagnostic test. This could mean other health conditions might be of concern.
5. Long distances to diagnostic and treatment health facilities also cause delays in detection and challenges in treatment monitoring.
6. Despite some vector control measures being undertaken; transmission is still ongoing.
7. The VL data is managed through several transmission systems including KHIS aggregated data, MOH 503, WHO integrated data platform and County situational reports. This leads to duplication, inconsistencies and a lot of work with little compliance to the timelines.
8. Inadequate and delays in supply of drugs and diagnostics.
9. Lack of sustained case management in case of cutaneous leishmaniasis due to high loss to follow-up.
10. Poor diagnosis of CL cases thus empirically treated (a clinically educated guess in the absence of complete or perfect information).
11. Poor health-seeking behavior from the community and low community awareness of the diseases in most areas.

Given these factors and to reverse the current trend, VL programme needs to embrace a more comprehensive approach to control.

2.2 Critical Challenges and Gaps in the Control of Leishmaniasis

1. Inadequate mapping of the various diseases across the country: No mapping of leishmaniasis has been done to map all endemic counties in the country.
2. Limited National and County Government ownership: Most of the counties rely on national government support in the management of leishmaniasis. The majority of the County Governments do not have budgets set aside for leishmaniasis control.
3. Inadequate budgets for undertaking the leishmania control activities.
4. Lack of vector control activities in all endemic counties
5. Inadequate investment in ACSM activities.
6. The inadequate number of trained personnel at all levels in case management and diagnosis:
7. Lack of a proper supply chain management system for leishmaniasis supplies leads to frequent stock-outs of key supplies.
8. Weak surveillance system which leads to late detection of cases leading to outbreak situations.
9. Lack of emphasis and inadequate investment in vector control.
10. Lack of integration of case management and vector control measures in responding to outbreaks (a lot of focus is on treatment)

2.3 SWOT Analysis in Leishmaniasis Control

Table 1.2 SWOT analysis carried out on the current status of control of leishmaniasis in the country

Strengths	Weaknesses
• NTD MoH coordination platform • Development of the strategy • Guidelines for the management of VL • Collaboration with research institutions and their academia • Existence of technical expertise • KHIS for data capture • Data collection tools • Well spread countrywide VBDCU structures • Increased interest and support in leishmaniasis research	• Inadequate skilled personnel • Inadequate testing facilities • Inadequate infrastructural support for testing, treatment and storage of leishmaniasis commodities • Lack of government funding and budget allocation for leishmaniasis • Weak data capture system (quality of data) • Poor ICT support • Erratic supply of commodities • Donor dependency • Lack of vector surveillance, control tools and activities • Inadequate mapping of leishmaniasis transmission hotspots • Weak surveillance systems • Inadequate ACSM activities • Lack of an integrated skin NTD strategy • Lack of cross-border surveillance and epidemic responses
Opportunities	Threats
• Growing interest of development partners on NTDs • UHC agenda • Local and global support for NTDs (As described in WHA/WHO) • Devolution • Regional cross border collaboration • Increased partnerships and collaborations	• Lack of political goodwill • Political instability • Low awareness of leishmaniasis as a Neglected Tropical Diseases (NTDs) • Poor health-seeking behaviour • Low literacy levels • Socio-cultural practices • High poverty levels

2.4 Global Policy

This strategy is aligned to 2007 World Health Assembly Resolution 60.13 on the control of leishmaniasis, the 2012 London Declaration on elimination,³² 2015 WHO Generic Framework for Control, Elimination of NTDs³³ and the WHO Regional Office for Africa 2016-2020 *Framework for the establishment of the Expanded Special Project for Elimination of NTDs*.³⁴ Programme areas are focused on 2010 WHO guidelines on the management of leishmaniasis³⁵ which emphasize prevention and control of leishmaniasis that requires a combination of intervention strategies. This strategy is also aligned to the new WHO roadmap of NTDs; *Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030*.

Key strategies for prevention and control are:

1. **Early diagnosis and effective prompt treatment** reduces the prevalence of the disease and prevents disabilities and death. It helps to reduce transmission and to monitor the spread and burden of disease. Currently, there are highly effective and safe anti-leishmanial medicines particularly for visceral leishmaniasis, although they can be difficult to use. Access to medicines has significantly improved thanks to a WHO-negotiated price scheme and a medicine donation programme through WHO.
2. **Vector control** helps to reduce or interrupt transmission of disease by decreasing the number of sandflies. Control methods include insecticide spray, use of insecticide-treated nets, environmental management and personal protection.
3. **Effective disease surveillance** is important to promptly monitor and take action during epidemics and situations with high case fatality rates under treatment.
4. **Control of animal reservoir hosts** is complex and should be tailored to the local situation.
5. **Social mobilization and strengthening partnerships** – mobilization, and education of the community with effective behavioral change interventions must always be locally adapted. Partnership and collaboration with various stakeholders and other vector-borne disease control programmes are critical.

2.5 National Policy

The 2nd Kenya National Strategic Plan for Control of the Neglected Tropical Diseases 2016-2020, outlines the approach the National NTD programme should adopt in its efforts to control and eliminate NTDs. The plan states the GoK's aim of accelerating the reduction of the disease burden and overall poverty alleviation through the control, elimination, and eradication of NTDs. It also lays out the operational framework proposed by the National NTD programme to achieve these objectives.

³² WHO. Accelerating work to overcome the global impact of neglected tropical diseases – A roadmap for implementation. WHO: Geneva. http://www.who.int/neglected_diseases/NTD_Road-Map_2012_Fullversion.pdf

³³ Uniting to Combat NTDs. Reaching the Unreached: The 4th Progress Report of the London Declaration. 2016. <http://unitingtocombatntds.org/report/fourth-report-reaching-unreached>

³⁴ WHO. Generic Framework for Control, Elimination and Eradication of Neglected Tropical Diseases. 2015. http://www.who.int/neglected_diseases/resources/NTD_Generic_Framework_2015.pdf

³⁵ World Health Organization. Control of the leishmaniasis. WHO Technical Report Series, 949. Report of a meeting of the WHO Expert Committee on the Control of Leishmaniasis, Geneva, 22–26, March 2010.

Over and above the achievement of the national health goals, the GoK has prioritized Universal Health Coverage (UHC) as one of its Big 4 agenda items over the next 5 years (2017-2022). The focus for UHC is on the prevention of disease and primary healthcare as emphasized in the Alma-Ata principles. The interests in UHC are key to NTDs which are amenable to prevention activities.

It is envisaged that concerted efforts by both the National and County Governments and other implementing partners, will ensure that UHC is achieved even before 2022.

2.6 Guiding Principles

For this strategy to be effectively implemented, the following principles will be embraced by all partners:

- Equitable and inclusive distribution of health services and interventions in line with the UHC agenda;
- Public participation, people-centered and multi-sectoral approaches to planning, implementation, and review;
- Community social accountability and active public involvement;
- Efficiency in the application of information technology;
- Effective coordination anchored on productive engagements between and among the national and county governments and implementing partners;
- Strategies that embrace cost-effectiveness and value for money.

CHAPTER THREE

STRATEGIC OBJECTIVES

VISION

A healthy nation free of leishmaniasis.

MISSION

To ensure access to prevention, diagnosis, treatment, and control of leishmaniasis in Kenya.

GOAL

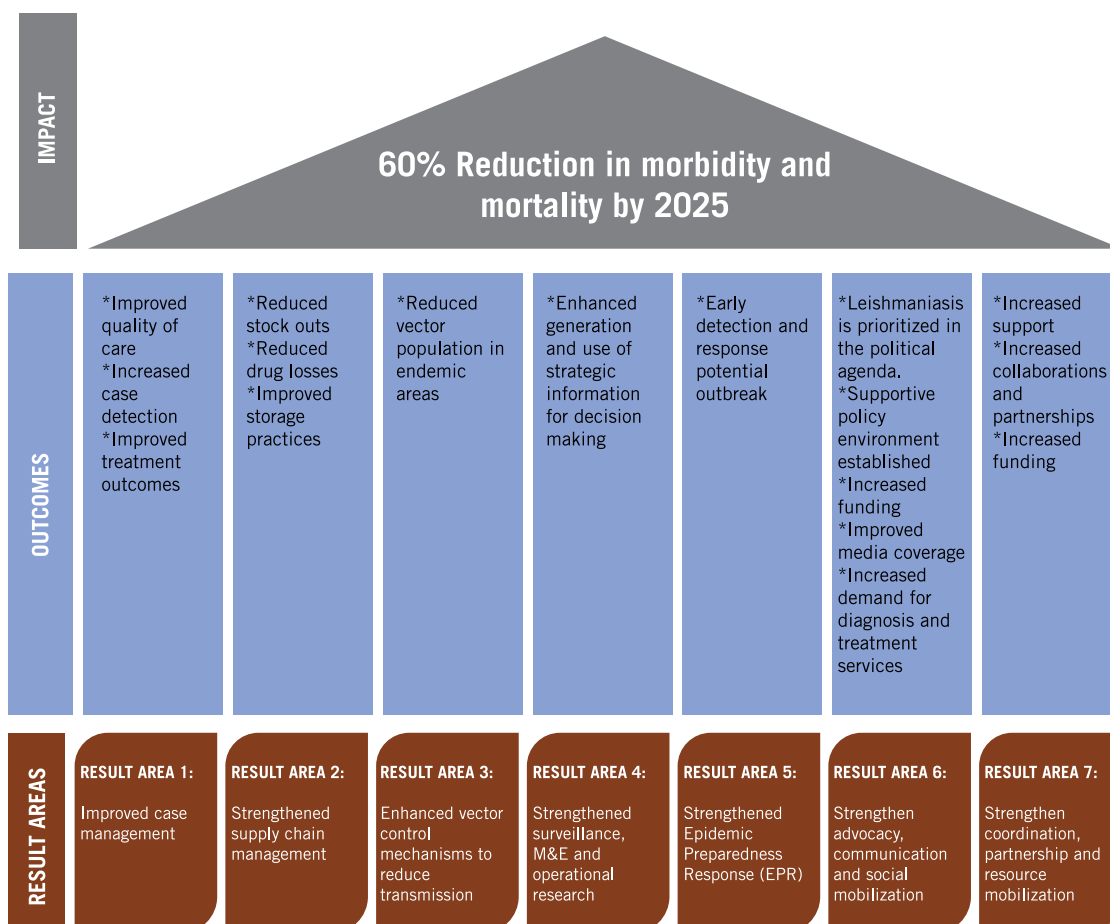
To control leishmaniasis in Kenya through comprehensive and integrated efforts by 2025.

The main objectives of the control strategies are:

1. Reduction of morbidity due to visceral leishmaniasis by 60% and cutaneous leishmaniasis by 85% by 2025
2. Reduction in the occurrence of leishmaniasis outbreaks in Kenya by 50%
3. To reduce case fatality due to visceral leishmaniasis in Kenya to less than 1% by 2025

KEY RESULT AREAS

This strategy has **7 key Result Areas** as shown below in the impact pathway;



Key Result Area 1: Improved case management for CL and VL

Proper diagnosis and prompt management of leishmaniasis cases are crucial in achieving the goal of this strategy. In this objective, the programme will focus on developing and renewing guidelines for the management of VL and CL, equipping health care workers with the relevant knowledge and skills, laboratory quality assurance and efficacy testing of medicines.

This objective will be achieved through the following strategies:

1.1 Reviewing the diagnosis and treatment guidelines for VL and CL in Kenya to incorporate new technologies in diagnosis, treatment, and management

Guidelines for the management of CL will be developed while the existing VL guidelines will be revised to incorporate current management practices.

1.2 Strengthen the capacity of health care workers for case management of leishmaniasis

Training of the health workers on the diagnosis and treatment of both CL and VL will be undertaken at all levels.

1.3 Establishing more testing and treatment sites for management of leishmaniasis

To enhance increased access to quality care by leishmaniasis patients the programme will upscale the sites for clinical management.

1.4 Undertake quality assurance for diagnosis of leishmaniasis

Internal and external quality assurance at the national level and through inter-county validation will be done; and lot –to- lot validation evaluation of both rapid kits and DAT.

1.5 Conduct Therapeutic Efficacy Test for leishmaniasis medicines

Due to increased resistance to antimonials and other leishmaniasis medicines the strategy will aim at continuous efficacy testing to ensure sensitivity.

Key Result Area 2: Strengthened supply chain management system for VL and CL

In this strategy, the programme will aim to ensure that there are correct quantification and an adequate supply of leishmaniasis medical commodities (drugs and diagnostics). This will be achieved through:

2.1 Capacity building for quantification and forecasting

A forecasting and quantification tool will be developed and adopted for timely forecasting and procurement planning of the supplies through WHO. Forecasting will be done based on morbidity data or estimated number of leishmaniasis cases, adjusting for anticipated disease outbreaks. County Pharmacists will be provided with training on the tools and enabled to report consumption data into the DHIS2 platform.

2.2 Proper inventory management

Regular monitoring and supervision will be conducted at all treatment sites and storage facilities to adequate inventory control parameters are established to avoid stock-outs and wastage of medicines and diagnostics.

The programme will strive to ensure that at any one time, there is at least enough stock of medicines and diagnostics tests at treatment sites to diagnose and treat all cases anticipated within the next quarter.

2.3 Improvement in warehousing

The programme will leverage KEMSA warehousing and logistics infrastructure and work with County Health authorities to ensure adequate storage management infrastructure and conditions are upheld at the relevant health facilities and county stores where applicable. Through County Pharmacists, the programme will implement standard operating procedures for warehousing and distribution of all pharmaceutical and diagnostic materials including cold chain products such as Liposomal Amphotericin B infusion.

2.4 Ensure proper logistical support

The programme will work closely with KEMSA to integrate leishmaniasis medicines and diagnostics into the e-LMIS allowing regular delivery of supplies through the standard health product ordering and delivery system. The programme will engage KEMSA to provide adequate logistic support from national to county level for delivery of medicines and diagnostic materials at affordable costs.

2.5 Improve reporting on stock levels

The programme will emphasize the responsibility of the counties in reporting of the stock level of leishmaniasis medicines and diagnostics by progressively making it a requirement before issuing additional stock to the counties. The programme will ensure monthly reporting into the DHIS2 platform is done by the relevant County Pharmacists to achieve improved inventory visibility and enable timely requisitions for supplies. The national level will conduct regular follow-ups to identify and address reporting challenges.

Key Result Area 3: Enhanced vector control mechanisms to reduce leishmaniasis transmission

Vector management is key in leishmaniasis transmission control. In Kenya, *Phlebotomus* sandflies are the main vectors known to transmit leishmaniasis. Sandflies, unlike mosquitoes, have poorly defined breeding areas and do not aggregate as juveniles that are amenable to environmental management. During the day phlebotomine sandflies have been reported to rest and reproduce in relatively cool, humid, and moist dark places including; bedrooms, wall crevices, latrines, caves, rocks or soil, dense vegetation, tree holes, anthills and animal burrows depending on the species. This objective will target protecting persons against sandfly bites, controlling vector densities and monitoring the occurrence and distributions of the sandflies in Kenya.

To achieve this the following strategies will be implemented:

3.1 Strengthen the use of Insecticide Treated Nets (ITNs) in the management of leishmaniasis transmission

The use of insecticide-treated nets will be rolled out in all VL and CL endemic regions in Kenya.

3.2 Conduct Indoor Residual Spraying (IRS) and chemical space spraying

Spraying inside the houses (walls), caves, and other sandfly breeding habitats with insecticides known to be efficacious to sandflies will be done in VL and CL endemic counties and outbreak areas.

3.3 Undertake environmental management

Communities will be engaged in environment management by either destroying sandfly breeding habitats such as anthills, clearing bushes, or improving houses through smearing or sealing of open eaves that allow entry of sandflies into houses.

3.4 Establish leishmaniasis vector surveillance sentinel sites

The NTD programme will endeavor to routinely monitor the occurrence of VL and CL in Kenya, more so, sandfly species distribution and occurrence in disease-endemic regions. Therefore, the programme will set up sandfly sentinel sites in regions with a high burden of VL and CL in the country.

3.5 Insecticide resistance monitoring

Frequent use of insecticides in known induce resistance or reduced efficacy of the chemicals on sand flies. Routine monitoring of susceptibility of sand flies towards chemicals such as pyrethroids that are routinely used in the control of sand fly and agriculture will be undertaken.

Key Result Area 4: Strengthened surveillance, monitoring and evaluation, and operational research for informed decision making

Surveillance, monitoring, evaluation, learning, and research will be key processes in the leishmaniasis control strategy. These processes will enable the programme to generate strategic information for;

- Tracking the progress of set targets
- Demonstrating if the programme has contributed to desired outcomes,
- Learning and adaptive management that provide answers to research questions where there are information gaps.

Impact, outcomes, outputs resulting from interventions (under the strategic objectives) of this strategy have been identified, targets set and indicators designed to measure the success. The strategies under this objective will play a supportive role and generate evidence that examines what effect the interventions have on the burden and spread of the disease, i.e. impact of the interventions and the outcome of interest. Below is a detailed strategic approach to deliver on the supportive functions.

4.1 Monitoring and evaluation of programme performance towards achieving set targets and desired results.

Monitoring of the control programme will involve collecting routine data to verify the progress or status of implementation, ensure accountability, detect problems and constraints, promote evidence-based planning and provide prompt feedback so that adjustments can be made as needed.

Evaluation will involve the periodic assessment of changes in targeted outcomes or results that can be attributed to a programme. The objectives of evaluation are to relate a particular outcome or health impact directly to a particular intervention after a certain time, determine the value or worth of a particular project or programme, link any two parts of the monitoring and evaluation framework (input, process, output, outcomes, and impact), measure the effectiveness of the programme and provide reliable information on progress in controlling leishmaniasis that can be used.

Baseline evaluations will be conducted to determine the status quo of key indicators pre-intervention (before the rollout of the strategy). Baseline data will set the benchmark for where the progress can assess if it is making a difference. Household surveys, as well as Knowledge, Attitudes and Perception surveys, will be conducted to demonstrate desired outcomes of this strategy

The programme will aspire to achieve and track the results represented below in Appendix 2 during the life of this strategy. The impact pathway (in chapter 3) demonstrates the pillars (key result areas of the strategy and the pathway to achieving impact.

4.2 Establishing and strengthening surveillance systems for effective and timely response

The programme will take advantage of these existing surveillance systems which are part of the national health notification system but operating independently from the leishmaniasis control programme. The strategic information from surveillance activities will guide immediate action for cases of public health importance and facilitate monitoring of events and trends.

GIS-based mapping will be employed and will enable the control programme to trace the evolution of the leishmaniasis problem, identify affected areas and map out old and new active foci of VL and CL where targeted and site-specific leishmaniasis interventions should be deployed.

Surveys to assess local situations, problems and needs related to leishmaniasis will be carried out at regular intervals. Also, passive and active disease surveillance will be employed depending on the local epidemiological situation and a regular flow and exchange of information established.

4.3 Conducting operational research for improving programme implementation

The programme will leverage the expertise of partner research institutions and other relevant actors to conduct operational research that will generate strategic information to improve the delivery of interventions by the programme. Operational research will facilitate the programme to;

1. Define the actual endemicity (burden) of leishmaniasis and the population at risk based on eco-epidemiological data for specific foci.
2. Use data from surveillance to identify descriptive epidemiological aspects of the disease (person, place, and time) and seasonality patterns to accurately illuminate where and when transmission occurs and how control strategies should be focused.
3. Assess the efficacy and effectiveness of applied control measures, measures for vector and reservoir control, surveillance tools, and methods.
4. Have a better understanding of the barriers facing target populations to access treatment;
5. Among many other areas of interest where there is a need for knowledge that will improve programme delivery.

Key Result Area 5: Strengthened Epidemic Response (EPR) for leishmaniasis

This strategy aims at ensuring early detection and treatment of new cases and prevent the spread of the epidemic. Key activities to be implemented include increasing alerts, prompt investigation of validated alerts and cases, active case finding both in the health structures and in the community, particularly around new cases. This will be achieved through;

5.1 Update the case definition including alerts and suspected cases that do not present with constitutional symptoms and disseminate to all affected sub-counties

5.2 Build the capacity of personnel involved in surveillance, community health volunteers and ensure their supervision

5.3 Establish a unit responsible for the re-evaluation of all validated and invalidated alerts

5.4 Train and use multidisciplinary rapid intervention teams to quickly validate alerts and ensure their investigation

5.5 Build on the integrated results of social, behavioral and epidemiological analyses to better support surveillance approaches

5.6 Ensure laboratory training for the laboratory teams in the affected counties

5.7 Establish vector control and patterns of transmission through the concerned departments for the elimination of Vectors within the affected regions

5.8 Establish Contingency funds for EPR at the county level. This will ensure that counties can rapidly mobilize resources to respond to outbreak situations

5.9 Counties with the support from MoH, develop contingency plans for outbreak response

Key Result Area 6: Advocacy, Communication and Social Mobilization (ACSM)

This strategy embraces policy change, sustained political, financial and social commitment towards leishmaniasis control.

6.1 Advocacy

It is anticipated that through advocacy, the Ministry of Health will seek and develop partnerships and engage policymakers at all levels of governance to achieve strong commitment for VL & CL control. Notably, health is a devolved function; hence, the county governments will be key partners in the implementation of this objective. Policy advocacy will lobby national and county political leaders to increase funding for VL and CL programmes and institute policy changes to support the implementation environment. Programme advocacy will reach out to decision-makers and community partners to solicit their participation in local actions and programme decisions to support VL and CL services. Media advocacy will help to highlight VL and CL issues on the public agenda by prompting the media to cover related topics regularly and responsibly to raise awareness of VL and CL problems and solutions.

The following are high-level advocacy activities planned for this strategy period:

1. Consultation meetings with policymakers at the national level, including MoH, Senate and Parliamentary Health Committees, the Council of Governors (CoG) and the County Executive Committee (CEC) Members for Health Forum of the CoG. These consultations will aim to sensitize them on the BTS and seek their support in prioritizing and allocating resources for leishmaniasis control.
2. Consultation meetings at the county level in endemic counties with the Governors, CECs members for health and their teams, County Assembly and other key players in the health sector, on the importance of investing in CL and VL
3. Media advocacy for VL and CL. This will require working with the technical team at the NTD Unit to develop content and engage with the policymakers to speak up on CL and VL
4. Identify key areas that require policy reforms and enforcement, such as making VL drugs and diagnostic tests priority essential commodities
5. Sharing data between implementers; a key instrument for advocacy at the national and county levels.

6.2 Communication

The strategy aims to increase community VL/CL awareness for exposure avoidance, risk reduction, and improve health-seeking behavior and provide VL and CL information to all stakeholders at all levels during every opportunity that presents itself for such dissemination. This will include county, sub-county, community level and household/individual level advocacy activities. Using an integrated inter-sectoral approach, efforts will be made to promote the provision of VL and CL information during the implementation of activities by other programmes and stakeholders, which may involve contact with significant proportions of community members. Diverse communication platforms appropriate to the target audience will be utilized to achieve the objectives as outlined below:

1. Customize messages to resonate with local culture, language, religion and social dynamics to encourage behavior change.
2. The use of print media, radio, television, social media platforms (such as Twitter, WhatsApp, Instagram, Facebook, among others), posters, billboards, flyers, chiefs' barazas, religious gatherings, among others to rapidly expand the reach of messaging for VL and CL control-related intentions.
3. Support the development and/or adaptation of health tools for VL and CL.
4. Demystify VL and CL and address beliefs and practices among community groups, which can be detrimental to the control of VL and CL.
5. Leverage on the communication strategy for NTDs, The Health Promotion Unit (HPU) of MoH, and other existing public health platforms that have the capacity and structures at the national and county levels to generate content, develop, produce and disseminate communication materials.
6. Partnerships with other agencies, including CSOs, CBOs, FBOs, and NGOs with expertise in ACSM will be explored and utilized.

6.3 Social mobilization

The strategy aims to enhance community engagement by building alliances and engaging the participation of stakeholders to increase visibility and urgency for VL and CL control. A broad range of stakeholders including policymakers, professional and religious groups, the media, the private sector, VL and CL patients and their families and other community groups will be involved in the planning, implementation and evaluation services to strengthen community participation and ownership of control activities for long-term use and sustainability and to ensure quality and effectiveness of these programmes. The key social mobilization activities proposed in this strategy period include the following:

1. Hold targeted workshops and community meetings to improve the level of ownership, knowledge, and awareness among community members, local opinion leaders, religious leaders, programme implementers, government officials and other stakeholders.
2. Engage communities through participatory community approaches for ownership, accountability and sustainability of interventions.
3. Expand service delivery through community-based approaches.

Key Result Area 7: Strengthened Coordination, Partnerships, and Resource Mobilization

This involves the harmonization of programmematic activities of all stakeholders under a unified approach of planning, execution and reporting.

7.1 Coordination

One of the key challenges facing VL and CL control in Kenya is the fragmentation of programmematic, which has led to duplication and inconsistencies in its operations. The achievement of the strategic objectives will rely heavily on how well the Ministry of Health will streamline all stakeholders' actions in an effective partnership at the national and county levels.

To this end, the following coordination activities are outlined for this strategy period:

1. Government leadership and ownership – Facilitate engagement of multiple stakeholders at country and county levels.
2. Establish a VL and CL coordination section within the country and county NTDs programmes that will ensure all activities identified in this strategy for joint implementation are conducted in a harmonized manner.
3. Develop a coordination platform that will be easily accessible to all parties to the strategy including the national and county governments, departments and officers responsible for each component of the strategy and development partners supporting the implementation of the strategy.
4. Have a transparent and effective coalition.
5. Organize forums at the national and county levels where partners will be engaged in discussions on policy direction, development and review of guidelines, develop plans of action, governance and agenda-setting, the setting of norms and standards, identify priority needs and report back on the agreed milestones and challenges.

6. Monitor the implementation plan closely to measure performance, progress and success towards achieving the set goals.
7. Two-way communication with all the stakeholders will be key to ensuring that they inform and are informed about interventions.
8. Due to disease distribution and geographical uniqueness, counties will be clustered for better coordination and efficiency. The proposed clusters include:
 - a. Marsabit, Isiolo and Samburu
 - b. Mandera, Wajir, Garissa and Kitui
 - c. Turkana, West Pokot and Baringo
 - d. Nakuru and Nyandarua
9. Organize national and county level forums where stakeholders will review, report and disseminate achievements.
10. Endorsement of relevant resolutions and the most current NTDs road map to meet global targets for VL and CL.
11. Provide technical support through i) formation of expert committees ii) formal and informal consultations, iii) develop a framework for implementation, iv) provide a process of validation and v) carry out performance assessments.
12. Keep the global community informed about the progress being made in Kenya towards control of VL and CL by contributing to the global health observatory- timely, accurate and complete surveillance updates and support publication of epidemiological reports
13. Strengthen inter-sectoral and cross-border collaboration and partnerships with international organizations and neighboring VL and CL endemic countries.
14. Stimulate research for VL and CL.
15. Strengthen the institutional capacity of health services and the capacity for decision-making related to leishmaniasis control (both in the general health care system and in the services responsible for leishmaniasis prevention and control).

7.2 Partnerships

Partnerships remain a key strategy for resource mobilization and programme implementation. It is the main vehicle through which the targets set in this strategy will be achieved because it will allow all health sector players to collaborate and harmonize their interests, recognizing each other's mandates, strengths and limitations. The Ministry of Health, through the VL and CL Programme, will work towards expanding the partnership base by:

- Scouting for and engaging potential stakeholders.
- Assessing and building capacity and resources for stakeholder engagement.
- Assigning roles and responsibilities based on capacity, expertise and contributions to the programme.
- Manage the partnerships by developing a SEP that will be used to ensure that partner activities are coordinated and there is continuous information flow. A communication plan will also be developed as part of the SEP.
- Concerted efforts to align all activities towards the achievement of the overall vision and mission of the strategy.
- Organizing an NTD Forum held annually that will bring together all partners in Kenya to discuss NTD interventions and monitor progress towards achieving control and elimination targets.
- Create and manage budgets.

The following Table presents a preliminary list of categories of partners. The list is not conclusive and will be reviewed and updated periodically.

Table 3.1 Preliminary list of Categories of Partners

Name	Key areas of partnership
Ministry of Health (including the relevant departments, divisions, programmes and units)	Oversight and coordination of all organizations and programmes involved in VL and CL activities in the country including clinical, vector, surveillance, research, HMIS, community health and research. Ownership of all National VL and CL plans. Engage/lead all stakeholders and implements the full range of activities. Invest national resources (human, financial, infrastructure).
National Government Ministries	Engage those with mandates that have a direct impact on the control of VL and CL. Sensitization of key stakeholders within these ministries to understand and support the VL and CL control agenda.
Semi-Autonomous Government Agencies (SAGAs)	KEMRI has a key role to play in research, monitoring, evaluation and surveillance; Pharmacy and Poisons' Board (PPB) whose mandate includes regulation of medicines and other health technologies; KEMSA is important in all aspects of the supply chain.
County Governments	Departments involved in VL and CL with the recognition that health is a devolved function.
Development partners	Provide strategic directions, technical assistance, operational support, capacity building procurement of essential medicines, monitor and evaluate progress, support surveillance systems, resource mobilization, donor coordination, advocacy and public information. It is envisaged that this support will continue and the technical elements will be intensified as the country moves from control towards the elimination of VL and CL.
Donors	Provide multilateral and bilateral support. Undertake high-level advocacy with endemic countries and other partners. Provide advocacy and assistance in partnership development.
Pharma and generic manufacturers	Manufacture, donation, preferential prices, pharmacovigilance, logistics and research
Development banks and multilateral agencies including World Bank	Provide access to country-level financing.
Implementing partners	Several organizations that implement specific aspects of VL and CL control, Provide technical support, diagnosis, treatment, vector control, drug development, BCC, social mobilization, surveillance and research. These partners will adopt the provisions made in this strategic framework and work towards collectively achieving the strategic objectives.
Research and Academia -	Provide scientific knowledge, research, training, and evaluation. Operational and implementation research that informs policy and programming. Provide answers to specific programmatic questions.
CSOs	Provide health services and have vast experience in BCC in endemic counties and would be key allies in the implementation process.
Communities	All VL and CL endemic communities will be key in the entire planning, implementation, monitoring and evaluation processes.

7.3 Resource Mobilization

To secure adequate resources for leishmaniasis control, the strategy will develop a resource mobilization plan that will involve the following:

- 1) Estimate VL and CL priority needs for the strategic period.
- 2) Build an investment case to the exchequer, donors, and other stakeholders on areas for support and strengthening (Human Resource, Infrastructure support, Supply chain among others).
- 3) Provide a sustainability framework that advocates for the country and county ownership through financing and integration of VL and CL in national and county health plans and budgets.
- 4) Identify opportunities for funding including bilateral support, development banks, private sectors and other innovative funding mechanisms.
- 5) Borrow best practices from case studies, detailing specific country initiatives that have successfully mobilized resources in Africa and beyond.

CHAPTER FOUR

RESOURCE REQUIREMENTS FOR LEISHMANIASIS STRATEGIC PLAN

This chapter describes in detail the level of resource requirements for the implementation of the priority activities in the cutaneous leishmaniasis (CL) and visceral leishmaniasis (VL) strategic plan 2020/21 to 2024/25. A good health system raises adequate revenue for service provision, enhances the efficiencies of management of resources, and provides financial protection to the poor against catastrophic and impoverishing situations. Understanding how the health systems and services are financed, programmed and resourced is important in the strategic mobilization of resources, advocating for the financing of priority actions and supporting populations to access available health services. Also, estimation of resource needs will ensure the goals identified in this strategic plan are met.

Estimation of resource requirements, availability, and resource gaps will inform the government, partners, and other stakeholders on financial requirements for leishmaniasis programming and potential resource gaps. This will ensure a look into sustainability in financing for leishmaniasis interventions and could inform resource mobilization initiatives to cover the funding gap identified. The funding information will catalyse discussion on sustainable financing of leishmaniasis interventions to reduce over-reliance on donor funding. Funding information could further accelerate the transition to domestic funding, by ensuring the government allocates enough resources to achieve leishmaniasis control and elimination in a sustainable manner and to some extent pushing the country's Universal Health Coverage (UHC) agenda.

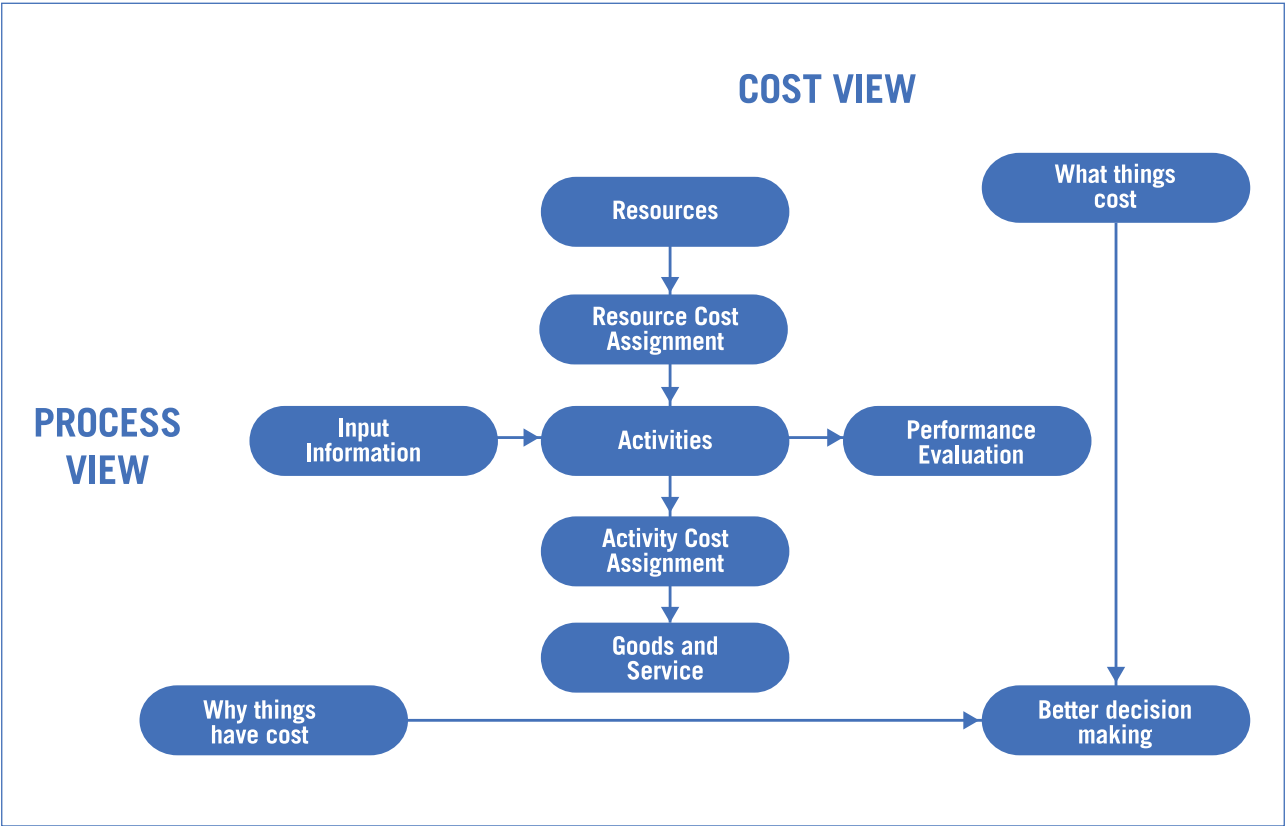
Overall, this information on cost estimates, resources available, and the financing gap provide critical information to aid decision-making relating to leishmaniasis resource mobilization, planning and annual budgeting. The information is also useful in the development of the leishmaniasis annual operational plans and ultimately the realization of the goals set in the strategic plan. The chapter contains a section on;- description of the costing methodology; cost estimates for the implementation of this strategic plan; projected available resources; and finally, the resource gaps for the strategic plan are estimated by comparing resources required (cost estimates) with the resources available.

4.1 Costing Methodology

Financial resources needed for this leishmaniasis strategic plan were estimated by costing all the activities that are outlined in the strategic plan that will contribute to the achievement of the set objectives. The strategic plan was costed using the Activity-Based Costing (ABC) approach. The costs estimated are incremental costs, defined as additional costs of delivering interventions and activities prioritized in the leishmaniasis strategic plan. The costs were calculated based on the implementation timeframe covering the financial year 2020/21 to 2024/25. The adopted approach was determined based on the potential policy utility of the cost estimates by the leishmaniasis programme, key among the considerations is that the ABC approach is the preferred costing approach by the government of Kenya for planning and budgeting. The NTD leishmaniasis team felt that employing the ABC costing approach it will make the results more applicable in the development of programme-based budgets as well as Annual Work Plans (AWPs) for the next five years.

The ABC uses a bottom-up, input-based approach, indicating the cost of all inputs required to achieve the strategic plan’s targets. ABC is a process that allocates costs of inputs based on each activity, it attempts to identify what causes the cost to change (cost drivers). All costs of activities are traced to the product or service for which the activities are performed. The costing logic springs from activity-based costing with the intuition that activities require inputs. These inputs are required in certain quantities and with certain frequencies. The sum of all the input costs gives the activity cost. The activities are added up to arrive at the strategy cost, objective cost and eventually the total cost of the strategic plan. The availability of the estimated resources enables the implementation of priorities activities in the strategic plan and ultimate realization of performance targets set in the strategic plan, the ABC model cost view and process view are presented in Figure 4.1 below.

Figure 4.1: Activity based costing model process and costing view.

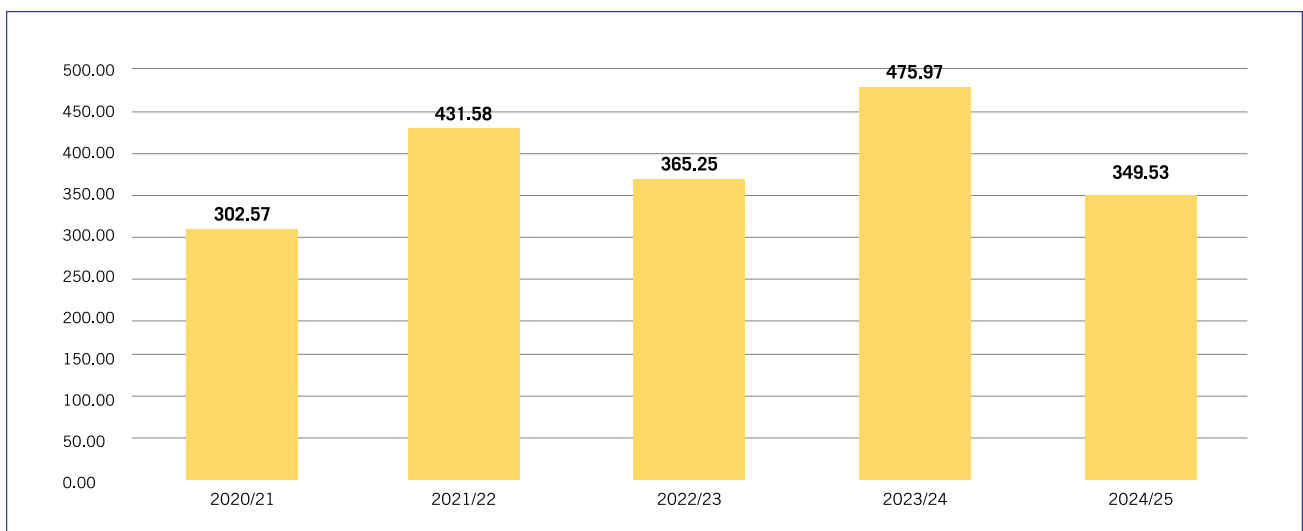


The costing estimates were based on epidemiological data collected and validated by the leishmaniasis programme. This included population sizes (e.g., target population), current and projected coverage (e.g., what percentage of people require the services and how is this likely to change going forward) and unit costs. The costing data was also verified with information from key stakeholders and donors. Through a consultation process with the programme and other key stakeholders, the targets were agreed upon and they formed the basis for estimating the total resource requirement.

4.2 Summary cost estimates for the Leishmaniasis Strategic Plan.

The total cost to implement activities under the 7 strategic objective areas outlined in the leishmaniasis strategic plan over the next five years will be KES 1.92 Billion (US\$ 18.1 million). Figure 4.2 provides the total resources required for the leishmaniasis strategic plan over the 5 years. There is variation in the financial need across years as the programme implementation approach control and elimination, coupled with an increase in momentum during the implementation period. FY 2021/22 and FY 2023/24 will account for the highest resource needed per year at KES 431.58 Million and 475.97 Million respectively accounting for 22.4% and 24.7% of the total resources required, respectively for the period of the strategic plan. Attributing to this cost variation is the high resources needed for commodities specifically commodity required for IRS intervention activities across the 10 leishmaniasis endemic counties.

Figure 4.2: Resource needs leishmaniasis strategic plan (KES., Millions).



Source: ABC costing Model

4.3 Cost Estimates by Key Result Area

Cost analysis of implementing the leishmaniasis strategic plan by strategic objective is presented in this section. The strategic objective on enhancing vector control mechanisms to reduce leishmaniasis transmission will consume the largest share of the resources needed at KES 490.32 Million largely driven the programme's target for IRS intervention in 27 wards spread across 10 endemic counties. A strategic objective that aims to strengthen surveillance, monitoring and evaluation and operational research for informed decision making; and strengthening the supply chain management system for VL and CL will require KES 484.26 Million and KES 290.03 Million respectively over the five years. Table 4.1 presents a summary of total resources needs for implementing the leishmaniasis strategic plan by strategic objective area. Detailed financial resources required for each strategic objective by the strategy are provided in Appendix 1.

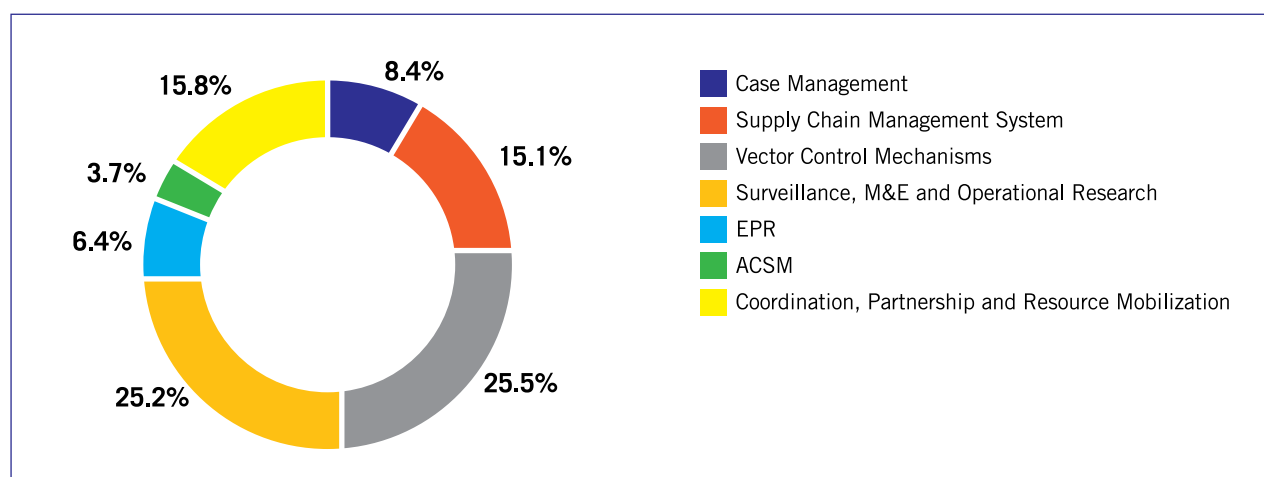
Table 4.1: Total costs by strategic plan key result areas (KES Millions)

Key Result Area	2020/21	2021/22	2022/23	2023/24	2024/25	Total
Improve case management for CL and VL	30.36	57.05	20.74	51.24	3.21	162.61
Strengthened supply chain management system for VL and CL	55.50	58.92	58.43	58.53	58.65	290.03
Enhanced vector control mechanisms to reduce leishmaniasis transmission	-	131.45	88.18	181.71	88.97	490.32
Strengthened surveillance, monitoring and evaluation, and operational research for informed decision making	104.33	95.29	93.92	92.29	98.43	484.26
Strengthened EPR for leishmaniasis	29.81	20.35	28.84	21.59	22.23	122.82
Advocacy, Communication and Social Mobilization (ACSM)	22.18	10.68	15.30	8.71	13.97	70.83
Strengthened Coordination, Partnerships and Resource Mobilization	60.38	57.85	59.83	61.90	64.07	304.03
Grand Total	302.57	431.58	365.25	475.97	349.53	1,924.89

Source: ABC costing Model

Three result areas will account for 66.4% of the total resources required over the 5 years strategic plan implementation period. Vector control mechanisms will consume 25.5% of the total resource needs, while surveillance, monitoring and evaluation and operational research; and coordination partnership and resource mobilization require 25.2% and 15.8% of the resources needs, respectively. As the programme moves toward elimination, the cost of monitoring, establishing and strengthening surveillance systems for effective timely response will become more critical which explains the trend in the resources needs. Figure 4.3 shows the proportion of resources needs per each of the strategic objectives.

Figure 4.3: Proportion of resource needs per strategic objective areas.

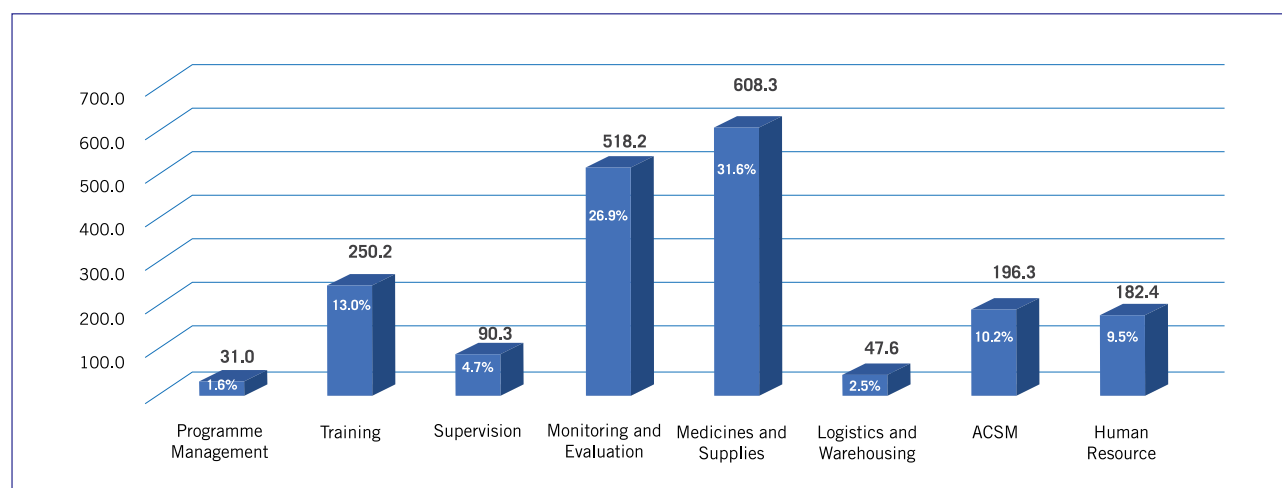


Source: ABC costing Model

4.4 Cost estimates by cost categories

The weight of each of the cost categories in the overall resources needs for the strategy is further estimated to give insights into various cost drivers. The results show that the 3 main cost drivers for the leishmaniasis strategic plan across the five years programmes are medicine and supplies at KES 608.3 Million; monitoring and evaluation at KES 518.2 Million; and training KES 250.2 Million, accounting for 31.6%, 26.9% and 13.0% of the total cost of the strategic plan, respectively. Figure 4.4 shows cost by categories for the leishmaniasis strategic plan.

Figure 4.4: Cost of implementing leishmaniasis strategic plan by cost categories (KES, Million).



Source: ABC costing Model

4.5 Available Resources

By understanding how the health systems and services are financed, programmes and resources can be better directed to strategically complement the health financing already in place, advocate for the financing of needed health priorities and aid populations to access available health services. Resource tracking estimates for the leishmaniasis programme do not exist and hence secondary data sources were used to estimate the available financial resources for financing the leishmaniasis strategic plan. Government financial commitments were estimated from the Fiscal Space as captured in the MOH budget. Planning assumptions have been made about future contributions available each year of the planning period with an estimated 10 percent growth rate of the human resource commitment in line with the past average growth rate of the public wage bill. This data was supplemented by the country leishmaniasis commodities procurement and supply data received as in-kind support mainly from WHO. Together these assisted to estimate the total resource availability for leishmaniasis programming including in the 5 years of implementation of the leishmaniasis strategic plan.

Overall, a total of KES 323.91 Million is estimated to be available to support the leishmaniasis strategic plan over the next five years representing 16.8% for the resources need with an estimated gap of 83.2%. Domestic financing is expected to cover the current human resource need for the programme with exception of the new suggested position which is part of the human resource need funding Gap. Also, domestic funding will cover programme management; monitoring and evaluation, this support was estimated based on the current government support to leishmaniasis. Development Partners (WHO) contribution through in-kind provision of commodities will cover the first 3 years while the last 2-year commodities need to remain a gap. For Training, Supervision, Logistic and Warehousing, Advocacy/Communication and Social Behaviour Change there is currently no resources commitment representing a 100% funding Gap. Table 4.2 shows the projected resource availability by cost category.

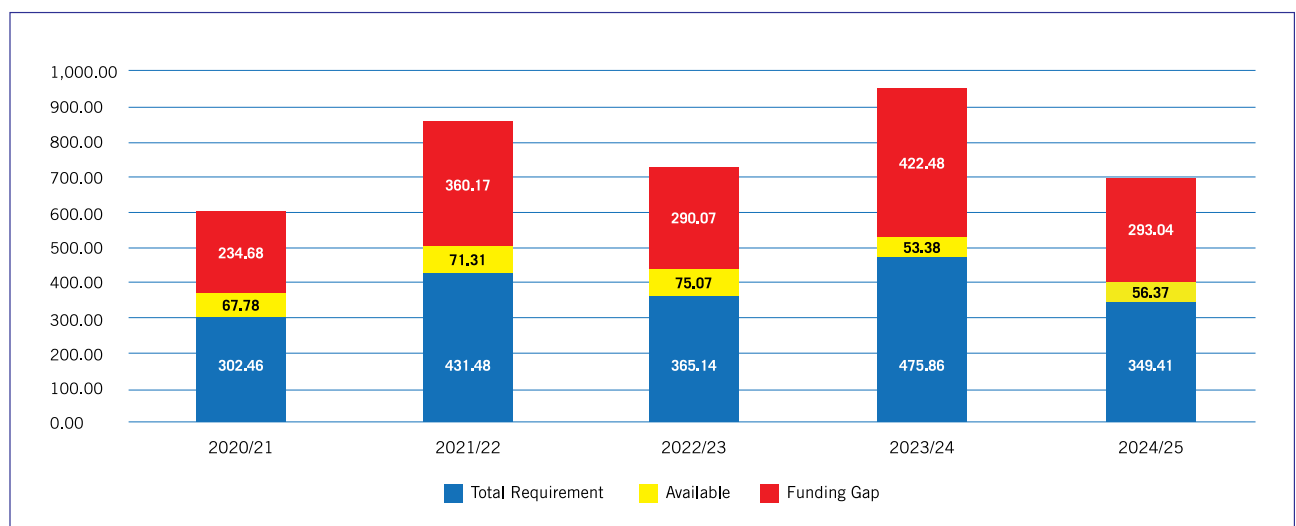
Table 4.2: Projected resource availability by cost category (KES, Millions).

Cost Category	2020/21	2021/22	2022/23	2023/24	2024/25	Total
Programme management	1.64	1.8	1.98	2.18	2.4	10
Monitoring and evaluation	13.34	14.68	16.14	17.76	19.53	81.45
Medicines, commodities and supplies	22.2	23.31	24.48			69.99
Human Resources	30.6	31.52	32.46	33.44	34.44	162.46
Total	67.8	71.3	75.1	53.4	56.4	323.91

4.6 Financial Gap Analysis

The difference between the resource requirements and the available resource provides a measure of the funding gap which exists if the leishmaniasis strategic plan is to be fully implemented. The identification of the funding gap provides an opportunity for stakeholders to determine the priority areas where additional resource mobilization could be invested for optimal results. The financing gap was estimated by generating the difference between the projected available resources and the cost of implementing the leishmaniasis strategic plan. The results are in Figure 4.5

Figure 4.5: Financial gap analysis for Leishmaniasis Strategic Plan (KES, Millions).



The health sector and specifically the leishmaniasis programme will need to mobilize additional KES, 1.60 Billion to cover the projected funding gap for the next 5 years. Table 4.3 summarizes the resource gap based on estimated resource need and projected resources available by cost category.

Table 4.3: Financial gap analysis by cost category (Ksh, Millions).

Cost Category	2020/21	2021/22	2022/23	2023/24	2024/25	Total
Programme management	12.015	5.02703	1.09488	1.46817	1.35956	20.9646
Training	33.6351	72.5743	43.8271	78.3723	21.7955	250.204
Supervision	17.7403	17.051	18.7397	18.0894	18.6321	90.2526
Monitoring and evaluation	97.8393	87.465	80.8141	83.4586	87.1739	436.751
Medicines, commodities and supplies	27.0795	123.226	91.4596	181.565	115.026	538.356
Logistics and warehousing	2.61875	12.4356	8.50382	15.6501	8.42203	47.6303
Advocacy/Communication and Social behaviour Change	40.4818	38.7925	41.673	39.5233	35.8429	196.313
Human Resources	3.27	3.597	3.9567	4.35237	4.78761	19.9637
Total	234.68	360.168	290.069	422.479	293.039	1600.44

Appendix 1: Detailed financial resources requirement and implementation plan for leishmaniasis strategic plan

Key Result Area and Strategies	Sum of Cost Y1 (Usd)	Sum of Cost Y2 (Usd)	Sum of Cost Y3 (Usd)	Sum of Cost Y4 (Usd)	Sum of Cost Y5 (Usd)	Total Y1-Y5 (Usd)
KRA 1 Improved case management for CL and VL	285,616	536,725	195,141	482,038	30,182	1,529,703
1.1.1 Reviewing the diagnosis and treatment guidelines for VL and CL in Kenya to incorporate new technologies in diagnosis, treatment and management.	80,190	49,486	-	-	-	129,676
1.2 Strengthen capacity of health care workers for case management of leishmaniasis	-	236,667	4,154	251,080	4,407	496,307
1.3 Establishing more testing and treatment sites for management of leishmaniasis	182,520	56,460	159,778	25,025	25,776	449,558
1.4 Undertake quality assurance for diagnosis of leishmaniasis	22,906	194,112	17,461	205,934	-	440,414
1.5 Conduct therapeutic efficacy studies for leishmaniasis's drugs	-	-	13,748	-	-	13,748
KRA 2 Strengthened supply chain management system for VL and CL	522,065	554,280	549,664	550,636	551,740	2,728,385
2.1 Capacity building for quantification and forecasting	216	5,833	180	82	85	6,396
2.2 Proper inventory management	33,604	34,612	35,651	36,720	37,822	178,409
2.2.1 Procurement of leishmaniasis commodities	463,609	487,907	487,907	487,907	487,907	2,415,238
2.3 Improvement in warehousing	9,238	9,722	9,722	9,722	9,722	48,128
2.4 Ensure proper logistical support	15,397	16,204	16,204	16,204	16,204	80,214
2.5 Improve reporting on stock levels	No Cost. Already Costed under 2.2.	-				

Key Result Area and Strategies	Sum of Cost Y1 (Usd)	Sum of Cost Y2 (Usd)	Sum of Cost Y3 (Usd)	Sum of Cost Y4 (Usd)	Sum of Cost Y5 (Usd)	Total Y1-Y5 (Usd)
KRA 3 Enhanced vector control mechanisms to reduce leishmaniasis transmission	-	1,236,604	829,553	1,709,430	836,978	4,612,565
3.1 Strengthen the use of Insecticide Treated Nets (ITNs) in the management of leishmaniasis transmission	-	495,222	-	544,050	19,228	1,058,500
3.2 Conduct Indoor Residual Straying (IRS) and chemical space spraying	-	722,627	808,567	1,135,898	797,062	3,464,154
3.3 Undertake environmental management	-	10,270	11,491	16,143	11,328	49,232
3.4 Establish leishmaniasis vector surveillance sentinel sites	-	Costed as part IRS Monitoring 3.5				
3.5 Insecticide Resistance monitoring	-	8,486	9,495	13,339	9,360	40,679
KRA 4 Strengthened surveillance, monitoring and evaluation and operational research for informed decision making	981,501	896,400	883,579	868,162	925,971	4,555,612
4.1 Monitoring and evaluation of programme performance towards achieving set targets and desired results.	603,034	592,056	609,818	628,112	678,720	3,111,740
4.2 Establishing and strengthening surveillance systems for effective and timely response	334,260	258,810	226,862	191,743	197,496	1,209,171
4.3 Conducting Operational Research for improving programme implementation	44,207	45,533	46,899	48,306	49,755	234,701

Key Result Area and Strategies	Sum of Cost Y1 (Usd)	Sum of Cost Y2 (Usd)	Sum of Cost Y3 (Usd)	Sum of Cost Y4 (Usd)	Sum of Cost Y5 (Usd)	Total Y1-Y5 (Usd)
KRA 5 Strengthened EPR for leishmaniasis	280,451	191,408	271,298	203,065	209,157	1,155,379
5.1 Update the case definition including alerts and suspected cases that do not present with constitutional symptoms and disseminate to all affected sub-counties.	94,911	62,591	74,458	66,402	68,394	366,757
5.2 Build the capacity of personnel involved in surveillance, community health volunteers and ensure their supervision	60,474	-	64,157	-	-	124,631
5.3 Establish a unit responsible for the re-evaluation of all validated and invalidated alerts	108,561	111,817	115,172	118,627	122,186	576,363
5.4 Use multidisciplinary rapid intervention teams to quickly validate alerts and ensure their investigation.	5,268	5,426	5,589	5,757	5,929	27,969
5.5 Build on the integrated results of social, behavioral and epidemiological analyses to better support surveillance approaches.	-	No cost the activity is done internally by Programme head	-			
5.7 Set up county teams to review and validate investigation reports in health facilities for gaps in knowledge of VL.	4,064	4,186	4,311	4,441	4,574	21,576
5.8 Establish vector control and patterns of transmission through the concerned departments for elimination of Vectors within the affected regions.	-	Already costed as part of SO3	-			
5.9 Counties develop contingency plans for outbreak response	7,173	7,388	7,610	7,838	8,073	38,083

Key Result Area and Strategies	Sum of Cost Y1 (Usd)	Sum of Cost Y2 (Usd)	Sum of Cost Y3 (Usd)	Sum of Cost Y4 (Usd)	Sum of Cost Y5 (Usd)	Total Y1-Y5 (Usd)
KRA 6 Advocacy, Communication And Social Mobilization (ACSM)	208,671	100,461	143,895	81,908	131,416	666,352
6.1 Advocacy	79,379	21,976	84,213	23,314	24,014	232,896
6.2 Communication	129,292	70,346	48,504	49,959	107,402	405,504
6.3 Social Mobilization	-	8,139	11,178	8,635	-	27,952
KRA 7 Strengthened Coordination, Partnerships and Resource Mobilization	568,029	544,168	562,862	582,353	602,690	2,860,101
7.1 Coordination	145,021	145,377	149,739	154,231	158,858	753,225
7.2 Partnerships	71,096	57,604	59,333	61,113	62,946	312,091
7.3 Resource Mobilization	33,286	10,847	11,173	11,508	11,853	78,667
7.4 Human resource for NTDs	318,627	330,339	342,617	355,502	369,033	1,716,117
Grand Total	2,846,333	4,060,047	3,435,991	4,477,593	3,288,134	18,108,098

Appendix 2 Monitoring and Evaluation Framework for the Leishmaniasis Strategic Plan

Objectives Results/Outputs	Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
		<i>The quantitative/qualitative evidence which will be used to measure/judge the timed achievement of goal/ purpose</i>	<i>At the start of this strategy</i>	<i>Expected quantified situation at end of the life of the strategy</i>	<i>Cost-effective methods and sources of information/data which will be used to quantify or assess the indicator(s)</i>	<i>What external factors are necessary for sustaining the goal in the long run?</i>
Goal: 1. Reduction of morbidity due to Leishmaniasis in Kenya by 60% by 2025 2. Reduction on the occurrence of Leishmaniasis outbreaks in Kenya by 50%	Reduced prevalence of Leishmaniasis by 60%	- The number of Leishmaniasis cases reported from 2021 to 2025 - The number of confirmed outbreaks reported from 2021 to 2025	1063 cases of VL and 100 cases of CL reported in 2020 - VL outbreaks reported in 6 Counties in 2019/2020		- Health facility reports from DHIS2 (KHMIS) - Outbreak reports from DSRU	The data from the health facilities will be accurate and timely. All the cases diagnosed and treated will be captured in the registers and reported. The DSRU can detect and report all the outbreaks.
		<i>The quantitative/qualitative evidence which will be used to measure/judge the <u>timed</u> achievement of goal/ purpose</i>	<i>At the start of this strategy</i>	<i>Expected quantified situation at end of the life of the strategy</i>	<i>Cost-effective methods and sources of information/data which will be used to quantify or assess the indicator(s)</i>	<i>What external factors are necessary for sustaining the goal in the long run?</i>

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 1	KRA 1: Improved case management for CL and VL	• Improved Quality of Care • Increased Leishmaniasis case detection. • Improved Leishmaniasis treatment outcomes.	• Initial cure rate • Failure rate • Case fatality rate • Proportion of Leishmaniasis cases treated under the revised national guidelines of care			DHIS2 (KHMIS)	
	Result 1.1. Review the diagnosis and treatment guidelines for VL and develop CL treatment & diagnosis	• Revised VL and treatment guideline • Developed CL and treatment guideline	Number of diagnosis and treatment guidelines for VL and CL revised and developed	0	1 (Combined VL & CL diagnosis and treatment guidelines	Copies of the guideline	There will be financial support for the revision of the guidelines
	Result 1.2 Strengthen the capacity of health care workers for diagnosis and case management of Leishmaniasis	Health care workers trained on diagnosis and case management of Leishmaniasis	Number and cadre of health workers trained	60	1000 health workers trained in all endemic Counties	Training reports	Health workers will be available and ready to be trained
	Result 1.3: Establishing more diagnostic and treatment centres	Diagnostic and treatment centres increased	Number of health facilities providing Leishmaniasis diagnosis and treatment services	38 for VL and 4 for CL	100 facilities	Number of facilities reporting in the DHIS2 (KHMIS)	More facilities in endemic areas will have the staff and equipment to provide Leishmaniasis services

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 1	Result 1.4: Undertake quality assurance for diagnosis and treatment of Leishmaniasis	Quality of Leishmaniasis diagnosis and treatment improved	- Number/Percentage of test kits evaluated that are successful - Number of external quality control activities undertaken - Number of inter-county quality assurance activities done. - Number/proportion of complete recoveries. - Percentage of patients reporting positive experiences with service providers. - Number of Health facilities that pass Quality audits.	0	5 (Biannual QA activities both at national and inter-counties)	• Quality assurance reports • Reports of the evaluation of the test kits as required • Client Satisfaction Survey • Quality Audit Reports • DHIS2 (KHMIS)	- There will be new test kits to be evaluated - The MOH (DVB&NTD) will have technical teams to conduct QA activities - The Counties will be ready to participate in QA activities
	Result 1.5: Conduct Therapeutic efficacy tests for Leishmaniasis medicines		• Number/percentage of drugs that pass efficacy test. • Number/percentage of centres conducting therapeutic efficacy tests	0	1	Reports of Therapeutic efficacy tests	• Research team is available • Well equipped facility and patients

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 2	KRA 2: Strengthened supply chain for both VL and CL medical supplies	• Reduced Stockouts • Reduced Drug losses • Improved storage Practices	• Proportion of facilities that report stockouts • Proportion of drugs that are destroyed, expired, etc				
	Result 2.1: Capacity building on quantification and forecasting	HCWs trained on quantification and forecasting	Number and cadre of staff trained	0	100	Training reports	Training materials and tools are available
	Result 2.2: Improved inventory management	- Facilities utilising inventory management tools - Monitoring, support supervision visits conducted - Improved and efficient reporting of drug stockouts		0	50	- Reports of the tools provided - Reports of the supervision visits done by the County and national pharmacist - Stockout reports from the health facilities	• There will be adequate stock • Each facility will have staff responsible for Leishmaniasis medical supplies

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 2	Result 2.3: Improved warehousing of Leishmaniasis diagnostic kits and medicines	- Reduced losses of drugs - Improved drug storage practices	- Agreement with KEMSA for warehousing at the national level - Number of Counties provided with SOPs for proper warehousing - Number of Counties with warehoused adhering to the SOPs	0	- Agreement with KEMSA - Counties (All endemic Counties)	- Letter of agreement with KEMSA - County pharmacy reports	- KEMSA will be willing to get into an agreement with the programme - The Counties will have warehouses that can be improved
	Result 2.4: Ensure proper logistical support	- Reduced losses of drugs - Improved drug storage practices	- Leishmaniasis diagnostics and medicines captured in KEMSA e-LMIS system - Number of deliveries done by or through KEMSA logistics system	0	All products	- KEMSA e-LMIS reports - KEMSA delivery reports	KEMSA will be willing to get into a working agreement with the programme
	Result 2.5: Improve reporting of stock level	Improved and efficient reporting of drug stockouts	Number of Counties submitting monthly reports	0	(All endemic Counties)	County stock reports	Counties have trained staff to report
	KRA 3: Enhanced vector control mechanisms to reduce leishmaniasis transmission	Reduced leishmaniasis incidence in endemic areas	Number of new cases reported annually				

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 3	Result 3.1: Strengthen the use of Insecticides Treated Nets (ITN) in the management of Leishmaniasis transmission	Insecticides Treated Nets (ITN) distributed and utilized by the target population	Number of ITNs distributed Percentage of Households (HHs) utilising ITNs	0	1000 HHs	ITN distribution reports HH survey	ITNs will be available for distribution
	Result 3.2: Conduct Indoor Residual Spraying (IRS) and chemical space spraying	Targeted HHs reached with IRS	- Number of households where IRS was conducted/Coverage of targeted HHs - Number of Counties where chemical space spraying has been done	0	1000 HHs 10 Counties (All endemic counties)	IRS activity reports	- Safe chemicals will be available for IRS - Guidelines for IRS and chemical space spraying will be available - County and national government will have trained staff
	Result 3.3 Undertake environmental management	Improved environmental management practices at HH	- Number of HHs trained on environmental management - Number of HHs participating in specific environmental management activities	0		- Environmental management reports - Supervision reports	- Communities (HHs) will be ready and willing to be trained. - Collaboration with the environmental health

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 3	Result 3.4: Establish vector surveillance sentinel sites	Surveillance insect harbour sites enhanced	Number of sentinel sites established	0	10 sentinel sites established	Sentinel sites reports	Information will be available to identify areas for the establishment of the sentinel sites
	Result 3.5: Insecticides resistance monitoring	Insecticide efficacy improved	Number of sites where resistance will be monitored	0	2	Insecticides resistance reports	• A scientist will be available to conduct the research • Funding will be provided for the research • There will be consistent use of insecticides
KRA 4	KRA 4: Strengthened surveillance, monitoring and evaluation, and operational research for informed decision making	Evidence generated for decision making					

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 4	Result 4.1: Monitoring and evaluation of programme performance towards achieving set targets and desired results	M&E strategy established	• Availability of implementation indicators with targets • Detailed work plan with timelines and including supervision schedules	0	2 (National and County plans)	Programme reports	Availability of the M&E staff both at the national and county level
	Result 4.2 Establishing and strengthening surveillance system for effective and timely response	Improved data reporting	- Leishmania data incorporated into the national surveillance system - Number of health facilities with data collection tools and reporting regularly - Number of staff trained on surveillance	0	50 health facilities 100 staff trained	- DSRU reports which include Leishmaniasis - Health facilities report in DHIS2 (KHMIS) - Training reports	The surveillance system can capture the leishmaniasis indicators
	Result 4.3: Conducting operational research for improving programme implementation	Knowledge generated from research	Number of operational researches conducted	0	2 operation research per year	Reports	There will be researchers and funding for conducting the operational research

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 5	KRA 5: Strengthened Epidemic Preparedness Response (EPR) for Leishmaniasis	Timely and immediate action for cases of public health importance					
	Result 5.1: Update and disseminate the case definition and alerts	Health facilities with updated case definitions and alert thresholds	- Updated case definition including alerts thresholds - Number of health facilities provided with the updated case definitions	0		- Updated case definition document - Distribution reports	The health facilities will follow the case definitions and adhere to the thresholds
	Result 5.2: Capacity building of surveillance staff	HCW trained on surveillance	- Number and cadre of staff trained on surveillance - Number of supervision visit	0	100 HCW trained 10 visits (Biannually)	- Training reports - Supervision reports	There will be staff in the counties to be trained
	Results 5.3: Establish a unit for evaluation of the alerts		Number and expertise of the unit staff	0	1 unit	Reports for establishment	The programme will work with other divisions and departments to get the required experts
	Results 5.4: Use of multidisciplinary team for investigation	Multidisciplinary team for investigation established	List of staff and their expertise involved in outbreak validation and response	0	10 Multidisciplinary teams formed in the ten endemic areas	Report of the response teams	The programme will work with other divisions and departments to get the required experts

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 5	Results 5.5: Build integrated results of social, behavioural, and epidemiological analyses to support surveillance	Social, behavioural, and epidemiological analyses conducted	Number of reports on various analyses	0		Analyzed reports	Data on social, behavioural, and epidemiology will be available for analysis
	Result 5.6: Training of laboratory teams	Laboratory teams trained on surveillance	Number of laboratory personnel in affected areas trained	0	50 Lab personnel trained in the 10 endemic counties	Training reports	The affected areas will have qualified laboratory personnel to be trained
	Result 5.7: Review the vector control and patterns of transmissions	Vector control and patterns of transmissions monitored	Vector control activities in the affected areas	0		Vector control reports	• There will be a strong collaboration with the relevant departments • The vector control activities conducted will conform to the leishmaniasis control strategies

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 6	KRA6: Advocacy, Communication and Social Mobilization (ACSM)	- Leishmaniasis is prioritized the political agenda. - Supportive policy environment for Leishmaniasis established - Increased funding for Leishmaniasis programmes. - Improved media coverage of Leishmaniasis. - Increased demand for diagnosis and treatment services.	- Number of county governments that allocate funding and resources for NTD control and elimination. - Number of new policies and laws improve access to diagnosis and treatment. - Value of funds (Kshs.) mobilized towards NTD programme.	10 counties allocating funds		• Knowledge Attitudes and Perception (KAP) survey • Programme Reports • Media Monitoring	• There will be a strong collaboration with the relevant departments • The vector control activities conducted will conform to the leishmaniasis control strategies
	Result 6.1 Advocacy activities	- Leishmaniasis is included on the political agenda. - Laws are improved/passed, new policies are approved, or existing policies are reinforced that promote innovative Leishmaniasis interventions.	- Number of meetings with policymakers held by the national team - Number of meetings with policymakers held at the counties - Number of media engagements for advocacy	0		Advocacy reports	Decision-makers will be willing to take part in advocacy activities

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 6	Result 6.2: Communication	- Improved media coverage - Increased public awareness of Leishmaniasis. - Improved knowledge about Leishmaniasis symptoms, treatment, and services. - More compassionate attitudes of health workers and community members toward people with Leishmaniasis. - People seek care and maintain treatment. - Decreased stigma.	- Types of communication channels used - Number of IEC materials developed and distributed - Number of IEC materials translated into local languages - Number newspaper articles, TV shows, documentaries, radio programmes,	0	Mainstream and social media)	• Communication activity reports • Media Monitoring • Knowledge Attitudes and Perception (KAP) survey	• There will be cooperation and support from different partners • The programme will collaborate with the Division of health promotion in the development of IEC materials

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 6	Result 6.3 Social mobilization	Increased public support to Leishmaniasis interventions	- Number of community meetings held - Number of communities participating in Leishmaniasis control activities - Number clients who seek diagnosis and treatment services. - Number of Clients who confirm that they can access more support services throughout treatment	0	2 per county	• Community engagement reports • KAP survey • Client Satisfaction Survey • Programme Reports	The public will be willing and ready to support the control initiatives
	KRA 7: Strengthened Coordination, Partnership, and Resource mobilization						
	Result 7.1 Coordination	Enhanced Partnerships	- Number of engagements with different stakeholders - Number of Counties with an established coordination mechanism - Number of coordination meetings held	1 only at the national level (TAG)	5 (National and 4 cluster counties)	Meeting reports and resolutions	Counties will have a mechanism for coordination. There will be clear Terms of Reference for coordination activities

Objectives Results/ Outputs		Results	Verifiable Indicators	Current situation/ Baseline	Project Targets	Means of Verification	General Risks / Assumptions
KRA 7	Result 7.2: Partnerships	Enhanced Partnerships	- Number of potential partners engaged - Number of training conducted on partner engagement - Availability of Strategic Engagement Plan (SEP)	0	4 categories of partners	Reports of partner engagements	Availability of partners who are ready for engagement
	Result 7.3: Resource mobilization	- Increased funding for the Leishmaniasis programme. - Partnerships enhanced	- Number of investment cases developed and shared with potential funders - Availability of sustainability framework - Number of potential funders identified and engaged - Value of funds (Kshs.) mobilized towards Leishmaniasis	0		- Resource mobilization reports - Sustainability framework - List of potential funders engaged and meetings held	The programme will have a comprehensive estimate of the needs and priorities.

Appendix 3 Workplan

Work Plan to Achieve Objective 1	2021				2022				2023		2024		2025	
Main Activities to Result 1.1	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
1.1.1 Review Visceral leishmaniasis treatment guidelines			X											
1.1.2 Develop Cutaneous leishmaniasis guidelines			X	X										
1.1.3 Printing and dissemination of the guidelines				X	X	X	X							

	2021				2022				2023		2024		2025	
Main Activities to Result 1.2	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
1.2.1: Conduct Training of Trainers training	X				X									
1.2.2: Train health care workers on diagnosis and treatment of CL and VL		X	X	X	X	X	X	X	X	X	X	X	X	X
1.2.3: Conduct On-job training and mentorship for health care workers		X	X	X	X	X	X	X	X	X	X	X	X	X

	2021				2022				2023		2024		2025	
Main Activities to Result 1.3	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
1.3.1: Conducting health facilities mapping in the endemic areas		X	X											
1.3.2: Identify and establish sentinel sites in the endemic regions				X	X	X	X							
1.3.3: Conduct support supervision		X	X	X	X	X	X	X	X	X	X	X	X	X

	2021				2022				2023		2024		2025	
Main Activities to Result 1.4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
1.4.1: Develop leishmaniasis quality assurance (QA) implementation plan		X												
1.4.2: Conduct assessment of the national and county reference laboratories		X	X											
1.4.3: Conduct training for laboratory staff on QA of parasitological tests, microscopy, and rapid diagnostic tests (RDTs)				X	X	X	X	X	X	X	X	X	X	X
1.4.4: Conduct lot to lot testing of leishmaniasis RDTs and DAT					X			X			X		X	
Main Activities to Result 1.5	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
1.5.1: Develop a protocol for leishmaniasis medicines therapeutic efficacy tests			X											
1.5.2: Develop tools for therapeutic efficacy tests				X	X									
1.5.3: Conduct leishmaniasis drug efficacy monitoring study					X	X				X			X	
Main activities to achieve KRA 2	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
2.1 Capacity building for quantification and forecasting	X	X												
2.2 Proper inventory management	X	X												
2.2.1 Procurement of leishmaniasis commodities	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2.3 Improvement in warehousing	X	X	X	X										
2.4 Ensure proper logistical support														
2.5 Improve reporting on stock levels	X	X	X	X										

	2021				2022				2023		2024		2025	
Main activities to achieve KRA 3	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
3.1 Strengthen the use of Insecticide Treated Nets (ITNs) in the management of leishmaniasis transmission					X	X	X	X	X	X	X	X	X	X
3.2 Conduct Indoor Residual Straying (IRS) and chemical space spraying					X	X	X	X	X	X	X	X	X	X
3.3 Undertake environmental management					X	X	X	X	X	X	X	X	X	X
3.4 Establish leishmaniasis vector surveillance sentinel sites	X	X	X	X	X	X	X	X						
3.5 Insecticide Resistance monitoring					X	X	X	X	X	X	X	X	X	X
Main activities to achieve KRA 4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
4.1 Monitoring and evaluation of programme performance towards achieving set targets and desired results.				X				X		X		X		X
4.2 Establishing and strengthening surveillance systems for effective and timely response	X	X	X	X										
4.3 Conducting Operational Research for improving programme implementation				X				X		X		X		X

	2021				2022				2023		2024		2025	
Main activities KRA 5	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
5.1 Update the case definition including alerts and suspected cases that do not present with constitutional symptoms and disseminate to all affected sub-counties.	X	X	X	X				X		X		X		X
5.2 Build the capacity of personnel involved in surveillance, community health volunteers and ensure their supervision	X	X	X	X										
5.3 Establish a unit responsible for the re-evaluation of all validated and invalidated alerts	X	X	X	X										
5.4 Use multidisciplinary rapid intervention teams to quickly validate alerts and ensure their investigation.	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5.5 Build on the integrated results of social, behavioral, and epidemiological analyses to better support surveillance approaches.	X	X	X	X	X	X	X	X	X	X	X	X	X	X
5.7 Set up county teams to review and validate investigation reports in health facilities for gaps in knowledge of VL.				X				X		X				X
5.8 Establish vector control and patterns of transmission through the concerned departments for the elimination of Vectors within the affected regions.				X				X		X				X
5.9 Counties develop contingency plans for outbreak response	X	X	X	X	X	X	X	X						

	2021				2022				2023		2024		2025	
Main activities KRA 6	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
6.1 Advocacy	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6.2 Communication	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6.3 Social Mobilization	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Main activities KRA 7	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1+2	Q3+4	Q1+2	Q3+4	Q1+2	Q3+4
7.1 Coordination	X	X	X	X										
7.2 Partnerships	X	X	X	X										
7.3 Resource Mobilization	X	X	X	X	X	X	X	X	X	X	X	X	X	X
7.4 Human resource for NTDs	X	X	X	X										

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Printing supported by ASCEND PROGRAM

