Sierra Leone

FY2018

Control of Neglected Tropical Diseases

Annual Work Plan
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ACRONYM LIST

ALB	Albendazole
APOC	African Program for Onchocerciasis Control
BCC	Behavior Change Communication
CBM	Christoffel BlindenMission
CDD	Community- Drug Distributor
CDTI	Community Directed Treatment with Ivermectin
CHA	Community Health Assistant
CHO	Community Health Officer
CHW	Community Health Worker
CMS	Central Medical Stores
CNTD	Center for Neglected Tropical Diseases
DPC	Disease Prevention and Control
DHMT	District Health Management Team
DMO	District Medical Officer
DPC	Disease Prevention and Control
DQA	Data Quality Assessment
DSA	Disease Specific Assessment
EU	Evaluation Unit
FAQs	Frequently Asked Questions
FHI 360	Family Health International 360
FOG	Fixed Obligation Grant
FP	Focal Point
FTS	Filariasis Test Strip
GoSL	Government of Sierra Leone
HD	Health District
HKI	Helen Keller International
HRA	High-risk adult
HTR	Hard to reach
ICT	Immunochromatographic test
IEC	Information, Education and Communication
INDB	Integrated NTD Database
IVM	Ivermectin
JRSM	Joint request for selected preventive chemotherapy medicines
JSI	John Snow Inc.
KAP	Knowledge, attitudes and practices
LF	Lymphatic Filariasis
LSHTM	London School of Hygiene and Tropical Medicine
MCHA	Maternal and Child Health Aide
MDA	Mass Drug Administration
MEST	Ministry of Education, Science and Technology
mf	microfilaria

M&E	Monitoring and Evaluation
MoHS	Ministry of Health and Sanitation
MRU	Manu River Union
MSH	Management Sciences for Health
NEC-ADR	National Expert Committee for Adverse Drug Reactions
NGO	Non-Governmental Organization
NTD	Neglected Tropical Diseases
NTDP	Neglected Tropical Diseases Program
Oncho	Onchocerciasis
PCT	Preventive Chemotherapy NTDs
Pre-TAS	Pre-Transmission Assessment Survey
PHU	Peripheral Health Unit
PZQ	Praziquantel
RPRG	Regional Program Review Group
RWA	Rural Western Area
SAC	School aged children
SAE	Serious Adverse Events
SCH	Schistosomiasis
SCM	Supply Chain Management
SL	Sierra Leone
STH	Soil-Transmitted Helminthes
TA	Technical Assistance
TAC	Technical Advisory Committee
TAS	Transmission Assessment Survey
TIPAC	Tool for Integrated Planning and Costing
ToT	Training of Trainers
TF	Trachomatous inflammation-Follicular
TT	Trachomatous Trichiasis
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
UWA	Urban Western Area
WA	Western Area
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization

COUNTRY OVERVIEW

1. General country background

Sierra Leone has four major administrative units: the Northern, Southern and Eastern Provinces and the Western Area (WA). The three provinces are further divided into 12 health districts (HDs) and the WA is divided into two HDs: the Rural Western Area (RWA) and the Urban Western Area (UWA), which includes the capital, Freetown. The 12 HDs of the three provinces comprise 149 chiefdoms (i.e., sub-districts), which are governed by traditional paramount chiefs. The WA is sub-divided into 30 wards, which are headed by councilors. There are an estimated 14,413 villages in the provincial districts, with each village comprising an average of 100-500 people.

The Ministry of Health and Sanitation (MoHS) is divided into medical and management services. Under the medical service division there are 14 directorates, including the directorate of Disease Prevention and Control (DPC), which oversees the national neglected tropical diseases program (NTDP). Each of the 14 HDs have a District Health Management Team (DHMT) led by a District Medical Officer (DMO) that coordinates all health activities. The DHMTs have focal persons (FP) for each disease program, including one for neglected tropical diseases (NTDs). There are 1,258 Peripheral Health Units (PHUs) throughout the country that are staffed by different cadres of health workers: Community Health Officers (CHOs), Community Health Assistants (CHAs), Maternal and Child Health Aides (MCHAs) and nurses, who oversee approximately 29,000 volunteer Community Drug Distributors (CDDs). These CDDs are the backbone of all the NDTP activities in rural areas. While in the rural areas CDDs serve as volunteers within the NTDP; in the WA, there are no volunteer CDDs and the NTD drugs are distributed by paid community health workers (CHWs) for a fixed number of days (normally five days).

The END in Africa project, funded by the United States Agency for International Development (USAID) and managed by Family Health International (FHI) 360, provides the main support to the NTDP in Sierra Leone through Helen Keller International (HKI). In addition to USAID support, the following partners have historically contributed to the NTDP, though not all of those described below currently support the NTDP. Table 1 summarizes those organizations currently providing support.

- The former **African Program for Onchocerciasis Control (APOC)** provided technical and financial support to the NTDP for mapping and Community Directed Treatment with Ivermectin (CDTI) for control of onchocerciasis (oncho) from 2005 to 2014. Since APOC funding for NTDs in Sierra Leone ended in calendar year 2014, the END in Africa project has since covered the gaps that APOC was unable to fund. Although APOC support was exclusively for oncho control (training of health workers and CDDs and supervision of mass drug administration (MDA) in hyper- and meso-endemic communities), the funds were pooled with those for overall integrated NTD activities. APOC provided approximately $100,000 per annum.
- **Sightsavers** has also supported CDTI for oncho control post-war since 2002. Activities supported include training of CDDs and monitoring and supervision of MDA. Financial support provided is approximately $20-30,000 per annum. Recently, Sightsavers secured a five-year grant (£117,000) from Irish Aid to support eye care programs and NTD activities especially in the area of oncho elimination. Sightsavers operates on different financial timeframes from USAID (January-December against October-September); therefore, their commitments for Fiscal Year (FY) 2018 will not be known until January 2018.
- **TOMS Shoes** and HKI established an innovative partnership in FY13 that resulted in the donation of shoes to all CDDs and their dependents as motivation in the last four years (FY13, FY14, FY15 and FY17). This partnership will continue in FY18.

- From FY10 to FY14, the **Liverpool Center for Neglected Tropical Diseases (CNTD)** supported the refurbishment of the NTD laboratory in Makeni and operational research for the endemic NTDs on an ad-hoc basis. There has been no financial support since FY15 and no pledge for support for FY18 at this time.
- **Johnson & Johnson,** through a Ghanaian consultant (Dr. S.D. Mante), has trained/retrained 70 doctors, mostly from the Northern Province, on surgical procedures for hydrocele for a number of years. However, there is no pledge for support in FY18.
- Over the years, the NTDP has received both cash and in-kind donations through HKI for a second round of de-worming of school-aged children (SAC) on a sub-national basis. Funds in FY10 came from the **World Food Program** and in FY11 and FY12 from the **World Bank's Fast Track Initiative** through the **Ministry of Education, Science and Technology (MEST)**. The mebendazole/ albendazole used in these deworming campaigns were donated from various sources: The Saint Andrews Clinic for Children-Sierra Leone, De-worm The World, Feed The Children, and World Vision-Sierra Leone. In FY13, SABIN Vaccine Institute also supported a second round of deworming for SAC in RWA. Additionally, UNICEF supported a second round of deworming for SAC in the 12 provincial districts in September 2015. The WA was not included because MDA for LF-STH was already planned to take place in October 2015.
- **UNICEF** and **Irish Aid** are co-funding a project to transition maternal and child health weeks to HKI's six-monthly point of contact nutrition project. This project will support deworming for pre-school aged children (PSAC) and will initially be rolled out in three HDs in FY18 (Koinadugu, Bo and Kenema). The project will be scaled up to all HDs over the next four years.

Table 1: Non-ENVISION/END in Africa NTD partners working in country, donor support and summarized activities

Partner	Location (Regions/States)	Activities	In FY17, was USAID providing direct financial support to this partner through PROJECT?	List other donors supporting these partners/ activities
Sightsavers	12 HDs for Oncho only	Provide financial support for training of health staff and CDDs, supervision of MDAs and Oncho Elimination Committee meetings	No	DFID, Irish Aid
WHO	14 HDs	Drug donation program for NTDP and technical support	No	

2. National NTD Program Overview

Lymphatic filariasis (LF)

Mapping with immunochromatographic test (ICT) cards in 2005 showed that all 14 HDs are LF endemic. Baseline LF microfilaria (*mf*) surveys were performed in 2007 and 2008.[1] USAID support for LF activities started in 2008 with the baseline *mf* survey in 8 of 14 HDs, and all subsequent disease-specific assessments (DSAs) have since 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.) in all 14 endemic HDs, although other partners, such as APOC and Sightsavers, have historically provided (APOC) or continue to provide (Sightsavers) support for the integrated LF/onchocerciasis treatment. In 2010, Sierra Leone achieved 100% geographic coverage for LF MDA in all 14 endemic HDs. Drug distribution is conducted through campaign strategies with CHWs in the WA[2] and CDDs supported by MCHAs-in-training in the 12 provincial districts.

An impact assessment[3] in 2011 and a pre-transmission assessment survey (Pre-TAS) in 2013 both showed a reduction in mf prevalence. In the Pre-TAS, 12 HDs were grouped into six pairs, each sharing a sentinel site in one HD and a spot-check site in the other HD due to the small district population sizes. Among the six pairs, four (made up of the eight HDs of Bo + Pujehun, Kambia + Port Loko, Tonkolili + Kono and Bonthe + Moyamba), had mf prevalence <1% at each survey site and qualified for the stop-MDA transmission assessment survey (TAS 1) in FY15.[4] However, the TAS did not take place due to the Ebola outbreak in 2014-2015. The NTDP made the decision not to conduct TAS again in FY16, as communities were still recovering from the Ebola outbreak and may not have readily participated in surveys requiring blood samples. Subsequently, TAS was conducted between March and April 2017 in four evaluation units (EUs), using the Alere Filariasis Test Strip (FTS), with each original pair of HDs comprising one EU. All four EUs were well below the critical cut-off value for number of positives and MDA for LF has subsequently stopped in these eight HDs in FY17 (Table 1a).

Table 1a. FY17 TAS Results in 4 EUs

Evaluation Unit	No. Tested	No. Positive	Critical Cut-off	Prevalence
Kambia & Port Loko	1,926	0	20	0.00%
Bo & Pujehun	1,764	0	20	0.00%
Kono & Tonkolili	1,725	7	20	0.41%
Moyamba & Bonthe	1,737	0	20	0.00%
Total	**7,152**	**7**		**0.10%**

The four HDs that failed the pre-TAS in 2013 include Bombali + Koinadugu and Kailahun + Kenema. This was due to the fact that at least one site in each pair had mf prevalence >1%. Three additional MDAs have since been completed in FY14, FY15 and FY16 in these districts. In February 2017, a second pre-TAS ("re-pre-TAS") was conducted in these four HDs using FTS (this time HDs assessed individually) with each HD

[1] Koroma JB, Bangura MM, Hodges MH, et al. Lymphatic filariasis mapping by Immunochromatographic Test card and baseline microfilaria survey prior to mass drug administration in Sierra Leone. *Parasit Vectors.* 2012; 5(10). doi:10.1186/1756-3305-5-10

[2] Hodges MH, Smith, SJ, Fussum D, et al. High coverage of mass drug administration for lymphatic filariasis in rural and non-rural settings in the Western Area, Sierra Leone. *Parasite Vectors* 2010; 3**(**120). doi:10.1186/1756-3305-3-120.

[3] Koroma JB, Sesay S, Sonnie M, et al. (2013) Impact of Three Rounds of Mass Drug Administration on Lymphatic Filariasis in Areas Previously Treated for Onchocerciasis in Sierra Leone. *PLOS Negl Trop Dis*. 2013; 7(6):e2273. DOI: 10.1371/journal.pntd.0002273.

[4] National Neglected Tropical Disease Program. (2007) Report on Pre-transmission assessment survey in 12 health districts in Sierra Leone (unpublished report).

having a sentinel site and a spot check site. All four HDs had antigenemia (Ag) prevalence >2% and did not qualify for TAS for a second time.

Pre-TAS was also conducted in the UWA and RWA in April 2017 using FTS (these two HDs had qualified for Pre-TAS in FY15 but the Pre-TAS was postponed due to the Ebola outbreak). The results indicate that the UWA had Ag prevalence <2% and qualifies for TAS 1 in FY18; however, the RWA had Ag prevalence >2%. Based on WHO recommendations, two additional rounds of MDA will be conducted in the five HDs that failed the pre-TAS in FY17. A re-pre-TAS is anticipated in these five HDs in FY19. Table 1b below summarizes the FY17 Pre-TAS results in six HDs.

Table 1b. FY17 Pre-TAS results in 6 HDs

District	Type of Site	No. Tested	No. Positive	Prevalence
Kailahun	Sentinel Site	310	19	6.13%
	Spot Check	310	9	2.90%
Kenema	Sentinel Site	301	4	1.33%
	Spot Check	300	7	2.33%
Koinadugu	Sentinel Site	306	23	7.52%
	Spot Check	304	59	19.41%
Bombali	Sentinel Site	308	28	9.09%
	Spot Check	300	50	16.67%
		305	79	25.90%
Western Area Rural	Sentinel Site	350	13	3.71%
	Spot Check	300	5	1.67%
Western Area Urban	Sentinel Site	300	2	0.67%
	Spot Check	300	2	0.67%

The reason for the persistent pre-TAS failure in the four HDs could be attributed to the following:

1. There is a possibility of cross-reaction of *Mansonella perstans (M. perstans)* with *W. bancrofti*. *M. perstans* is another vector-borne human filarial nematode whose antigen may be picked up by the FTS. *M. perstans*[5] was identified in 1996 in the south of Sierra Leone. A follow-up study targeting the 296 individuals who had tested positive by FTS was conducted in May 2017 to determine their *mf* status and also determine possibility of cross-reaction with *M. perstans*. Overall, 236 individuals were traced and provided a midnight blood sample and 232 provided a midday blood sample. Both *W. bancrofti* and *M. perstans mf* were detected in the FTS positives.
2. High antigenaemia rate in Bombali and Koinadugu districts may be due to concentration of LF infected people from other areas of Sierra Leone and from neighboring countries because it is believed that there are traditional healers in these districts who claim they can cure the disease.
3. There may be poor focal treatment coverage in hard-to-reach communities. A qualitative study was conducted by the END in Africa Technical Associate Director to determine treatment, compliance and migration patterns of LF patients in these four HDs. Preliminary results indicate that inadequate social mobilization and poor MDA coverage may be responsible for the persistent prevalence in some areas.
4. The recent Ebola Virus Disease outbreak may have weakened compliance to treatment.

[5] Gbakima AA, Sahr F (1996) Filariasis in the Kaiyamba Chiefdom, Moyamba District Sierra Leone: an epidemiological and clinical study. Public Health; 110(3):169-174

5. Cross-border transmission due to population movement could also be a possibility, for example in Bombali and Koinadugu, which border Guinea, and Kailahun, which borders Guinea and Liberia. 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 the END in Africa funding to deliberate and draw on concrete solutions from FY18 onwards.

Onchocerciasis

Studies conducted with financial and technical support from APOC between 2003 and 2005 using skin snips showed that 12 of 14 HDs had meso-endemic (mf prevalence ≥40 and <60%) or hyper-endemic (prevalence ≥60%) areas, with an overall estimated at-risk population of three million people eligible for treatment with ivermectin (IVM). The WA (RWA and UWA) and the Island of Bonthe were not found to be endemic for oncho (though the rest of Bonthe district was). 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 to accommodate for LF treatment. USAID support for oncho activities started in 2008 with integrated management of LF and oncho in 12 HDs. After five rounds of MDA, an impact assessment was conducted by the NTDP in 2010 with technical and financial support from APOC that showed significant reduction in oncho prevalence within the 12 endemic HDs.

After 10 years of MDA, another oncho impact assessment using OV-16 rapid diagnostic test was conducted alongside the TAS in eight HDs in April 2017, and separately in four HDs in June 2017, to determine the impact of MDA and the need for IVM MDA in hypo-endemic areas that have benefitted from MDA for LF since 2008 (Table 1c).

Table 1c. Results of oncho impact assessment in children 5-9 years using OV-16 rapid diagnostic test

District	No. Tested	No. Positive	Prevalence
Kambia & Port Loko	3,123	61	2.0%
Bo & Pujehun	2,997	63	2.1%
Bonthe & Moyamba	2,766	47	1.7%
Tonkolili & Kono	2,994	78	2.6%
Bombali & Koinadugu	3,002	72	2.4%
Kailahun & Kenema	2,834	53	1.9%
Total	**17,716**	**374**	**2.1%**

The national strategy for oncho is elimination. In FY17 and with support from Sightsavers, the NTDP and partners set up a technical advisory committee (TAC) for onchocerciasis elimination. To achieve the onchocerciasis elimination goal, the TAC in the second inaugural meeting held in December 2016 agreed on the following points:

- To maintain high coverage and build on the post-Ebola cross sector approaches for implementation, the NTDP should work closely with the directorate of primary health care to align the CDD distribution network with the expanded CHW program to ensure sustainability;
- To effectively address the challenges associated with oncho transmission along the borders, the NTDP should continue to align cross-border implementation and monitoring activities with the other Mano River Union (MRU) countries through their annual MRU NTD meetings;
- Epidemiological surveys are essential for generating the data required for developing a framework for oncho elimination including the delineation of transmission zones.

- Additional funding for technical assistance for the delineation of transmission zones and initial analysis of the data, including applying them to current models, should be addressed in order to come up with an informed decision which will also be disseminated to other countries embarking on oncho elimination.

The TAC will continue to meet twice annually to ensure that these measures are implemented in order to eliminate onchocerciasis by 2025. Sightsavers has indicated continuous funding of the TAC. The next meeting is tentatively scheduled for December 2017.

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)[6] 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 three districts (Bo, Bombali and Kono). The entire Bonthe district and UWA were not endemic. In 2009, annual MDA started targeting only SAC in six endemic HDs and scaled up in 2010 to include all 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%)[7].

In May 2016, a prevalence assessment for SCH using Kato-Katz and urine filtration technique was conducted in 12 HDs. The results (by range) are shown in Table 1d below. During the national review meeting held in June 2016, data were discussed and decisions made about subsequent treatment strategies. It was agreed that mean prevalence will be used to determine the treatment strategy within a district since 5 to 6 sites (which do not cover all chiefdoms) were sampled per district. This new treatment strategy was effectively rolled out during the SCH MDA in May 2017.

Table 1d. SCH prevalence data by range at baseline, midterm and impact assessment

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%

[6] Koroma JB, Peterson J, Gbakima AA, et al. Geographical Distribution of Intestinal Schistosomiasis and Soil-Transmitted Helminthiasis and Preventive Chemotherapy Strategies in Sierra Leone. *PLOS Negl Trop Dis*. 2010; 4(11): e891. DOI: 10.1371/journal.pntd.0000891.

[7] Sesay S, Paye J, Bah MS, et al. Schistosoma mansoni infection after three years of mass drug administration in Sierra Leone. *Parasit Vectors*. 2014; 7(14). doi:10.1186/1756-3305-7-14.

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.*

Soil Transmitted Helminths

Mapping in 2008 using Kato-Katz method showed moderate to high prevalence of STH in 12 HDs[8]. USAID support for STH activities started in 2008 with integration of LF MDA for all persons five years and above in all 14 HDs. One round of MDA 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 MDA STH is dependent on the availability of funding, and therefore, has not been implemented regularly in most districts. Since FY13 there has been no second round of MDA for STH.

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 FY18, 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 was projected to stop in 8 HDs following the TAS in 2017. The results are shown in Table 1e below.

Table 1e. Prevalence data for any STH infection at baseline and impact

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%

[8]Koroma JB, Heck E, Vandy M, et al. Epidemiology of Trachoma in the Five Northern Districts of Sierra Leone. *Ophthalmic Epidemiol*. 2011; 18(4):150-157. DOI: 10.3109/09286586.2011.594204.

With the stop of LF MDA in 8 HDs in 2017, the national strategy is to target only SAC with ALB for STH in those 8 HDs administered along with IVM treatment for oncho. In the remaining districts where MDA for LF will continue in 2018, individuals over five years will continue to benefit from the integrated LF/STH treatment.

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 and where prior surveillance reports from the MoHS suggested that trachoma may be a public health problem. The mapping showed that the prevalence of trachomatous inflammation-follicular (TF) in children aged 1–9 years was <5% in all 14 HDs 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 warranted. 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 system has been put in place for trachoma. The National Eye Care Program and Christoffel BlindenMission (CBM) can provide trichiasis surgery when cases are referred for treatment. However, payment is based on a cost-recovery mechanism and these fees may inhibit those affected from seeking care. The NTDP has included trachoma surveillance and outreach surgical camps for TT in the new Master Plan (2016-2020).

3. Snapshot of NTD status in country (Table 2)

Table 2: Snapshot of the <u>expected</u> status of the NTD program in Sierra Leone as of September 30, 2017

		Columns C+D+E=B for each disease*			Columns F+G+H=C for each disease*				
		MAPPING GAP DETERMINATION			MDA GAP DETERMINATION			MDA ACHIEVEMENT	DSA NEEDS
A	B	C	D	E	F		G	H	I
Disease	Total No. of Districts in COUNTRY	No. of districts classified as endemic **	No. of districts classified as non-endemic **	No. of districts in need of initial mapping	No. of districts receiving MDA as of 09/30/17		No. of districts expected to be in need of MDA at any level: MDA not yet started, or has prematurely stopped as of 09/30/17	Expected No. of districts where criteria for stopping district-level MDA have been met as of 09/30/17	No. of districts requiring DSA as of 09/30/17
					USAID-funded	Others			
Lymphatic filariasis	14	14	0	0	6	0	0	8	Pre-TAS: 0 TAS: 0
Onchocerciasis		12	2	0	12	0	0	0	0*
Schistosomiasis		12	2	0	7	0	5	0	0
Soil-transmitted helminths		14	0	0	14	0	0	0	0
Trachoma**		0	14	0	0	0	0	0	0

*Note that in March and April 2017 an Oncho impact assessment was integrated with LF TAS in 8 HDs using OV-16 RDT. The remaining 4 HDs completed their assessment by end of July 2017.

**Sierra Leone is not endemic for trachoma.

PLANNED ACTIVITIES

1. Capacity Strengthening Strategy

The NTDP has identified five key areas for capacity building, including: resource mobilization, monitoring and evaluation (M&E), supply chain management, human resources, and financial and operational management capacity.

Resource Mobilization: The NTDP does not currently have sufficient capacity for resource mobilization and faces a challenging environment with overall limited resources for health and significant competing demands, including implementation of programs to reduce the country's high maternal and infant mortality and Ebola recovery. USAID through the END in Africa project continues to be the main donor to the NTD program for all key activities.

In FY16, with support from Deloitte and END in Africa, the NTDP and HKI received training on the Tool for Integrated Planning and Costing (TIPAC) to help the NTDP with budgeting, costing, and projection of funding gaps. The TIPAC was updated and funding gaps were identified, especially in the area of morbidity control. As a way of overcoming this gap, the NTDP requests technical assistance (TA) from Deloitte in FY18 to help build their capacity to identify opportunities for strategic social partnership, especially from the private sector (e.g. banks, mining and companies, etc.). This will not only help fill existing funding gaps, but will also prepare the NTDP to mobilize other funding when international donor funding ends. Although this request was made in FY17, Deloitte was not able to support this activity in the current fiscal year.

The number of proposals submitted or meetings held with potential private sector donors, the amount of funding secured from private sector organizations, and the increase in government support will be used to measure the success of these activities.

M&E Capacity: Building local M&E capacity has been on ongoing process, especially in the areas of monitoring MDA and evaluating the training of the various health workers involved in NTD activities. All trainings follow a pre- and post-test to determine the effectiveness of the training as well as the understanding of the training topics. During independent monitoring, an evaluation exercise is conducted to assess the knowledge of health staff following the training received during the Pre-MDA activities. Questionnaires are developed for CDDs, PHU staff, NTD focal persons, and community stakeholders with input from the national program to determine the effectiveness of the trainings and community sensitization meetings. Results from these evaluation exercises are presented during annual review meetings where the gaps in training and community meetings are discussed in-depth and recommendations are made for subsequent training sessions. In FY18, the NTDP and partners will continue to undertake joint monitoring and supportive supervision during trainings, community meetings, and MDA to ensure that issues discussed are well understood by participants.

As districts begin to reach the elimination criteria for LF, it is critical to build the NTDP's capacity in post-MDA surveillance. Transition and post-elimination strategies are a key element in the recent integrated NTD five-year Master Plan (2016-2020). In FY14, the NTDP conducted its first training of district laboratory technicians to carry out diagnosis of LF using mf thick smear. Similarly, in FY17, the NTDP and some national laboratory technicians were also trained on pre-TAS and TAS using the WHO recommended FTS kits. These trainings will help the national program prepare for post-MDA surveillance for LF. Meanwhile, the NTDP will continue to advocate to the MoHS to include NTD surveillance in the national disease

surveillance system through series of stakeholders' meetings. This will help the early detection/prevention of recrudescence of the disease once MDA stops.

Furthermore, a training workshop on data quality assessment (DQA), the integrated NTD database (INDB), and the use of WHO drug requisition and reporting forms was conducted in August 2016. In FY18, the NTDP will require additional TA from FHI360 to conduct a refresher training on the INDB and update the database with past and recent data generated from MDAs and DSAs. Cascade DQA training for all NTD focal points and district M&E officers in all 14 HDs is scheduled in September 2017. However, implementation of the DQA will be conducted in the first quarter of FY18 without external technical assistance. It is expected that recommendations following the DQA will result in improvements in the quality of the data being reported at all levels. This will enable us to determine if there has been an improvement in the quality of the data reported.

The NTDP will continue to administer pre- and post-tests after training exercises to measure the level of understanding of the participants. In addition, the successful implementation of the DQA, the number of NTDP staff and laboratory technicians receiving training for DSAs and conducting appropriate diagnoses for DSAs will indicate an improvement in the capacity of staff. The timely identification of any recrudescence of LF in areas that have stopped MDA and a positive result from the follow up DQA will indicate impact of these capacity building activities.

Supply Chain Management Capacity: During the NTD supply chain management (SCM) workshop organized by Management Sciences for Health (MSH) in Ghana in FY16, one of the key action points was to incorporate NTD drug management into the country's general SCM system so that the government can effectively and sustainably manage NTD drugs. However, this is likely not feasible in Sierra Leone given the fact that the policy of the central warehouse is to charge 3% of the total value of the drugs for storage. As a way of addressing this weakness with the current policies in place, the NTDP now has a dedicated pharmacist who will work with the central medical store to ensure all NTD drugs are captured in their tracking system.

In addition, it has been noted by the DHMTs that transportation of drug from the NTDP central warehouse in Makeni to the district medical drug stores and onward to the PHUs and communities does not always occur on time given the limited transport budget. An additional budget line is proposed for FY18 to alleviate this issue (please see the "Drug supply and Commodity Management and Procurement") section.

The number of HDs receiving timely drug delivery and the accuracy of the amount of drugs received/requested will be used to measure the success of these activities.

Human Resource Capacity: Currently, human capacity at the NTDP is limited, with a single program manager, a monitoring and evaluation officer, two national supervisors, a dedicated pharmacist and an administrative and finance officer. In FY18, HKI will advocate to the MoHS to add additional staff to the NTDP to increase the program's technical and data management capacity. The number of additional staff recruited to the NTDP will be used to measure success of this effort.

Financial and Operational Management Capacity: In FY17, HKI worked directly with the NTDP to provide ongoing planning and financial support. For example, HKI assisted the NTDP to complete the 2018 drug request to WHO, complete TAS eligibility forms, update M&E forms and supervisory check lists. This support will continue in FY18, as needed. To ensure proper financial management, HKI's finance team will also continue to provide regular support to the NTDP finance department for proper and sustainable

financial management. Following the FOG training received in FY14, there has been significant improvement in milestone reporting and management of the FOGs in general. There has been no major issue with milestone reporting in the past three fiscal years, with the exception of occasional late reporting of milestones by some districts, which may delay payments.

Improvement in financial and operational management capacity will be determined based on: the submission of complete and accurate drug applications, updating TIPAC, and timely reporting of milestones by all districts. Also, a reduction in the contact hours by HKI and partners will also help to determine the impact of this exercise.

Table 3: Project assistance for capacity strengthening

Project assistance area	Capacity strengthening interventions/activities	How these activities will help to correct needs identified in situation above
a. Strategic Planning	-SCH/STH transition planning	This will help prepare the NTDP for future SCH/STH treatment once LF MDA stops
c. Building Advocacy for a Sustainable National NTD Program	-TA to update TIPAC and support NTDP to develop a resource mobilization strategy -Advocate to high-level government for funding for NTD activity implementation -Advocate to increase the human resource capacity and expand the office space of the national program -Advocate for the integration of CDDs into the CHW program	-This will build the capacity of the program to identify opportunities and secure funds for activity implementation -This will help sustain the NTD program even when donor funding stops
e. MDA Coverage	TA to train and conduct coverage survey in three HDs (Kailahun, Kenema & Bombali)	This will help identify issues of MDA compliance in these high prevalence districts for LF
f. Social Mobilization to Enable NTD Program Activities	-Tailored social mobilization activities for traditional healers in Pre-TAS failed districts -Support NTDP to hold MDA launch in targeted HDs	-This will help improve compliance and subsequently MDA coverage in districts that have persistently failed Pre-TAS
g. Training	-MDA cascade training for health workers and supervisors -Training of laboratory technicians to conduct DSAs (i.e., TAS for UWA)	-Continue building the skills and capacity of health workers at all levels; build capacity of local lab techs in conducting DSAs
i. Supervision for MDA	-Establish community self-monitoring	-Increased supervision at community level to help improve MDA compliance and coverage, especially in HDs that failed pre-TAS
j. M&E	-DQA implementation	-Build capacity in data management and reporting and improve quality of data at all levels

l. Dossier Development	-Orientate NTDP on the requirements and necessary documentation for dossier development for LF -Update the integrated NTD database with past and recent data generated from MDAs and DSAs	-Ensure NTDP is familiar with LF dossier requirements and dossier development process -This will help ensure that all LF and oncho data are integrated and well managed at national level for the dossier
m. Short-term Technical Assistance	-TA from Deloitte to update TIPAC and support NTDP with resource mobilization, especially from the private sector (e.g., banks, mining companies) -TA from FHI360 for refresher training/practical data entry into the integrated NTD database with past and recent data generated from MDAs and DSAs	-This will fill existing funding gaps and prepare the NTDP to mobilize other funding when international donor funding ends. -This will help improve the quality of the data reported at all levels of implementation

2. Project assistance

The MDA activities target at-risk populations for each of the four PC NTDs endemic in Sierra Leone, aiming for equitable and high coverage for both males and females. However, social mobilization on market days is aimed at reaching more women, because they make-up the majority of the traders in the markets. Markets are the best occasion to reach large number of women in rural settings. Furthermore, over 80% of PHU staff, all the MCHA-Training Coordinators (included in the ToT for MDA-LF-Oncho-STH in 12 HDs), and all the MCHA-trainees who perform MDA in the urban setting are females. During community meetings, females are encouraged to serve as CDDs to replace their male counterparts who left to seek employment, especially within the new mining/industrial sector. There has been a significant increase in the proportion of female CDDs: from 16.7% to 24.8% in five years. Improving this proportion in hard-to-reach (HTR) communities is challenged by low female literacy rates, high domestic responsibilities for women and the requirement of spousal permission for women to accept such responsibilities.

Attempts have been made to recruit more female independent monitors. However, recruiting an equal proportion of female independent monitors is also challenging due to concerns regarding their personal safety in HTR communities and some cultural practices that limit activities of women in rural areas. Most of these HTR communities can only be accessed on a motorcycle, many of which are driven by male ex-combatants[9] who are still seen as threats to women by communities. Since 2013, the proportion of female independent monitors has been approximately 30% compared to less than 15% when this activity began in 2010.

a. Strategic Planning

Location in Budget / total cost for activities in this section:

1.	**Strategic Planning**		153,245,000	$	20,433
7.1.a.	Review Meeting for NTDs	MoHS	118,785,000	$	15,838
8.1.a.	NTD Task force Meeting	HKI	2,475,000	$	330
8.1.b.	STH Task Force Committee	HKI	31,985,000	$	4,265

[9] Sierra Leone had a civil war between 1991 and 2002; most of the ex-combatants took up professions like bike riding for commercial purpose.

The NTDP, with technical assistance from HKI and the WHO, developed a five year NTD Master Plan (2011-2015) which covered four strategic priorities: 1) strengthening of government ownership, advocacy, coordination and partnerships; 2) building capacity to plan for results, resource mobilization, training and financial sustainability; 3) scaling-up access to interventions, mobilizing domestic and partner resources to address the non-MDA treatment and 4) enhancing M&E for NTDs, disease surveillance, data management and operational research. In FY16, NTDP, developed a new five-year strategic plan (2016-2020) with technical assistance from HKI and the WHO and according to new WHO guidelines. The plan highlights key areas such as post-MDA surveillance for NTDs, cross border control strategies for NTDs, policies to guide effective program implementation and establish integrated data management systems and support impact analysis for NTDs using the DQA tool.

Annual NTD Review Meeting

An annual NTD meeting reviews the targets achieved and discusses recommendations from independent monitors, lessons learned and examples of 'best-practice' from the previous year's activities. Stakeholders at various levels are encouraged to give opinions on how NTD activities can be better planned and implemented based upon experience. These review meetings provide an opportunity for the NTDP, HKI and partners to validate the work plan, agree on the target population for each MDA, and agree on modified strategies and timeframes for implementation. Scheduling considerations such as delays in funding, late arrival of drugs, and unforeseen competing MoHS activities or public health emergencies are taken into account to mitigate any delays in MDA implementation.

END in Africa support is requested for one annual NTD review meeting in November 2017. The three-day review meeting will encompass a microplanning meeting for all districts to discuss the implementation of the recommendations from the FY18 work planning meeting.

NTD Task Force Meeting

The NTD task force meeting, which is organized quarterly, will be conducted at the directorate of disease prevention and control with participation of key stakeholders such as WHO, Sightsavers, the national program manager for malaria, and other senior MoHS staff to discuss NTD guidelines and MDA strategies for FY18. END in Africa support is requested for three NTD Task Force meetings in FY18.

Technical Advisory Committee Meeting (supported by Sightsavers)

As the country is approaching 12-15 rounds of effective treatment for oncho, a Technical Advisory Committee (TAC) was set up in 2016 to look at the possibility of elimination by 2025, as per new WHO guidelines. The committee has held two meetings wherein a joint communique for oncho elimination was agreed. The NTDP is planning to hold another meeting in December 2017 to discuss progress toward oncho elimination and strategies to stop MDA for oncho. Key participants will include WHO, USAID, Sightsavers, HKI, FHI360, LSHTM, and international experts. Sightsavers has committed to supporting these meetings.

SCH/STH Transition Planning Meeting

SCH/STH transition planning meeting will be held in the first quarter of FY18 to develop comprehensive plan for the transition. A transition plan will be completed by March 2018.

b. NTD Secretariat

Location in Budget / total cost for activities in this section:

2.	**NTD Secretariat**		127,218,580	$	16,962
8.2.a.	Administrative Cost for the NTD Programme Secretariat & NSAH	HKI	78,248,580	$	10,433
8.2.b.	Vehicle Repairs & Maintenance (NTDP & NSAH)	HKI	48,970,000	$	6,529

Maintenance and fuel costs of existing NTDP vehicles have been included in the NTDP operations budget. This fund will be used to make regular maintenance and provision of fuel for the NTDP vehicles and will enhance the NTDP staff's capability to supervise the activities at all levels. At the district level, the cost of hiring of motorcycles have also been included in the budget. Funds are also regularly made available to both NTDP and National School and Adolescent Health Program (NSAHP) secretariats to support administrative running costs including office supplies, computers and accessories, internet running cost and fuel for office generator.

c. Building Advocacy for a Sustainable National NTD Program

Location in Budget / total cost for activities in this section:

3.	**Advocacy**		107,317,500	$	14,309
8.3.a.	MRU Meeting	HKI	69,817,500	$	9,309
8.3.b.	Branding	HKI	37,500,000	$	5,000

One of the major challenges of the NTDP is the lack of funds from the government to support the implementation of NTD activities. The Government of Sierra Leone (GoSL) sole support to NTDs is salaries and administrative costs. In FY16, the GoSL pledged $6700 for morbidity management, however, the fund has still not yet been released. In FY18 advocacy in the context of NTDs in Sierra Leone will be conducted at various levels. Below are the plans for building advocacy for a sustainable national NTD program.

Mano River Union Meeting

Government-to-government advocacy in FY18 will be enhanced through the MRU Secretariat prioritizing cross-border control and synchronized scaled-up MDAs in neighboring Guinea and Liberia. The MRU comprises Sierra Leone, Liberia, Guinea and Cote D'Ivoire and was established with the goal of fostering economic cooperation and other regional developmental goals, including NTD control. The MRU annual meetings on NTDs are held in rotation to facilitate collaboration and coordination between Ministries of Health and partners. Key recommendations of the FY17 meeting were to establish NTD Ambassadors in each MRU country to advocate for fundraising for NTD activities; establish an NTD Expert Advisory Committee in all MRU countries and develop a case management strategic plan. It is expected that the next meeting (in Conakry, Guinea) will discuss the implementation progress of these recommendations. There is a risk of recrudescence of disease in Sierra Leone unless the neighboring countries (Guinea and Liberia) step up effective MDA, especially along the border communities. END in Africa support is requested for HKI and NTDP participation in the meeting.

Advocacy for Resource Mobilization

In FY18, technical assistance is requested from Deloitte to build the capacity of the NTDP to solicit funding for NTDs from private institutions, such as the banks, mining companies, mobile phone companies and other business entities (see "STTA" section). Resource mobilization efforts will target funds to support morbidity management for LF (which was identified during the FY16 TIPAC training as the major funding gap) and also to look at the possibility of supporting other NTD activities such as post-MDA surveillance surveys and implementation of a passive surveillance system. Since current donors in SL are not targeting the morbidity management aspect of LF elimination, it is hoped that these private institutions will help the NTDP address this gap through their corporate social responsibility.

Over the years, GoSL support to the NTDP has been limited to administrative support. Sierra Leone as a post-conflict country has always been challenged with numerous health issues (including, but not limited to, high infant and maternal mortality, high prevalence of malaria, and disease epidemics such as the recent Ebola outbreak) and available government resources are not sufficient to address all of these needs. On day three of the work planning session, the NTDP lead a delegation of partners including HKI, Sightsavers, WHO, FHI360, the media and donor representatives including USAID to the top management level of the MoHS to share updates on NTD elimination and control in the country.

Advocacy with Parliamentary Oversight Committee for Health
In FY18 the NTDP will strategically target political support through the Minister of Health and Sanitation and the Parliamentary Budget Oversight Committee for Health for an increased GoSL input into the national NTD budget beyond administrative and salary costs to include funding for activities, such as MDAs and morbidity management. The Parliamentary Oversight Committee and the Minister of Health will be encouraged to participate in the MDA launch especially in districts that have failed pre-TAS. This will increase community leadership and support for MDAs. Also, in FY18, the NTDP plans to engage the "Health for all" coalition (a coalition of civil society organizations involved in health activities) to help mobilize government support for additional resources. The experience gained from the TIPAC resource mobilization will help to advocate for more government support.

Advocacy to Incorporate CDDs into CHW Program
The MoHS has incorporated some of the CDDs into an umbrella body called "CHW program." Since CDDs operate on a voluntary basis for the NTDP, this initiative by the MoHS will help sustain the NTD program as CHWs will receive a monthly stipend provided by the GoSL. This will also help minimize CDD attrition as they will be utilized by multiple programs and gain more recognition in their communities. CDDs are well positioned to become health educators and community mobilizers for Water, Sanitation and Hygiene (WASH) activities, which would help sustain the success of the NTDP. However, the initial roll out of this scheme has also met with fiscal challenge as the Government relies on donor partners to fund the first few years. If this come into effect it's hoped to solve some of the challenges with CDD motivation.

The success of the advocacy efforts highlighted above will be measured based on the following:

- Additional amount provided by GoSL to support NTDP for salaries and expanded human resource capacity, MDA activities, morbidity and other administrative costs
- Attendance list and photos showing number of stakeholders attending the MDA launch in WA, Bombali, Koinadugu, Kailahun, and Kenema.
- Appointment of NTD Ambassador for Sierra Leone (as agreed at the last MRU meeting)
- Number of proposals submitted or meetings held with potential private sector donors

d. Mapping

Location in Budget: N/A
Total cost for activities in this section: $0

Mapping for all targeted PC NTDs has been completed, including hypo-endemic oncho villages; there are no gaps. No mapping is required in FY18.

e. MDA Coverage

Location in Budget / total cost for activities in this section:

7.	MDA		3,375,042,000	$ 450,006
7.7.a.	MDA ONCHO-LF in 12 Districts	MoHS	1,130,460,000	$ 150,728
7.7.b.	MDA SCH in 8 Districts	MoHS	354,280,000	$ 47,237
7.7.c.	Feeding of School Children Prior to PZQ	MoHS	237,907,000	$ 31,721
7.7.d.	MDA-LF-Western Area	MoHS	397,035,000	$ 52,938
7.7.e.	MCHA-LF-District Head Quarter Towns	MoHS	71,400,000	$ 9,520
7.7.f.	Supervision of Hard To Reach Areas	MoHS	125,920,000	$ 16,789
7.7.g.	MDA Launch in 5 Districts	MoHS	105,240,000	$ 14,032
8.7.a.	Branded Items for CDDs	HKI	870,000,000	$ 116,000
8.7.b.	Materials for MDA	HKI	82,800,000	$ 11,040

Table 4: USAID supported coverage results for FY16

NTD	# Rounds of annual distribution	Treatment target (FY16) # DISTRICTS	# Districts not meeting epi coverage target in FY16*	# Districts not meeting program coverage target in FY16*	Treatment targets (FY16) # PERSONS	# persons treated (FY16)	Percentage of treatment target met (FY16) PERSONS
LF	*1*	*14*	*None*	*None*	*5,834,037*	*5,645,521*	*96.7%*
OV	1	12	None	None	2,836,262	2,709,504	95.5%
SCH**	1	7	None	None	1,282,075	1,038,783	81.0%
STH	*1*	*14*	*None*	*None*	*5,834,037*	*5,645,521*	*96.7%*
TRA	NA	NA	NA	NA	NA	NA	NA

*Epi and Program coverage as defined in the workbooks

** According to WHO guidelines only program coverage applies for SCH. Percentage treatment is based on program coverage results according to FY16 workbooks.

Overall, the reported district-level MDA coverage for all four endemic diseases has been above 80%, ranging from 81% for schistosomiasis to 96.7% for STH/LF. Onchocerciasis MDA also reported a very high level of coverage, reaching 95.5% of at-risk populations in 12 HDs in FY16.

Despite these positive findings, and significant decreases in onchocerciasis prevalence, the failure to pass the pre-TAS for LF in five HDs and the reports of supervision and independent monitoring (see below) indicate that MDA coverage may be suboptimal in certain areas within a given district. Some of the potential challenges identified as contributing to poor coverage include: missing the "window of opportunity" for implementation (described below), CDD fatigue, ineffective supervision in hard-to-reach (HTR) communities, and competing health activities such mother and child health weeks, immunization campaigns, and bed net distribution, which can disrupt the planned schedule for MDA.

The "window of opportunity" refers to the optimal timeframes for implementation of MDAs agreed by all stakeholders in Sierra Leone and taking into consideration lessons learned from previous MDAs. The optimal timeframes for MDAs must account for the rainy season, traditional and religious practices of the populations being targeted, and, for the school-based SCH MDA, the school year calendar. In the past, it has been difficult to respect the window of opportunity, due to a number of factors including elections (FY13), delay of approval of budgets (FY14), Ebola (FY15), and late arrival of drugs (FY16 & FY17). MDAs in FY18 are planned between March and May 2018 to ensure all activities are completed by June 30, 2018.

MDA Coverage in Districts with High Prevalence for LF

While district-level coverage results have exceeded the minimum required epidemiological and programmatic coverage thresholds, coverage may vary at lower levels within a given district. Each of the five HDs that failed pre-TAS in FY17 face unique challenges that impact MDA coverage:

- **Kailahun** experiences cross border migration for trade, farming, schooling and MDA. As the NTDPs in Guinea and Liberia have not reached 100% geographic coverage for NTDs, there is an influx of people from Liberia and Guinea when there is MDA in Sierra Leone.
- **Bombali** shares a border with Guinea and had the highest LF mf prevalence in Sierra Leone at baseline: 6.9%. Sella Limba chiefdom has the highest levels of elephantiasis and deep-rooted traditional beliefs[10] regarding witchcraft which can affect MDA compliance. It is believed that "Elephantiasis is sickness God has brought" to punish the wicked. In FY14, FY15 and FY16 special advocacy meetings were conducted by the NTDP, HKI and some members of the DHMT in the Kamakwie chiefdom headquarter town that was attended by various stakeholders who pledged increased commitment to NTD activities. In FY18 the MDA launch will be held including the establishment of community self-monitoring groups to ensure that communities comply with treatment.
- **Koinadugu** also shares border with Guinea and has the worst terrain and road network in the country. It can take some PHU staff days to travel to the district headquarters, Kabala, for training/refresher training. Some areas are only accessible by motorcycles which are both expensive and risky. It is also difficult for the PHU staff to reach all their catchment villages to join the CDDs to mobilize communities. During the raining seasons, many communities become inaccessible. The extensive border with Guinea is used by traditional cattle herders who bring their cattle into Sierra Leone. Using an innovative MDA on market days in FY18 can help reach these cattle herders who may reside in Guinea but frequently travel to Sierra Leone or vice versa. Also, the possibility of using traditional healers as CDDs and/or social mobilizers for MDA will form part of collaborative efforts in FY18 to help mitigate compliance issues among LF sufferers.
- **Kenema** shares a border with Liberia and, like Kailahun, experience cross border migration for trade, farming, schooling and MDA. The HD also has difficult terrain especially in the chiefdoms that share border with Liberia.
- **RWA** is largely composed of migrants during the civil war who may still harbor *W. bancrofti.* Although this is the first Pre-TAS the district has failed, intensified social mobilization activities specifically targeting youth groups, bike riders (who for one reason or another are very difficult to reach during MDAs) will help ensure that MDA coverage remains high and the HD succeeds in the next Pre-TAS assessment.

The following activities are proposed to address these challenges and ensure high coverage during the FY18 MDA:

- Continue in-process Independent Monitoring
- Coverage survey in three HDs (Koinadugu, Bombali, Kailahun) (see "M&E" section)
- Community self-monitoring in four HDs (Koinadugu, Bombali, Kailahun, Kenema) and intensified supervision of MDA at all levels (see "Supervision" section)
- Microplanning meeting for DHMTs at national level (see "Strategic Planning" section)
- MDA launch in 4 HDs (Bombali, Koinadugu, Kailahun and Kenema) in addition to the WA
- Engaging traditional healers and youth groups in the MDA (see "Social mobilization" section)

[10] Sonnie, MS et al. Traditional Beliefs Affecting Elephantiasis in Sella Limba Chiefdom, Bombali District, Sierra Leone (unpublished manuscript).

- Revision of IEC materials (posters and flyers) and translation of radio jingles into 11 local languages (see "Social Mobilization" section)
- Cross-border meetings in seven HDs sharing border with Liberia and Guinea
- Advocate for the inclusion of CDDs into national CHW program (see "Advocacy" section)

Independent Monitoring (IM)

According to NTDP reports, all MDAs in every district have surpassed the minimal required epidemiological and programmatic coverage for all targeted PC NTDs since 2010. The NTDP reports have also been corroborated by reports from the independent monitoring conducted during MDAs, which has shown very minor differences between reported coverage and IM coverage to date (see Table 4a below).

Table 4a. NTDP Reported Coverage vs. Independent Monitoring Results (2011-2016)

Year	MDA 12 HDs		MDA SCH		MDA WA	
	NTDP Results	IM Results	NTDP Results	IM Results	DHMT-WA Results	IM Results
2011	80%	78%	82%	85%	81%	79%
2012	79%	74%	81%	81%	79%	75%
2013	81%	69%	80%	72%	82%	82%
2014	MDA deferred due to Ebola outbreak					
2015	77%	75%	79%	74%	78%	79%
2016	77%	85%	81%	83%	78%	69%

In-process and end–process IM in Sierra Leone was modelled on the WHO recurrent polio campaigns in 2010 and is vital in a post-conflict setting where population denominators are inaccurate. It is performed in both randomly selected clusters (enumeration areas) taken from the national population census (2004) and additionally in purposefully selected clusters known to be either hard to reach from recent campaigns (NTDs, vitamin A supplementation or vaccinations) or those expected to have particular challenges in the current MDA (e.g. population movement along border areas). The in-process results are relayed immediately via HKI to the NTDP and onwards to the DHMTs in order to quickly resolve any challenges while the MDA is ongoing. End-process results are helpful to validate coverage especially in HTR locations where the NTD burden is highest and MDA distribution is difficult.

There is need for more in-process independent monitoring of MDAs to help improve coverage in chiefdoms that are very difficult to access during MDAs and since coverage may be variable within a district, to determine whether there are areas with lower coverage that can be better targeted via advocacy or social mobilization activities.

MDA Launch

In addition to the MDA launch regularly held in WA, LF MDA will also be launched in the four districts that failed pre-TAS, including Bombali, Koinadugu, Kailahun and Kenema, in FY18. The launch will target senior MoHS officials including the Minister of Health, local authorities (paramount chiefs, section chiefs, councilors) and the Parliamentary Oversight Committee for Health. The pre-MDA press briefing for journalists will be led by the Minister of Information and reported on social media, radio and in newspapers (two of which are available on-line). The launch is a new activity that will raise awareness of the NTD program in targeted districts to ensure that MDA coverage is improved. Key local stakeholders including traditional healers, CDDs, religious leaders, political leaders and all DHMT staff will be invited to participate. Special recognition of CDDs' contribution to the program will also to help improve motivation

among CDDs. The MDA launch will replace the special advocacy meetings that were previously conducted in FY16 and FY17.

Cross-border meetings

Seven HDs share borders with neighboring MRU countries: Kambia, Kono, Koinadugu, Bombali (with Guinea), Kailahun (with Liberia and Guinea), Kenema and Pujehun (with Liberia). Synchronization of MDAs for NTDs in the border communities has also not been achieved in the three MRU countries. To help improve NTD control along these borders, pre-MDA cross border meetings are planned for FY18 to discuss the cross-border MDA activities, including discussion on the estimated border population who are likely to cross over into Sierra Leone during MDAs. These populations are estimated based on the available data from DHMTs used during polio campaign which are synchronized with the neighboring countries. The extra number of doses will be added to the allocation according to the village census in these border villages. In addition to house-to-house distribution, MDA on market-days, which usually last 1-3 days, is also proposed to reach people crossing into Sierra Leone for trade.

Specific messages that will now be included in the IEC strategy

Monthly live, interactive national radio panel discussions are intensively broadcast on different radio stations several days before and during MDA. In addition, the public can submit questions by phone or text message to radio stations which answer queries and address concerns or rumors that sometimes arise during MDA. The development of standard Frequently Asked Questions (FAQs) on NTD transmission, control, and prevention and their use for all social mobilization events has contributed immensely to the public understanding and acceptance of NTD activities. These FAQs are disseminated by the media to correct misconceptions and advise community leaders how to facilitate community participation. The FAQs are revised to address new public concerns, which can adversely affect MDA-coverage, such as cholera in FY12 and Ebola in FY15 and FY16.

Additionally, the use of screens in public locations to show the 'Wan Pot' video drama on NTDs also helped sensitize the public for MDA in the WA. This will be revised and used in FY18.

MDA plans for FY18

In FY18, all activities will be implemented by June 30, 2017. The planned MDAs include:

- LF-STH MDA in 2 HDs (RWA and UWA) targeting 1,250,185 million persons over five years;
- OV-STH MDA in 8 HDs (Kono, Tonkolili, Port Loko, Kambia, Bo, Bonthe, Moyamba and Pujehun) targeting 2,874,073 million people (SAC only for STH);
- LF-OV-STH MDA in 4 HDs (Kailahun, Kenema, Bombali and Koinadugu) targeting 1,799,632 million persons over five years; and
- SCH MDA in 7 HDs (Kailahun, Kenema, Kono, Bombali, Koinadugu, Tonkolili and Bo) targeting 524,274 SAC and 1,165,685 high-risk adults.

The MDA for LF in the WA is performed by CHWs via both static health facilities/outreach posts/community meeting points and by a street-by-street 'campaign' over five days. This is scheduled to take place in March 2018 alongside MDAs for LF-oncho-STH in 4 HDs and OV-STH in 8 districts respectively. Also, the NTDP will conduct a second round of OV MDA six months after the first round, however, this activity will be supported by Sightsavers with funds from Irish Aid.

LF-oncho-STH MDA in 4 HDs and OV-STH MDA in 8 HDs will be implemented over a period of 6-8 weeks in April–May 2018 by volunteer CDDs in rural settings using the house-to-house distribution method. This is supplemented through distribution conducted by MCHAs-in-training in urban town settings. In the mining areas, MDA will be carried out by the mining companies' medical staff at the same time in FY18 to ensure coverage, especially of males outside their census-villages.

SCH MDA will be conducted at sub-district (i.e., Chiefdom) level targeted SAC and HRA based on WHO treatment guidelines. SCH MDA will be implemented by health workers assisted mostly by school teachers in May 2018 lasting seven days as both a community and a school-based campaign in 7 HDs.

A second round of STH MDA will be conducted in 6 HDs (Bombali, Bonthe, Moyamba, Koinadugu, Tonkolili and Pujehun) based on the discussion of the national review for SCH/STH held in June 2016. However, USAID funds are not being solicited for this activity; instead, the NTDP will seek out other funding will be sought and actual implementation will be dependent on the availability of funding and drugs.

Table 5: USAID-supported districts and estimated target populations for MDA in FY18

NTD	Age groups targeted (per disease workbook instructions)	Number of rounds of distribution annually	Distribution platform(s)	Number of districts to be treated in FY18	Total # of eligible people to be targeted in FY18
Lymphatic filariasis	*≥ 5 years*	*1*	*Community (rural) and campaign (Urban)*	*6**	*3,049,817*
Onchocerciasis	*≥ 5 years*	*2*	*Community*	*12***	4,673,705
Schistosomiasis	*5-14 years* *At risk adults*	*1*	*School* *Community*	*7*	*1,689,959*
Soil-transmitted helminths*	*≥ 5 years*	*2*	*Community*	*14*	4,062,333
Trachoma	NA	NA	NA	NA	NA

***** MDA will be planned for UWA which will implement TAS 1 in FY18; however, MDA will not be conducted if the HD passes the TAS.

**MDA for Oncho will be conducted twice annually. The first round of OV-STH MDA in 8 HDS (Kono, Tonkolili, Port Loko, Kambia, Bo, Bonthe, Moyamba & Pujehun) will target adults with IVM only and IVM+ALB for SAC. The second round of MDA in hyper and meso endemic communities will be supported by Sightsavers.

f. Social Mobilization to Enable NTD Program Activities

Location in Budget / total cost for activities in this section:

4.	Social Mobilization		2,059,831,000	$	274,644
7.4.a.	Social Mobilization in the Western Area	MoHS	195,134,000	$	26,018
7.4.b.	Social Mobilization at the Community Level for ONCHO- LF (12 Districts)	MoHS	546,480,000	$	72,864
7.4.c.	Social Mobilization at the Community Level for SCH-STH	MoHS	300,460,000	$	40,061
7.4.d.	Social Mobilization at the District Level for MDA Oncho LF (12 Districts)	MoHS	88,060,000	$	11,741
7.4.e.	Social Mobilization at the District Level for MDA SCH-STH (7 Districts)	MoHS	59,820,000	$	7,976
7.4.f.	Social Mobilization at the District Level in the Western Area (RWA and UWA)	MoHS	27,445,000	$	3,659
7.4.g.	Social Mobilization with Private and Public Practitioners WA	MoHS	26,921,000	$	3,589
7.4.h.	Cross Border Meeting	MoHS	77,076,000	$	10,277
7.4.i.	Social Mobilization using Traditional Healers and Youth Groups	MoHS	184,735,000	$	24,631
8.4.a.	IEC Materials	HKI	367,080,000	$	48,944
8.4.b.	Radio and TV programs for MDA (jingles, video clips, discussions etc)	HKI	186,620,000	$	24,883

Social mobilization is conducted at national, regional and community levels. Advocacy meetings are organized by the NTDP and information is shared with decision-makers within the MoHS and also with parliamentarians, medical professionals, Non-Governmental Organizations (NGOs) and Community-Based Organizations (CBOs). At the district and community level, social mobilization activities for MDA target key stakeholders such as religious leaders, paramount chiefs, civil society heads, and councilors/city mayors. In addition, an MDA launch is planned in the WA and the four HDs with high LF prevalence to raise awareness and visibility of the NTD program among key stakeholders. Specific, planned social mobilization activities include:

Social Mobilization at District and Community Level

At the district level, social mobilization will be held with stakeholders such as religious leaders, paramount chiefs, civil society heads, and councilors/city mayors. Religious leaders are well respected by members of the community and their support is vital to improving community participation. Paramount chiefs are the traditional heads of the chiefdoms within the districts and their inclusion is very crucial for the success of any program. Councilors and/or the city mayors are encouraged to integrate NTD activities into their budgets and annual work plans. Civil society organizations (e.g. health for all coalition, the media, women and youth groups (market women, bike riders) will also be targeted to enhance participation of their pairs in the NTD program.

At chiefdom and village levels, the PHU staff hold pre-MDA village meetings attended by traditional leaders, section chiefs, headmen, religious leaders and local teachers. Also at the village level, the services of town criers, who work on a volunteer basis, are utilized to convene sensitization meetings at the request of the village chief and also inform the people about the availability of the MDA drugs and the need for every eligible person to comply with the treatment.

In addition, social mobilization on market days within border districts will specially target the traditional cattle-herders who migrate between Guinea and Sierra Leone. Social mobilization is organized by PHUs on market days because this is the only time the cattle herders will be in the same place and they can receive treatment during MDA regardless of their country of origin.

Social mobilization for targeted groups

- **Private Medical Professionals:** Since 2011, private medical professionals in the WA have collaborated with the NTDP during MDAs by participating in the distribution of IVM and ALB for LF elimination and also completing the necessary tally sheets as instructed by the NTDP. In FY18, the NTDP and HKI will work to reach more medical practitioners through their professional body, called the Sierra Leone Medical and Dental Association, to increase awareness among more medical practitioners who will further help in sensitization of their patients about the benefits of participating in MDAs, as well as the management of Severe Adverse Events (SAEs).
- **Mining Companies:** Since workers within the mining sector are more likely to miss MDAs, the NTDP has established collaborations with mining companies to ensure that their workers are treated by their medical staff during the period of MDAs in these communities. The country of origin of staff have not been recorded in the past. However, in FY18, the NTDP will modify treatment forms sent to those companies that incorporate country of origin for the foreign workers in particular. This collaboration was established with Sierra Rutile in FY13 and with African Minerals in FY14. In FY18, more efforts will be made by the respective DHMTs to add Timis Mining (formerly London Mining) and Addax Bioenergy in this list so that their medical providers can join in the distribution of PC NTD medicines.

- **Religious leaders:** Lessons learned from the recent past suggest that some communities listen to religious leaders more than traditional leaders, as they are considered closer to God and their messages in line with God's will. This was also evidenced during the Ebola outbreak, as community compliance with Ebola prevention messages increased when the religious leaders were engaged by a local NGO "FOCUS 1000" to lead community sensitizations efforts. The NTDP has continuously used the services of religious leaders and traditional heads in all social mobilization activities to raise awareness about NTDs and during MDAs. The high reported annual MDA coverage and reduced prevalence of NTDs are indication that the social mobilization activities have been largely effective.
- **Traditional healers:** In districts where there is persistent prevalence of LF, traditional healers will be recruited and trained as CDDs to help in MDA. Also, they will serve as community advocates to help mobilize members of their communities to participate in MDAs to improve coverage.
- **Youth groups:** Leaders of youth groups will be recruited and trained in FY18 to serve as community mobilizers to help sensitize their communities to participate in MDAs to improve coverage.

The next Pre-TAS results will be used to evaluate the effectiveness of these proposed strategies.

IEC Materials, Radio and Television

Television, public mega-screens and social media (Facebook) are used for LF MDA in the WA: a short animation film was produced in FY11, and a short comic sketch produced by 'Wan-Pot'[11] in FY12 was modified in FY13, FY15, FY16, FY17 and will be revised and used again in FY18. Youth groups will also be contracted to make street announcements. Also as a way of improving social mobilization for the MDA WA, a group of students from universities were used to support the program in social mobilization activities targeting tertiary institutions to help raise awareness of NTDs among their colleague students in FY16. These medical students will be targeted again to volunteer in FY18 to continue to raise awareness about NTDs in tertiary institutions in the country.

The NTDP and partners will continue to develop private sector partnership with telecommunication providers such as Airtel and /or Africell that may be willing to extend their corporate social responsibilities and distribute free SMS messages to their subscribers, especially during the period of the SCH MDA in schools and LF MDA in the WA. This attempt has been made in previous MDA campaigns but has not been successful. However, the program will continue to advocate for this to happen in FY18.

Radio broadcasting has been and will be used again as a complementary and cost-efficient strategy. Community radio stations and the commercial 'Star Radio' transmit nation-wide and will continue to disseminate well-tailored, pre-tested messages through interactive, live, panelist broadcasts. Position statements will be prepared in advance to ensure that key NTD messages are repeatedly delivered in various forms during each broadcast by the various panelists. These programs also include the use of the information found in the Frequently Asked Questions (FAQs) to ensure consistency of messaging[12] and jingles translated into main local languages (Mende, Temne, Limba, Krio, Kissi, Loko, Kono, Fula, Shebro, Yalunka & Koranko), which have been revised to include issues about MDA in the post-Ebola context. The FAQs can be used as an anchor by the interviewer to address public concerns on NTDs and also respond

[11] Arguably the most popular theater group in Sierra Leone.
https://www.youtube.com/watch?v=Z5PfRcRdv4k
https://www.youtube.com/watch?v=Btzt5-V7Dng

[12] FAQs are printed pages listing common questions received about NTDs and the medications used to treat them, along with a factual response to counter misconceptions about the diseases and drugs)

to questions and concerns that listeners might send by SMS or voice calls. The revised FAQs and position statements are written in English but discussed in the local language Krio during radio discussion and will also be disseminated during community meetings before and during MDAs.

The media used in social mobilization depends on the population. During the war, Sierra Leoneans developed the culture of listening to radios, and it is the most common medium of communication. In the capital both TV and radios are used, as people can access these facilities everywhere (offices, homes, streets). In the villages, town criers are normally used because they are the main medium of communication for meetings and other information. These people are well known in their communities and information from them is considered to be from the stakeholders. Independent monitoring also helps to identify which practices are appropriate for each population. The effectiveness of this approach was evaluated during the independent monitoring of the three MDAs in FY16 and the results showed that over 40% of individuals who heard about MDA did so via radio broadcasts and town criers. This same strategy of evaluating the effectiveness of social mobilization and trainings will be utilized in FY18.

Pre-survey Sensitization

As was done in FY17, social mobilization in FY18 will be conducted in the Western Urban Area prior to implementing the TAS 1. The reason for this is because the survey will entail blood collection and with the post Ebola trauma still in the minds of communities, there is concern that the activity may create panic if the school authorities and parents/guardians are not properly sensitized. Therefore, social mobilization with specific messages will be conducted prior to the DSA to inform communities about the survey procedures and the possibility of stopping MDA.

Also, sensitization of the population on scaling down or stopping MDA in the UWA will form part of the key messages in FY18. Since the UWA will undergo TAS, communities should be informed about the survey results and a positive result should be celebrated as a triumph. This will gather support from political heads and DHMTs who would want to achieve stop-MDA criteria.

Evaluation of Social Mobilization

Social mobilization activities have been evaluated in the past by independent monitors. Results from these evaluations have helped the national program to address gaps in social mobilization activities. In FY16, results from the independent monitoring of MDAs for both LF-Oncho-STH in the 12 HDs and SCH in 7 HDs showed that community leaders knew the signs and symptoms of LF, Oncho STH and SCH. From the analysis of the community sensitization meetings for LF-Oncho in 12 HDs, 75% of the community members knew the vectors that transmit LF and Oncho and 76% knew at least four of the exclusion criteria for MDA. 60% of community members heard about MDA from health workers and 30% via radio. Coverage results from the independent monitoring is explained below under the M&E section (see Table 5).

Table 6: Social Mobilization/Communication Activities and Materials Checklist for NTD work planning

Category	Key Messages	Target Population	IEC Activity (e.g., materials, medium, training groups)	Where/when will they be distributed	Frequency	Has this material/message or approach been evaluated? If no, please detail in narrative how that will be addressed.

MDA Participation	*MDA will take place in all communities in the 14 health districts*	*Community members (SAC and adults)*	*Banners* *FAQs and leaflets*	*Hung in 122 locations for 2 weeks before MDA in the WA only* *Distributed in all community meetings for all MDAs*	*Once annually, prior to MDA*	*# of persons participating in the MDA, tracked via treatment registers and independent monitoring results.* *Coverage survey in targeted districts*
	The drugs provided are free and safe	*Community members*	*Radio* *Television*	*34 local and commercial radio stations. 1 week pre and during MDA campaign* *3 TV stations (SLBC, Star TV and AYV). 10 days pre and during LF-STH MDA campaign in the WA*	*Jingles in 8 local languages aired 2 times per day (morning and night) during peak hours* *Panel discussions and airing of video clip on TV for 10 days pre and during MDA campaign in the WA*	*# of times messages aired on radio during reference period - social mobilization reports* *% of audience who recall message- Post event coverage survey* *# of times video clip aired on TV* *% of people who recall seeing the video clip - Post event coverage survey*
	Some side effects are as a result of the dying Mf	*Health workers and supervisors*	*Integrated training manual*	*District level health workers and supervisors' trainings*	*Integrated training manuals will be distributed in all trainings*	*# of training manuals disseminated during reference period - training attendance list in the social mobilization report*
	Drugs handed out at school are safe and keep you healthy and free of worms	*School aged children*	*SCH-STH leaflets*	*Head teachers and school supervisors*	*Training manual will be distributed in all primary schools*	*# of training manuals disseminated during reference period - training attendance list in the report*
Other	*Promoting visibility of NTDP*	*General public*	*MDA bulletin*	*Sierra Leone Medical and Dental Association annual conference*	*Distributio n of brochure during conference*	*# of brochure distributed to key stakeholders- copy of the bulletin to be attached to the semi-annual reports*

g. Training

Location in Budget / total cost for activities in this section:

5.	Capacity Building/Training		1,635,600,800	$	218,080
7.5.a.	Training of Trainers - ONCHO LF	MoHS	47,471,600	$	6,330
7.5.b.	Training of Supervisors - SCH	MoHS	70,175,000	$	9,357
7.5.c.	Refresher Training 12 Districts PHU Staff Oncho-LF	MoHS	354,920,000	$	47,323
7.5.d.	Refresher Training PHU Staff: SCH-STH	MoHS	119,059,200	$	15,875
7.5.e.	Refresher Training of CDDs	MoHS	895,300,000	$	119,373
7.5.f.	Training PHU Staff Western Area	MoHS	25,680,000	$	3,424
7.5.g.	Training, Community Health Workers, Western Area	MoHS	122,995,000	$	16,399

Yearly training/refresher training for MDA will be provided for health personnel in a cascade format. Pre- and post-tests are administered to ensure that participants acquire the knowledge and skills being taught. The quality of training is further assessed during independent monitoring using questionnaires designed to assess knowledge, attitudes and practices (KAP). Details of planned trainings/refresher trainings for FY18 is shown in Table 7 below. Lessons learned include the fact that the annual trainings/refresher trainings are required due to transfer of staff to new positions, attrition, recruitment and selection of new CDDs. As a way to minimise the number of trainings, supervisors are encouraged to rotate the PHU staff who attend training activities so that even with transfers they will still have knowledge of NTDs. The inclusion of NTDs into the teaching curriculum will help increase knowledge of NTDs control among all graduating personnel.

- Training of trainers for MDA LF-OV-STH will target NTD focal points, school health focal points, district pharmacists, MCH Aid coordinators and other DHMT members. Training topics will include Signs and symptoms of the targeted NTDs, exclusion criteria, MDA strategies, reporting of adverse events, logistics and supply chain management and strategies for effective social mobilization.

- Training of supervisors for MDA SCH in 7 HDs will comprise of community health officers, community health assistants, community health nurses, district pharmacists, and NTD and school health focal persons. The topics will range from the causes, transmission, and signs and symptoms of SCH, NTD treatment and prevention, MDA strategy, and exclusion criteria. The training will be held in two districts headquarter towns- one in the south-east and another in the north.

- Training and refresher training of PHU staff for MDAs LF-OV-STH, LF-STH and SCH will target health personnel's in PHUs right across the country. Topics will range on the causes, transmission, signs and symptoms of NTDs, treatment and prevention, MDA strategies and how to conduct social mobilization at village level. These training will be conducted at district headquarter towns by the DHMTS and will be supervised by the national program and partners. The effectiveness of these trainings will be evaluated after each MDA.

- Training and refresher training of CDDs for MDA LF-OV-STH MDA and CHWs for MDA LF-STH will be conducted at PHU levels in all 14 HDs. Training topics will include exclusion criteria, referral of severe adverse events, drug management, the importance of following the directly observed treatment protocol and inclusion of new community members in the register. These trainings will be supervised by the national program, DHMTs and partners.

- Training of independent monitors will be conducted for all MDAs with participants ranging from tertiary institutions, pharmacy board of Sierra Lone and Statistics Sierra Leone. Topics will include IM strategies, mHealth data reporting, and the importance of debriefing with DHMTs and the national program.

- Training of survey teams for LF TAS in UWA: A total of 10 personnel including 2 team leaders, 4 laboratory technicians, and 4 support staff will be trained on TAS methodology, sample selection, the use of FTS and biohazard and safety handling of blood samples. The survey will be supervised by both the national program and partners.

- Training on TIPAC as a tool for resource mobilization will include participants from the national program, HKI, representatives from DPC, TB and Leprosy control program, and the directorate of finance at MoHS central level. The topics will include how the tool generates and organizes data and the main features of the tool (i.e., data entry modules and reports) and the use of TIPAC data in targeted resource mobilization.

- Training of survey teams for coverage survey in three of the four HDs that failed Pre-TAS. A total of 24 personnel including six team leaders, 12 enumerators and six supervisors will be trained on coverage survey methodology, sample size, selection and survey protocols. The survey will be conducted by independent people.

Table 7: Training targets

Training Groups	Training Topics	Number to be Trained			Number Training Days	Location of training(s)	Name other funding partner (if applicable, e.g., MOH, SCI) and what component(s) they are supporting
		New	Refresher	Total trainees			
Training of Trainers	*MDA LF-oncho-STH & SCH*	*8*	*43*	*51*	*1*	*Bo*	Sightsavers (second round OV MDA)
Supervisors	*MDA SCH-STH*	*5*	*35*	*40*	*1*	*Kenema and Makeni*	
PHU staff	*MDA SCH-STH* *MDA LF-oncho- STH* *MDA LF & STH*	*17* *335* *60*	*224* *815* *90*	*241* *1,150* *150*	*1* *1* *1*	*7 HD* *12 HD* *RWA & UWA*	
CHWs	*MDA LF STH*	*832*	*1538*	*2370*	*1*	*RWA&UWA*	
CDDs	*MDA LF oncho & STH*	*TBD*	*29000*[13]	*29000*	*1*	*All PHUs in 12 districts*	Sightsavers (second round OV MDA)
Independent monitors	*MDA LF-oncho-STH, SCH & STH; LF-STH in WA*	*65*	*15*	*80*	*1*	*HKI conference hall*	

[13] The exact number of CDDs who are new or returning cannot be determined at this time; generally, it depends on the number of CDDs who decide to continue to work for the NTDP.

Team Leaders and Technicians	*LF TAS in UWA*	*0*	*10*	*10*	*1*	*NTD Lab Makeni*	
Coverage Survey	*LF, Oncho, STH 3 HDs*	*24*	*0*	*24*	*3*	*TBD*	
NTDP & HKI	*Training on use of TIPAC report for resource mobilization*	*11*	*0*	*11*	*3*	*Wussum Hotel*	

h. Drug supply and Commodity Management and Procurement

Location in Budget / total cost for activities in this section:

8.	Drug and Commodity Supply Management and Procurement		258,300,000	$	34,440
7.8.a.	Distribution of Logistics & Drugs, Storage & Clearing Oncho-LF 12 Districts	MoHS	112,560,000	$	15,008
7.8.b.	Distribution of Logistics and Drugs: SCH	MoHS	85,890,000	$	11,452
8.8.a.	Transportation and Clearing of Drugs	HKI	59,850,000	$	7,980

NTD Drug Quantification and JRSM

The current drug quantification is based on the projected national census conducted in 2015 by Statistics Sierra Leone. The Joint request for selected preventive chemotherapy medicines (JRSM) forms are used to request for all NTD drugs taking into consideration the remaining stock from previous MDA. Currently there is no donation program for PZQ for high risk adults and the NTDP is exploring other options to procure PZQ to cover this gap. One challenge that has been identified is the under supply of drugs to the DHMTs as a result of inaccurate population census data. This challenge will be addressed by the national level providing 10% buffer of drugs to certain districts especially those bordering Guinea and Liberia.

In FY16, the NTDP and partners received training that was facilitated by the M&E Coordinator of FHI360 on WHO joint drug application and reporting. Immediately after the training, the national program submitted the application for FY17 MDA drugs using the new forms. Drug application for FY18 MDA using the WHO forms was submitted by April 15, 2017 with support from HKI. The NTDP and HKI will work together in FY18 to submit a joint application for the FY19 MDAs.

During MDA, the CDDs will administer the drug based on the census data but will also add new members to the register who were not present during the census and administer drugs to everyone eligible. If drug shortages are identified (for example, in Kailahun and Kambia due to MDA-migration, in rapidly urbanizing settings, such as the WA, or mining communities within Bombali, Tonkolili and Port Loko) then additional supplies are requested by the PHU in-charge which are delivered by the NTD focal persons.

Transport and Storage within country

According to the current SCM of the NTDP, all drugs arriving in-country are transported to the warehouse in Makeni without passing through the Central Medical Stores (CMS). This was a concern raised by Management Sciences for Health (MSH) during the NTD SCM workshop in Accra in February 2016. MSH recommends that all drugs must go through the CMS for onward distribution to the respective districts. However, the NTDP is currently evaluating this recommendation, given the fact that the CMS has stated that they will charge the program 3% of the total value of the drugs. In addition, another issue was with storage conditions; to assist with this, HKI purchased two air conditioner split units and two giant fans to help with ventilation.

The budget line for drug and other commodity transportation has been increased in the FY18 budget to address concerns raised by the DHMTs regarding drug transport. Previously, the district staff relied on the vehicles and time available to them to ensure that drugs were distributed to the PHUs and communities

during CDD training and before the start of the MDA. However, this has caused problems with drugs not arriving to the PHUs on time. Increasing the transport budget will improve the drug distribution from the NTDP central warehouse in Makeni to the district medical drug stores and onward to the PHUs and communities. In addition, there was previously no budget line to transport CDD incentives; rather, distribution was done in conjunction with other activities, and this resulted in delayed distribution. The budget line will ensure that CDDs incentives, such as T-shirts and bags, are transported from the NTDP central warehouse in Makeni to the district warehouses and PHUs for onward distribution to CDDs during the CDD training.

Reverse Logistics and Waste Management

Post-MDA, drugs remaining are brought to the PHU staff by the CDDs/CHWs. The PHU staff quantify and document the remaining stock for all catchment villages and return the stock to the district pharmacist. The remaining stock/drugs are collected from the district medical store by the NTDP staff from the various districts and brought to the NTDP central warehouse in Makeni. These drugs are again quantified by the NTDP storekeeper, checked for expiry date, documented, and packed accordingly.

Empty cups, which are normally reused by the communities for domestic purposes following the completion of MDA, are returned to the PHUs based on recommendations from John Snow, Inc. (JSI) to be used during subsequent drug distribution. However, MSH now recommends the destruction of all empty cups/bottles after MDA. The Sierra Leone Pharmacy Board (SLPB) has a written standard operating procedures (SOP) for the destruction of open bottles/cups. In FY18, the NTDP will write formerly to the SLPB for the destruction of empty bottles/cups after every MDA.

Monitoring and Management of Adverse Events

Health staff and CDDs are trained to conduct directly observed treatment and follow WHO guidelines on exclusion criteria, common side effects, and recognition and response to serious adverse events (SAEs). During social mobilization, communities are informed about minor adverse events. Persons with SAEs are referred by the CDDs to the PHU for management. The PHU staff report to the DHMT and immediately onwards to the NTDP using reporting systems established by WHO and the SLPB. The NTDP will immediately inform HKI and WHO if an SAE is reported, and HKI will inform FHI360. Since 2011, the monitoring and management of SAEs was expanded to include the National Expert Committee for Adverse Drug Reactions (NEC-ADR). This body is comprised of physicians and public health specialists, pharmacists from SLPB, pathologists, and representatives from WHO and NGOs led by the MoHS and is charged with the responsibility of monitoring for SAEs during all MDAs for NTDs and immunization campaigns. The role of NEC-ADR will be expanded in FY18 to cover MDA for SCH in 7 HDs.

The major challenges identified in the supply chain management in FY15 involved the handling of drugs by the NTD focal persons. It was observed the district pharmacists are not well-implicated in the drug management at the district; instead, it is the NTD focal persons who are in-charge. Also, the reverse logistics are expected to come through the district pharmacist but this is not the case in many districts. As recommended by MSH during the supply chain management training, all NTD drugs from the central store in Makeni will be transported directly to the district drug store handled by the district pharmacists. All reverse logistics will also take this format.

i. Supervision for MDA

Location in Budget / total cost for activities in this section:

9.	Supervision		604,385,200	$	80,585
7.9.a.	Collecting, Reporting, Analysis - Oncho LF	MoHS	148,820,000	$	19,843
7.9.b.	Collecting, Reporting, Analysis - MDA Schisto	MoHS	34,895,000	$	4,653
8.9.a.	Monitoring & Supervision of MDA ONCHO- LF & SCH-STH 12 Districts	HKI	420,670,200	$	56,089

Support to NTDP for supervision

Supervision of the NTDP is conducted on several levels: an NTD Task Force oversees the master planning process and monitors the NTDP to ensure quality control. At the district level, the cost of hiring motorcycles and providing fuel is included in the district budgets to aid the NTD FP to effectively supervise activities. At PHU level, the cost of transportation for PHU staff to cover her/his catchment villages has been included in the budget, including transportation cost for village social mobilization, CDDs training and MDAs**.** Technical support from the END in Africa project will be provided during planning and implementation of the TAS in UWA in FY18.

WHO guidelines, MoHS regulations and monitoring mechanisms

During the annual NTD Task Force meeting, the issue of current WHO and MoHS regulations are discussed as applicable to the national context. As a technical assistance organization, HKI's key functions for the END in Africa project are to provide technical and financial support to the NTDP. The HKI NTDP Coordinator works closely with the national NTDP Manager and other senior MoHS staff to ensure adherence to guidelines and regulations: for example, modification of exclusion criteria for the LF MDA, which in the local context was extended from 1 to 2 weeks' post-partum due to the high maternal mortality rate in Sierra Leone, as the NTDP wanted to avoid the NTD drugs being blamed for these deaths. HKI will work with FHI360 to ensure the NTDP is represented in international technical NTD meetings scheduled in FY18. An Oncho elimination committee that was set up in the first quarter of FY17 with Sightsavers' support will continue to meet twice annually to discuss the possibility of stopping MDA in 2020.

Actions that identify and address potential issues/bottlenecks during MDAs

Supportive supervision uses supervisory checklists/post-tests for national, district and community levels to ensure program quality. Training of trainers (DHMTs), advocacy meetings and training of PHU-in-charge at the district level is supportively supervised by the NTDP and HKI. PHU activities are supervised by the DHMTs and activities at community level (social mobilization, training of CDDs and implementation of MDA) are supervised by PHU staff and monitored by the DHMTs, with spot checks by NTDP and HKI. Inadequate performance is always reported to an employee's line supervisor, DHMT and/or the national NTDP for remedial action. The DHMTs and community leaders supervise training of CDDs/CHWs and conduct spot checks at community level. During MDA, the PHU staff ensure that CDDs/CHWs adhere to the following treatment guidelines: (a) the correct use of dose poles; (b) strict observation of the exclusion criteria for treatment; (c) correct recording of doses administered in the village register or tally sheet by gender; (d) proper supply chain management to detect and report any stock outs; and (e) proper identification/referral of SAE cases and reporting of SAEs to the appropriate health authorities. Supportive supervision of health staff and CDDs or CHWs gives the opportunity to evaluate if the health workers are doing the activities correctly and correct underperformance or malpractice on site. Supervision also helps motivate CDDs/CHWs as they can see and appreciate the interest shown in what they do. Deputy District Directors of Education and School inspectors supervise the second STH MDA when and where it is performed independently of the SCH MDA with back up from the NSAHP, DHMT and HKI. MDA is supervised using supervisory check lists by staff at all levels: national, district and community.

In the eight districts where MDA for LF has stopped, increase supervision at PHU level will be made to ensure that CDDs are correctly administering ALB to SAC only.

Independent monitors are selected from the SLPB, Statistics Sierra Leone, University of Sierra Leone and Njala University, to conduct both in-process and end-process monitoring of MDA modelled on the WHO sampling framework[14]. The in-process monitoring serves as a way to immediately troubleshoot problems, such as low coverage, shortage of drugs and other supplies, and community resistance to participation in the MDA. Both random and purposive sampling is employed for in-process monitoring. It is important to focus on areas that historically have lower coverage and that are hard to reach, so in these cases, purposive sampling is used to ensure that enough sites in this category are included. However, it is also important to assess those sites that have historically performed well and to ensure that monitoring covers a wide geographic spread and is representative of the entire population being targeted; therefore, random sampling can be used as well. Independent monitoring enables the DHMTs to focus on weak aspects/areas of implementation for improved coverage as these are reported directly to them in person or by phone for remedial action in real time. Coverage data is collected via mobile applications using Android phones. The webhost account administrator at HKI receives, sorts, cleans, queries where necessary, and reports in-process coverage results daily to the NTDP for distribution by email to all DHMTs. The end process monitoring is conducted immediately after the MDA campaign to independently estimate post-MDA program coverage. Cluster random sampling using probability proportionate to size is used for end-process monitoring since this is the phase of IM that will estimate program coverage. The results of the end-process monitoring are used for comparison with the reported MDA coverage and also to recommend ways to achieve improved coverage in the next round of MDA. The independent monitoring has been very effective in helping to achieve effective programmatic coverage.

All aspects of preparation for MDA need to be monitored and these are performed annually by HKI-staff independently of the NTDP, and the results shared with the NTDP and DHMTs at the annual NTD review meeting. Community leaders and influencers will serve as community monitoring agents in chiefdoms with persistent LF mf prevalence ≥1% in FY18.

Debriefing of independent monitors. After each round of in-process and end-process monitoring of provincial activities they are debriefed at the HKI office together with representatives of the NTDP. Qualitative reports from their field trip are discussed at length and recorded by the HKI-NTD team together with their recommendations for future MDAs. For MDAs in the WA, daily debriefing on the in-process monitoring occurs at the DHMT office at 6 pm. In-process monitoring has contributed immensely to avoiding pockets of low coverage, especially in HTR areas and identifying underperforming CDDs, PHU staff and/or DHMTs. It is timely and cost-effective since it enables program implementers to activate corrective measures without delay. Funds for the independent monitoring and the supervision conducted by HKI are located in the other direct costs.

New Strategies to improve supervision in districts that failed Pre-TAS

In FY18, the NTDP plans to increase the number of supervisors and supervision trips in Bombali, Kailahun, Koinadugu and Kenema at district and PHU level for all activities. This will address the gap in time and personnel as indicated by the DHMTs during the work planning meeting.

In FY18, the NTDP and partners (HKI, Sightsavers and WHO) will conduct more supervision visits to these districts. HKI will also encourage supervision visit by donor partners such as the USAID local mission.
The NTDP also plans to establish community self-monitoring in these districts. This will encourage community members to actively participate in MDA activities to help improve coverage. The PHU staff will

[14] WHO. Immunization coverage cluster survey: reference manual. 2005; Geneva: WHO: WHO/IVB/04.23.

be tasked with ensuring that these self-monitoring groups are set up especially in hard to reach communities and reports sent to them.

How data collection is followed through pre-established procedures and protocols
Data are collected by the CDDs/CHWs in their registers in accordance with WHO guidelines and tally sheets for MDA in the urban setting. These are collated by the PHU-in-charge and checked by the NTDFP. The National NTD Supervisors tour the districts to collect these collated reports and assist with the checking and if necessary visit PHU to cross-check directly or obtain delayed reports. All the data collection tools are based on indicators described in WHO guidelines and the donor.

Overcoming issues encountered during MDA
Each MDA encounters unique barriers which are often predictable from previous independent monitoring debriefings or a general understanding of the MoHS and the pressures due to additional programs and emergencies it is encountering. Independent monitoring as mentioned above also helps with prompt and timely actions.

The DHMTs are encouraged to roll out the MDA training to all PHU staff such that trained health staff will always be available even in the event of transfer and other reasons for absence of their colleagues. This can be achieved by rotating personnel who are nominated to attend the training and not limited to the health personnel 'In-charge' of the health facilities.

There may be a rapid influx of people within the WA when social mobilization regarding MDA is highly effective resulting in internal MDA-migration from other districts. Within the WA, both supportive supervision and independent monitoring as mentioned above enable drug shortages to be corrected overnight. As the WA is the commercial center of Sierra Leone, many persons visit for trade on a regular or infrequent basis and may 'elect' to participate in MDA as they may have missed the MDA round in the provinces. Thus the DHMT-WA is supplied with a generous buffer stock of drugs and the NTDP is on stand-by to re-supply them if necessary. Drug shortages at the new mining communities due to employment–seeking migration has occurred and again the DHMTs in the affected districts (Bombali, Tonkolili and Port Loko) are resupplied by the NTDP or distribution within the district is re-organized by the DHMTs.

Negative rumors can spread quickly during an MDA and need to be quickly reported by the PHU staff or independent monitor to the DHMT. Rumors vary from the side effects to be encountered during MDAs to fears of impotency, infertility or cholera during the rainy season. Domestic deputes between health workers/CDDs and their families or local politics can also set off negative rumors and fears as evidenced during the Ebola outbreak. The NTDFP visits the affected community and reports back to the DMO who may also visit the affected community and/or address the district through the community radio the same day. This rapid investigation and response has been highly effective at resolving issues in both the provinces and the WA, maintaining the momentum of the MDA and achieving effective coverage. Further modification of IEC materials, advocacy, social mobilization and radio discussions will be implemented to achieve effective coverage.

In the past, there have been a lot of compliance issues because of the side effects. In a bid to improve this situation, the NTDP determined that it needed to train CDDs and health workers on what the actual side effects are and what community members might expect if they take the drug. Consequently, health workers and CDDs are trained on recognition and management of common side effects and referral of SAEs, and there are now few issues with compliance.

Monitoring of social mobilization activities

The NTDP and partners provide supportive supervision for social mobilization. However, because this particular activity is mostly at community level and in most cases PHU staff hold meetings at their convenience, assessment of this exercises normally happens during the independent monitoring where monitors administer questionnaires to members of the community on knowledge of the program and the means through which they received information. Supervisors normally provide support at the district level including participation in the radio programs held. In some cases, supervisors work with PHU staff to organize these meetings where supervisors are able to assess the understanding of the PHU staff on NTDs and make recommendations for improvement in the next training. Each chiefdom also has at least 1 supervisor who provide overall support to the PHU staff.

j. Monitoring and Evaluation

Location in Budget / total cost for activities in this section:

11.	Monitoring and Evaluation		757,197,760	$	100,960
7.11.a.	Transmission Assessment Survey for LF	MoHS	103,374,000	$	13,783
7.11.b.	Implementation of DQA	MoHS	70,299,000	$	9,373
8.11.a.	Independent Monitoring MDA Oncho-LF and SCH-STH in 12 Districts & WA	HKI	355,960,000	$	47,461
8.11.b.	Materials NTD Surveys	HKI	113,325,000	$	15,110
8.11.c.	Monitoring of Adverse drug reaction	HKI	32,850,000	$	4,380
8.11.d.	Mhealth	HKI	33,389,760	$	4,452
8.11.e.	Vehicle Rental for HKI	HKI	48,000,000	$	6,400

Data Quality Assessments (DQA)

The NTDP with technical assistance from the END in Africa Project held a training workshop at the end of the fourth quarter of FY16 to strengthen data management, create a national NTD database, and train their staff on its use and maintenance. In the last quarter of FY17, the NTDP will hold its first DQA with technical support from End in Africa. In the first quarter of FY18, the DQA will be rolled out in two districts with support from END in Africa.

Integrated NTD Database (INDB)

There is a need to hold a practical refresher training for the NTDP on the INDB in FY18. END in Africa support is requested for this activity, which is planned for November 2017. The goal of the practical training will be to enter data from recent DSAs into the INDB. The INDB will ensure that all data is securely maintained in a central, accessible location and that data reporting is consistent. The database can also assist with populating drug applications and help the NTDP prepare its elimination dossiers for LF and Oncho.

Coverage Survey

In FY18, a coverage survey according to the new WHO coverage guidelines will be implemented in the three districts that had the highest prevalence of LF in the Pre-TAS (Koinadugu, Bombali and Kailahun). The survey will be conducted in November 2017, approximately two months following the FY17 MDA, which is planned for September 2017. The reason for this survey is to verify the reported coverage, which has consistently been above 80%. If the survey results indicate that coverage is below the 80% threshold, the results will be used to identify new strategies to address any bottlenecks in program implementation to ensure high coverage for the FY18 MDA.

Disease Specific Assessments

In FY18, TAS for LF will be conducted in the UWA in February based on WHO guidelines using Alere FTS. Pre-survey activities, such as listing of primary schools and sensitization in communities will be conducted in the first quarter of FY18. Laboratory technicians and other support staff will be trained on the filed protocols and laboratory technics prior to the survey. See Table 7 above for details on the number of personnel who will be trained.

In addition, the eight districts that passed TAS1 and stopped MDA in FY17 will transition to post-MDA surveillance. Currently there is no specific plan for surveillance except after two years when TAS2 will be implemented.

M&E challenges, inaccurate denominators, getting DSA results out, MOH approvals

The 2004 national population census was conducted two years after the end of the civil conflict in Sierra Leone[15] when many Sierra Leoneans were either internally or externally displaced. Since then, much internal migration and rapid urbanization has occurred. This has been a challenge to the government and every partner working in the country. The NTDP has therefore been dependent on the village census that is conducted annually by CDDs in the rural areas. In the urban areas, the program had relied on WHO estimated numbers that have been used during National Immunization Days (NIDs) for polio, measles and yellow fever vaccinations. The FY18 work plan will use projections of the recent 2015 national census figures for program planning. However, the 2015 census figures are grossly underestimated for some districts especially the UWA. The GoSL is currently conducting civil registration for individuals below 18 years in the entire country. It is anticipated that this exercise will help to address the gaps in the 2015 census especially for SAC population.

To ensure high quality DSA results, HKI NTD staff will participate in field work including microscopy (where applicable) and data analysis. Also, NTD country team and partners will seek the assistance of HKI-HQ and RO to help develop protocols consistent with WHO guidelines for DSAs. MoHS approval for NTD DSAs and the ensuing publications relating to these DSAs has not been problematic.

Evaluation questionnaires are administered to community leaders, CDDs, PHU staff, DHMTs and community members to assess the extent and quality of activities performed are revised annually. The mobile phone application used to collect data will be used again in FY18 to strengthen independent monitoring and electronic reports of milestones met from FOGs. In addition, in FY13, electronic data collection was introduced for Independent monitoring through the use of smartphones for daily reporting during both in- and end-process monitoring. In FY18, this technology will continue to be used to facilitate timely reporting and swift actions during MDAs.

Table 9: Reporting of DSA supported with USAID funds that did not meet critical cut-off thresholds as of September 30, 2017

NTD	Number of remaining endemic districts (same as Table2)	Type of DSA carried out (add extra rows as needed for each type)	Number of DSAs conducted with USAID support	Number of EU that did not meet critical cutoff thresholds	Why did the EU not "pass" the DSA?	Post-DSA failure activities (be specific about timeframes)

[15] Civil conflict was between 1991 and 2002.

Lymphatic filariasis	14	Pre-TAS using FTS	6	5	See section under "NTD Program Overview" for possible reasons	Follow up survey using mf thick smear and questionnaires to ascertain compliance issues with treatment
Onchocerciasis	12	NA	NA	NA	NA	NA
Trachoma	NA	NA	NA	NA	NA	NA

Table 10: Planned Disease-specific Assessments for FY18 by Disease

Disease	No. of endemic districts	No. of Evaluation Units	No. of Evaluation Units planned for DSA	Type of assessment	Diagnostic method (Indicator: Mf, FTS, etc)
Lymphatic filariasis	14	NA	1	TAS 1	FTS

k. Supervision for Monitoring and Evaluation and DSAs

Location in Budget: Included in M&E
Total cost for activities in this section: $0

As part of effort to ensure WHO guidelines are followed, all field personnel including laboratory technicians are trained on the recommended strategy for DSA implementation. In addition, the survey teams are supervised throughout the DSAs to ensure compliance with the guidelines provided. Furthermore, four members of the NTDP program (two national and two districts) and one HKI staff participated in a WHO organized workshop in Entebbe, Uganda on the use of the new tools such as the FTS in the implementation LF surveys and the integration of Oncho and STH surveys during TAS. This will help build capacity on WHO recommended procedures.

With respect to supervision of coverage surveys, the current tool (Independent Monitoring) is mainly implemented by HKI and HKI supervises the Independent monitors to ensure that pre-established procedures are being followed to increase quality of data collected. The coverage survey in three HDs will be implemented by HKI, independent of the NTDP. HKI will organize the training of surveyors and will also supervise the survey implementation in the field.

l. Dossier Development

Location in Budget: Not budgeted separately
Total cost for activities in this section: $0

The NTDP implement programs for the elimination of LF in 14 HDs. In order for the country to eliminate the disease, all HDs will have to verify the absence of continued transmission in all endemic EUs after post MDA TAS. It is anticipated that 4 EUs will implement TAS 2 and TAS 3 in 2019 and 2021 respectively. One district or implementation unit will conduct TAS 1 in FY18 and if successful, will implement TAS 2 and TAS 3 in FY20 and FY22 respectively. The five districts which failed the Pre-TAS in FY17, will repeat

the process again in FY19 and if successful, will implement TAS1 in FY20, TAS2 in FY22, and TAS3 in FY24. This means the entire country is anticipated to meet the criteria to eliminate LF by FY24 at the earliest. Dossier development is expected in FY23 just before the final TAS3 in the country.

The MoHS is not currently familiar with the dossier development process or templates. The NTDP has not yet begun to prepare the narrative portion of the dossier. In FY18, HKI will orientate MoHS and partners on the processes and the requirements for the templates. This will equip the program to gather the necessary information required. No budget line is required for this activity.

The MoHS and partners have always kept copies of all data and information generated by the program since its inception. Baseline data and reports, impact assessments, Pre-TAS and TAS data are all available at the national level. Data on capacity building, social mobilization and other M&E activities are all available at the national level. In addition, reports generated and shared with WHO, USAID all contain most of the data required to develop the dossier. Several published data exist in the program and also online. To ensure that survey and MDA data is properly stored and managed and get ready for future dossier development, the NTDP will receive a practical refresher training on the integrated NTD database in FY18 and establish and complete the national integrated NTD database. HKI will advocate to the MoH to appoint a full-time data manager to the national NTD team. Having a centralized data management system will facilitate timely completion of the LF dossier in the future.

m. Short-term Technical Assistance

Location in Budget: STTA

Total cost for activities in this section: $0

Table 11: Technical Assistance request from PROJECT

Task-TA needed (Relevant Activity category)	Why needed	Technical skill required; (source of TA (CDC, RTI/HQ, etc))	Number of Days required and anticipated quarter	Funding source (e.g., country budget, overall budget, CDC funding)
Internal support (e.g., RTI/HQ, USAID, CDC)				
TA to update the TIPAC for FY18 and to use TIPAC report for resource mobilization (Strategic Planning)	*The NTDP has indicated that they cannot do the updating of the tool on their own*	*TIPAC Expertise (FHI 360/Deloitte)*	*5 days, Q1*	*USAID/FHI 360 – Deloitte budget*
TA for refresher training and implementation of NTD integrated database	*This will support the NTDP to compile and integrate all data in preparation for dossier development*	*Integrated database expertise (FHI360)*	*5 days, Q1*	*USAID/FHI 360*
External support (e.g., hired consultants)				

- **TIPAC**: The TIPAC will need to be updated to reflect Sierra Leone's FY17 data, and as such the National NTDP is requesting external support for this effort. With technical and financial support from the END in Africa project/Deloitte, the NTDP staff, representatives from the leprosy

program, directorate of disease prevention and control, and the Director of Finance, and HKI NTD staff received training on the TIPAC in March 2016. In FY18, a workshop will be held with support from Deloitte and FHI360 to update the TIPAC with new program outputs and to sensitize stakeholders in the MoHS on the importance and use of TIPAC as an advocacy tool for resource mobilization.

- **Resource Mobilization**: The NTDP currently only has two main donors (USAID/FHI360/HKI and Sightsavers). Given that the NTDP has needs for additional funding for activities that are not part of the scope of either of these projects/donors (such as management for lymphedema and hydrocele cases and passive surveillance), the NTDP will require the skills to help mobilize and manage additional resources. This technical assistance is proposed along with the TIPAC to ensure that the NTDP can use TIPAC data for their own resource mobilization efforts.

- **INDB Refresher Training & Data Entry:** Please refer to the M&E section for a description.

3. Planned FOGs to local organizations and/or governments

Table 12: Planned FOG recipients—include for all sub-partners as well.

FOG recipient (split by type of recipient)	No.of FOGs	Activities	Target Date of FOG application to USAID
NTDP	3	• Annual review meeting • Social Mobilization Meetings at the community level for MDA in 12 HDs • Cross-border meeting for 7 HD prior to MDA • Social mobilization at the district level for LF-Oncho-STH MDA in 12 HDs • Training of Trainers: LF-Oncho-STH in 12 HDs • Training and Refresher Training for PHU staff for LF-Oncho-STH in 12 HDs • LF-Oncho-STH MDA in 12 HDs • SCH MDA in 7 HD • MCHA-MDA LF-Oncho-STH in 12 HDs • Distribution of drugs and other logistics LF-Oncho-STH MDA in 12 HDs • Collection, Analysis and Reporting LF-Oncho-STH in 12 • Social mobilization at the community level for SCH MDA in 12 HDs • Social mobilization at the district level for SCH MDA in 7 HDs • Training of supervisors for SCH MDA in 7 HDs • Training and refresher training of PHU staff for SCH MDA in 7HDs • Training and refresher training of CDDs • Feeding of schoolchildren prior to SCH MDA in 7 HDs • Supervision and Materials for hard to reach areas • Distribution of Logistics and Drugs for SCH MDA in 12 HDs • Collection, analysis and reporting for SCH MDA in 7 HDs • LF Transmission Assessment Survey Urban Western Area • MDA Launch in 4 Districts • Meetings with Traditional Healers	*Oct 2017*
DHMT-UWA	1	• Social Mobilization at the community level (UWA) • Social Mobilization with private practitioners	*Oct 2017*

		• Social mobilization at the district level UWA • Training of PHU staff in UWA • Training of CHWs in UWA • LF-STH MDA in WA	
DHMT-RWA	1	• Social Mobilization at the community level (RWA) • Social Mobilization with private practitioners • Social mobilization at the district level RWA • Training of PHU staff in WA • Training of CHWs in WA • LF-STH MDA in WA • MDA Launch • Meetings with Traditional Healers	*Oct 2017*

4. Cross-Portfolio Requests for Support

Table 13: Cross-Portfolio Requests for Support

Identified Issue/Activity for which support is requested.	Which USAID partner would likely be best positioned to provide this support?	Estimated time needed to address activity
LF Burden Assessment	USAID's MMDP Project	3 Months

The major gap in Sierra Leone is the lack of funds for LF morbidity management if the NTDP is to achieve LF elimination by 2020. This is highlighted by the WHO as one of the key components of the elimination of LF. This gap accounted for 39% ($760,306) of the total cost for NTD activities, as per the March 2016 update on TIPAC, using data included in the TIPAC at that time. This gap calculation included assessment of the morbidity situation, hydrocele surgery and lymphedema management (using burden estimates from 2010).

In 2010, the CDDs estimated the backlog of people living with hydrocele or lymphedema as 23,500 and 8,300, respectively. These numbers were obtained from reports from the annual census conducted by CDDs before each MDA in each community. Also in 2012, reports from PHU staff at health facilities showed that 4,341 persons had lymphedema while 11,104 persons had hydrocele. Previous support from Johnson & Johnson was limited to the training of the doctors to perform hydrocele surgery and the 200 surgeries performed as part of the training. Since LF-sufferers have little or no disposable income to pay for transportation to a surgical center, doctors' expenses, and surgical consumables, few hydrocele surgeries are currently being performed. In FY16, the Chief Medical Officer indicated the need for the MoHS to support NTD-morbidity management, proposing that hydrocele surgeries could be performed free by the district medical superintendents. However, this has not been achieved due to the lack of funds from other sources. In order to help LF sufferers, the NTDP will require support from other partners for provision of surgical consumables, and for referrals. HKI and NTDP will continue to advocate with the NGO liaison office of the MoHS for support from other NGO partners working with disabilities.

It is worth noting that it has been over 5 years since the last assessment of cases by CDDs. Currently the NTDP believes that few new cases have occurred while some of those previously affected might have died

or moved, and some other existing cases may not have declared themselves or may not have been identified. Also, the data reported include general lymphedema and hydrocele that may not necessarily be related to LF.

In order to get an accurate estimate of lymphedema and hydrocele patients in the country, the NTDP would like to conduct an assessment to determine the current backlog of people suffering from lymphedema and hydrocele in the country and better understand the distribution of these cases to better plan for services.

The national program plans to train CDDs to conduct the assessment in communities throughout the country in FY18, if funding is made available. This was also included in the FY17 work plan but funding was not available. This is because each community has a CDD who distributes the drugs to inhabitants and there are higher chances that he/she can identify the patients. Also, the results will be more reliable and will reflect the total number in the country rather than an estimate.

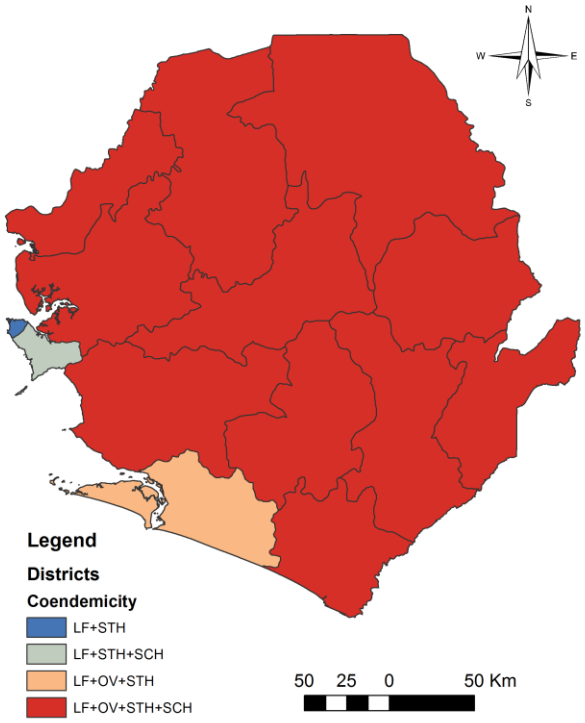
Following the burden assessment, the NTDP and HKI Sierra Leone will use these data to advocate for support for hydrocele surgery and lymphedema care from other sources.

In order to conduct this morbidity assessment, the CDD MDA training would need to be increased to 2 days (from the 1 day currently budgeted) to ensure sufficient time to cover the lymphedema and hydrocele identification. In addition, new community registers will be printed and distributed to all CDDs with modifications that will capture the morbidity data. Data collection is expected to take place during either CDD census or during MDA where each household will be visited by CDDs. The NTDP will require funding to cover the cost of training approximately 30,000 CDDs, 1,185 CHWs, and 1,020 MCH Aides-in-training and their allowances to collect the required data; printing of new community registers/forms; and cost for data entry, analysis and reporting. Please find below a breakdown of the proposed costs.

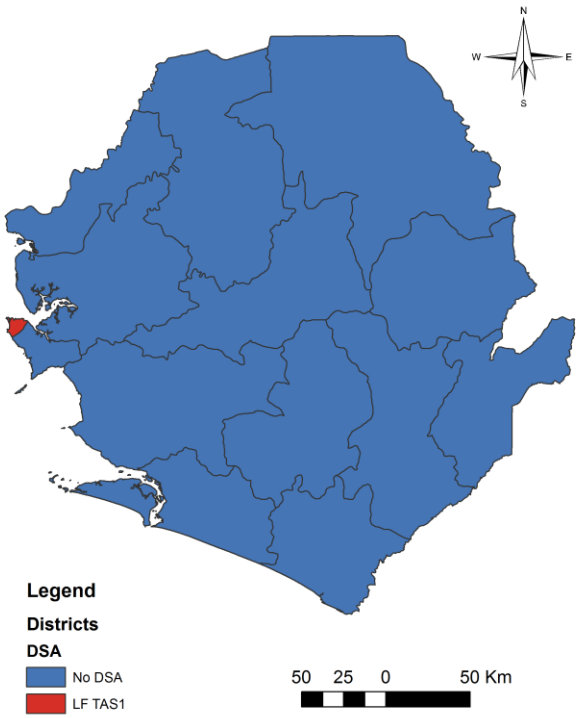
Morbidity Assessment for LF in Sierra Leone					
Training of Technicians					
Training Per Diem	**Unit cost (SLL)**	**Number of personnel**	**Number of days**	**Amount SLL**	**Amount USD**
MCH- Coordinators	100,000	12	1	1,200,000	198
PHUs	60,000	1,270	1	76,200,000	12,591
CHWs in Western Area	20,000	2,370	1	47,400,000	7,832
CDDs in villages	20,000	29,000	1	580,000,000	95,836
MCH Aides in urban towns	15,000	450	1	6,750,000	1,115
Subtotal -Training Per Diem				**711,550,000**	**117,573**
Materials - Stationaries					
Stationeries	**Unit cost (SLL)**	**Number of Units**		**Amount SLL**	**Amount USD**
Packet of Pens	25,000	100		2,500,000	413
Packet of Pencils	4,000	450		1,800,000	297
Printing of Registers	25,000	16,000		400,000,000	66,094
Subtotal - Stationeries				**404,300,000**	**66,804**
Field costs for survey					
Per diem Field Work	**Unit cost (SLL)**	**Number of personnel**	**Number of Days**	**Amount SLL**	**Amount USD**

CDDs	5,000	29,000	5	725,000,000	119,795
CHWs in Western Area	20,000	2,370	5	237,000,000	39,161
MCH Aides in urban towns	15,000	450	10	67,500,000	11,153
Subtotal – Per diem Field Work				**1,029,500,000**	**170,109**
TOTAL				**2,145,350,000**	**354,486**

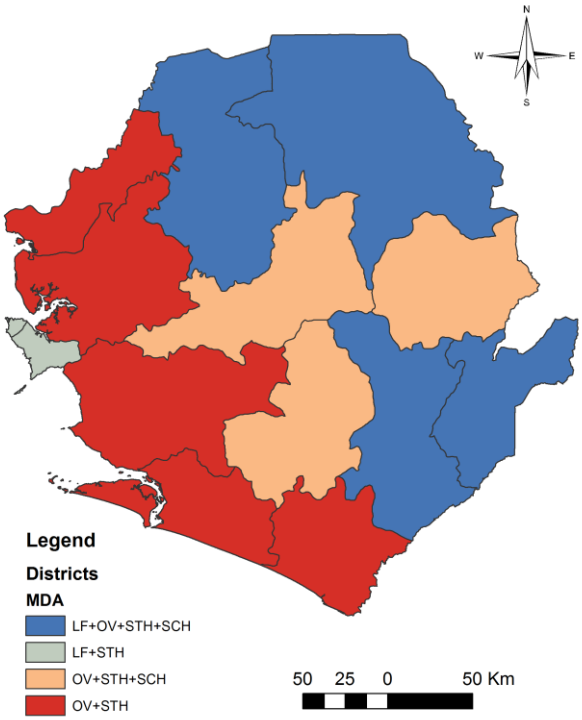
5. Maps



Map of NTD Co-endemicity



Map of FY18 DSAs



Map of FY18 MDAs

APPENDICES

1. Sierra Leone staffing chart and NTDP Organogram
2. Work plan timeline
3. Work plan deliverables
4. Table of USAID-supported districts
5. Sierra Leone FY17 SAR1
6. Program Workbook
7. Disease Workbook
8. Country budget