



**MINISTRY OF HEALTH AND SANITATION
GOVERNMENT OF SIERRA LEONE
THE
NATIONAL NEGLECTED TROPICAL
DISEASES PROGRAMME**

**MASTER PLAN FOR NEGLECTED
TROPICAL DISEASES ELIMINATION IN SIERRA LEONE
2016-2020**

Insert Photos



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ACRONYMS

ALB	Albendazole
ACT	Artemisinin Combination Therapy
AFRO	Africa Region of the World Health Organization
APOC	African Programme for Onchocerciasis Control
CBS	Community Based Surveillance
CDD	Community Drug Distributor
CDTI	Community Directed Treatment with Ivermectin
CHANGES	Community Health and Nutrition, Gender and Education Support
CHDs	Child Health Days
CHW	Community Health Worker
CM	Case Management (NTDs)
CMO	Chief Medical Officer
ComDT	Community Directed Treatment
DALYs	Disability Adjusted Life Years
DEC	Diethyl carbamazine Citrate, an anti-filarial drug
DFMO	DL - alpha-difluoro-methyl-ornithine (Eflornithine), a trypanocidal drug
DHMT	District Health Management Team
DMO	District Medical Officer
DHS	Demographic Health Survey
DPHC	Director of Primary Health Care
DDPC	Directorate of Disease Prevention and Control
DPI	Department for planning and Information

ESPEN	Expanded Special Project for Elimination of Neglected Tropical Diseases
GAVI	Global alliance for vaccines and immunization
GDP	Gross Domestic Product
GNP	Gross National Product
GOSL	Government of Sierra Leone
GPELF	Global Programme for Elimination of Lymphatic Filariasis
GWE	Guinea Worm Eradication
HAT	Human African Trypanosomiasis
HIS	Health Information Systems
HIV	Human Immunodeficiency Virus
HSSP	Health Sector Strategic Plan
IDSR	Integrated Diseases Surveillance and Response
IEC	Information Education and Communication
IRS	Indoor Residual Spraying
ITNs	Insecticide Treated Nets
IU	Implementation Unit
LF	Lymphatic Filariasis
LFE	Lymphatic Filariasis Elimination
MADP	Mectizan Albendazole Donation Programme
MCH	Maternal and Child Health
MBD	Mebendazole
MDA	Mass Drug Administration
Mectizan	An anti-filarial drug donated by Merck & Co. Inc.
MoHS	Ministry of Health and Sanitation
NAS	National AIDS Secretariat
NGDO	Non-Governmental Development Organization
NGO	Non-governmental Organization
NSAHP	National School and Adolescence Health Programme
NHA	National Health Accounts
NTD/NTDs	Neglected Tropical Disease or Diseases

BU	Buruli Ulcer
OCP	Onchocerciasis Control Programmes
PCT	Preventive Chemotherapy (NTDs)
PELF	Programme for Elimination of Lymphatic Filariasis
PHC	Primary Health Care
PHU	Peripheral Health Unit
PMTCT	Prevention of Mother to Child Transmission
PRSP	Poverty Reduction Strategy Paper
PZQ	Praziquantel
SAC	School age children
SAEs	Severe Adverse Events
SECHNs	State Enrol Community Health Nurses
SLNNS	Sierra Leone National Nutrition Survey
SSL	Statistics Sierra Leone
SSTH	Schistosomiasis and Soil Transmitted Helminthiasis
STH	Soil Transmitted Helminthiasis
TDR	Special Programme for Tropical Diseases Research
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VCCT	Voluntarily Confidential Counselling and Testing
WFP	World Food Programme
WHA	World Health Assembly
WHO	World Health Organization

FOREWORD

This National Strategic Master Plan for 2016-2020 in action for the control of Neglected Tropical Diseases has been developed in line with the Ministry of Health and Sanitation vision, which is to transform Sierra Leone into a nation free from all Neglected Tropical Diseases.

This Master Plan aims at guiding implementation of interventions for Neglected Tropical Diseases in an integrated way to increase the benefits. It is the product of extensive consultations with partners and stakeholders. This national Multi-Year Strategic plan of action for the control of Neglected Tropical Diseases comes at a time when there is global goodwill for control of Neglected Tropical Diseases. As such it is my hope that all stakeholders will play their respective roles and responsibilities in supporting the implementation of this master plan.

In Sierra Leone Neglected Tropical Diseases include Onchocerciasis, Lymphatic Filariasis, Schistosomiasis, Soil Transmitted Helminthiasis, Trachoma, Buruli Ulcer, Human African Trypanosomiasis and Guinea Worm Disease which was eradicated in 2009. These diseases constitute a serious impediment to socioeconomic development and quality of life. Neglected Tropical Diseases have enormous impact on individuals, families and communities in terms of disease burden, loss of productivity, and the aggravation of poverty and high cost of long term care. Neglected Tropical Diseases cause disfigurement and disability leading to stigma and social discrimination.

The Government of Sierra Leone's commitment to uplifting the socioeconomic status of all her citizens is clearly articulated in Sierra Leone's agenda for prosperity. In compliance with this national agenda, the Ministry of Health and Sanitation will spearhead the implementation of this national master plan of action for the control and/or elimination of Neglected Tropical Diseases (2016-2020) with the goal of making Sierra Leone free of Neglected Tropical Diseases. This goal will be achieved through implementation of the WHO recommended public health strategies for the prevention and control of Neglected Tropical Diseases. These interventions include: Preventive Chemotherapy, Case Management, Vector Control, Provision of Safe Water, Sanitation, Hygiene and Surveillance. Evidence suggests that more effective control results are achieved when all the approaches are combined and delivered together. The Ministry of Health and Sanitation will mobilize development partners to raise all the resources needed for the realisation of the goals of the country master plan.

My Ministry in collaboration with stakeholders will develop an effective mechanism for implementation, supervision, monitoring and evaluation and research. All stakeholders including local communities will be engaged in all aspects of programme implementation as well as raising awareness through concerted health promotion and education strategies.

It is my expectation that this comprehensive Neglected Tropical Diseases master plan will be a major step towards the goal of eliminating Neglected Tropical Diseases in Sierra Leone and I implore all stakeholders to put all effort into its implementation to enable the country to achieve its vision of a nation free of Neglected Tropical Diseases.

Dr. Abubakarr Fofanah

Minister of Health and Sanitation

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Dr. Brima Kargbo

Chief Medical Officer

Ministry of Health and Sanitation

LIST OF CONTRIBUTORS

No	Name	Organization	Email
1.	Dr. J.N Kande	Director of primary health MOHS	Joeagie90@gmail.com
2.	Dr. Yankuba M. Bah	Programme Manager NTDP	Yakuba_b@yahoo.com
3.	Dr. T.T Samba	DMO/DHMT W/Area MOHS	ttsamba@yahoo.com
4.	Dr. Francis Moses	DMO/DHMT Koinadugu	franqoline@gmail.com
5.	Dr. M.A Vandi	DMO/DHMT Kenema	Mohamedavandi69@yahoo.com
6.	Rugiatu Kanu	School Health/MOHS	Rugiat_2_k@yahoo.com
7.	Ekundayo Karim	National Supervisor NTDP	sahrkundayo@yahoo.com
8.	Samah Conteh	National Supervisor NTDP	contehsamah14@gmail.com
11.	David Saio Turay	Pharmacist MOHS	turaydavidsaio897@gmail.com
12.	Abdul Conteh	M&E National NTDP	abdulconteh2020@yahoo.com
13.	Musa Koroma	Finance officer NTDP/MOHS	—
14.	Fanta Koroma	Secretary NTDP	Shamata23@gmail.com
15.	Francis Koroma	EHS/MOHS	Gandhigandlit,kallon@gmail.com
16.	Ghandi Kallon	W/Area NTD Focal/ DHMT	Franciskoroma76@gmail.com
17.	Ishmail Rogers	Focal NTD/MOHS Kambia	Ishmailrogers55@gmail.com
18.	John S. Kanei	Focal NTD/DHMT Bo	John.kanei@yahoo.co.UK
19.	Amara Moiba	NTD Focal/ DHMT Kono	amarasahrmoiba@gmail.com
20.	Aiah Sam	NTD Focal/DHMT Tonkolili	s.aiah@yahoo.co.uk
21.	Micheal Renner	NLTCP/MOHS	michealsrenner@yahoo.com
22.	Brima V. Kamara	Sightsavers	bkamara@sightsavers.org
23.	Dr. Louisa Ganda	WHO	gandal@who.int
24.	Mustapha Sonnie	Head of Programme HKI	msonnie@hki.org
25.	Jusufo Paye	NTD Programme Coordinator HKI	jpaye@hki.org
26.	Mohamed S. Bah	NTD Programme Assistant HKI	mdbah@hki.org
27.	Isatu Savage	NTD M & E HKI	isavage@hki.org
28.	Alhassan Konneh	NTD Intern HKI	akonneh@hki.org
29.	Victoria Redwood-Sawyer	NTD Intern HKI	VRedwood-Sawyer@hki.org
30.	Shekuba Kande	NTD Intern HKI	skande@hki.org
31.	Dr. Dorcas Alusala	WHO Consultant	dalusala@yahoo.com
32.	Dr. Ngozi Njebuome	WHO Consultant	ngonjep@yahoo.com

INTRODUCTION

The World Health Organization estimates that neglected tropical diseases (NTDs) affects over one billion people worldwide with Africa bearing the highest burden. In Sierra Leone, the endemic NTDs, include lymphatic filariasis (LF), onchocerciasis, soil-transmitted helminthiasis (STH), schistosomiasis, buruli ulcer (BU), leprosy, human african trypanosomiasis (HAT) and rabies. Following trachoma mapping in 2008, the prevalence was below 5% which according to WHO guidelines is not of public health significance. Guinea worm disease has been eradicated from Sierra Leone since 2009. The Community-Directed Treatment with Ivermectin (CDTI), an intervention approach adopted by the African Programme for Onchocerciasis Control (APOC), has been shown to be very effective strategy. The National NTD Programme (NTDP) in Sierra Leone has used the CDTI plus approach to conduct mass drug administration (MDAs) for all targeted preventive chemotherapy (PCT) -NTDs since 2007. Almost all districts in Sierra Leone are endemic for at least two of the PCT- NTDs.

Sierra Leone has integrated the implementation of the NTD Programme since 2007 starting with onchocerciasis and lymphatic filariasis, and later bringing on board schistosomiasis and STH. Integration is particularly important at this time of dwindling resources from donor nations and agencies. Sierra Leone has just emerged from a devastating Ebola Virus Disease (EVD) epidemic that has interrupted the economic growth, health care delivery services, other social sectors and developmental activities. Presently, the Government of Sierra Leone (GoSL) requires the support of partners to adequately finance health care programmes.

This NTD Master Plan will provide clear directions for NTD programme in Sierra Leone for 2016-2020 and facilitate better coordination of NTD activities thus enabling NTD partners to channel their financial and technical support where it is needed most.

This plan is divided into 3 parts:

1. Part one: Situation Analysis;
2. Part two: NTD Strategic Agenda;
3. Part three: Operational Framework, including Budget.

PART 1: SITUATION ANALYSIS

1.1. COUNTRY PROFILE

1.1.1 ADMINISTRATIVE, DEMOGRAPHIC AND COMMUNITY STRUCTURES

Sierra Leone is divided into four major areas, namely Northern Region, Southern Region, Eastern Region and the Western Area, where the capital Freetown is located. The regions are further divided into 14 health districts: (5 five in the north, 4 four in the south, 3 three in the east and 2 two in the Western Area), which are in turn sub-divided into chiefdoms, governed by local paramount chiefs. There are 149 chiefdoms in 12 districts (north, east and south) governed by local paramount chiefs and 31 zones in the Western Area. Chiefdoms are further divided into sections and sections into villages. In the 12 districts, there are approximately 14,413 villages and communities and the average village has a population between 100-500 inhabitants, headed by local chiefs. In the Western Area, the rapidly growing non-rural communities merge into each other and are administered by a mixture of councilors and traditional leaders.

With the recent devolution of social services to local communities, the country has been divided into 19 local councils that have been further sub-divided into 392 wards. Each ward is headed by an elected councilor.

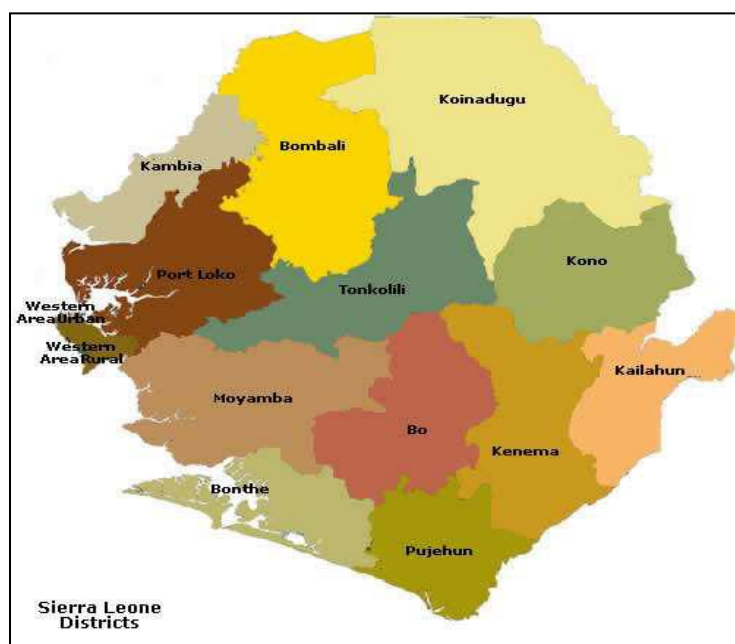


FIGURE 1 ADMINISTRATIVE MAP OF SIERRA LEONE SHOWING DISTRICTS

Community Structure

Each village is headed by a chief supported by the council of elders, including religious leaders bounded by cultural norms and traditions. They meet regularly to discuss issues relating to the development of their communities including health, agriculture, and education. The village authorities play important roles in NTD activities such as social mobilization, selection and motivation of community drug distributors (CDDs) and supervision of MDAs. These communities have

also been involved/participate in other health interventions such as insecticide treated bed nets (ITN) distribution, home management of malaria as well as expanded program for immunization (EPI) and reproductive and child health RCH programme interventions. The village composition is usually stable except for villages that are located in border areas where

there is continuous movement because the of similar ethnicity is the same on both sides of the borders and people move across to trade or visit relatives. Although English is the official language spoken in schools and government administration institutions, there are about 16 tribes in Sierra Leone, reflecting the diversity of cultural traditions. However, there are three dominant languages in the country: Mende in the Southern and Eastern region; Temne in the Northern region; and Krio in the Western area. It is usually advantageous to have people who can speak the languages of areas in which they work or health workers can be found locally to serve as interpreters when necessary. However, this is not a stringent deterrent to the delivery of health services.

Agriculture is the main occupation and crops grown are: rice, cassava, ground nuts, potatoes, yams, cocoa, coffee, corn, pepper e.t.c. Other activities are mining and fishing. Schistosomiasis, however, SCH transmission is common in mining areas due to the mining activities. The two main religions are Islam and Christianity and because of the harmony between the two religions, it is easy to find a mosque and a church in a village and these two bodies can easily serve as contact points for health education activities. Within the traditional setting, women are responsible for the day to day running of the household, including health affairs of the family. With the participation of women, health programmes are usually more successful.

Demography

The most recent national census conducted was in 2015 with provisional result of 7,075,641. Generally, the male: female ratio is 49%: 51%. Primary school enrollment rate is 85% and 73% of the total population live within 5 km of a health facility. Table 1 below has details of the population distribution in Sierra Leone per region and district.

TABLE 1: NATIONAL POPULATION DATA SCHOOLS AND HEALTH FACILITIES AT DISTRICT LEVELS

Table 1: National population Data Schools and Health Facilities at district Levels										
Province /Region	District	No. of villages	No of Oncho communities	Total Population	Under fives	5-14 years	15 Yrs and above	No. of Primary School Aged Children (6-12 years)	No. Primary Schools	No. Health Centers
Eastern	Kailahun	977	570	525,372	89,839	70,400	365,134	109,652	346	83
	Kenema	1380	752	609,873	104,288	81,723	423,862	154,330	605	130
	Kono	1360	620	505,767	86,486	67,773	351508	74,232	349	88
Southern	Bo	1367	1267	574,201	98,188	76,943	399,070	155,760	520	125
	Bonthe	550	183	200,730	34,325	26,898	139,507	39,475	219	57
	Moyamba	1539	1000	318,064	54,389	42,621	221,054	64,188	486	110
	Pujehun	815	502	345,577	59,094	46,307	240,176	80,181	273	72
Northern	Tonkolili	1024	631	530,776	90,763	71,124	368,889	102,157	525	108
	Port Loko	1769	920	614,063	105,005	82,284	426774	130,794	512	110
	Kambia	830	490	343,686	58770	46,054	238862	80,329	197	80

	Bombali	1596	1000	606,183	103,657	81,229	421297	115,726	510	110
	Koinadugu	1041	516	408,097	69,785	57685	283627	78,860	372	78
Western Area	W Rural	518	0	442,951	75,745	59,355	307,851	241,438	151	55
	W Urban	1234	0	1,050,301	179,601	140,740	729,957	945,423	470	65
		16,000	8451	7,075,641	1,209,935	1,705,040	3,907,952	1,495,266	5535	1271

1.1.2 GEOGRAPHICAL CHARACTERISTICS

Sierra Leone is located on the West Coast of Africa and is positioned between latitudes 7° and 10° north of the equator, and longitudes 10.5° and 13.5° west of Greenwich.

The country is covering an area of 71,720 square kilometres and is bordered in the north and north-east by Guinea and in the south and south-east by Liberia.

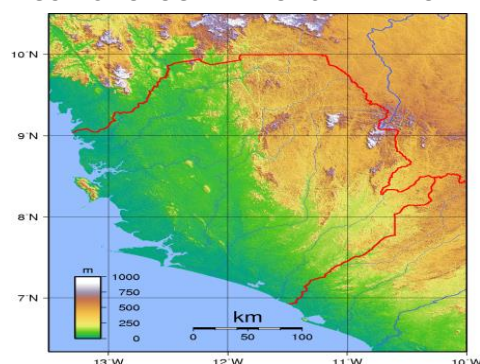
Its western border is formed by the Atlantic Ocean.



Figure2 Location of Sierra Leone

There are four major landscapes; the coastal/estuarine mangroves and alluvial floodplains which cover about 15% of the land area; the interior low lands/plains occupy 45% of the land area; the interior plateau and hills found mainly in the north-eastern and eastern parts of the country and the peninsular mountains which rise abruptly from the coast to a height of about 900 meters. There are nine major rivers running almost parallel to each other from north-east to south-west and in large estuaries with eleven small lakes. The country has a tropical type of climate, hot and humid for most of the year. There are two distinct seasons, the rainy season lasting from mid-May to mid-October, and the dry season extends from mid-October to mid-May.

FIGURE3 TOPOGRAPHY OF SIERRA LEONE



Rapid population growth pressuring the environment; over harvesting of timber, expansion of cattle grazing, and slash-and-burn agriculture is contributing to deforestation and soil exhaustion.

An estimated 60% of Sierra Leone lies in the onchocerciasis belt of West Africa and is drained by a network of several large rivers with numerous breeding sites for black flies – the vector of onchocerciasis. The 12

districts in the 3 provinces are traversed by 7 major rivers (Rokel, Taia, Waanjie, Sewa, Kaba, Gbangbaia and Moa) and numerous big streams that empty into the Atlantic Ocean. This water

course passes through forested vegetation and rocky landscape providing rapids that increase the oxygen concentration in the water and make it a potential breeding site for the black fly.

1.1.3 SOCIO-ECONOMIC STATUS AND INDICATORS

Sierra Leone is an agrarian economy with 61.1% of the labour force involved in agriculture, the majority of which are involved in subsistence farming (SLDHS 2013). There are about 21 economic activities reported in the census of December 2004 but the country's main economic sectors include mining, agriculture and fisheries. The analysis shows that household members of all employment categories are involved in agriculture. This is particularly so for the crop sub-sector, where the majority (between 73-97%) of the household members; whether employed, self-employed, unpaid farm workers, looking for work, not working and not looking for work, household workers, students and the retired are engaged in crop farming. Subsistence farming accounted for 58% of the country's GDP for 2012 (SLDHS 2013). Sierra Leone's manufacturing sector continues to develop and consists mainly of the processing of raw materials and of light manufacturing for the domestic market. The economic prospects look good and living standards should rise over time if the current stabilizing macroeconomic policy can be maintained. The data disaggregated at National level shows that women are more engaged in farming (52.2 percent) than their male counterparts (47.8 percent). They also dominate the crop and poultry sub-sectors, while the men dominate the livestock, hunting, forestry and fishery sub-sectors. These results show a similar pattern of gender division of responsibility for crop farming and poultry rearing in the regions as well as in the districts. Agricultural activities by status and gender at national, regional and district levels indicated that the males dominate the paid and self-employed, student and the retired categories, while women dominate the unpaid family workforce, household work, not working/not looking for work and other categories in all the six agricultural activities.

Sierra Leone has poor health indicators, with life expectancy of 51 years for females and 49 years for males, an infant mortality rate of 92 per 1000 live births, an under-fives mortality rate of 156 per 1,000 live births and a maternal mortality rate of 1,165 per 100 000 births (SLDHS, 2013). Sierra Leone is classified by the UN as one of the least developed countries in the world. In 2014, Sierra Leone ranked 181 out of 188 in the UN Human Development Index. It is one of nine countries in Africa whose income per capita has actually fallen compared to 1960s levels. About 70 % of Sierra Leoneans were living below the poverty line in 2014. The average national income (GNI) per person was US\$630 in 2015. In 2013, the real GDP growth was 17.8 (World Bank Data 2015).

Availability of clean water and safe sanitation is a major factor affecting the health status of the population. Overall, 60% of the population has access to safe drinking water, and only 10% have access to improved non-shared sanitation facilities. The situation is worse in rural areas compared to urban communities: rural communities had 49% of access to safe water compared to coverage of 90% for non-rural communities. The poor sanitation and inadequate access to potable water pre-dispose the people to NTDs especially SCH schistosomiasis and STH.

1.1.4 TRANSPORTATION AND COMMUNICATION

There are three modes of transportation, namely: road, sea (marine) and air. These modes are regulated by statutory bodies, whilst the Ministry of Transport and Aviation handles policy for the effective execution of the respective mandate of these parastatals, . Tthe sector also includes freight and passenger movements. The overall goal of the sector is to increase access of the urban and rural populations to market centers as well as to social and economic services through an efficient, affordable, safe and sustainable transport system. The transport sector has suffered major setbacks in the past due partly to the 10-year civil war, as well as the lack of funds and other logistical support to the sector. The entire feeder road network plus 11,550 km in the core road network (CRN) is either under refurbishment or requires necessary repairs. The plan to rehabilitate these roads of the CRN is programmed to last until 2030. Better road links to key border crossings are included in the proposed infrastructure investment plan.

Transportation within the country is mainly by road and partly by sea. Transportation in urban areas, including district headquarter towns, and between urban areas is relatively good. Public transportation system includes a system of buses, cars and motorbikes (motorcycles locally called Okadas). The distances between the headquarters of the 14 districts are shown in annex 1.2. However, transportation in rural areas is poor with some areas accessed only on foot or with motorcycles. Transportation to rural areas is especially poor during the rainy season when the roads are worse. Because of the poor transportation system, health programmes can only be successful when vehicles and motorcycles are made available for programme use and maintained in good working condition. The NTD programme has two functional vehicles donated by United State Agency for International Development (USAID) through Helen Keller International /(HKI) in 2016. Motorbikes used by the program are hired on an annual basis by USAID. At present, there are 6 six hired bikes to support programme work. These vehicles and motorcycles have been the only means of extending NTD programme activities to rural areas and because of the poor road network in rural areas, these vehicles and motorbikes wear out easily and therefore require regular maintenance.

Communication has improved recently with introduction of up to four mobile networks. All 14 districts are covered by at least 2 Global System for Mobile communication (GSM) networks although not in all areas of the districts. It is estimated that up to 85% of health facilities have coverage for at least one mobile network. All districts now have a radio station with programmes in the languages that are spoken within the district. The NTD programme has been using district radios for health education relating to NTDs. Activities include radio discussions on NTDs, airing of jingles and sometimes phone-in programmes organized for the people.

1.2 HEALTH SYSTEM SITUATION ANALYSIS

1.2.1 HEALTH SYSTEM GOALS AND PRIORITIES

The majority of the causes of illnesses and deaths are preventable. Most of the morbidity and mortality have been attributed to diarrheal diseases which increased from 7% to 11%, nutritional deficiencies which increased from 4% to 10%, anaemia which increased from 10% to 39.2%, malaria 22%, tuberculosis 12%, HIV/AIDS which increased from 0.9% to 1.5%, (SLDHS 2008 and 2013). The greatest burden of disease is on rural populations, and on women within the rural population. Women are also more likely to have to stop their economic activities due to illness than men.

Malaria remains the most common cause of illness and death in the country. Twenty-five percent of children under five years of age had malaria in the last two weeks of the latest household survey (SLDHS, 2013) as compared to 24% (SLDHS, 2008). The survey also reported that 49% of under-fives and 63% of pregnant women slept under insecticides treated nets (ITNs). Forty-eight percent of children with fever received an anti-malaria with only 37% receiving artemisinin combination therapy (ACT). In addition, only 27% of children with fever received ACT within a day of onset of fever as recommended.

The Pprevalence of HIV in the general population has remained constant at 1.5% from 2008-2013. This may be related to the marked improvement in the HIV/AIDS programme implementation. For example, by the end of 2005 there were only 20 VCCT sites in the country but by the end of 2008 a total of 369 sites had been established; in 2005 there were only 18 sites providing prvention of mother to child transmission (PMTCT) services nationwide but by the end of 2008 PMTCT sites had increased to 326 (National Aids Secretariat Programme Report 2008) .

In 2013, 16% of children under the age of 5 years were found to be underweight which shows a reduction as compared to 2008 which was 21%, while 38% were stunted showing an increase (36%), and 9% were wasted (SL DHS 2013) demonstrating a reduction as compared to 2008 (SL DHS 2008) which was 10%. Children in rural areas are more likely to be stunted and wasted than children in urban areas. However, according to the Sierra Leone National Nutrition Survey (SLNNS) conducted in 2014, the prevalence of underweight amongst children under five years of age decreased from 18.7- 12.1%, prevalence of stunting from 34.1- 28.8% and that of wasting from 6.9- 4.7%.

Availability of clean water and safe sanitation is a major factor affecting the health status of the population. Almost half of the population has no access to safe drinking water, and households which have access to improved non-shared sanitation facilities decreased from 13%-10%. 20% households have no sanitation facility. In Urban areas, 20% of households use improved sanitation facilities compared with 5% of households in rural areas. The situation is worse in rural areas compared to urban communities: rural communities increased from 34%- 48% of

access to safe water compared to an increase in coverage from 84%- 89% for non-rural communities.

From 2005 – 2010 to 2016 MoHs MoHS in collaboration with partners conducted impact assessment surveys on for Onchocerciasis which has reduced from 68% to -20.5%, LFLymphatic Filariasis reduced from 2.42% to -0.5%, STH decreased from (2.4-63%) to - (7.7-20%), SCH schistosomiasis decreased from (9.6-68%) to- (2.8-39.2%)., and Trachoma was (<5% at baseline). and no case of HAT has been detected following an assesment in Kambia and Port Loko dstricts in the northern part of the country.(0%) have stabilized.

Based on analysis of 50 developing countries, the Health Financing Group (Abuja Declaration, 2005) recommends that governments should increase the per capita expenditure on Health to 15% of public expenditure and also reverse its declining per-capita expenditure on health. Health care costs in Sierra Leone are of great concern. Out of pocket expenses of about 70% remain among the highest in Africa (NHA Report, 2007). A review commissioned by the Ministry in 2007 established that even modest charges tend to exclude over 50% of the population from seeking health care and exemption systems in current use do not seem to work (Health Financing Assessment, Oxford Policy Management 2008).

In view of the foregoing situation and challenges confronting the availability, accessibility and affordability of quality health care services in the country, the Government is implementing an “agenda for prosperity” poverty reduction strategic paper (PRSP 2-agenda for change), with the goal of contributing to health improvement and subsequent poverty reduction. Implementation of free health care to pregnant women, lactating mothers and children less than five years in all public health facilities started in April 2010 to address maternal and infant mortality.

1.2.2 ANALYSIS OF THE OVERALL HEALTH SYSTEM

Service delivery

Health care service delivery remains to be one of the key challenges for the good governance of post Ebola Virus DiseaseEVD Sierra Leone. The 2014-2016 Ebola Virus DiseaseEVD epidemic had grave effects on health care service delivery. This continues to undermine standards, availability, accessibility, affordability and acceptability of services.

The health care service delivery organization system is based on the primary health care concept, which was started in the 1980s. The public health delivery system comprises of three levels: (a) peripheral health units (community health centers, community health posts, and maternal and child health posts) for first line primary health care; (b) district hospitals for secondary care; and (c) regional/national hospitals for tertiary care.

Meeting the demand for effective and efficient health care service delivery is a critical challenge for the post Ebola Ministry of Health and SanitationMoHS. General accessibility to health facilities shows considerable district variations. Qualitative perceptions from rural communities

reveal that physical distance to health facilities and economic factors present major barrier in accessing health care services. In addition social roles, expectations, norms and values of behavior make women more vulnerable to ill health; yet have fewer resources and opportunities to protect their health or to utilize health care. The existing functional health facilities are inadequate and inequitably distributed within chiefdoms and districts. To address this situation, MoHS in collaboration with its partners are building new facilities and rehabilitating existing ones in order to increase access and improve service utilization. Education positively affects health seeking behavior and economic empowerment, thus the increase in school enrolments is an opportunity that will enhance utilization of health services. Equally, the enactment of the child rights and gender bills will encourage beneficiaries to timely seek health care services.

The Ministry of Health and Sanitation MoHS is encouraging continuous integration of health services as a strategy to increase utilization of services and reduce missed opportunities at service delivery points (Primary, Secondary and Tertiary). Presently, the NTD NTDP control programme is fully integrated into Primary Health Care (PHC) with active community participation. The NTDP programme conducts three integrated mass drug administration (MDA) annually; the first half of the year is for integrated MDA for the control of Schistosomiasis often in 7 health districts; and STH; and the second half of the year is for integrated MDA for the control and/or elimination of Onchocerciasis onchocerciasis, Lymphatic Filariasis (LF) and STH in 12 health districts. In between the first and second half of the year is integrated MDA for the control and/or of LF and STH in the WA.

Health workforce

There are critical shortages of most cadres of Health Care Work force. Staff vacancies at primary, secondary and tertiary health care delivery levels are affecting utilization and quality of service delivery. Inadequate manpower and staff attrition are issues that are being addressed by increased training and recruitment into the health sector. Inadequate human resources to implement NTD activities/interventions continues to be a concern. The basic necessities and amenities in the form of transportation, accommodation and even salary/remuneration are improving. There had been an increase in the number of institutional training facilities for Maternal child health (MCH) Aides and State enrolled community health nurses (SECHNs) at district level to increase the number of staff in the Peripheral Health Units (PHUs). Furthermore, Community Health Officers (CHOs), Environmental Health officers (EHOs) and other cadres are trained at the School of community health sciences, Njala University, Bo Campus. In addition, mechanisms are being put in place to attract qualified Sierra Leonean nationals in the Diaspora and international staff to fill in the human resource gaps. Because of the human resource challenges and at the same time aiming to reach every community in the country, the community directed approach has been adopted and successfully used to implement NTD related interventions. The community directed drug distributors (CDDs or community volunteers, who are selected by their respective communities to work with the NTD programme) are responsible for all activities implemented within communities. They are trained and supervised by national and district health workers.

Health information

A functional and integrated Health Information System (HIS) is a prerequisite for sound and reliable decision-making and planning. Two key departments within the public sector have been established to meet this need, namely, Directorates of Planning and Information, (within the Ministry of Health and Sanitation), and Statistics Sierra Leone.

The Health Information System (HIS) consists of routine systems (HMIS, demographic and disease surveillance) and non-routine systems (household surveys, research). The Directorate of Planning and Information (DPI) is responsible for collecting general data on the operations of the MOHS, while the Directorate of Disease Prevention and Control (DPC) collects data on epidemic prone diseases. In collaboration with the Statistics Sierra Leone (SSL), the DPI also conducts regular population and health facility-based surveys to get data on certain indicators.

Within each district there are at least one Monitoring and Evaluation Officer as well as one Disease Surveillance Officer whose role is to coordinate data collection, management and dissemination at the district level. In each district the primary source of routine data collection are health facilities, which report monthly to their respective district health management teams, using harmonized tools, which include data on NTDs (Onchocerciasis and Schistosomiasis). The NTDCP is currently advocating with DPI to include data on LF on the harmonized tool. The District Monitoring and Evaluation Officers works in collaboration with District NTD focal person to enter data received from individual health facilities into a district database and produce reports which are forwarded to the national level for compilation, analysis and dissemination. Data from health facilities are often incomplete and untimely. Capacity for data analysis at district and PHU levels is weak. Feedback from national to district and district to health facilities continues to be a challenge. Operational research is highly under-funded and therefore very weak, and research findings are most often only shared in international journals without any feedback to policymaking level.

Medical products

The Ministry of Health and Sanitation (MoHS) has made considerable effort in making medicines and health technologies accessible to the general population. This has been achieved through central government allocations and donor support to the various departments, agencies and institutions that are responsible for quantification, procurement, storage and distribution of pharmaceutical products.

In the past 5 years the NTDP control programme has received donations of Ivermectin and Albendazole from Merck and Co. Inc. and GlaxoSmithKline, and also Praziquantel and Mebendazole from various supporting Partners. Praziquantel is been procured by USAID. Importation and use of these drugs are strictly in line with the policies and regulations of the Pharmacy Board of Sierra Leone.

The NTDP programme is constrained in terms of transport and logistics to deliver drugs to the various levels. The USAID has also been supportive in this drive by procuring and donating two brand new vehicles to the NTDP in 2016 for delivery of drugs and monitoring and supervision activities; and hiring of This plan has to make provision for vehicles and motorcycles for NTD national staff and district NTD focal points also for delivery of drugs monitoring and supervision..

Regarding pharmaco-vigilance system, NTD drugs arriving in the country are tested for quality and efficacy by the Pharmaco-vigilance department of the Sierra Leone Pharmacy Board (SLPB) before they are taken to the communities for distributions. All sSevere Aadverse eEvents (SAEs) are reported by the PHU staff to the District Health Management Teams (DHMTs) and onwards to the NTDCP, using a reporting system established by WHO and Pharmaceutical companies. The Pharmaco-vigilance department is part of the NTD monitoring and supervision team during MDA.

Health financing

The Government of Sierra Leone (GOSL) allocates budget to line ministries including MoHS annually. In 2010 MoHS allocated Le 80,000,000 (approximately 12,000 USD) to NTDCP excluding staff salaries and infrastructure.

Development partners (e.g. bilateral and multi-lateral agencies, Global Fund for AIDS, Tuberculosis and Malaria, GAVI) and international philanthropic organizations (including religious bodies) are funding approximately 50% of the annual health budget at present. A number of UN agencies also give support to the MoHS in thematic areas, such as reproductive health, malaria, HIV/AIDS nutrition and policy. The NTDP control programme is presently funded by USAID through FHI360 and HKI, ESPEN, Sightsavers, WHO and Government of Sierra Leone.GoSL

Inadequate financing remains the primary constraint inhibiting the full implementation of the health sector annual work plans (AWP), including GoSL financial support for implementation of NTD activities. the NTDP control programme. The different health financing options for the sector and their potential to raise funds for health care delivery services were elaborated in the Assessment of Health Financing study conducted in 2008. The current level of public funding as depicted in the table below, is about US\$ 2.9 per capita on average, which falls far below the estimated requirements. Mostly only 30% of the approved Ministry's budget is actually disbursed.

The Ministry of Health and SanitationMoHS is organized into two main divisions: professional and Administrative. The Chief Medical Officer (CMO) heads the professional division. There are ten directorates. The NTDCP is under the directorate of DPC *(See Organogram, annex 11). Under the DPC are 5 main programmes namely: Malaria Control (MCP), HIV/AIDS, TB/Leprosy, NTDs, Disease Surveillance and Child Health /Expanded Programme of Immunization (CH/EPI).

At the District level, there is the District Health Management Team (DHMT) headed by a District Medical Officer (DMO). The DMO controls all the Public Health staff and also coordinates all public health activities within the district. He is also responsible for administration, planning, support supervision, training, monitoring and evaluation and research among others. The DHMT has focal persons for each disease Programme, including the NTD Control programme.

With the devolution of primary and secondary health care to local councils, leadership and governance of the health sector is the primary role of the Ministry of Health and Sanitation MoHS, both within the health care system and in relation to other actors whose activities impact on health. This includes the private as well as the public sector in order to enhance access and improve health outcomes. Leadership and governance encompass policy guidance, regulations, monitoring and oversight, collaboration and coalition building, accountability and external partners.

As mentioned above, the Ministry of Health and Sanitation MoHS is the statutory body responsible for ensuring coordination of health interventions and actions.

Inter-sectorial collaboration

Concerning collaboration among various departments and building coalitions for better health outcomes, Sierra Leone has developed its second agenda, agenda for prosperity from agenda for change Poverty Reduction Strategy Paper (PRSP II), which is committed to the achievement of the Sustainable Development Goals (SDGs). All sectors are involved in a collaborative effort rather than segmented activities. In recognition of the fact that many of the determinants of health in Sierra Leone are outside the mandate of the health sector, it is crucially important for the MoHS to have strong collaboration with other line ministries, departments and agencies (Ministry of Energy & Power, Agriculture, Education, Works, Finance, and Foreign Affairs & Development, Local Government etc.). Currently, this collaboration is still limited. The National School and Adolescent Health Programme (NSAHP) is within the MoHS but many of its activities are implemented through the Ministry of Education. The NTDP Control programme has collaborated and continues to collaborate with the NSAHP on mass drug administration MDA for the control of sSchistosomiasis and STH in school aged children.

Collaboration with Health Private Sector

The MoHS is committed to building collaboration and coordination processes with private providers to increase effective service delivery. The capacity of the private health care sector in Sierra Leone is well known. Their contribution to the overall health status within the country is still to be assessed. At present, the Sierra Leone Medical and Dental Council and the MoHS are yet to effectively monitor and regulate private providers despite a legislative role to do so. Effective coordination with development partners including Helen Keller International, Sightsavers, APOC, WHO, CNTDs Liverpool School of Tropical Medicine and MDP is a priority for the MoHS. The mechanisms for consultation, collaboration and coordination are well established on technical matters. The production of this NTD master plan is an important step in strengthening the Ministry's leadership capacity in the integrated management of NTDs. The master plan highlights the Ministry's desire to work with development partners and donors in

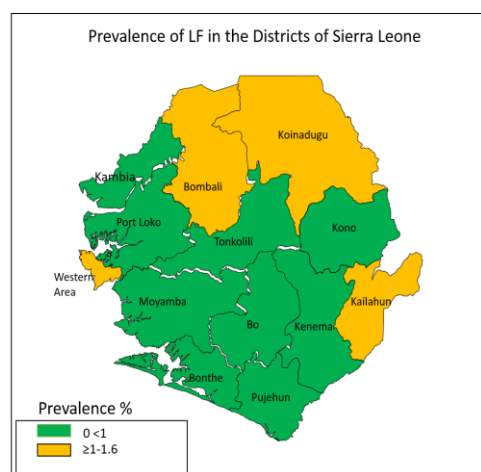
developing policies and strategic directions for NTD control and in planning and financing of NTD activities in the country.

1.3 NTD SITUATION ANALYSIS

1.3.1 EPIDEMIOLOGY AND BURDEN OF DISEASE

Lymphatic Filariasis

Lymphatic Filariasis was endemic in the country according to a profile of communicable disease compiled by WHO in 2004. Previous studies conducted on LF in Sierra Leone showed that the prevalence of antigenaemia was found to be similar in most parts of the country. LF infection was seen in young children, implying that there was intense transmission going on and infection was acquired early in life. Mapping for LF was conducted in 2005 using immunochromatographic test (ICT) cards and the results showed that all 14 HDs were endemic for LF and the entire population was at risk of being infected. After 3 rounds of MDA an impact assessment to determine the current disease burden was conducted in 12 HDs districts in July/August 2011 and the results showed that only 1 district was endemic ($\geq 1\%$). In September 2013 (see table 2), a Pre-Transmission



Assessment survey (Pre-TAS) conducted in 12 HDs districts after 5 rounds of MDA showed that 3 districts still had prevalence $\geq 1\%$.

FIGURE 4 PREVALENCE OF LF

TABLE 2: LF DISTRIBUTION IN THE COUNTRY

District/Region/ State	Location/ Site/	Baseline	Prevalence % (numbers/ rate/proportion)	Study method	Year of survey and reference
Kailahun	Manowa, Bunumbu&Madina	2.6	1.6	Night blood sample	2013
Kenema	Golahun	0.6	0.0	Night blood sample	2013
Kono	Tombodu&Penduma	2.4	0.6	Night blood sample	2013
Bombali	Kagberay, Makaprr, Mayoba&Matak	6.9	1.4	Night blood sample	2013
Kambia	Yebaya	2.1	0.0	Night blood sample	2013
Koinadugu	Kumala&Yataya	5.7	1.0	Night blood sample	2013
Port Loko	Mammah	4.4	0.3	Night blood sample	2013
Tonkolili	Massagble	2.4	0.0	Night blood sample	2013
Bo	Gelehun&Borborbu	2.0	0.3	Night blood sample	2013

Bonthe	Moboya	1.2	0.0	Night blood sample	2013
Moyamba	Mosenesie & Wubangay	1.0	0.0	Night blood sample	2013
Pujehun	Moala&Njaluahun	0.0	0.3	Night blood sample	2013

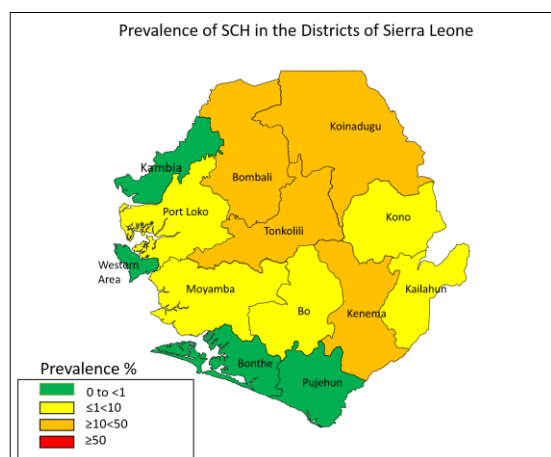
Onchocerciasis

Studies of oOnchocerciasis in Sierra Leone dates back to 1926 when a team from Liverpool School of Tropical Medicine discovered that oOnchocerciasis is transmitted by black flies (*Simulium spp.*). Since then there had been many studies on the epidemiology and control of oOnchocerciasis, which showed that Oonchocerciasis was endemic and found in 12 out of 14 HDshealth districts. The results of the 2005 study showed that oOnchocerciasis affects 8,451 villages and roughly two million people in Sierra Leone 60% of all communities, and 40% of the population (APOC, 2005). In 2010, an epidemiological survey showed a significant reduction in the disease prevalence with prevalence ranging from 8% in Pujehun to 28% in Moyamba, Pujehun which had sites with the highest prevalence (87.2%) at baseline, now had the lowest (8%) during the impact survey. See Annex 3.2

Schistosomiasis

In 1924, Blacklock and Thomson reported on the occurrence of *Schistosoma haematobium* and their snail intermediate hosts in specific areas of Sierra Leone (Gbakima et al 1987). Gbakima et al (1987) also quotes several studies including the followings: Gordon et al (1934) reported the first classical study on the transmission of Schistosomiasis in Sierra Leone. This study, for the first time, unraveled the life cycles of *S. haematobium* and *S. mansoni* in their respective intermediate hosts.

FIGURE 5 PREVALENCE OF SCH



In 2008/2009/2010, the NTDP control programme and HKIHelen Keller International conducted mapping to determine the prevalence of sSchistosomiasis and the results indicated high prevalence of sSchistosomiasis in 7 HDsdistricts (Kono, Koinadugu, Kenema, Kailahun, Bo, Bombali and Tonkolili), affecting 1.8 million people at risk of being infected and an overall prevalence of 45%. In 2012, an impact assessment was conducted in the 7 endemic districtsHDs, which had been receiving MDA, and the results showed that overall prevalence had reduced to 15.1%. Following 6 years

of MDA, an impact assessment was again conducted in 2016 and the overall result showed 1.6% and 16.2% prevalence for *S. haematobium* and *S. mansoni* respectively. Five districts (Moyamba, Kambia, Pujehun, Port Loko, & rural Western Area), which had low baseline

prevalence but had never been treated and 2 districts (Urban Western Area & Bonthe), which had zero prevalence, were remapped in 2016 (Annexes 3.3 and 3.4)

Soil Transmitted Helminthes

There have been few studies specifically designed to look at the situation of STH within the country. In 2008 mapping was conducted for sSchistosomiasis and STH in school aged children to determine the prevalence of the different types of worms in all 14 HDs districts. All of the 14 districts HDs had moderate prevalence (between 20% and 50%) for *Ascaris Lumbricoides*, *Trichuris Trichiura* and *Strongyloides stercoralis* but had high prevalence for Hookworm. STH was therefore considered to be endemic in all 14 HDs districts, affecting the entire population of Sierra Leone, especially children (Annexes 3.5 and 3.6). Parasitological evaluation to determine the impact of mass drug administration following several rounds of MDA was conducted in 2016 and results showed that prevalence had reduced significantly. No district had high prevalence of Hookworm compared to 4 HDs districts at baseline.

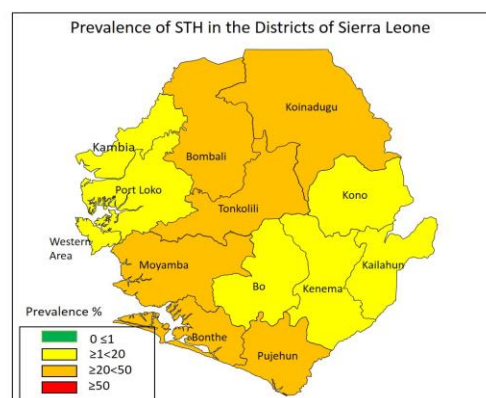


FIGURE 6 PREVALENCE OF STH

Buruli Ulcer

There had been reports of Buruli ulcer in Sierra Leone but no formal assessment had been done until late 2011. The 2011 assessment confirmed that 8 (28%) out of the 28 patients with suspected Buruli ulcer were positive. The results suggest that Buruli is present in Sierra Leone. See Annex 3.7

Rabies

The rabies programme in Sierra Leone has been on-going and coordinated by the Ministry of Agriculture under the veterinary department. The country has large population of dogs in both the urban and rural areas owned by individuals while some are stray dogs. It is important therefore, that the rabies programme be established under the NTDs. There are at least two PCT-NTDS per district and as many as four in some district as shown in table 3 below.

TABLE 2 NTD CO-ENDEMICITY

Region	District	Oncho	LF	Schisto	STH
Eastern	Kailahun	+	+	+	+
	Kenema	+	+	+	+
	Kono	+	+	+	+
Southern	Bo	+	+	+	+
	Bonthe	+	+	-	+
	Moyamba	+	+	+/-	+
	Pujehun	+	+	-	+

Northern	Tonkolili	+	+	+/-	+
	Port Loko	+	+	+/-	+
	Kambia	+	+	-	+
	Bombali	+	+	+	+
	Koinadugu	+	+	+	+
Western	Western rural	-	+	-	+
	Western urban	-	+	-	+

Based on the information on the table there are no mapping needs in the country as shown in table 4 below.

TABLE 3 NTD MAPPING STATUS

Endemic NTD	Total # Districts	No. Of endemic districts	No. Of districts mapped or known endemicity status	No. Of districts remaining to be mapped or assessed for endemicity status
Schistosomiasis	14	9	14	0
Soil Transmitted Helminthiasis	14	14	14	0
Onchocerciasis	14	12	14	0
LF	14	14	14	0
Trachoma	14	0	5	9

1.3.2 NTD PROGRAMME IMPLEMENTATION

Interventions for preventive chemotherapy (PCT)

Lymphatic filariasis (LF)

Mapping with Immunochromatographic test (ICT) cards in 2005 showed that all 14 Health Districts HDs are LF endemic and baseline LF microfilaria (Mf) surveys were performed in 2007 and 2008. Geographic MDA coverage of 100% for LF was achieved in 2010 with inclusion of the urban settings in WA and the 12 provincial districts. Drug distribution is conducted through campaign strategies with CHWs in the WA and CDDs supported by Maternal child health MCHAs-in-training in the 12 HDsdistricts. An impact assessment in 2011 and a Pre-TAS in 2013 for LF both showed a reduction in Mf prevalence. In the Pre-TAS, 12 health districtsHDs were paired into 6 evaluation units EUs due to the small district population sizes, in which each EU shared a sentinel site in one HD and a spot-check site in the other HD. Four of the six EUs (made up of the HDs of Bo + Pujehun, Kambia + Port Loko, Tonkolili + Kono and Bonthe + Moyamba), had mf prevalence <1% and qualified for TAS in FY15 but TAS did not take place due to the Ebola outbreak in 2014-2015. The NTDP made the decision not to conduct TAS in FY16, as communities were still recovering from the Ebola outbreak and may not readily participate in

surveys requiring blood samples, as this may be associated with Ebola. However, the NTDP now believes that TAS can be conducted and have planned for them in FY17.

The two EUs that failed the pre-TAS include Bombali + Koinadugu and Kailahun + Kenema. This was due to the fact that at least one site in each EU had mf prevalence >1%. Two additional MDAs have been completed in FY14 and FY15 for all districts, and a third MDA in FY16 is currently ongoing in all 12 HDs. The four HDs that 'failed' the pre-TAS are scheduled for their second pre-TAS in FY17. All these four HDs share borders with Guinea and/or Liberia where full scale-up of MDAs to 100% geographic coverage has not yet been achieved by their national NTDPs. Although the Ebola outbreak hindered the cross-border control efforts with Guinea and Liberia, HKI will organize a cross border meeting for Sierra Leone, Guinea and Liberia through END in Africa funding to deliberate and draw on concrete solutions from FY17 onwards. Both the RWA and UWA in the WA will have completed six rounds of effective MDA by the end of FY16; pre-TAS will also be conducted in these two HDs in FY17.

USAID support for LF activities started in 2008 with baseline mf survey in 8 of 14 HDs, and all subsequent Disease Specific Assessments (DSAs) have been supported exclusively by USAID. USAID is also the main donor for LF MDA activities (advocacy, training, social mobilization, CDD motivation, distribution of logistics etc.), although other partners, such as APOC and Sightsavers, whose support are mainly for Onchocerciasis, have also provided (APOC) or continue to provide (Sightsavers) support for the integrated treatment. The USAID support for LF activities covers the entire 14 HDs.

Onchocerciasis

Studies conducted between 2003 and 2005 using skin snip with financial and technical support from APOC, showed that 12 HDs had meso-endemic (mf prevalence ≥ 20 and $< 60\%$) and hyper-endemic (prevalence $\geq 60\%$) areas with an estimated at-risk population of three million that had to be treated with Ivermectin (IVM). The WA (RWA and UWA) and the Island of Bonthe were not endemic for Oncho onchocerciasis (though the rest of Bonthe district is). From 2002-2006, CDTI was implemented in 8,451 meso-endemic and hyper-endemic villages. Albendazole (ALB) was added to the strategy in six districts in 2007 and to all 12 HDs in 2009. After five rounds of MDA, an impact assessment was conducted by the NTDP in 2010, with technical and financial support from APOC, which showed significant reduction in onchocerciasis prevalence within the 12 endemic HDs. In order to make a decision about onchocerciasis MDA after LF MDA, which is projected to stop in 2018, another impact assessment survey is proposed in FY17 to determine the prevalence status in 12 HDs and the need for IVM MDA in hypo-endemic areas that have benefitted from MDA for LF since 2008.

Schistosomiasis

Prior to the USAID funding in 2008, there was no Schistosomiasis (SCH) control program in Sierra Leone, although evidence from earlier studies indicated that both intestinal and urinary forms of SCH were prevalent in the northeast. Mapping in 2008-09 found moderate

to high prevalence of *Schistosoma mansoni* in seven HDs (Kono, Koinadugu, Kenema, Kailahun, Bo, Bombali and Tonkolili) with 1.8 million people at risk, and low prevalence in the five coastal districts (Port Loko, Kambia, Moyamba, Pujehun and RWA). It also showed that *S. haematobium* was endemic in 3 districts (Bo, Bombali and Kono). The entire Bonthe district and UWA had zero prevalence. In 2009, annual MDA started targeting only school aged children (SAC) in six endemic HDs and scaled up in 2010 to include all school aged children (SAC) and at-risk adults in the seven highly or moderately endemic HDs (any adult living in the rural areas of these seven HDs) according to the national plan for morbidity control. In 2012 an impact assessment showed that the overall prevalence of *S. mansoni* had decreased by 67.2% (from an overall prevalence of 49.7% to an overall prevalence of 16.3%).

In May 2016, a prevalence assessment for schistosomiasisSCH using Kato-Katz and urine filtration technique was conducted in 12 HDs. The results (by range) are shown in the table below. During the national review meeting held in June 2016, data were discussed and decisions made about FY17 treatment.

Soil Transmitted Helminths

Mapping in 2008 using Kato-Katz method showed moderate to high prevalence of STH in 12 HDs. One round of MDA-STH for everyone above five years of age is implemented through LF MDA under the END in Africa project. The second round of STH MDA for SAC only is partly implemented by health workers/CDDs during the MDA for SCH and partly by school teachers in HDs not treated for SCH. However, the second round of STH MDA has not been conducted in each district every year because it is dependent on availability of funds and the timely arrival of drugs. The second MDA for STH has so far been made possible by the donation of mebendazole by HKI between FY2009 and FY2013. In FY2011, FY2012 and FY2013 the second MDA for STH was also conducted in 8, 12 and 1 HDs, respectively, by school teachers. In FY14, a second round MDA was scheduled to happen in 12 HDs alongside the SCH MDA, however, this activity did not happen due to the Ebola outbreak. Since 2005, HKI has supported the nutrition program of the MoHS to conduct a biannual de-worming of children 12-59 months old with funds from the Canadian Department for Foreign Affairs, Trade and Development. This de-worming is integrated with Mother and Child Health Weeks that include vitamin A supplementation, distribution of long-lasting insecticide-treated nets and polio, measles and/or yellow fever vaccinations. In FY17, this activity is expected to continue with funding from the “Seeing is Believing” project.

Prevalence assessments for STH using Kato-Katz thick smear were conducted in April 2016 in the 14 HDs to determine future STH treatment needs, given the fact that LF treatment is projected to stop by 2018. The results are shown in the Annex

Trachoma

Mapping was conducted with USAID funds in 2008 in the five northern HDs that border districts in Guinea where trachoma was known to be endemic. Prior surveillance reports from the MoHS

suggested that trachoma may be a public health problem in these border HDs. The prevalence of trachomatous inflammation-follicular (TF) in children aged 1–9 years in all mapped districts was <5% and MDA with azithromycin was not warranted in line with WHO guidelines. The prevalence of trachomatous trichiasis (TT) in persons ≥ 15 years was <1% among those studied and so interventions for TT were also not conducted. Although training to identify TF and TT cases in the communities has been integrated in the annual training of trainers (ToT) for MDA-LF-onchocerciasis, no surveillance has yet been put in place for trachoma. The National Eye Care Program and Christoffel Blinden mission (CBM) can provide trichiasis surgery when cases are referred for treatment. However, payment is based on a cost-recovery mechanism and the fees may not be affordable for most of those affected. The NTDP is including trachoma surveillance and outreach surgical camps for TT in this Master Plan for 2016-2020.

Interventions for case management (CM)

Human African Trypanosomiasis

Forecariah, a district in the Republic of Guinea, is known to have a high prevalence of Human African Trypanosomiasis (HAT). Because of the geographical location of Kambia district that is sharing border with Forecariah and the many cross border activities going on between people of these two bordering districts in term of trade, inter marriages and relations, it is likely possible that cross border transmission of HAT is taking place. In December 2009, the NTD Control Programme conducted joint field visits with WHO consultants and members of the Kambia district health management team to investigate if cross border transmission of the HAT is occurring. Various communities were visited and questionnaires were administered to know if the communities are aware of people who had developed signs and symptoms of HAT. Key stakeholders, PHU staff, traditional birth attendants, traditional healers, chiefs and village development committee members were interviewed. There were no indications of HAT during these interviews.

In the first quarter of 2010, a situation analysis was conducted in a total of 40 communities. The selection of communities/villages was based on proximity to the Sierra Leone-Guinea border and the presence of mangroves close to the community. During the situation analysis, no positive case of HAT was discovered. This shows that there is no evidence of active transmission of the Trypanosoma pathogen from Guinea to the Kambia district. However, further situation analysis should be done in other suspected districts at risk for decision-making.

Guinea Worm Disease

After 2 assessment visits conducted in 2002 and 2006, the International Certification Committee for Guinea Worm visited Sierra Leone and recommended certification of Sierra Leone as free from Guinea Worm Disease. In 2007, Sierra Leone was certified as free from Guinea Worm by the WHO Director General and since then post certification surveillance has been ongoing with no confirmed case of Guinea Worm reported.

Leprosy

For the past years leprosy has been and is still coordinated by the National Leprosy and Tuberculosis control Programme. For the purpose of this document leprosy being one of the NTDs diseases is included.

For the last four years leprosy service has been integrated into the peripheral health service with leprosy assistants and supervisors as the first referral line. Passive diagnosis and treatment are carried out by the general health staff, while disability prevention and management of reactions is the responsibility of NLTCP staff.

New leprosy cases are still found (598 in 2007). The overall registered prevalence has reached the elimination goal of less than 1/10,000 population. However, in 2007, six out of fourteen 14 districts HDs had prevalence above 1/10,000 of population, contributing most of the new cases. After the recovery of the programme in 2002/2003, case finding remains fairly constant around 600 cases per year.

Rabies

There is a slight reduction in the trend of disability rate at time of diagnosis, which would point to patients coming earlier than before.

The ministry of health MoHS component is yet to be established fully under the NTDP programme. The country plans to No continuous rabies RBs vaccination. Formation of rabies RBs Task Force comprising of MoHS, Police, City Council and WHO is recommended.

- * MoHS
- * Police
- * City Council
- * WHO

Survey in Freetown on Knowledge, attitude and practice of dogs was conducted in constituency 109 in three wards – 384, 385, 386. One of the major challenges identified is the access to rabies vaccine. therefore, MoHS with support from of WHO and is working towards improving availability of rabies vaccine over the next five years. Also, by-laws will be in developed Freetown with city council for dog care. The national goal is to eliminate rabies from Sierra Leone by 2020.

Table 5.1 summarises the past and ongoing interventions to control the different NTDs.

TABLE 4.1 SUMMARY OF INTERVENTION INFORMATION ON EXISTING PCT PROGRAMMES

NTD	Date programme started	Total districts targeted	No. of districts covered (geographical coverage*)	Total population in target district	No. (%) Covered	Key strategies used	Key partners
Oncho	2005	12	12	3,374,326	2,642,193 (78.3%)	MDA	
LF	2007	14	14	5,212,620	4,065,939 (78%)	MDA	

Schisto	2009	7	7	2,909,979	2,309,274 (79)		
STH	2007	14	14	5,212,620	4,065,939 (78%)	MDA	

*Geographical coverage = $\frac{\text{No. of districts covered by the programme}}{\text{Total no. of endemic districts in the country}}$

TABLE 5.2 SUMMARY OF INTERVENTION INFORMATION ON EXISTING CM PROGRAMMES

NTD	Date programme started	Total districts targeted	No. of districts covered (geographical coverage*)	(%) covered	Key strategies used	Key partners
HAT	Not started	Not known	0	0	NA	WHO
BURULII	Not started	14	2	14.3	Case search	WHO
RABIES	Not started	14	0	0	NA	WHO
LF	Not started	14	0	0	NA	HKI, WHO

*Geographical coverage = $\frac{\text{No. of districts covered by the programme}}{\text{Total no. of endemic districts in the country}}$

1.3.3 GAPS AND PRIORITIES

TABLE 5 SWOT COUNTERACTING TABLE

Weakness	Strengths counteracting weaknesses	Opportunities counteracting Weaknesses
1. budget allocation but minimal release	1. Strong NTDP commitment under leadership of one program manager guided by a NTD Task Force	1. Formation of steering committee: collaboration with ministries of education, agriculture, water, environment protection agency.
2. Community ownership and motivation of CDDs is variable	2. Engagement of CDDs as CHW	2. Developing NTD master plan for 2016-2020
3. Data Management	3. Training at national level on DQA and NTD database establishment	3. CDDs being piloted as CHSFP for IDSR
4. No morbidity	4. Inclusion of assessment	

<p>management of case management disease</p> <p>Note: NTDs not included in the current IDSR</p>	<p>of morbidity prevalence in 2016 NTD annual plan trained district laboratory technicians on NTD diagnosis</p>	<p>4. Establishment of NTD data base and planned DQA</p> <p>5. USAID funding morbidity management in some countries</p> <p>6. continuous technical support from WHO & HKI</p>
Threats	Strengths counteracting threats	Opportunities counteracting threats
<p>Elimination of STH and oncho after LF elimination</p> <p>Outbreak of disease epidemics like Ebola and persisting over the period of time</p> <p>2018 election: Presidential, Parliamentary and Local Government Elections</p>	<p>Commitment of drug companies to continue donation of STH and oncho drugs</p> <p>Formation of ESPEN after APOC and scaling up of mandate to include NTDs</p> <p>Established surveillance structure by the MoHS& WHO including integrated disease surveillance and response (IDSR), community based surveillance (CBS), rapid response team (RRT) & public health emergency management committee</p> <p>Monitoring of electioneering process by civil society groups Community sensitisation on political tolerance by NGOs and civil society</p>	<p>Donor commitment to NTD control/elimination: USAID, DFID, Bill and Melinda Gate Foundation Renewed global interest in NTD e.g the London declaration on NTDs, BMGF, G7, Bilaterals. SDGs</p> <p>Donor commitment to support strengthening surveillance an early warning system in the Mano River Basin</p> <p>Establishment of health sector recovery plan and budget after the Ebola outbreak.</p> <p>Formation of political party registration commission (PPRC) to arbitrate political parties</p>

From the SWOT analysis the following Gaps and priorities have been identified

- Inadequate budget support from MoHS for program or activity implementation
- Infrastructure: Inadequate office space in Freetown
- Lack of support Morbidity Management: lymphedema and hydrocele management
- Data quality management
- Logistics: Vehicles and Motorcycles

- NTDs curricula for health training institution
- No NTD steering Committee

PART 2: NTD STRATEGIC AGENDA

2.1 OVERALL NTD PROGRAMME MISSION, VISION AND GOALS

Strategic Goal:

To control and eliminate Neglected Tropical diseasesNTDs and significantly reduce suffering due to their chronic manifestations in Sierra Leone by 2020

Vision:

Sierra Leone that is free of Neglected Tropical DiseasesNTDs

Mission:

To maintain a well-managed, integrated and sustainable NTDP that will provide quality services for the control, elimination and eradication of NTDs that are endemic in Sierra Leone through a comprehensive and consolidated approach that will include accurate mapping, treatment, prevention, surveillance and research.

2.2 GUIDING PRINCIPLES AND STRATEGIC PRIORITIES

The four (4) strategic priorities of the NTDP control programme in Sierra Leone are:

- Strategic Priority 1: Strengthen government ownership, advocacy, coordination and partnerships;
- Strategic Priority 2: Enhance planning for results, resource mobilization and financial sustainability of national NTD programme;
- Strategic Priority 3: Scale-up access to interventions, treatment and system capacity building;
- Strategic Priority 4: Enhance NTD monitoring and evaluation, morbidity control, case management, surveillance and operations research.

The NTD programme is at the stage of pre-elimination of lymphatic filariasis, onchocerciasis and sustaining control for STH and SCH schistosomiasis that are shown to be endemic in the country. Therefore, the programme through this plan will try to improve coordination and partnerships, improve resource mobilization and ensure sustainability of programme implementation and donor support, continue preventive chemotherapy PC, strengthen morbidity control and case management, improve monitoring and evaluation, surveillance and research for control/elimination of NTDs. The table below outlines the strategic objectives set by the NTD programme to achieve its goals set for 2020.

TABLE 6 STRATEGIC FRAMEWORK SUMMARY

STRATEGIC PRIORITIES	STRATEGIC OBJECTIVES
Strategic Priority 1: Strengthen government ownership, advocacy, coordination and partnerships.	To strengthen capacity of the National NTD Control Programme for effective management of all endemic NTDs in Sierra Leone.
	To strengthen political support for NTDs at national, district and village/community levels.
	Strengthen NTD partnership for continuation and improvement of financial and technical support to the NTD Programme.
	To develop an NTD policy and ensure that it is included in the national health policy
	To improve coordination of NTDs activities among stakeholders at all levels.
	To improve collaboration with relevant sectors such as WASH, Health Education and Ministry of Education
	To introduce NTDs into the curricula of health training institutions (School of Community Health Sciences, Nursing Schools, MCHA training schools and College of Medicine and Allied Health Sciences).
Strategic Priority 2: Enhance planning for results, resource mobilization and financial sustainability of national NTD programme	Strengthen advocacy among national and international NGOs for improved financial, and technical support to the NTD Programme.
	Build strategic partnership with public and private sector development for NTD programme.
	Improve advocacy within the MoHS, local councils for increased financial support to the NTD Programme.
	Improve community participation in planning and motivation of CDDs for NTD control.
	Improve motivation of CDDs to continue NTD activities within their respective communities.
Strategic Priority 3: Scale-up access to interventions, treatment and system capacity building.	Continue the established integrated annual MDAs for Onchocerciasis/LF and SCHsotosomiasis/STH.
	Strengthen morbidity control and case management interventions for LF.
	Strengthen capacity of NTDP staff, DHMTs on NTD implementation activities,
	Strengthen integrated vector management interventions for all NTDs.
	Continue to determine NTDs distribution in all districts for a better application of strategies to control or eliminate NTDs.
	Strengthen drugs and other supplies for NTD programme and DHMTs for improved service provision.
Strategic Priority 4: Enhance	Strengthen the capacity of the NTD Programme to conduct

NTD monitoring and evaluation, surveillance and operations research	surveillance, monitoring and supervision and evaluation of all NTD activities and ensure feedback at all levels.
	Strengthen capacity of the DHMTs to conduct surveillance, supervision, monitoring and evaluation of all NTD activities.
	Strengthen surveillance, supervision, monitoring and evaluation of all NTD into other NTD related programmes.
	Strengthen operational research for NTD and Publication.
	Collaborate with Pharmacovigilance sector of the MOHS to integrate NTD drugs in to Pharmacovigilance system for quality control and support the NTDs implementation.

2.3 NATIONAL NTD PROGRAMME GOALS, OBJECTIVES, STRATEGIES AND TARGETS

The table below describes the goals, objectives, delivering channels and targets of specific NTDs in the country.

TABLE 7 SUMMARY OF NTDS SPECIFIC GOALS AND OBJECTIVES

Global goals	National goal	Objectives	Intervention	Delivery channel	Targeted population	Key performance indicators
Onchocerciasis Elimination where feasible with CDTI and other effective interventions by 2025	To eliminate onchocerciasis in all 12 endemic districts with CDTI intervention by 2020	By 2020 at least 80% of population in hyper and meso endemic zones will be treated with Ivermectin using CDTI approach.	Annual MDAs	Communitie sCDDs	4,386,386	% therapeutic coverage
		By 2020 90% of communities fully participate in Oncho onchocerciasis activities including i(Improved	Community meetings	Communitie sCDDs, PHU staff, community leaders	8,451 communities	% of at risk communities in which meetings held each year

Global goals	National goal	Objectives	Intervention	Delivery channel	Targeted population	Key performance indicators
		community self-monitoring monitoring and , incentives for CDDs motivation)				
LF: Eelimination as a global public health problem by 2020.		By 2020 at least 85% of population in endemic communities should be treated with Ivermectin and Albendazole	Annual MDAs	Communitie sCDDs	7,075,641	% therapeutic coverage % of post event coverage survey % of impact assessment
		By 2020 90% of communities fully participate in LF activities (including Improved community self-monitoring , improved CDDsand incentive for CDDs motivation)	During and post annual MDAs	CDDs, PHU staff, community leadersCom munities	13,413 communities	% of at risk communities in which meetings held each year
		To reduce microfilaria prevalence to less than	Annual MDA	NTDP staff, DHMTs, CDDs, PHU staff,	14 districtsHDs	# of districts achieving criteria to stop MDA

Global goals	National goal	Objectives	Intervention	Delivery channel	Targeted population	Key performance indicators
		1% in all implementation units (IUs).		community leadersCommunities		
		To attain zZero antigenaemia in children between the age 6-7 years by 2020.	surveys to determine the impact of MDA	NTDP staff, DHMTs, CDDs, PHU staff, community leadersCommunities	14 HDs14 districts	# of districts achieving critical cut off value for TAS 1
		By 2020 80% of people with hydrocoele s are operated in the IUs.	Surgical operation	NTDP staff, DHMTs, CDDs, PHU staff, community leaders	14 HDs14 districts	# of hydroceles surgeries done.
		By 2020 at least one community member trained and provide care to lymphoede ma patients in all the IUs.	Identify and train community member	NTDP staff, DHMTs, CDDs, PHU staff, community leadersCommunity	14 HDs14 districts	# of people trained
SCHSchistosomiasis: eElimination by 2020	To control SCH schistosomiasis and reduce their transmission to a low level by 2020.	By 2020 at least 80% of populations in endemic communities should be treated with Praziquantel	Annual MDAs	School aged children and at risk adultsPHU staff and CDDs	2,065,502 SAC and special at risk adults people	% therapeutic coverage
		Reduce prevalence in all	MDA	NTDP staff, DHMTs, CDDs, PHU	7 districts	% prevalence

Global goals	National goal	Objectives	Intervention	Delivery channel	Targeted population	Key performance indicators
		districts to less than 10% among school aged childrenSA C		staff, Teachers, Parents, community leadersCom munities		
		To sensitise all endemic communities on the use of improved sanitation and hygiene promotion	Sensitization meetings	Communitie s/Schools/C TAsPHU staff, community leaders, CDDs	7 districts	# of districts with less than 10% prevalence
STH: eElimination by 2020	To control STH and reduce their transmission to a minimal level	By 2020 at least 85% of population s in endemic communities should be treated with albendazol e/mebenda zole	Annual MDAs	Communitie sCDDs, MCHA, CHWs	7,075,641	% therapeutic coverage
		To reduce prevalence in all districts to less than 10% among school aged children.	Annual MDA	NTDP staff, DHMTs, CDDs, PHU staff, Teachers, Parents, community leadersCom munities	14 districtsHDs	% prevalence
		To sensitise all endemic	Sensitization meetings	NTDP staff, DHMTs,	14 districts	# of districts with less than

Global goals	National goal	Objectives	Intervention	Delivery channel	Targeted population	Key performance indicators
		communities on the use of improved sanitation and hygiene promotion		CDDs, PHU staff, Teachers, Parents, communityC communities /Schools/CT Asleaders		10% prevalence
		Strengthen the environmental health directorate to implement rural water supply and sanitation programmes in endemic communities	Community sensitization on improved sanitation practices and hygiene promotion Promoting sanitation marketing	Communities (households, institutions, public places)	14 districtsHDs	% of population with access to improved sanitation
Guinea Worm/Dracunculiasis: Eradication by 2020.	To continue surveillance system.	Continue active surveillance for Guinea Worm cases in the country.	Surveillance at community level	communities PHU staff and CDDs	14 districts	# of Guinea Worm cases per district
HAT: Eliminate as a public health problem by 2020	To conduct assessments in districts bordering Guinea and Liberia	Conduct Baseline assessment	Communities along the border districts	communities Survey teams, DHMTs and PHU staff	7 districts	# of HAT cases per district
		Develop a strategy to manage HAT cases identified	Identify HAT cases	Communities	7 border districts	# of HAT cases identified and treated
Buruli ulcer:	To prevent	To detect	Surveillance	communities	14 districts	# of Buruli

Global goals	National goal	Objectives	Intervention	Delivery channel	Targeted population	Key performance indicators
prevent disability by 2020	disability by 2020.	and conduct early treatment of cases	at community level	sPHU staff and CDDs		ulcer cases per district identified and treated
Trachoma: Elimination as blinding disease by 2020.	To eliminate trachoma as blinding disease by 2020 in the country.	Continue active surveillance of trachoma cases in the country.	Surveillance at community level	PHU staff and CDDscommunities	14 districts	# of trachoma cases per district
Leprosy: Prevent disability by 2020	To prevent disability by 2020	To continue to identify and treat new cases	Surveillance at community level	PHU staff and CDDsCommunities	14 districts	# of new leprosy cases detected and treated.

2.4. NATIONAL MILESTONES

ELIMINATION MILESTONES

Lymphatic Filariasis

No.	Indicators	2015	2016	2017	2018	2019	2020
1	Completed mapping of LF and determined LF endemic areas and the population at risk	100 (%)					
2	Begun implementation of LF MDA in districts requiring LF MDA	100%	100 (%)	100 (%)	100 (%)	100 (%)	100 (%)
3	achieving100% geographical coverage in LF endemic districts	100%	100%	100%	100%	100%	100%
4	Major urban areas with evidence of LF transmission under adequate MDA (all 14 HDs more than 65%)	100%	100%	100%	100%	100%	100%
5	Conducted more than 5 rounds of MDA in all endemic IUs with more than 65% and stopped MDA in at least 50% of LF endemic IUs under WHO criteria	100%	100%	100%	43%	43%	0%
6	Conducted first TAS activities in at least 50% of LF endemic IUs after at least 5 rounds of MDA	0%	0%	64.3%	35.7%		
7	Conducted and Passed at least 2 TAS activities in 75% of IUs	No (%)	No (%)	0%	0%	64.3%	35.7%
8	Started passive surveillance and vector control activities in at least 75% of IUs.	No (%)	No (%)	No (%)	64.3%	100%	100%
9	Present “the dossier “for in-country verification of absence of LF transmission	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
10	Proportion and number of IUs where there is full coverage of morbidity- management services and access to basic care	No (%)	No (%)	50%	70%	90%	100%)
11	Proportion and number of IUs where 75% of hydrocele cases benefitted from appropriate surgery	No (%)	No (%)	21% 3/14	50% 7/14	71% 10/14	100% 14/14

Oncho Elimination Milestones

	Indicators	2015	2016	2017	2018	2019	2020
1	Completed mapping/delineation of onchocerciasis and determined onchocerciasis endemic areas and the population at risk	100 (%)					
2	Begun implementation of onchocerciasis MDA in districts requiring MDA	100%	100%	100%	100%	100%	100%
3	achieving100% geographical coverage in onchocerciasis endemic districts	100%	100%	100%	100%	100%	100%

4	Conducted more than 10 rounds of MDA in all endemic IUs with regional/State coverage more than 65%	100%	100%	100%	100%	100%	100%
5	Conducted Phase 1a Epid evaluation activities in at least 50% of oncho endemic IUs after at least 10 rounds of MDA	No (%)	No (%)	100%	No%	No%	No%
6	Conducted and Passed epidemiological and entomological assessment in 50% of IUs	No (%)	No (%)	No (%)	50%	No (%)	No (%)
7	Present “the dossier “for in-country verification of absence of oncho transmission	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
8	Proportion and number of IUs where treatment has been stopped	0	0	0	0	0	0
Schistosomiasis Elimination Milestones							
	Indicators	2015	2016	2017	2018	2019	2020
1	Completed mapping of SCH and determined areas above intervention threshold and the Endemic population	100 (%)					
2	Begun implementation of school-based/community-based treatments in Endemic districts	100%	100%	95%	100%	100%	100%
3	achieving100% geographical coverage in schistosomiasis endemic districts	100 (%)	100 (%)	95%	100%	100%	100%
4	Conducted 3-5 years of consecutive treatments in all Endemic districts with regional/State coverage more than 75%	No (%)	No (%)	No (%)	100 (%)	100 (%)	100 (%)
5	Conducted first impact assessment activities in at least 50% of SCH Endemic districts after at least 3 years of consecutive treatments	No (%)	No (%)	No%	100%	No (%)	No (%)
6	Endemic districts achieving moderate morbidity control	NA	NA	NA	NA	NA	NA
7	Endemic districts achieving advanced morbidity control	NA	NA	NA	NA	NA	NA
8	Endemic districts achieving elimination of transmission	No (%)	No (%)	No (%)	No (%)	No (%)	100%
STH Elimination Milestones							
	Indicators	2015	2016	2017	2018	2019	2020
1	Completed mapping of STH and determined areas above intervention threshold and the Endemic population	100(%)					
2	Begun implementation of school-based/community-based treatments in	100%	100%	100%	100 (%)	100 (%)	100 (%)

	Endemic districts						
3	achieving 100% geographical coverage in STH Endemic districts	100%	100%	100%	100%	100%	100%
4	Conducted 3-5 years of consecutive treatments in all Endemic districts with regional/State coverage more than 75%	100%	100%	100%	100%	100%	100%
5	Conducted first impact assessment activities in at least 50% of STH Endemic districts after at least 3 years of consecutive treatments	No%	100%	No%	No%	100%	No%
6	Endemic districts achieving moderate morbidity control	NA	NA	NA	NA	NA	NA
7	Endemic districts achieving advanced morbidity control	NA	NA	NA	NA	NA	NA
Trachoma Elimination Milestones							
	Indicators	2015	2016	2017	2018	2019	2020
1	Completed mapping of trachoma and determined areas above intervention threshold and the target population	100 (%)					
2	Begun implementation of community-based treatments in target districts	NA	NA	NA	NA	NA	NA
3	Achieved 100% geographical coverage in trachoma target districts	NA	NA	NA	NA	NA	NA
4	Conducted 3-5 rounds of treatments in all target districts with regional/State coverage more than 75%	NA	NA	NA	NA	NA	NA
5	Conducted first impact assessment activities in at least 50% of trachoma target districts after at least 3 rounds of treatments	NA	NA	NA	NA	NA	NA
6	Started passive surveillance in at least 75% of IUs.	NA	NA	NA	NA	NA	NA
7	Proportion and number of target districts where there is full coverage of case-management services	NA	NA	NA	NA	NA	NA
8	Target districts achieved elimination of blinding trachoma	NA	NA	NA	NA	NA	NA
IDM Control/Elimination Milestones							
	Indicators	2015	2016	2017	2018	2019	2020
1	Active Case detection in 100% of Highly endemic districts	4.9%	0%	40%	50%	75%	85%
2	Passive case detection in 100% of other endemic districts	0 (%)	0 (%)	40%	60%	80%	90%
3	Manage all patients in peripheral health facilities	0%	0%	25%	40%	65%	75%

4	Refer severe and complicated cases for management at district hospitals and reference centres	0%	0%	100%	100%	100%	100%
5	Achieved 100% geographical coverage of SAFE in trachoma target districts (NA)	NA	NA	NA	NA	NA	NA
6	Achieved 100% treatment coverage of identified leprosy cases	100%	100%	100 %	100%	100%	100%
7	Achieved 100% treatment coverage of identified cases for other CM-NTDs	0%	0%	100%	100%	100%	100%
8	Started passive surveillance in at least 50% of target districts for CM-NTDs targeted for elimination (HAT, Leprosy)	0%	0%	100%	100%	100%	100%
9	Started sentinel site surveillance in at least 50% of target districts for for CM-NTDs targeted for elimination (HAT, Leprosy)	0%	0%	0%	25%	50%	75%
10	Target districts that sustained elimination of leprosy and achieved elimination of HAT	0%	0%	0%	0%	0%	9.8% 4/14

PHASE Milestones

	Indicators	2015	2016	2017	2018	2019	2020
1	Proportion and number of Endemic districts with adequate* access to clean water for SCH control	74%	No (%)	No (%)	No (%)	No (%)	No (%)
2	Proportion and number of Endemic districts with adequate** sanitation manipulation for SCH control	66%	No (%)	No (%)	No (%)	No (%)	No (%)
3	Proportion and number of Endemic districts with adequate*** environmental manipulation for SCH control	80%	No (%)	No (%)	No (%)	No (%)	No (%)
4	Proportion and number of Endemic districts with adequate* access to clean water and health education for STH control	74%	No (%)	No (%)	No (%)	No (%)	No (%)
5	Proportion and number of Endemic districts with adequate** sanitation for STH control	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)
6	Proportion and number of Endemic districts with adequate*** environmental manipulation for STH control	No (%)	No (%)	No (%)	No (%)	No (%)	No (%)

PART 3 OPERATIONAL FRAMEWORKS

3.1 SCALING UP ACCESS TO NTD INTERVENTIONS AND TREATMENT AND SERVICE DELIVERY CAPACITY

The current status of endemic NTDs in Sierra Leone, as described in the situation analysis, identifies need to continue large-scale interventions MDA for Onchocerciasis, Lymphatic Filariasis, LF, Soil Transmitted Helminthiasis STH, sSchistosomiasis and more assessments for buruli ulcer, HAT and Rabbits Leprosy. However, as of now Leprosy activities are implemented by the national Leprosy and Tuberculosis B control programme. Interventions for the other NTDs (Trachoma, Human African Trypanosomiasis, Buruli Ulcer etc.) are yet to be carried out.

The operational framework describes how the planned activities will be implemented. It also explains the country's capacity needs, how resources will be mobilized, how potential risks will be addressed, and how the sustainability of the project achievements will be ensured. Furthermore, it explains how the programme outcomes will be attained.

3.1.1 SCALING UP PREVENTIVE CHEMOTHERAPY INTERVENTIONS

Table 9 below describes the types of MDAs, their delivery channels and timing as well as the requirements to achieve effective MDA implementation in the various disease combinations

TABLE 8 TYPES OF MASS DRUG ADMINISTRATION

Cross-cutting MDA types	Delivery channels	Timing of treatments	Disease combination	Requirements	Target (districts)-list	Other mass disease control interventions
MDA1 - one round of MDA of Ivermectin and Albendazole	community-based campaign	Annually	Lymphatic Filariasis LF, Onchocerciasis, & STH.,	Training of health personnel; Training of teachers & community volunteers; Social mobilization; Supervision;	14 districts HDs	CDI community based intervention EPI Mother & Child Health Week campaigns, ITN distribution and re-treatment.
T1 – Praziquantel and Albendazole/Mebe ndazole	Community-based campaigns and School-based campaigns.	Annually for SCH and biannually for STH	Schistosomiasis, STH,	Production of tools; Logistics for drug distribution and management. Training of health personnel; Training of teachers & community volunteers; Social mobilization; Supervision; Production of tools;	7 districts for SCH and 14 for STH	Community total led sanitation (CLT)s

Cross-cutting MDA types	Delivery channels	Timing of treatments	Disease combination	Requirements	Target (districts)-list	Other mass disease control interventions
				Logistics for drug distribution and management.		

Legend

MDA1 = Ivermectin + Albendazole T1 = Praziquantel + Albendazole or Praziquantel + mebendazole

MDA2 = DEC+ Albendazole T2 = Praziquantel only

MDA3 = Ivermectin only (CDTI) T3 = Albendazole or mebendazole only

MDA4 = Azithromycin only

TABLE 9 ACTIVITIES FOR STRATEGIC PRIORITY 1 –SCALE UP ACCESS TO PCT INTERVENTIONS

Activity	Details (sub-activities)	Timeframe	Resources needed
Strategic objective 1: Scale up an integrated preventive chemotherapy, including access to interventions for lymphatic filariasis, soil transmitted helminthiasis, onchocerciasis, schistosomiasis and trachoma			
<p>Refresher TOT of DHMT mMembers on NTDs, concept of PCTs</p> <p>Training and refresher tTraining of PHU staff on the concept of Preventive</p>	<p>Refresher training of tTrainers-DHMT members on the management of NTDs and the concept of community directed interventions (CDI) preventive chemotherapy for Oncho/LF/STH, and STH</p>	<p>Yearly</p> <p>Year1 –Year5</p>	<p>Office Stationery: Pen, Pencil, Eraser, A4 paper, Notebook, File, Flip Chart, Training Manuals, Markers etc.</p> <p>Breakfast and Lunch</p> <p>Per diem and Transport</p> <p>Training Hall rental, Generator and Fuel, Facilitation fees for facilitators</p>

Chemotherapy for Oncho/LF/STH.			
Refresher tTraining of CDDs on the concept of Preventive Chemotherapy for Oncho/LF/STH	training of CDDs on theon the concept ofconcept CDIof CDI including drug distribution and logistics		
Implementation of SCH schistosomiasis and STH activities (MDA).	Conduct Training/refresher training of PHU staff in the 7 districts on the management of SCH &STH and concept of CDI	Year1 –Year5	Office Stationery: Pen, Pencil, Eraser, A4 paper, Notebook, File, Flip Chart, Training Manuals, Markers etc. Breakfast and Lunch Per diem and Transport Training Hall rental, Generator and Fuel, Facilitation fees for facilitators
	Conduct Training/refresher training of teachers in 7 districts on SCH and STH MDA	Year1 –Year5	Office Stationery: Pen, Pencil, Eraser, A4 paper, Notebook, File, Flip Chart, Training Manuals, Markers etc. Breakfast and Lunch Per diem and Transport Training Hall rental, Generator and Fuel, Facilitation fees for facilitators
Advocacy	Conduct Advocacy meetings with stakeholders at national and district levels in the 7 districts	Year1 –Year5	Breakfast and Lunch Per diem and Transport Hall rental, Generator and Fuel PA System rental
Social Mobilization	Conduct Community meetings on	Year1 –Year5	Breakfast and Lunch

	SCHschistosomiasis &STH in all the targeted districts.		Per diem and Transport Generator and Fuel PA System rental
	Conduct Radio discussions and airing of jingles on STH in the 5 districts	Year1 –Year5	Recording of Jingles in Local Languages Payment for Air Time Transport refund to Panelists
Drug and Logistics	Conduct Distribution of logistics and drugs to 14 targeted districts for onchocerciasis, LF and STH Conduct Distribution of logistics and drugs to 7 targeted districts for STH and SCH	Year1 –Year5	From National to Districts Vehicle rental Fuel for Vehicles Incentive to Labour DSA for Distributors
...	Conduct Distribution of logistics and drugs to communities in the 7 targeted districts for SCHschistosomiasis &STH	Year1 –Year5	From District to PHUs Vehicle rental Fuel for Vehicles Incentive to Labour DSA for Distributors
MDA	Conduct Monitoring and supervision of MDA for the PCT of Onchocerciasis, LF & STH in all the 14 targeted districts. Conduct Monitoring and supervision of MDA for the PCT of SCH &STH in all the 7 targeted districts.	Year1 –Year5	Vehicle Hire Motorbike Hire Fuel for Vehicles and Motorbikes DSA for Supervisors
	Conduct Data	Year1 –Year5	Motorbike Hire

	collection, analysis and reporting of MDA done on the PCT of SCH &STH in all the 7 targeted districts		Fuel for Motorbikes DSA for Data Collectors Printing of Data Tools
Implementation of SCH and STH activities (MDA) in schools	Training of Teachers in 10 districts on STH MDA activities Training of Teachers on STH MDA in 4 non-SCH schistosomiasis endemic districts	Year1 –Year5	Office Stationery: Pen, Pencil, Eraser, A4 paper, Notebook, File, Flip Chart, Training Manuals, Markers etc. Breakfast and Lunch Per diem and Transport Training Hall rental, Generator and Fuel, Facilitation fees for facilitators
	Conduct aAdvocacy meetings with stakeholders at districts level in 5 districts	Year1 –Year5	Breakfast and Lunch Per diem and Transport Hall rental, Generator and Fuel PA System rental
	Conduct Community and school meetings in the 5 districts	Year1 –Year5	Breakfast and Lunch Per diem and Transport Hall rental, Generator and Fuel PA System rental
	Conduct Distribution of logistics and drugs to districts in 5 districts	Year1 –Year5	From National to Districts Vehicle rental Fuel for Vehicles Incentive to Labour DSA for Distributors
	Conduct Drug distribution in Schools in the 5 districts	Year1 –Year5	From District to PHUs Vehicle rental

			Fuel for Vehicles Incentive to Labour DSA for Distributors
	Conduct Monitoring and supervision of MDA for STH activities in the 5 districts.	Year1 –Year5	Vehicle Hire Motorbike Hire Fuel for Vehicles and Motorbikes DSA for Supervisors
	Conduct Data collection, analysis and reporting on STH in the 5 districts.	Year1 –Year5	Motorbike Hire Fuel for Motorbikes DSA for Data Collectors Printing of Data Tools
	Conduct Monitoring and supervision on MDA activities in all the 14 districts on Oncho, LF, and STH.	Year1 –Year5	Vehicle Hire Motorbike Hire Fuel for Vehicles and Motorbikes DSA for Supervisors
	Conduct Data collection, analysis and reporting on MDA done in all the 14 districts on Oncho, LF, and STH.	Year1 –Year5	Motorbike Hire Fuel for Motorbikes DSA for Data Collectors Printing of Data Tools

3.1.2 SCALING UP NTD CASE MANAGEMENT INTERVENTIONS

TABLE 10.1 ACTIVITIES FOR CASE MANAGEMENT INTERVENTIONS

Activity	Details (sub-activities)	Time frame	Resources needed
<p>Strategic Objective 2: Scale up integrated case-management-based disease interventions, especially the following:</p> <p>(List of interventions for major CM-NTDs)</p>			
Health facility based case management of Lymphatic Filariasis (hydrocele) in the 14 districts	Annual Training of medical officers/surgeons in the operation of hydrocoele in all the 14 districts.	Year1- Year5	<p>Training Manual</p> <p>Fees for facilitators</p> <p>Transport and DSA for facilitators</p> <p>Transport and DSA for Trainees</p> <p>Breakfast, Lunch and Dinner</p> <p>Surgical consumables: Sutures, blades, dressings</p> <p>Stationery: Notebooks, Pens, Flip Charts, Markers, A4 Paper</p>
Social Mobilization	Create awareness and sensitize communities on hydrocele cases and operation of hydrocoele.	Year1- Year5	<p>Breakfast and Lunch</p> <p>Per diem and Transport</p> <p>Hall rental,</p> <p>Generator and Fuel</p> <p>PA System rental</p> <p>Incentive to town criers</p> <p>Incentive to community mobilizers</p>
Procurement	Procurement of surgical kit, reagent and Drugs for the surgical operation in all the 14 districts.	Year1- Year5	Funds for procurement
Logistics	Confirm diagnoses and transport hydrocoele patients to referral hospitals for operation schedule	Year1- Year5	<p>Incentive to clinicians</p> <p>Transport refund for patients</p>
Conduct Surgery	Conduct 300 hydrocoele surgical operations per year for the five years.	Year1- Year5	Theatre fees

	Coordination of all cases of hydrocele operated.	Year1- Year5	Vehicle hire for supervision Fuel for Vehicle DSA for supervisors
Health facility based case management for LF complication (Lymphedema) and Leprosy	Identify all communities with cases of Lymphoedema	Year1 to year 5	Incentive to CHWs undertaking Lymphoedema surveillance
	Training of health care providers for LF Lymphoedema case management and leprosy in affected communities.	Year1 to year 5	Training Manual Fees for facilitators Transport and DSA for facilitators Transport and DSA for Trainees Breakfast, Lunch Stationery: Notebooks, Pens, Flip Charts, Markers, A4 Paper
	Train and retrain at least 1 community member to care for LF (Lymphoedema) and leprosy patients	Year1 to year 5	Training Manual Fees for facilitators Transport and DSA for facilitators Transport and DSA for Trainees Breakfast, Lunch Stationery: Notebooks, Pens, Flip Charts, Markers, A4 Paper
Social Mobilization	Create awareness and sensitize community to improve treatment seeking behavior for NTDs. (Posters, media, radio)	Year1 to year 5	Breakfast and Lunch Per diem and Transport Hall rental, Generator and Fuel PA System rental
	Production of NTD IEC Materials	2018	Breakfast and Lunch Per diem and Transport Hall rental,

			Generator and Fuel PA System rental Facilitators allowance Printing
Procurement	Procurement of logistics, disinfectants, and medication for LF Lymphoedema and leprosy care	Year1 to Year 5	Funds for procurement and distribution
	Train 500 community volunteers to provide care for Lymphoedema patients	2017-2019	Funding support to case identification and case management Breakfast and Lunch Per diem and Transport Hall rental, Generator and Fuel PA System rental Facilitators allowance Printing
Rehabilitation of the O.T.C (orthopedic Technical Centre) in makeni.	For the production of M.C.R sandals, prosthesis, churches etc sor our PALs.	Year 1 to year 5	Funding for building rehabilitation, procurement of materials for production of prosthesis, incentive/salaries to human resource for running the centre

TABLE 11.2 PACKAGE OF CASE MANAGEMENT (CM) AND CHRONIC CARE

Key interventions	GW	Leprosy	HAT	BU	Complications LF	Rabies
Advocacy/resource mobilization		X	X	X	X	X
Strengthening partnership		X	X	X	X	X
Inter sectoral collaboration		X	X	X	X	X
Health promotion		X	X	X	X	X
Capacity building		X	X	X	X	X
Mapping			X	X	X	
Passive case finding		X	X	X	X	X
Active case finding			X	X		X
Medical treatment		X	X	X	X	
Surgery		X	X	X	X	

Prevention of disability		X	X	X	X	
Integrated vector management/ reservoir control					X	
Surveillance	X					

3.1.3 SCALING UP NTD TRANSMISSION CONTROL INTERVENTIONS

Transmission control accelerates control efforts due to PCT and case management activities and hence should be conducted in all NTD endemic areas since most of the targeted NTDS are vector borne. Control activity against one vector may have impact on other NTDS. An example is LF and Malaria vectors. Provision of clean water supply and improved sanitation can contribute greatly to reduction of some of the NTDS such as schistosomiasis and STHS. Such activities are addressed under the PHASE strategy.

TABLE 11 INTERVENTION PACKAGES FOR TRANSMISSION CONTROL

Activity	Vectors and Associated NTDS				
	Mosquitoes		Other Vectors		
			Snails	Black fly	Tsetse fly
	LF	Malaria	Schisto	Oncho	HAT
ITN	X	X			
IRS	X	X			
Spacespraying				X	
Larviciding	X	X		X	
Traps					
Prevention/treatment of breeding sites	X	X			

TABLE 12 ACTIVITIES FOR DISEASE TRANSMISSION CONTROL

Activity		Oncho	LF	STH	SCH	Trachoma	HAT	Leprosy
Community sensitization & Social mobilization		X	X	x	x	x	x	x
Training		X	X	x	x	x	x	x
Mapping								
Health facility based case management		x	x	x	x	x	x	x
Health Promotion	Hand & face washing			x	x	x		
	Building of latrines			x	x			
	Behavior change communication.	X	x	x	x	x	x	x
Drug distribution	Community health worker involvement	x	x	x	x			
	School based			x	X			
	Community based	X	X	x	x			
	School feeding				x			
Monitoring and Evaluation		X	x	X	X	x	x	x
Surveillance		X	X	X	X	X	X	x
Integrated Vector Management/Animal Reservoir control		x	x			x	x	
Operational research		X	X	x	x		X	x

3.2 PHARCOVIGILANCE IN NTD CONTROL ACTIVITIES

Sierra Leone has a policy on Pharmacovigilance, which is fully operational with elaborated standard operating procedures. The structure consists of a national team headed by pharmacy board registrar and a network of district level pharmacists. The Pharmacovigilance will be included in the training of personnel involved in the NTD activities at all levels.

Pharmacovigilance teams will be set up in all districts. These teams will be responsible for monitoring, quality control, drug efficacy, and storage and report side effects during MDA activities. A reporting system for any serious adverse event will be set up to investigate and manage serious adverse events.

TABLE 13 ACTIVITIES FOR STRENGTHENING PHARMACO-VIGILANCE IN NTD PROGRAMMES.

Activity for strengthening Pharmacovigilance in NTD Programme			
Activity	Detail (sub activity)	Time/Frequency	Resources needed
strengthening Pharmacovigilance in NTD Programme	Improve and maintain intersectoral meetings with Pharmacy Board	Year 1 to Year 5	Breakfast and Lunch Per diem and Transport Hall rental, Generator and Fuel PA System rental
	Developed and distribute Pharmacovigilance forms for NTDs to all districts.	Year 1 and when necessary	Breakfast and Lunch Per diem and Transport Hall rental, Generator and Fuel PA System rental
	To conduct joint supervision with Pharmacovigilance teams during MDAs	Year 1 to Year 5	Breakfast and Lunch Per diem and Transport Hall rental, Generator and Fuel PA System rental
	To create a Pharmacovigilance committee at National and	Year 1	Appointment of the

	district level		members by the MoHS
	To train personnel (health workers, teachers, CDDs) on side effects of NTD drugs reporting and management.	Year 1- year 5	Breakfast and Lunch Per diem and Transport Hall rental, Generator and Fuel PA System rental Guideline,
	To create a software for proper documentation of serious side events following MDA by NTDCP	Year 1	Forms, cell phones
	To investigate and document Serious adverse event following MDA and refer	Year 1 – year 5	Treatment guide line, Transportation,
	To provide medical care to serious adverse events cases	Year 1 – year 5	Health facilities, drugs,
	Conduct active Pharmacovigilance activities in all districts	During MDAs.	Breakfast and Lunch Per diem and Transport Hall rental, Generator and Fuel PA System rental

3.4 STRENGTHENING CAPACITY AT NATIONAL LEVEL FOR NTD PROGRAMME MANAGEMENT AND IMPLEMENTATION

**TABLE 14 ACTIVITIES AND RESOURCES NEEDED FOR STRENGTHENING CAPACITY FOR NTD
PROGRAMME**

Activity	Details (sub-activities)	Time frame	Resources needed
Strategic objective 4: Strengthening capacity at national level for NTD programme management and implementation			
Leadership and management training	Support the program management team members to attend experience sharing tours to countries that have or on track to eliminate NTDs	Year 2	
Equipment use training			
Training on quality data management	Train district NTD focal persons and M&E officers	Year 2	
Morbidity Management	Train 1 coordinator for case management of LF and leprosy disability prevention and management. Train one assistant programme manager. Provide 1 admin officer and 1 accountant on NTD financial management	Year 1	Funding
	Train 4 personnel for entomological surveillance and vector control activities.	Year 1	Funding
	Train 8 epidemiological and 8 entomological technicians for surveillance activities.		
	Cascade training of District NTD focal persons and M&E		

	staff on motoring and evaluation activities		
Improve collaboration with other MOHS programmes and relevant Ministries for effective coordination of MDAs, case management and transmission control	Train 1 Liaison Officer for support services to collaborate with other department in the MoHS and other ministries for implementation of NTDs;	Year 1	Funding
Strengthen national and district laboratory capacity to diagnose NTDs	Equip, furnish and provide equipment, reagents and consumables for the NTD national and districts laboratories	Year 1, Year 2, Year 3, Year 4	Funding
Strengthen national and district capacity in procurement, storage and distribution of NTD medicines, reagents and consumables	<p>Train the NTD store manager and pharmacist on modern methods of store management</p> <p>Train district focal points and pharmacists on storage, and distribution of NTD medicines</p> <p>Train NTDP finance manager on procurement policies and procedures to comply with donor requirements</p> <p>Provide necessary logistics and office equipment for the offices in Makeni and Freetown, including the store and garage.</p>	Year 1 and Year 3	Funding

	Procure drugs (Praziquantel and antihistamines) Duty waiver, clearing and transportation to Makeni	Year 1 and Year 3	Funding
	Procure 3 new vehicles for administration 3 national supervisors	Year 2	Funding
	Procure 5 vehicles for supervision of district activities;	Year 2	Funding
	Procure 2 motorcycle per district (for district M&E/surveillance officers and district NTDs focal point);	Year 2	Funding
	Procure 1 motorbikes for messengers/office assistance at NTDs national offices	Year 1	
	Provide adequate logistics for repairs and maintenance of vehicles and motor bikes used for the NTDs activities.	Year 1 to year 5	Funding
	Provide adequate logistics (Night allowances, fuel, DSA, transportation, vehicle hire) for field (surveys and supervision) NTDs activities	Year 1 to Year 5	Funding
Build capacity in NTD programme management for national and districts coordination team members (training, short course, participation in	Send the Programme manager for a short course on management.	Year 1	Funding

scientific meetings)			
	Train M&E officer and DSOs at Masters level;	Year 1	Funding
	Train and retrain other NTD programme staff(National and District focal points) on M&E.	Year 1 to Year 5	Funding
	Training of laboratory technicians on NTDs	Year 1	Funding

SCALING UP PLAN

TABLE 15 SCALING UP/SCALING DOWN PLAN

NTD	Total No. districts requiring MDA	2016 No. Districts and Total population to be treated	2017 No. Districts and Total population to be treated	2018 No. Districts and Total population to be treated	2019 No. Districts and Total population to be treated	2020 No. Districts and Total population to be treated
LF	14	14 7,137,427	14 7,301,588	14 7,469,524	14 7,641,323	14 7,817,074
Onchocerciasis	12	12 5,332,510	12 5,455,158	12 5,580,627	12 5,708,981	12 5,840,288
Schistosomiasis	7	7 2,976,909	7 3,045,378	7 3,115,421	7 3,187,076	7 3,260,379
STH	14	14 7,137,427	14 7,301,588	14 7,469,524	14 7,641,323	14 7,817,074

3.5 ENHANCE PLANNING FOR RESULTS, RESOURCE MOBILIZATION AND FINANCIAL SUSTAINABILITY OF NATIONAL NTD PROGRAMMES

TABLE 16 STRATEGIC PRIORITY 2: ENHANCE PLANNING FOR RESULTS, RESOURCE MOBILIZATION AND FINANCIAL SUSTAINABILITY OF NATIONAL NTD PROGRAMMES.

Activity	Details (Sub-activities)	Timeframe	Resources needed
<i>Strategic Objective 1:</i> Strengthen advocacy among national and international NGOs for improved financial, and technical support to the NTD Control programme			
Advocate for resource mobilization with stakeholders at external partners	Make allocation for a member of the steering committee to participate in at least 2 international NTD	Year1-Year5	funding

levels	meetings per year.		
Develop NTDs resource mobilization strategy at all levels	Conduct 2 advocacy meetings per year with NGOs government and partners stakeholders each year to advocate for funding especially for case management NTDsfor the NTDs activities.	Year1-Year5	Funding
	Disseminate success reports and relevant updates of NTDs to all stakeholders NGOs and partners and in international fora.	Year1-Year5	funding
Support districts to disseminate their annual operational plans to local administration, partners and stakeholders	Involve as many NGOs as possible and districts administration in planning and review meetings at districts level.	Year1-Year5	funding
<i>Strategic Objective 2: Support planning and review meeting for the NTD Control programme</i>			
Conduct annual review meeting	Mobilize Financial resources to conduct review meetings	Year1-Year5	Funding
To organize national validation and stakeholder workshop for consensus building and dissemination of	Conduct workshop on budget development inviting all stakeholders and partners	Year1-Year5	Funding

the plan	Disseminate final budget plan to all stakeholders and partners and identified gaps	Year1-Year5	Funding
Develop the annual operational plan with detailed budget	Conduct workshop to develop annual detail operational budget for all district	Year1-Year5	Funding
	Disseminate final operational budget plan for districts to all stakeholders and partners and identify gaps	Year1-Year5	Funding
<i>Strategic Objective 3: Strengthen the integration and linkages of NTD programme and financial plan into health sector, national budgetary and financial mechanism.</i>			
Sensitize and advocate with all line Ministries and partners to support implementation of NTD strategic plan	Conduct sensitization meeting targeting line ministries and partners on NTDs integration and support.	Year1-Year5	Funding
	Conduct advocacy meeting inviting partners and line ministries on the support of NTDs activities.	Year1-Year5	Funding
	Conduct advocacy meeting for district councilors and paramount chiefs to support NTDs activities.	Year1-Year5	Funding
	Provide feedback to	Year1-Year5	Funding

	district councils and communities on NTDs activities.		
Brief the Minister of Health with the executive summary of the NTD strategic plan	Engage the minister and other dignitaries of MoHS in an NTDs strategic plan executive summary meeting.	Year1-Year5	Funding
Disseminate the executive summary of the NTD strategic plan to other sectors at national and district levels	Produce and disseminate in the form of booklet the executive summary of the NTDs strategic plan to other sector at national and district levels.	Year1-Year5	Funding

3.6 STRENGTHENING GOVERNMENT OWNERSHIP, ADVOCACY, COORDINATION AND PARTNERSHIPS

Coordination and policy formulation for NTDs remain the responsibility of central management through the Directorate of Disease Prevention and Control. At national level there is a technical committee that is responsible for organization, supportive supervision and monitoring of all MDA activities nationwide. All Neglected tropical diseases NTDs are yet to be included in the National health sector Strategic Plan. Focal persons have already existed in all the districts to oversee the implementation of the NTD control activities at districts and chiefdom levels. Implementation of NTD activities is done at district, health facility (PHUs) and community level. NTD control activities are included in the district health plans and are expected to be funded by the MoHS, Local Councils and Health Partners.

The programme is donor dependant and to a large extent funding for control of Onchocerciasis, Lymphatic Filariasis, Schistosomiasis and STH are vertical and not budgeted for by districts. Partners through WHO country office provide NTD drugs and other supplies to the NTD Control Programme as follows;

- The NTD Programme through a Non-Governmental Organization procures Praziquantel with funds provided by USAID.
- Mectizan is donated by Merck and co ltd,
- Albendazole is donated by GlaxoSmithKline
- NTD drugs and other supplies are stocked at Makeni NTDCP central store and supplied to districts based on their needs

- The drug management system has improved tremendously which has helped to ensure continuous stock of NTD drugs in health facilities in endemic districts. Sierra Leone has a strong Health Structural System that supports large-scale treatments (MDAs) and even morbidity management of LF complications when funds are available.

There is need to strengthen laboratory capacity at district and peripheral health units to ensure diagnosis, treatment and case management of all NTDs. There is need to strengthen advocacy, visibility and profile of NTD control which will contribute to increased awareness at all levels in the Ministry of health MoHS.

The specific activities that will be conducted to strengthen government ownership, advocacy, coordination and partnership are summarized in table below:

TABLE 17 ACTIVITIES FOR IMPLEMENTING STRATEGIC PRIORITY 1: STRENGTHEN GOVERNMENT OWNERSHIP, ADVOCACY, COORDINATION, AND PARTNERSHIP.

Activity	Details (Sub-activities)	Timeframe	Resources needed
Strategic Objective 1: <i>Strengthen coordination mechanism for the NTD control programme at national and sub-national levels.</i>			
Conduct meetings to guide establishment of coordination mechanisms at district level	National team conducts meeting to provide guidelines for coordination mechanisms for national and districts level.	One meeting per year	Funding
	Produce and print new guide lines on NTDs and disseminate to partners and DHMTs	Year 1 - 5	Funding
Provide technical support and funds for district NTD technical coordination mechanisms	National to conduct coordination of NTD activities	Once per year	Funding
	Districts to conduct coordination of NTD activities	Once per year	Funding
Strategic Objective 2: <i>Strengthen and foster partnerships for the control, elimination and eradication of targeted NTDs at national, district and community levels.</i>			
To include a budget line for NTD activities in the health sector budget	Ensure NTDs budgets factored in the national health sector plan.	Year 1-5	funding
	Develop NTD policy, and incorporate into the National Health Strategic plan	Year 2	funding
Conduct annual partners and stakeholders' meetings	Conduct annual partners and stakeholders meeting at national and districts levels.	Year1 –5	funding

To ensure salaries for NTD personnel	Continue to provide salary for NTD programme staff	Year 1-5	Funding
	Provide salary for 12 Oonchocerciasis laboratory technicians	Year 1-5	funding
To ensure running costs for NTD secretariat	Construct an NTD building with at least 10 offices in Freetown;	Year 1-5	funding
	Refurbish the NTD office and expand the warehouse in Makeni	Year 1-5	funding
	Provide the necessary logistics and office equipment for the offices in Makeni and Freetown, including the garage.	Year 1-5	funding
Establish and/or review MoU with various partners for NTD control/elimination	Conduct meeting <i>with</i> partners and stakeholders to review the MOUs for NTDs implementations	Year 1, 3 & 5	funding
	Develop, produce and disseminate MOUs of NTDs to all partners	Year 1, 3 & 5	Funding
Strategic Objective 3: Enhance high level reviews of NTD programme performance and the use of lessons learnt to enhance advocacy, awareness and effective implementation.			
Organize programme review meetings with all partners annually	Organize programme review meetings with all partners annually	Once per year	funding
	Publish annual reports and success stories on NTDs activities	Year 1-5	funding
	Conduct advocacy meetings at districts, chiefdom, and zonal levels	Year 1-5	funding
	Conduct social mobilization activities using radio and the print media	Year 1-5	funding
	Develop advocacy materials including short documentary films on NTDs in Sierra Leone.	Year 1-5	funding
Strategic Objective 4: Strengthen advocacy, visibility and profile of NTD control and elimination interventions at all levels.			
Establish and strengthen a steering committee for NTDs to serve as main advocacy body for NTD funding, control/elimination	Establish an NTD elimination committee at national level	Year 1	funding
	Establish a committee on resource mobilization targeting the public and private sectors	Year 2	funding

Hold advocacy meetings with parliamentary committee for health and other stakeholders.	Lobby to political leaders and policy makers at national and district levels for funds	Year1-5	funding
	Involve political leaders in NTD activities at district and village levels to advocate for NTDs funding.	Year 1-5	funding
	Develop advocacy materials that will specifically target political leaders.	Year 1-5	funding
Strategic Objective 5: Improve collaboration with relevant ministries such as MoHS/WASH, Health Education Division, Ministry of Education			
Strengthen linkage with line ministries to increase profile of NTD control/elimination at all levels	Conduct meeting to strengthen partnership with WASH, health Education and MOE to increase profile of NTD control/elimination at all levels	Year 1-5	funding
	Conduct advocacy meetings on NTDs at national and district levels targeting ministries;	Year 1-5	funding
Conduct advocacy and visibility events for NTD intervention at all levels	Conduct mobilization and sensitization of the public through radio and the print media;	Year 1-5	funding
	Develop advocacy materials including short documentary films on NTDs in Sierra Leone.	Year 1-5	
Strategic Objective 6: Introduce NTDs into the curricula of medical training institutions (School of Community Health Sciences, Nursing Schools, MCHA training schools and the College of Medicine).			
Prepare and disseminate guidelines on NTDs to different training institutions;	Organize Orientation work shop to disseminate guidelines to training institutions.	Year 1-5	Funding.
Advocate for inclusion of NTDs in curricula of training institutions.	Conduct a national advocacy meeting with heads of training institutions for inclusion of NTDs.	Year 1	Funding,
	Hire a consultant to develop a comprehensive NTD curricula for health training institutions	Year 2	

3.7 MONITORING AND EVALUATION

An obtainable system of monitoring and evaluation in the country include a health management information system from the peripheral health units PHU to the DHMT, then to

DPI and to various programmes. Integrated supervision from national level and survey data also form part of the monitoring and evaluation process.

An annual health statistics report is published each year by the MoHS providing the indicators achieved. The annual report present information on infrastructure, human resources, morbidity control, and technical Progress on programmes such as NTDs, TB and Leprosy, HIV/AIDS, Malaria and MCH.

There is a critical need to build capacity for monitoring and evaluation at all levels within the MinistryMoHS. With technical assistance, DPI will take the lead in providing integrated supportive supervision and will coordinate with all DPC programmes in the monitoring process. The NTDP and partners will conduct post coverage evaluation surveys, impacts assessment surveys and supervise every activity that is done in the districts by the DHMTs.

The NTD Program will be monitored and evaluated periodically to collect data to ensure progress and achievements. The effectiveness of the strategies will be assessed and program evaluation conducted at mid-term and at the end of the program cycle for impact for each specific PC NTD. Monitoring of NTDs will key into the national HMIS and IDSR systems through collaboration and capacity development of relevant sections.

Table 18 Strategic Priority 4: Enhance NTD monitoring and evaluation, surveillance and operations research.

Activity	Details (sub-activities)	Time frame	Resources needed
Strategic objective 1: Develop and promote an integrated NTD M&E framework and improve monitoring of NTDs, within the context of national health information systems.			
1. Monitoring national NTD program performance	i. Draft NTD M&E framework (plan)	2016	Personnel, venue hire, stationery, perdiem, fuel/transport refund, Meals, refreshment, communication and perdiem
	ii. Stakeholders Workshop to review finalized the draft NTD M&E framework (plan)	2016	Personnel, Perdiem, hall hire, meals, stationery, fuel refund, communication
	iii. Development of M&E tools	2016	Personnel, Perdiem, hall hire, meals, stationery, fuel refund, communication
	iv. Pre-test the M&E tools and modify as needed	2017	Personnel, Perdiem, stationery, fuel refund, vehicle hire, communication
	v. Train Personnel to use M&E tools	2017-2020	Personnel, Perdiem, hall hire, meals, stationery, fuel refund, participants, communication, technical support
	vi. Supervision of NTD	2017- 2020	Personnel, Perdiem, stationery,

	program activities		fuel refund, vehicle hire, communication
	vii. Validation of treatment coverage(DQA)	2017-2020	Personnel, Perdiem, fuel refund, communication, stationary, vehicle hire
2.Evaluation of Program impact	i. Sentinel and spot check site surveys-LF	2017-2020	Personnel, Perdiem, stationery, fuel refund, communication, technical support, laboratory and field supplies, Vehicle hire
	ii. LF TAS surveys	2017-2020	Personnel, Perdiem, stationery, fuel refund, communication, technical support, laboratory and field supplies, Vehicle hire
	iii. Onchocerciasis entomological surveys	2018	Personnel, Perdiem, stationery, fuel refund, communication, technical support laboratory and field supplies
	iv. Oncho epidemiological surveys	2017	Personnel, Perdiem, stationery, fuel refund, communication, technical support laboratory and field supplies, data analysis
	v. Impact assessment Trachoma	2017-2020	Personnel, Perdiem, stationery, fuel refund, communication, technical support laboratory and field supplies, data analysis
	vi. Impact assessment – Schistosomiasis and STH	2017-2020	Personnel, Perdiem, stationery, fuel refund, communication, technical support laboratory and field supplies, data analysis
	viii. KAP surveys	2017-2020	Personnel, Perdiem, stationery, fuel refund, communication, technical support laboratory and field supplies, dissemination of results
Strategic objective 2: Strengthen surveillance of NTDs and strengthen response and control of epidemic-prone NTDs, in particular HAT, Buruli Ulcer and GWD			
1.Strengthen surveillance during intervention and post intervention of NTDs within PHC	i. Establishment of sentinel sites	2017	Personnel, allowances, Perdiem, consumables, fuel
	ii. Meeting to develop surveillance tools	2018	Technical Consultant, Personnel, Perdiem, hall hire, meals, stationery, fuel refund, allowances
	iii. Identify and train surveillance focal persons	2018	Personnel, Perdiem, hall hire, meals, stationery, fuel refund,
	iv. Conduct post-intervention surveillance	2018-2020	Personnel, Perdiem, Fuel
2.Strengthen response and control of epidemic prone	i. Availability of drugs and materials	2018-2020	Availability of drugs, microscopes, GPS, reagents, computers, internet

NTDs			connection, drugs, insecticides, detergents, sprayers
	ii. Training of Epidemic response team	2018	Personnel, Perdiem, hall hire, meals, stationery, fuel refund
	iii. Develop Health Education and IEC materials for surveillance	2018	Communication expert, Personnel, Perdiem, hall hire, meals, stationery, fuel refund,
	iii. Pretest and distribution of the IEC materials	2018	Personnel, Perdiem, stationery, fuel refund, vehicle hire, communication, printing
Strategic objective 3: Establish integrated data management systems and support impact analysis for NTD in the WHO African Region as part of the global NTD data management system and global NTD plan			
1. Strength and update of integrated data management system.	i. Recruit technical personnel	201	Personnel,
	ii. Establish/streamline a data management system and establish suitable software to be used	2017	Data collection tools used for all levels Personnel, hall hire, meals, stationery, communication, fuel,
	iii. Procurement of computers, printers and software	2017	software procurement, professional fees, computers,
	iv. Design system, pre-test and develop training manual/curriculum documents/guides	2017	Indicators Personnel, wages, professional fees, stationery, photocopiers, computers, Internet connectivity
	vi. Training for data management	2017	Training manual/curriculum documents/guides, personnel
	vii. Conduct data entry and data management	2017-2020	Running system, personnel, wages, internet connection
2. Identification of operational research needs	i. Training in research methodology & basic statistics	2018-2020	Personnel, Perdiem, hall hire, stationery, communication, fuel.
	ii. Development of appropriate research proposals	2018-2020	Personnel, Perdiem, hall hire, meals, stationery, fuel refund, communication,
	iii. Conduct operational research	2018-2020	Personnel, Perdiem, fuel, equipment, laboratory supplies, stationery, communication,
	iv. Publication and dissemination	2018-2020	Personnel, allowances, stationery,
Integration of NTD data into the National HMIS and IDSR systems	Train the HMIS and IDSR system on NTDs Development of an integrated data management system	2017-2020	Personnel, allowances, stationery,

3.8. POST INTERVENTION SURVEILLANCE AND INTEGRATION WITHIN PRIMARY HEALTH CARE

It is important that the successes achieved are sustained by instituting a robust post-intervention surveillance within the primary health care system to ensure that the disease threshold is maintained at low levels where they are not of public health importance. The activities that will be implemented as part of the surveillance of each of the NTDs targeted in this plan are listed below. Furthermore, surveillance and other post intervention activities will be incorporated gradually into routine health service delivery prior to the end of the program.

TABLE 19 ACTIVITIES FOR SURVEILLANCE AND SUSTAINABILITY

Activity	Details (Sub-activities)	Timeframe	Resources needed
<i>Strategic Objective: To strengthen post-intervention surveillance by the primary health care and ability to incorporate the surveillance and residual control activities in routine health care delivery.</i>			
1. Strengthen post-intervention surveillance on NTDs within PHC	i. Training and Retraining of Lab staff for post surveillance NTD	2018	Personnel, Perdiem, hall hire meals, stationery, fuel refund, available IEC materials, surveillance HMIS tools, allowances
	ii. sentinel sites – LF, Schisto, STH Trachoma, HAT, GWD, & BU	2018	Personnel, allowances, Perdiem, consumables, fuel
	iii. Meeting to develop surveillance tools, IEC materials/messages	2018	Personnel, Perdiem, hall hire meals, stationery, fuel refund, available IEC materials, surveillance HMIS tools, allowances
	iv. Develop Health Education and IEC materials for surveillance	2018	Communication expert, personnel, Perdiem, hall hire, meals, stationery, fuel refund, available IEC materials, shows, film shows
	v. Incorporate surveillance tools into the HMIS	2018	Personnel, Perdiem, stationery, developed IEC materials, surveillance tools
	vi. Identify and train surveillance focal persons	2018-2020	Personnel, Perdiem, hall hire, meals, stationery, fuel refund, wages
	vii. Conduct post-intervention surveillance	2015-2020	Personnel, Perdiem, Fuel, stationery
2. Strengthen response and residual control of NTDs	i. Availability of drugs and materials	2015-2020	Microscopes, GPS, reagents, computers, internet connection, drugs, insecticides, detergents, sprayers, personnel
	ii. Training of NTD response team	2015	Personnel, Perdiem, hall hire, meals, stationery, fuel refund

BUDGET JUSTIFICATION AND ESTIMATES

TIPAC

TIPAC, a Microsoft Excel– based Programme was used to accurately estimate the costs and funding gaps of NTD master plans.

The TIPAC comprises four data entry modules and a reports module:

- **Base data:** this captures the basic background and Programme information data such as populations, currency exchange rates, per diem levels, target populations, and unit cost information;
- **Activity Cost:** estimated cost of Programme activities are captured in this module E.g. personnel, transport and supplies;
- **PC Drug Acquisition:** enters and tracks drug purchases, donations, and gaps for the first year of the Programme;
- **Funders:** tracks all the Programme funders and funds, including government funding, partners, bilateral donors, and nongovernmental organizations;
- **Reports:** Here you can view and analyze all of the data that you have entered into the TIPAC.

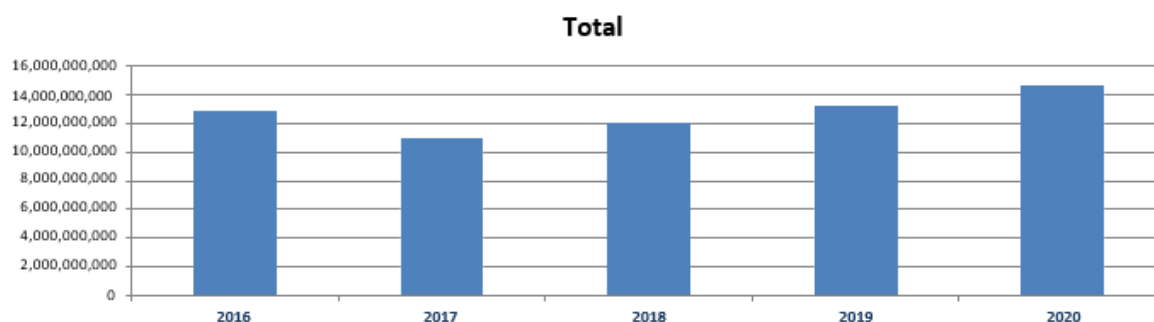
TIPAC was used to:

- Estimate the cost of implementing activities related to the NTD Programme;
- Quantify existing resources from the government and other funders for NTD Programme;
- Identify and quantify the funding gaps in an NTD Programme;
- Generate a projection of Programme costs and drug needs for up to five years;
- Produce summarized tables and charts, which can be used for presentations and additional analysis;
- Facilitate identification of integration opportunities and annual planning of NTD control Programme s in conjunction with national plans of action;

Data was organized by cost categories namely implementation costs and operational costs; Costs were organized by activities and the sub-activities that fall under those activities. Each sub-activity has cost classifications (personnel, transportation, supply, equipment, consultant, and other miscellaneous costs) which were entered into the TIPAC at this cost classification level. Below is the summary of the cost projection from the TIPAC covering 2016-2020.

SUMMARY BUDGET

Five-year cost projections



Five-year cost projections

Activity	2016	2017	2018	2019	2020	TOTAL
Total	12,934,148,618	10,920,233,654	12,042,124,008	13,280,964,277	14,649,109,067	63,826,579,625
Strategic planning	557,362,500	606,243,191	659,410,719	717,241,039	780,143,078	3,320,400,528
Advocacy	338,088,000	24,764,210	26,936,031	29,298,321	31,867,784	450,954,345
Monitoring and evaluation	447,033,000	486,237,794	528,880,849	575,263,699	625,714,325	2,663,129,667
Drug logistics	126,380,700	137,464,287	149,519,905	162,632,801	176,895,698	752,893,392
Social mobilization	1,931,609,912	2,006,894,097	2,231,007,536	2,480,214,108	2,757,329,256	11,407,054,908
Training	2,641,195,795	2,128,857,705	2,361,533,790	2,619,812,768	2,906,527,523	12,657,927,580
MDA drug distribution	2,104,916,859	2,342,863,838	2,607,709,156	2,902,493,491	3,230,601,253	13,188,584,597
Morbidity control and surgery	3,722,803,845	2,028,771,246	2,217,420,098	2,423,825,915	2,649,683,042	13,042,504,145
NTD Administrative Cost	963,122,008	1,047,587,808	1,139,461,259	1,239,392,011	1,348,086,691	5,737,649,777
National School and Adolescent Health Program Administrative Cost	25,236,000	27,449,197	29,856,492	32,474,906	35,322,955	150,339,551
Vehicle Repairs and Maintenance- NTD	61,920,000	67,350,384	73,257,013	79,681,653	86,669,734	368,878,783
Vehicle Repairs and Maintenance- NSAH	14,480,000	15,749,896	17,131,162	18,633,565	20,267,728	86,262,351

ANNEXES

PART I: SITUATION ANALYSIS

ANNEX 1.1 SUMMARY POPULATION TABLE

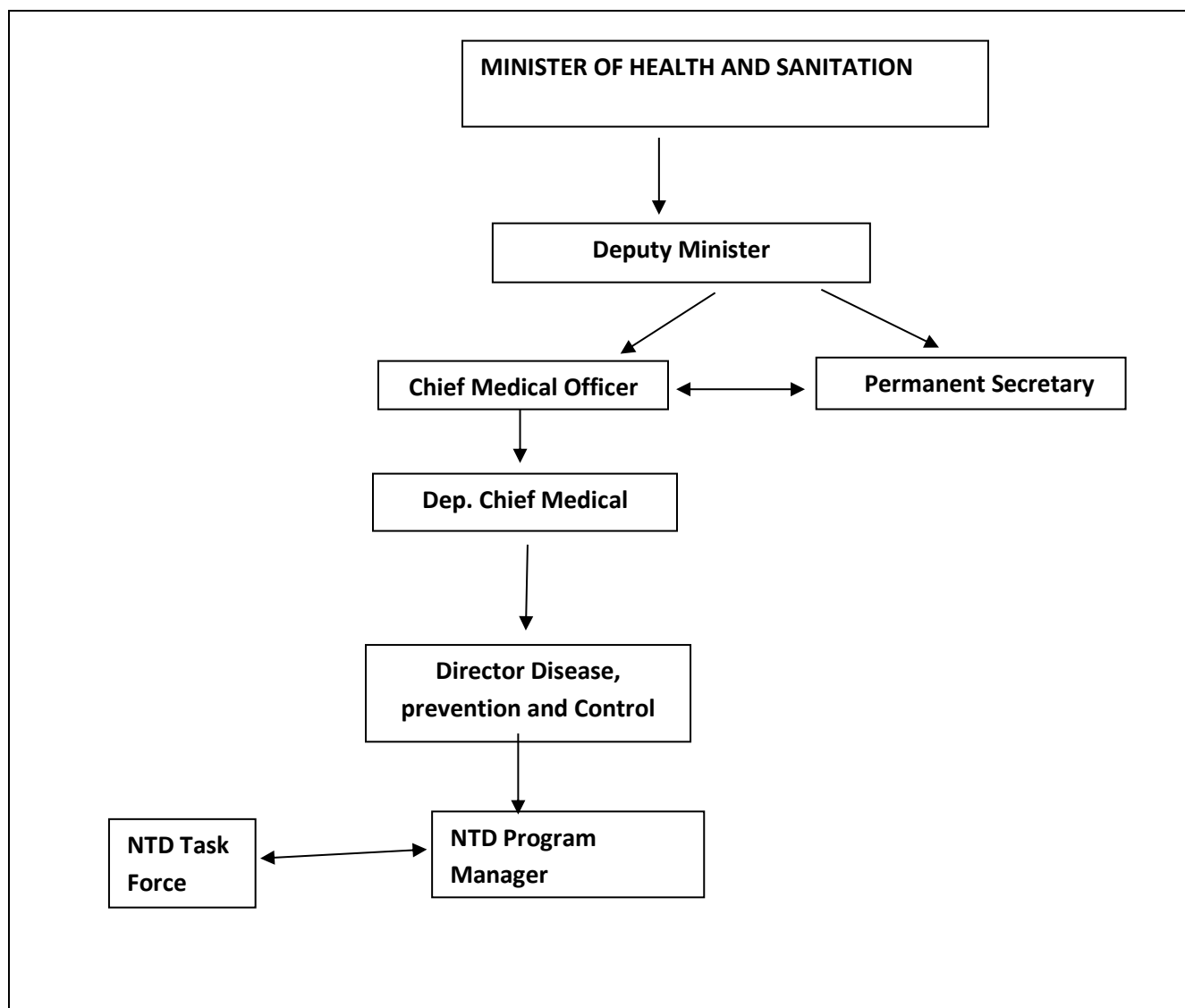
Table 1: National population Data Schools and Health Facilities at district Levels

Province/Region	District	No. of villages	No of Oncho communities	Total Population	Under fives	5-14 years	15 yrs and above	No. of primary school aged children (6-12 years)	No. Primary schools	No. health centers
Eastern	Kailahun	977	570	525,372	89,839	70,400	365,134	109,652	346	83
	Kenema	1380	752	609,873	104,288	81,723	423,862	154,330	605	130
	Kono	1360	620	505,767	86,486	67,773	351,508	74,232	349	88
Southern	Bo	1367	1267	574,201	98,188	76,943	399,070	155,760	520	125
	Bonthe	550	183	200,730	34,325	26,898	139,507	39,475	219	57
	Moyamba	1539	1000	318,064	54,389	42,621	221,054	64,188	486	110
	Pujehun	815	502	345,577	59,094	46,307	240,176	80,181	273	72
Northern	Tonkolili	1024	631	530,776	90,763	71,124	368,889	102,157	525	108
	Port Loko	1769	920	614,063	105,005	82,284	426,774	130,794	512	110
	Kambia	830	490	343,686	58,770	46,054	238,862	80,329	197	80
	Bombali	1596	1000	606,183	103,657	81,229	421,297	115,726	510	110
	Koinadugu	1041	516	408,097	69,785	57,685	283,627	78,860	372	78
Western Area	W Rural	518	0	442,951	75,745	59,355	307,851	241,438	151	55
	W Urban	1234	0	1,050,301	179,601	140,740	729,957	945,423	470	65
	Total	16,000	8451	7,075,641	1,209,935	1,705,040	3,907,952	1,495,266	5535	1271

ANNEX 1.2: Distances between main town and other towns

Freetown														
240	BO													
373	128	Bunumbu												
368	126	30	Daru											
312	251	373	382	Kabala										
466	181	54	77	410	Kailahun									
259	210	286	349	214	405	Kamakwei								
176	270	282	397	282	437	96	Kambia							
309	67	61	59	331	114	266	339	Kenema						
475	234	118	131	461	54	427	492	166	Koidu					
187	280	392	406	291	446	208	125	349	501	Lungi				
120	189	291	322	189	346	134	91	270	398	101	Lunsar			
207	102	205	235	142	259	114	179	182	312	189	84	Magbura		
185	125	227	258	125	282	91	155	206	334	165	64	22	Makeni	
198	112	240	238	259	293	226	230	181	347	240	174	112	134	
203	66	194	192	246	246	229	234	134	301	243	178	115	138	
348	110	66	62	342	118	309	213	40	171	382	282	195	218	
118	213	325	339	224	379	141	58	280	434	67	35	120	98	
307	77	166	165	326	221	293	347	107	274	357	266	179	202	
173	267	379	394	277	434	126	18	334	486	122	56	174	152	
328	178	69	99	283	122	250	317	109	178	323	222	136	158	
411	171	197	166	422	224	389	443	147	278	453	360	274	296	
450	110	136	106	362	165	328	382	86	218	392	299	213	235	

ANNEX 1.3: ORGANISATIONAL CHART OF THE MOHS AND THE NTD NATIONAL PROGRAMME



ANNEX 1.4: SUMMARY ON AVAILABLE DATA OF PCT-NTD DISTRIBUTION

Province or region	District or Chiefdoms*	Lymphatic filariasis	Onchocerciasis	Schistosomiasis	STH	Trachoma	
Northern Province	Bombali District	Yes	Yes	Yes	Yes	Yes	
	No of Chiefdoms	13	13	6	13		
	Tonkolili District	Yes	Yes	Yes	Yes	Yes	
	No of Chiefdoms	11	11	9	11		
	Kambia District	Yes	Yes	No	Yes	Yes	
	No of Chiefdoms	7	5	0	12		
	Koinadugu District	Yes	Yes	Yes	Yes	Yes	
	No of Chiefdoms	11	11	11	11		
	Port Loko District.	Yes	Yes	No	Yes	Yes	
No of Districts: 5							
Southern Province	Bo District	Yes	Yes	Yes	Yes	ND	
	No of Chiefdoms	15	15	15	15	ND	
	Pujehun District	Yes	Yes	No	Yes	ND	
	No of Chiefdoms	12	12	0	12	ND	
	Bonthe District	Yes	Yes	No	Yes	ND	
	No of Chiefdoms	11	11	0	11	ND	
	Moyamba District	Yes	Yes	No	Yes	ND	
	No of Chiefdoms	11	11	0	14	ND	
No of Districts: 4							
Eastern Province	Kenema District	Yes	Yes	Yes	Yes	ND	
	No of Chiefdoms	16	16	16	16	ND	
	Kono District	Yes	Yes	Yes	Yes	ND	
	No of Chiefdoms	14	14	14	14	ND	
	Kialahun District	Yes	Yes	Yes	Yes	ND	

	No of Chiefdoms	14	14	14	14	ND	
No of Districts: 3							
Western Area	Western Urban District	Yes	No	No	Yes	ND	
	No of Wards	49	0	0	49		
	Western Rural District	Yes	No	No	Yes	ND	
	No of Wards	20	0	0	20	ND	
No of Districts: 2							

Legend:

ND (No data): if no information is available

No: Not endemic or below PCT intervention threshold

Yes or known **Prevalence rate** if endemic

*Number of Chiefdoms/ Wards with localised distribution of onchocerciasis, schistosomiasis, LF and STH

ANNEX 1.5: SUMMARY ON AVAILABLE DATA ON CM-NTD DISTRIBUTION

Province or region	District or community*	Lymphatic filariasis	Onchocerciasis	Leprosy	Rabies	Buruli Ulcer
Northern Province	Bombali District	ND	ND	Yes	ND	ND
	Tonkolili District	ND	ND	Yes	ND	ND
	Kambia District	ND	ND	Yes	ND	ND
	Koinadugu District	ND	ND	Yes	ND	ND
	Port Loko District.	ND	ND	Yes	ND	ND
No of Districts: 5						
Southern Province	Bo District	ND	ND	Yes	ND	Yes
	Pujehun District	ND	ND	Yes	ND	Yes
	Bonthe District	ND	ND	Yes	ND	ND
	Moyamba District	ND	ND	Yes	ND	ND
No of Districts: 4						

Eastern Province	Kenema District	ND	ND	Yes	ND	ND
	Kono District	ND	ND	Yes	ND	ND
	Kialahun District	ND	ND	Yes	ND	ND
No of Districts: 3						
Western Area	Western Urban District	ND	ND	Yes	ND	ND
	Western Rural District	ND	ND	Yes	ND	ND
No of Districts: 2						

ND (No data): if no information is available

No for Not endemic or below elimination threshold

Yes or known **Prevalence rate** if endemic

*Community is mainly for localised distribution of Guinea worm, which is targeted for eradication.

In that case, state in bracket () the number of endemic communities or villages within the District

ANNEX 1.6: SUMMARY ON STATUS OF IMPLEMENTATION OF PCT NTD INTERVENTIONS IN DISTRICTS

Province or region	District or community*	Lymphatic filariasis	Onchocerciasis	Schistosomiasis	STH
Northern Province	Bombali District	PCT 8	PCT 10	PCT 5	PCT 6
	Tonkolili District	PCT 8	PCT 10	PCT 6	PCT 6
	Kambia District	PCT 8	PCT 10	No	PCT 6
	Koinadugu District	PCT 8	PCT 10	PCT 6	PCT 6
	Port Loko District.	PCT 8	PCT 10	No	PCT 6
No of Districts: 5					
Southern Province	Bo District	PCT 8	PCT 10	PCT 6	PCT 6
	Pujehun District	PCT 8	PCT 10	No	PCT 6
	Bonthe District	PCT 8	PCT 10	No	PCT 6
	Moyamba District	PCT 8	PCT 10	No	PCT 6
No of Districts: 4					

Eastern Province	Kenema District	PCT 8	PCT 10	PCT 6	PCT 6
	Kono District	PCT 8	PCT 10	PCT 6	PCT 6
	Kialahun District	PCT 8	PCT 10	PCT 6	PCT 6
No of Districts: 3					
Western Area	Western Urban District	PCT 8	No	No	PCT 6
	Western Rural District	PCT 8	No	No	PCT 7
No of Districts: 2					

Legend: ND (No data): if no information is available

No: if no intervention is required

MAP: if mapping is planned or on-going

PCT (1),PCT (2) ...PCT (10): if MDA, CDTI or Targeted treatment is on-going. In bracket is the number of round being conducted. Examples: MDA1 (1) = 1st round of MDA1 (IVM+ALB), T2 (3) = 3rd round of T2 (PZQ in SAC), CDTI (7) = 7th round of IVM in communities for Onchocerciasis

****** Loa loa is only for mapping

ANNEX 1.7: SUMMARY ON STATUS OF IMPLEMENTATION OF CM INTERVENTIONS IN DISTRICTS

Province or region	District or community *	Lymphatic filariasis	Onchocerciasis	Leprosy	Rabies	Buruli Ulcer
Northern Province	Bombali District	ND	ND	CM2	ND	ACF
	Tonkolili District	ND	ND	CM2	ND	ACF
	Kambia District	ND	ND	CM2	ND	ACF
	Koinadugu District	ND	ND	CM2	ND	ACF
	Port Loko District.	ND	ND	CM2	ND	ACF
No of Districts: 5						
Southern Province	Bo District	ND	ND	CM2	ND	CM1
	Pujehun District	ND	ND	CM2	ND	ACF
	Bonthe District	ND	ND	CM2	ND	CM1
	Moyamba District	ND	ND	CM2	ND	ACF
No of Districts: 4						
Eastern Province	Kenema District	ND	ND	CM2	ND	ACF
	Kono District	ND	ND	CM2	ND	ACF
	Kialahun District	ND	ND	CM2	ND	ACF
No of Districts: 3						
Western Area	Western Urban District	ND	ND	CM2	ND	ACF
	Western Rural District	ND	ND	CM2	ND	ACF
No of Districts: 2						

■ National LTB Control programme is going passive case management of Leprosy in all the 14 districts

Legend: ND (No data): if no information is available

No: if no active case finding is required (elimination goal is achieved at district level)

ACF: if active case finding is planned or on-going for assessing the disease burden and treating

CM1: if routine case finding and treatment are on-going in peripheral health facilities

CM2: if routine case finding and treatment are on-going and reference to higher levels (hospitals) is organised for confirmation of diagnosis, treatment and prevention of complications and disabilities

PART II: STRATEGIC AGENDA AND OPERATIONAL FRAMEWORK

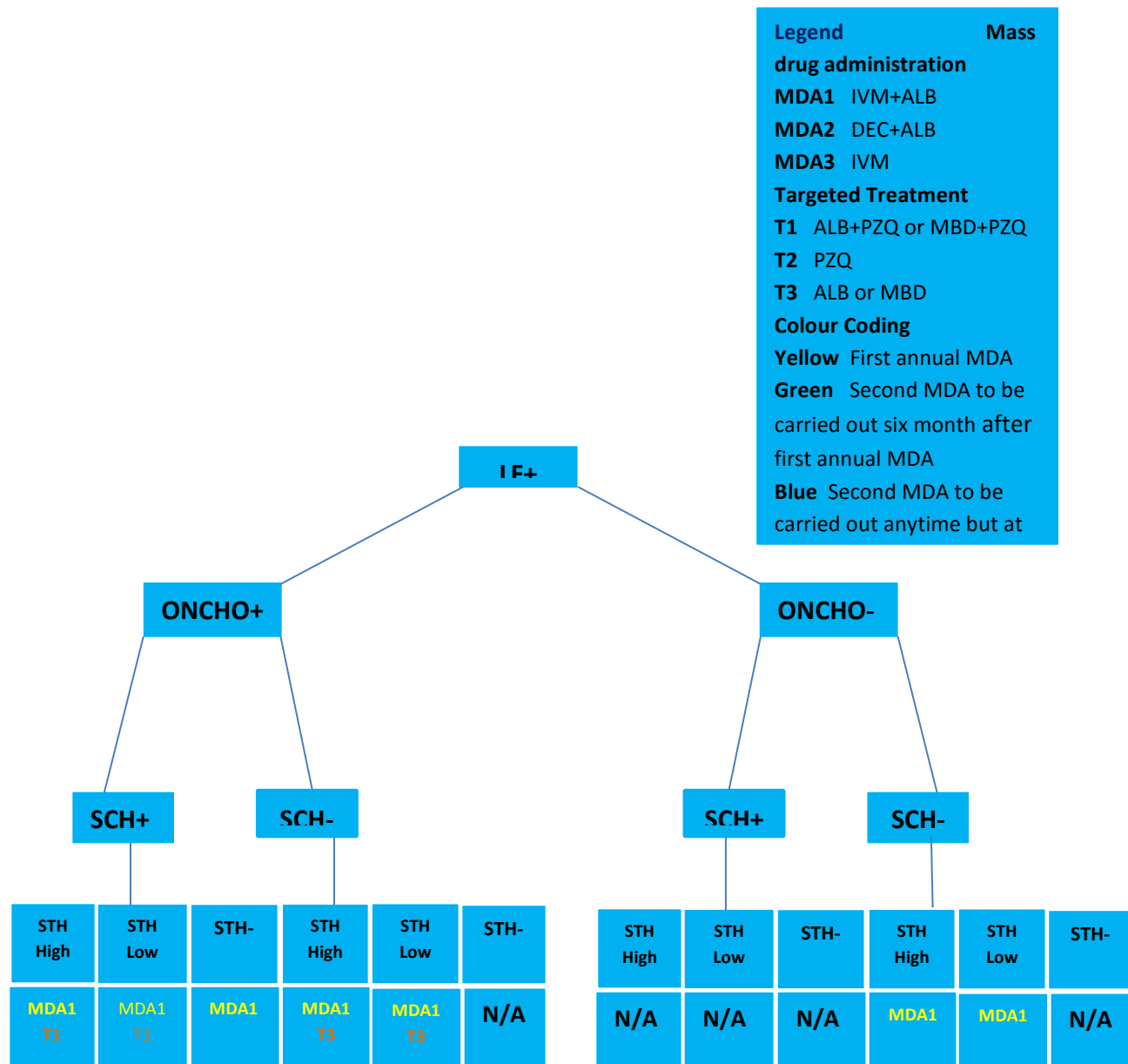
ANNEX 2. 1: PACKAGE OF PREVENTIVE CHEMOTHERAPY (PCT) - MASS DRUG ADMINISTRATION (MDA)

Activity		Lymphatic Filariasis	Onchocerciasis	Schistosomiasis	STH	Trachoma
Programme coordination		X	X	X	X	X
Advocacy		X	X	X	X	X
Resource mobilization		X	X	X	X	X
Social mobilization		X	X	X	X	X
Training		X	X	X	X	X
Mapping						
Drug distribution	CDTI	X	X	X	X	
	School			X	X	
	MDA campaign	X	X	X	X	
	Child health day				X	
	Immunization campaign				X	
	Health and nutrition day					
HSAM		X	X	X	X	X
M&E		X	X	X	X	

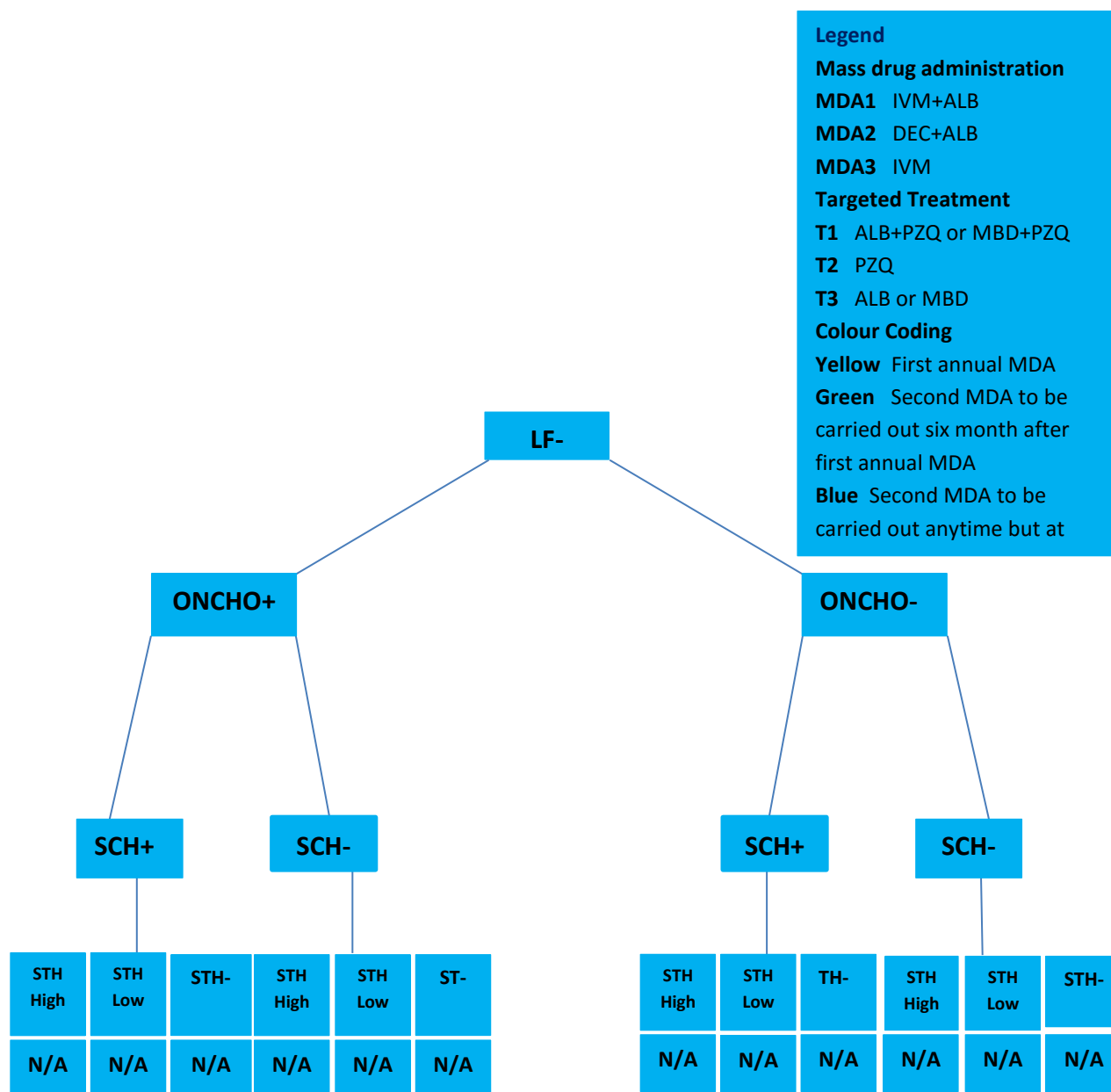
ANNEX 2.2: PACKAGE OF CASE MANAGEMENT (CM) AND CHRONIC CARE

Key interventions						
	GW	Leprosy	HAT	BU	Complications LF	Rabies
Advocacy/resource mobilization		X	X	X	X	X
Strengthening partnership		X	X	X	X	X
Inter sectoral collaboration		X	X	X	X	X
Health promotion		X	X	X	X	X
Capacity building		X	X	X	X	X
Mapping			X	X	X	
Passive case finding		X	X	X	X	X
Active case finding			X	X		X
Medical treatment		X	X	X	X	
Surgery		X	X	X	X	
Prevention of disability		X	X	X	X	
Integrated vector management/ reservoir control					X	
Surveillance	X					

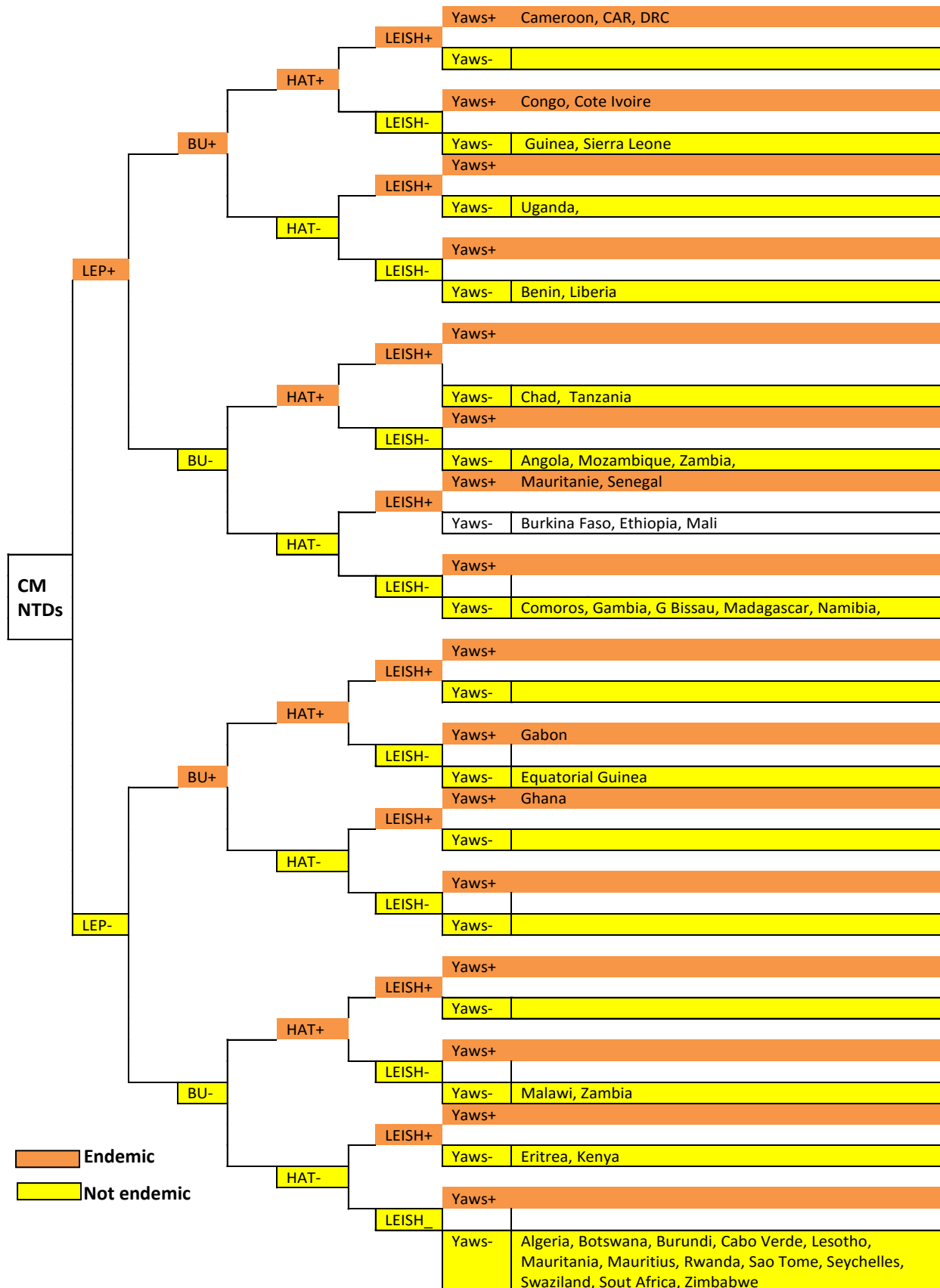
ANNEX 2. 3: PCT ALGORITHM 1



ANNEX 2.4: PCT ALGORITHM 2



ANNEX 2.5: ALGORITHM FOR CO-ENDEMICITY OF CM-NTDS (LEPROSY, BURULI ULCER, HAT) IN COUNTRIES OF THE WHO AFRICAN REGION



ANNEX 2.6 PACKAGE OF TRANSMISSION CONTROL - VECTOR/RESERVOIR CONTROL

Activity	Vectors and Associated NTDs				
	Mosquitoes		Other Vectors		
			Snails	Black fly	Tsetse fly
	LF	Malaria	Schisto	Oncho	HAT
ITN	X	X			
IRS	X	X			
Spacespraying				X	
Larviciding	X	X		X	
Traps					
Prevention/treatment of breeding sites	X	X			

ANNEX 2.7: PACKAGE OF IMPROVEMENT OF ENVIRONMENT, SUPPLY OF SAFE DRINKING WATER, SANITATION, AND OPERATIONAL RESEARCH

Activity	LF	Oncho	SCH	STH	Trach	LEP	HAT	GW	BU	Rabies
Partnership for water supply improvement	X	X	X	X	X	X	X	X	X	
Partnership for sanitation improvement			X	X	X					
Social mobilization	X	X	X	X	X	X	X	X	X	X
Health promotion	X	X	X	X	X	X	X	X	X	X
Operational research	X	X	X	X	X	X	X	X	X	X

ANNEX 2.8: “WHAT TO DO” BY DISTRICT (OPERATIONAL UNIT) BY OPERATIONAL PACKAGE

		PCT-NTDS		CM-NTDS		PCT& CMDS NTDS			NT DS targeted for elimination or eradication	
		MAP	PCT	ACF	CM1+2	IVM	SWS	IoE	SURV	VERIF
Eastern	Kenema		✓	✓	✓	✓	✓	✓	✓	✓
	Kono		✓	✓	✓	✓	✓	✓	✓	✓
	Kailahun		✓	✓	✓	✓	✓	✓	✓	✓
Southern	Bo		✓	✓	✓	✓	✓	✓	✓	✓
	Moyam		✓	✓	✓	✓	✓	✓	✓	✓
	Pujehun		✓	✓	✓	✓	✓	✓	✓	✓
	Bonthe		✓	✓	✓	✓	✓	✓	✓	✓
Northern	Bombali		✓	✓	✓	✓	✓	✓	✓	✓
	Tonkolili		✓	✓	✓	✓	✓	✓	✓	✓
	PortLoko		✓	✓	✓	✓	✓	✓	✓	✓
	Kambiai		✓	✓	✓	✓	✓	✓	✓	✓
Wesern Area	Western Rural		✓	✓	✓	✓	✓	✓	✓	✓
	Western Urban		✓	✓	✓	✓	✓	✓	✓	✓

LEGEND: MAP= Mapping; PCT= MDA, CDTI and Targeted Treatment; ACF= Active Case finding; CM1+2= Routine case finding and treatment in HF1 (peripheral) and HF2 (reference hospitals); IVM= Integrated Vector Management; SSWS= Sanitation and Safe drinking Water Supply; IoE= Improvement of Environment; SURV= Surveillance; VERIF= Verification

ANNEX 2.9: DRUG ESTIMATES AND LOGISTICS

NTD programme	Drug	Source drug	Status of procurement (donated or purchased)	Minimum lead time before delivery	In-country consignee
LF, oncho	IVM	Merck Inc	Donated	12 months	WHO
LEPROSY	MDT blister packs	WHO	Donated	12 months	WHO

ANNEX 2.10: DRUG FORECASTING AND LOGISTICS

Drug	Source of drug	Status of procurement (donate/purchased)	Minimum Lead time before delivery	In-country Consignee
IVM	Merck Inc	Donated	12 months	WHO
ALB	GSK	Donated	12 months	WHO
MEB	Deworm the world	Donated	12 months	WHO
PZQ	USAID/HKI	Purchased	12 months	WHO

**ANNEX 2.11: SUMMARY OF PROGRESSIVE SCALE UP AND PHASE OUT OF PCT
INTERVENTIONS PACKAGE**

	Status of interventions	Other PCT-NTD specific activities to be added
1	LF Mass drug administration started	.
		Coordinate LF MDA with onchocerciasis MDA
		Coordinate Schisto MDA with 2nd round of STH MDA, through school based approach,
		Assess BU and HAT endemic, if endemic; coordinate treatments jointly for BU and HAT MDA. For cases
2	LF MDA planned	<ul style="list-style-type: none"> -case finding for BU and HAT in all districts -Collect baseline for HAT and BU in the country -Coordinate timing of delivery of treatment through community-based and school-based approaches appropriately. <p>Assessment of lymphoedemas and hydrocele in all communities. Morbidity management of all identified cases both hydrocele and Lymphodema.</p>
3	LF MDA phasing out	<p>Conduct TAS and PRETAS for LF in targeted districts. Conduct Impact surveys for Schisto and STH with TAS in 2019 Continue MDA for Oncho in 12 districts. Evaluate for Oncho in 12 districts.Continue MDA using guidelines for WHO.Continue Schisto and STH using guidelines.</p>

**ANNEX 2.12: RESULTS FRAMEWORK FOR THE WHO-HQ-AFRO-APOC STRATEGIC PLAN,
2016–2020**

Strategic priorities	Strategic objectives	Core indicators
1 Strengthen advocacy, coordination and partnerships	<p>I. Strengthen coordination mechanisms for the NTD control programme at regional, national and district levels in the African Region;</p> <p>II. Strengthen and foster partnerships for the control, elimination and eradication of targeted NTDs at regional, national, district and community levels;</p> <p>III. Enhance high level reviews of NTD programme performance and the use of lessons learnt to enhance advocacy, awareness and effective implementation of targeted interventions;</p> <p>IV. Strengthen advocacy, visibility and profile of NTD control elimination and eradication interventions at all levels in the MRU Region.</p>	<ul style="list-style-type: none"> • Minutes of high-level NTD coordination meeting; • Minutes of partnership events on NTDs; • Number of high level advocacy events on NTDs; • Number of MRU partners involved in NTD programme.
2 Enhance resource mobilization and planning for results in NTD control	<p>I. Support countries to update integrated multiyear strategic plans and gender-sensitive annual operational plans for the control, elimination and eradication of targeted NTDs</p> <p>II. Enhance resource mobilization approaches and strategies at regional, national and district levels for NTD interventions</p> <p>III. Strengthen the integration and linkages of NTD programme with MOH&S into sector-wide and national budgetary and financing plans.</p> <p>IV. Support NTD program to develop and update national NTD policies and elaborate guidelines and tools to guide effective policy and programme implementation</p>	<ul style="list-style-type: none"> • NTDP having an updated national integrated NTD strategic plans; • Number of NTD guidelines and NTD planning and implementation tools developed; • Number of NTDP adapted national guidelines and tools; • Availability of NTDP budget line; • Total amount of financial resources available for NTDP activities; • Percentage of planned NTDP funds received.
3 Scaleup access to interventions, treatment and NTD service delivery capacity, within the overall health system	<p>I. Scale up an integrated preventive chemotherapy, including access to interventions for lymphatic filariasis, soil transmitted helminthiasis, onchocerciasis, schistosomiasis and trachoma;</p> <p>II. Scale up integrated case-management-based disease interventions, especially do the following:</p> <p>a. Intensify guinea worm surveillance;</p> <p>b. Enhance HAT control interventions for human African trypanosomiasis;</p> <p>c. Strengthen national programme to control Buruli ulcer;</p> <p>d. Strengthen leishmaniasis control and human rabies prevention;</p>	<ul style="list-style-type: none"> • Number of districts mapped for NTDs; • Drug administration coverage; • National coverage; • Parasitological prevalence; • Percentage of disease-specific targets achieved.

Strategic priorities	Strategic objectives	Core indicators
	<p>e. Strengthen national programme to eliminate tungiasis and control podoconiosis;</p> <p>III. Strengthening integrated vector management for targeted NTDs.</p> <p>IV. Strengthen capacity at the national level for NTD programme management and implementation and accelerate implementation of disease burden assessments and integrated mapping of NTDs;</p>	
4 Enhance NTD monitoring and evaluation, surveillance and operations research	<p>I. Develop and promote an integrated NTD M&E framework and improve monitoring of NTDs, within the context of MOH&S health information systems. This will include strengthening the reporting and response to severe adverse events by leveraging on-going efforts to strengthen pharmacovigilance systems;</p> <p>II. Strengthen surveillance of NTDs and strengthen response and control of epidemic-prone NTDs.</p> <p>III. Support operational research, documentation and evidence to guide innovative approaches to NTD programme interventions;</p> <p>IV. Establish integrated data management systems and support impact analysis for NTD using DQA tool.</p>	<ul style="list-style-type: none"> • NTD data completeness and timeliness; • Number of evaluation studies conducted and results disseminated; • Number of operational research studies conducted and results disseminated; • A functional data management system. • Quality of data assessed.

PART III: DISEASE SPECIFIC ANNEXES

ANNEX 3.1 DISTRICT PREVALENCE OF LF

District/Region/State	Location/Site/	Baseline	Prevalence % (numbers/rate/proportion)	Study method	Year of survey and reference
Kailahun	Manowa, Bunumbu&Madina	2.6	1.6	Night blood sample	2013
Kenema	Golahun	0.6	0.0	Night blood sample	2013
Kono	Tombodu&Penduma	2.4	0.6	Night blood sample	2013
Bombali	Kagberay, Makaprr, Mayoba&Matak	6.9	1.4	Night blood sample	2013
Kambia	Yebaya	2.1	0.0	Night blood sample	2013
Koinadugu	Kumala&Yataya	5.7	1.0	Night blood sample	2013
Port Loko	Mammah	4.4	0.3	Night blood sample	2013
Tonkolili	Massagble	2.4	0.0	Night blood sample	2013
Bo	Gelehun&Borborbu	2.0	0.3	Night blood sample	2013
Bonthe	Moboya	1.2	0.0	Night blood sample	2013

Moyamba	Mosenesie&Wubangay	1.0	0.0	Night blood sample	2013
Pujehun	Moala&Njaluahun	0.0	0.3	Night blood sample	2013

ANNEX 3.2: DISTRICT PREVALENCE OF ONCHO

DISTRICT	Location/Site	BASELINE (RANGE) 2002-2005	PREVALENCE % (Rate/Number/P roportion	study method	Year of survey
BOMBALI	Matene Malama Kabare	18.3-77.0	17	skin snip	2010
PORT LOKO	ropolon sarakawo mabeng rokon rosarr mawule mamanso	41.6-67.2	27	skin snip	2010
TONKOLILI	Makpankaw Kasokira-j Gbangba Mabansa Makwi	37.2-67.8	17	skin snip	2010
BONTHE	Wulai	3.7-69.1	27.27	skin snip	2010
KOINADUGU	Kamoia Karimuya Yissaia	34.7-56.3	19	skin snip	2010
MOYAMBA	Taabe Bonjema Faama Lungi Gondama Palima Wubange	21.9-67.8	28	skin snip	2010
PUJEHUN	Mbelebu Njala tusor Sarguehun	46.9-87.2	8	skin snip	2010
KAILAHUN	NJAGBWEMA- KUIVA	19.0-50.3	23.72	skin snip	2010

BO	Gelehun j Lembema Nyandehun Sembehun Yakaji Gawula Gborgborbu Jormu	16.84-68.9	26	skin snip	2010
KAMBIA	Kuye Bramaia	10.3-61.6	23.46	skin snip	2010
KENEMA	Guala	24.1-54.9	20.79	skin snip	2010
KONO	Waidu Koya Seidu	35.0-68.0	9	skin snip	2010

ANNEX 3.3: DISTRICT PREVALENCE OF SCH

District/Region/ State	Location/ Site/	Baseline 2008- 2009	Prevalence % (numbers/ rate/proportion) <i>S. haematobium</i>	Prevalence % (numbers/ rate/proportion) <i>S. mansoni</i>	Study method	Year of survey and reference
Kailahun	Njaluahun Yawei Upper Bambara Malema Luawa KissiTongi	60.0	0.3	28.5	Urine& Stool	2016
Kenema	Small Bo Niawa Simbaru Lower Bambara Dama Malegohun	60.5	1.1	38.0	Urine& Stool	2016
Kono	Nimiyama, GoramaKono, Mafindor Gbane Lei	65.0	1.2	8.3	Urine& Stool	2016
Bombali	SellaLimba, Tambaka, SafrokoLimba, Paki Massabong, BombaliSebora	27.5	0.8	18.9	Urine& Stool	2016
Kambia	Marthoraneh, Kawula, Kamasasa, Mambolo, Gbeleh		0.4	0.0	Urine& Stool	2016
Koinadugu	Kurubonla Falaba Sinkunia Yogomaia Bafodia Alikalia	83.3	7.0	30.7	Urine& Stool	2016
Port Loko	Rogbere Yele Sands GbanehBana Mamalikie Maborongnor		0.0	2.4	Urine& Stool	2016
Tonkolili	SambaiaBendugu, Kalansogoia, KholifaMabang, Malal Mara, Gbonkolenken, KholifaRowalla	35.0	3.5	23.6	Urine& Stool	2016

Bo	Tikonkoko Baoma Komboya NiawaLenga Valunia Badjia	25.2	2.9	2.6	Urine& Stool	2016
Bonthe	Jong, Imperi, Sogbini, KpandaKemo		0.0	0.0	Urine& Stool	2016
Moyamba	Kongbora, Kamajei, Upper Banta, Kowa, Dasse		0.0	1.2	Urine& Stool	2016
Pujehun	Mallen, KpangaKrim, YKK, Makpele, GallinessPerri		0.0	0.4	Urine& Stool	2016
Rural Western Area	Fullah Town Tissana Macdonald Samuel Town		NA	0.5	Urine& Stool	2016
Urban Western Area	East 1 (Magazine) Central 1 (Dwarzack) East 3 (Bottom Oku)		NA	0.0	Urine& Stool	2016

ANNEX 3.4 SCH PREVALENCE DATA AS A RANGE

District	SCH Prevalence Data by Range		
	Baseline 2008/09	Midterm 2012	Impact (or re-evaluation) 2016
Kailahun	22.0 -73%	2.0-22.0%	2.0-58.0%
Kenema	3.0-97.0%	4.0-44.0%	2.0-86.0%
Kono	50.0-93.0%	6.0-42.0%	0.0-14.0%
Bombali	0.0-68.0%	2.0-26.0%	4.0-46.0%
Kambia*	0.0-6.7%	-	0.0-2.0%
Koinadugu	13.3-93.3%	2.0-50.0%	14.0-52.0%
Port Loko*	0.0-8.3%	-	0.0-12.0%
Tonkolili	3.0-90.0%	2.0-66.0%	4.0-48.0%
Bo	0.0-65%	2.0-33.0%	0.0-15.0%
Bonthe*	0.00%	-	0.00%
Moyamba*	0.0-1.7%	-	0.0-2.0%
Pujehun*	0.0-4.2%	-	0.0-2.0%
Western Rural Area*	1.0-19.0%	-	0.0-2.0%
Western Urban Area*	0.00%	-	0.00%

**Districts that have not been treated for SCH.*

ANNEX 3.5 DISTRICT PREVALENCE OF STH

District/Region/State	Location/Site/	Prevalence % (numbers/rate/proportion) Ascaris	Prevalence % (numbers/rate/proportion) Hookworm	Prevalence % (numbers/rate/proportion) Trichuris	Prevalence % (numbers/rate/proportion) Any STH	Study method	Year of survey and reference
Kailahun	Njaluahun Yawei Upper Bambara Malema Luawa KissiTongi	4.0	8.7	0.7	12.4	Stool	2016
Kenema	Small Bo Niawa Simbaru Lower Bambara Dama Malegohun	0.3	6.3	0.0	6.6	Stool	2016
Kono	Nimiyama, GoramaKono, Mafindor Gbane Lei	5.8	12.8	1.7	17.4	Stool	2016
Bombali	SellaLimba, Tambaka, SafrokoLimba, Paki Massabong, BombaliSebora	3.7	25.8	2.9	28.3	Stool	2016
Kambia	Marthoraneh, Kawula, Kamasasa, Mambolo, Gbeleh	8.8	1.2	0.0	10.0	Stool	2016
Koinadugu	Kurubonla Falaba Sinkunia Yogomaia Bafodia Alikalia	7.7	14.8	0.0	20	Stool	2016
Port Loko	Rogbere Yele Sands GbanehBana Mamalikie Maborongnor	8.0	4.4	0.0	11.2	Stool	2016

Tonkolili	SambaiaBendugu, Kalansogoia, KholifaMabang, Malal Mara, Gbonkolenken, KholifaRowalla	4.3	31.2	1.3	33.2	Stool	2016
Bo	Tikonkoko Baoma Komboya NiawaLenga Valunia Badjia	0.0	8.2	0.3	8.2	Stool	2016
Bonthe	Jong, Imperi, Sogbini, KpandaKemo	3.0	30.5	1.0	34.7	Stool	2016
Moyamba	Kongbora, Kamajei, Upper Banta, Kowa, Dasse	5.1	23.7	1.0	27.4	Stool	2016
Pujehun	Mallen, KpangaKrim, YKK, Makpele, GallinessPerri	6.7	18.7	0.0	21.8	Stool	2016
Rural Western Area	Fullah Town Tissana Macdonald Samuel Town	0.5	14.1	0.5	41.7	Stool	2016
Urban Western Area	East 1 (Magazine) Central 1 (Dwarzack) East 3 (Bottom Oku)	6.7	4.0	0.7	9.6	Stool	2016

ANNEX 3.6: RANGE PREVALENCE FOR ANY STH

District	Prevalence Data for Any STH Infection	
	Baseline 2008	Impact 2016
Kailahun	49.8%	12.4%
Kenema	53.3%	6.6%
Kono	40.0%	17.4%
Bombali	25.2%	28.3%
Kambia	35.8%	10.0%
Koinadugu	68.5%	20.0%
Port Loko	53.3%	12.2%
Tonkolili	33.3%	33.2%
Bo	73.3%	8.2%
Bonthe	62.7%	34.7%
Moyamba	72.3%	27.4%
Pujehun	53.6%	21.8%
Western Rural Area	41.7%	13.9%
Western Urban Area	41.7%	9.6%

ANNEX 3.7: DISTRICT PREVALENCE OF BURULI ULCER

District/Region/ State	Location/ Site/	Prevalence % (numbers/ rate/proportion)	Study method	Year of survey and reference
Bo		27%	qPCR	2012
Bonthe		25%	qPCR	2012

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