Sierra Leone

FY2016

Control of Neglected Tropical Diseases

Annual Work Plan

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Acronyms and Abbreviations

ALB	Albendazole
APOC	African Program for Onchocerciasis Control
CBM	Christoffel BlindenMission
CBO	Community Based Organization
CDD	Community Drug Distributor
CDTI	Community Directed Treatment with Ivermectin
CHA	Community Health Assistants
CHO	Community Health Officer
CHW	Community Health Workers
CNTD	Center for Neglected Tropical Diseases
DHMT	District Health Management Team
DMO	District Medical Officer
DPC	Directorate of Disease Prevention and Control
DQA	Data Quality Assessment
DSA	Disease Specific Assessment
EU	Evaluation Unit
EVD	Ebola Virus Disease
FAQs	Frequently Asked Questions
FHI360	Family Health International
FP	Focal Person
FY	Fiscal Year
GoSL	Government of Sierra Leone
HD	Health District
HKI	Helen Keller International
HTR	Hard To Reach
IEC	Information, Education and Communication
IVM	Ivermectin
JSI	John Snow Incorporated
KAP	Knowledge, Attitude and Practice
LF	Lymphatic Filariasis
MCHA	Maternal and Child Health Aide
MDA	Mass Drug Administration
M&E	Monitoring and Evaluation
MF	Microfilaremia
MoHS	Ministry of Health and Sanitation
MRU	Mano River Union
NEC-ADR	National Expert Committee for Adverse Drug Reactions
NGO	Non-Governmental organization
NID	National Immunization Day
NSAHP	National School and Adolescent Health Program
NTD	Neglected Tropical Disease
NTDFP	Neglected Tropical Disease Focal Point
NTDP	Neglected Tropical Disease Program
Oncho	Onchocerciasis
PC NTDs	Neglected Tropical Diseases targeted through Preventive
PHU	Chemotherapy

	Peripheral Health Unit
Pre-TAS	Pre- Transmission Assessment Survey
PZQ	Praziquantel
RWA	Rural Western Area
SAC	School Aged Children
SAE	Serious Adverse Event
SCH	Schistosomiasis
SCM	Supply Chain Management
SLPB	Sierra Leone Pharmacy Board
SOP	Standard Operational Procedures
STH	Soil Transmitted Helminthes
TA	Technical Assistance
TAS	Transmission Assessment Survey
TF	Trachomatous Inflammation, Follicular
TIPAC	Tool for Integrated Planning and Costing
USAID	United States Agency for International Development
UWA	Urban Western Area
WA	Western Area
WASH	Water Sanitation and Hygiene
WHO	World Health Organization

Executive Summary

The annual Neglected Tropical Disease (NTD) review meeting marks the beginning of the implementation calendar to review the targets achieved and discuss lessons-learned from implementation of the previous year's activities. Following the review meeting, the Neglected Tropical Disease Program (NTDP), Helen Keller International (HKI) and other NTD partners will hold a series of macro planning meetings where target populations for all health districts (HDs) will be agreed upon, and recommendations and lessons learned from the review meeting will be discussed and transformed into a working document. Recommendations from micro planning meetings held at the district and community levels by various stakeholders will be fed into macro planning at the national level.

Goals for fiscal year (FY) 2016 are to maintain 100% geographic and over 80% programmatic coverage for mass drug administration (MDA) in 14 HDs for lymphatic filariasis (LF) and soil transmitted helminths (STH); in 12 HDs for onchocerciasis (oncho) and in 7 HDs for schistosomiasis (SCH). Disease specific assessments (DSAs) for SCH will include an evaluation of prevalence and a re-assessment in 7 and 5 HDs respectively. The re-assessment is aimed at investigating the status of the disease after 7 years since the baseline survey without treatment to determine whether MDA should commence in those districts. The SCH impact assessments will only measure the prevalence and intensity of SCH infection, not STH as had originally been intended. The reason is that the FY16 LF/Oncho/STH MDA with ivermectin (IVM) albendazole (ALB) in the 12 HDs have been scheduled for March 2016. The impact assessments are scheduled for April 2016, which is less than the six month interval between MDA and impact assessments, recommended by the World Health Organization (WHO). An expert committee meeting for SCH is also planned in 2016 after the survey will have been conducted to review the current treatment strategy and make an informed decision for further MDA.

A transmission assessment survey (TAS) in 4 evaluation units (EUs) in 8 HDs, pre-transmission assessment survey (pre-TAS) for the first time in the Western Area (WA) and for the second time in the 4 HDs that failed the pre-TAS in 2013) which was scheduled for FY14 has now been re-programed for FY17 to allow communities to recover from post Ebola trauma. The impact assessment for STH will go alongside TAS in the first quarter of FY2017. Additionally, an epidemiological evaluation for onchocerciasis which was scheduled for FY15 has now been deferred to FY17 to reassess the disease prevalence in hyper-, meso- and hypo-endemic communities. The results will also inform MDA-strategy for onchocerciasis after FY2016 when MDA for LF would have stopped in most districts. . Materials and pre survey activities for the above surveys will be procured in the last quarter of FY16.

Mapping for all targeted NTDs has been completed and no mapping is required in FY2016. MDA training and refresher trainings will be conducted for both new and previously-trained personnel. Training will target NTD focal persons (NTDFPs), district supervisors, peripheral health unit (PHU) staff, community health workers (CHWs), community drug distributors (CDDs), laboratory technicians and independent monitors. MDA will target 5.8 million persons for LF and STH in 14 HDs; 3.4 million persons for onchocerciasis in 12 HDs; 507,816 school aged children (SAC) and 774,259 at-risk adults for SCH in 12 HDs depending on the re-assessment results in 5 coastal HDs.

Supportive supervision will be conducted at all levels in a cascade manner during implementation of the following activities: macro-planning, training of district heath management teams (DHMTs), advocacy at district level, training of health workers, social mobilization, training of CDDs/CHWs, MDA and Independent monitoring. In addition, the National School and Adolescent Health Program (NSAHP) staff will participate in the supervision of the SCH MDA during which the second round of MDA-STH will be conducted. Community self-monitoring will be strengthened in FY2016 in chiefdoms (sub districts) within HDs with persistent LF-microfilaræmia level ≥1%.

Monitoring and evaluation (M&E) performed by the NTDP will be enhanced through training on data quality assurance (DQAs), the WHO Joint Reporting and Drug Request Forms and the creation of a national database with technical assistance from Family Health International 360 (FHI360) and the Ghana NTDP. In[1]-process and end[2]-process independent monitoring (IM) of MDA coverage and the debriefings that accompany the IM will continue to help the NTDP swiftly address challenges and help validate programmatic coverage especially in hard to reach (HTR) communities. Independent monitoring results looking at the impact of advocacy, social mobilization and training will continue and be used to improve the quality of these activities.

Transition to post-MDA LF surveillance is anticipated in 8 HDs in FY2017 after the planned TAS in November 2016. This transition will require further training of district/private sector laboratory technicians on the identification of LF-microfilaria from blood samples collected as part of their routine work between 10pm and 2am and during screening for the army and police recruitments and university entrants' screening. Cross border control to prevent recrudescence due to importation of LF from other HDs and/or from neighboring Guinea and Liberia will focus on synchronizing NTD activities within the Mano River Union (MRU) and modifying MDA strategies to ensure coverage amongst cattle herders and other nomadic people, employment-seeking migrants and MDA-migrants. The Tool for Integrated Planning and Costing (TIPAC) will be updated by senior Ministry of Health and Sanitation (MoHS) financial and technical officials and the HKI team with technical assistance from END in Africa through Deloitte.

Looking ahead, there will be a need to help people living with LF-disability (hydrocele and lymphedema that are estimated at 23,500 and 8,300 respectively), to strengthen LF surveillance, to provide continued STH MDA in HDs that have stopped MDA for LF and to provide continued MDA for oncho in hypo-, meso- and hyper-endemic communities.

[1] In-process monitoring is conducted during MDAs and is used to provide information on MDA performance indicators such as problems with supplies, refusals, distribution or other issues that are reported daily to the DHMT and forwarded when appropriate to the NTDP for action.
[2] End-process monitoring is conducted immediately after the MDA campaign to independently estimate post-MDA program coverage especially in urban settings such as the WA where accurate population data is unavailable. Although not as rigorous as a coverage validation survey, independent monitoring is less costly and more useful to program implementers since corrective measure can be activated in real time.

COUNTRY OVERVIEW

Administratively, Sierra Leone is divided into the Western Area (WA) and three provinces: Northern, Southern and Eastern. The three provinces are further divided into 12 health districts (HDs); while the WA is divided into rural (RWA) and urban (UWA), where the capital Freetown is located. Excluding the WA, Sierra Leone has about 14,413 villages with populations ranging from 100-500 inhabitants (2004 population census). There are 149 chiefdoms in the 12 HDs of the 3 provinces that are governed by traditional paramount chiefs while WA is subdivided into 30 wards headed by Councilors.

The Ministry of Health and Sanitation (MoHS) is divided into medical and management services. Under the medical service there are 14 directorates including the directorate of Disease Prevention and Control (DPC) which supervises the national neglected tropical disease program (NTDP). Each of the 12 HDs and the WA 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 1,195 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[3] volunteer Community Drug Distributors (CDDs). These CDDs are the back bone of all the NDTP activities in the rural setting. While in the rural setting CDDs serve as volunteers within the NTDP, in the WA, there are no volunteer CDDs and NTD drugs are distributed by paid community health workers (CHWs) for a fixed number of days (normally five days).

In addition to the NTD Program of the United States Agency for International Development (USAID), which provides the main support to the activities of the NTDP in Sierra Leone through Helen Keller International (HKI), the following partners have contributed support to the integrated NTDP:

The African Program for Onchocerciasis Control (APOC) has provided technical and financial support to the mapping and Community Directed Treatment with Ivermectin (CDTI) for control of onchocerciasis (oncho) since 2003 after the Onchocerciasis Control program was closed in 2002. Even though APOC support has exclusively been for oncho control (training of health workers and CDDs and supervision of MDA in hyper-and meso-endemic communities), the funds are pooled with those for overall integrated NTD activities. APOC provide approximately $100,000 per annum.

Sightsavers has also supported CDTI for onchocerciasis control post-war since 2002. Activities supported include training of CDDs, monitoring and supervision of MDA. Financial support provided is approximately $20-30,000 per annum.

[3] Historically, 22,500 CDDs have received training and motivation (T-shirts, etc.) through END in Africa and 6,500 through APOC. APOC did not provide funding to Sierra Leone in 2015 and is closing at the end of 2015; END in Africa will support the additional 6,500 CDDs that APOC will no longer support.

Since APOC will be closing at the end of 2015, other partner funding for NTD activities in FY2016 is expected from Sightsavers only. However, since Sightsavers operates on different financial timeframes from USAID (January-December against October-September), their commitments for FY2016 will not be known until January 2016. TOMS Shoes and HKI established an innovative partnership in FY2013 that has resulted in the giving of shoes to all CDDs for themselves and their dependents as motivation. The first shipment of 123,085 pairs and the second shipment of 201,330 pairs were distributed in FY2013 and FY2014 respectively. A third shipment of 204,930 pairs is expected to arrive and will be distributed in October 2015. From FY2010 to FY2014, 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. Johnson & Johnson via a Ghanaian consultant (Dr. S.D. Mante) has trained/retrained 70 doctors, mostly from the Northern Province, on surgical procedures for hydrocele. However, there is no pledge from these organizations for FY16.

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 FY2010 came from the World Food Program and in FY2011 and FY2012 from the World Bank's Fast Track Initiative through the Ministry of Education, Science and Technology. Mebendazole/ALB has been 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 FY2013, SABIN vaccine institute also supported a second round of deworming for SAC in RWA.

USAID history of support

USAID support to the NTDP in Sierra Leone began in 2008 with baseline microfilaremia (Mf) survey for LF in 8 HDs[4], mapping/baseline survey for SCH and STH in 14 HDs, mapping survey for trachoma in 5 HDs and additional sub-district level (chiefdom) SCH surveys in 7 HDs in 2009. After all mapping/baseline surveys for the 5 NTDs targeted through preventive chemotherapy (PCT NTDs) was completed, USAID support has since been extended to include MDA, M&E, DSA and capacity building for the control/elimination of the 4 PC NTDs that are endemic in Sierra Leone (trachoma mapping surveys showed that trachoma was not endemic in Sierra Leone and did not warrant MDA intervention based on the WHO guidelines).

Since the integrated control of NTDs began in 2008 with funds from USAID, the NTDP has achieved remarkable success with LF, oncho, SCH and STH. Achievements to-date include 100% geographic coverage for all target NTDs according to the national plan. Program coverage for SCH has been expanded from school-going children only in 6 districts in 2009 to include all SAC and at-risk adults in endemic chiefdoms in 7 HDs in 2010. Effective programmatic coverage of ≥80%, according to NTDP reports at the district level, has been maintained consecutively for LF, oncho, SCH and STH since 2010. The results of Pre-TAS completed for LF in 2013 and impact assessment survey completed for SCH in 2012 showed a reduction in disease prevalence, indicating progress towards elimination/control, respectively. All NTD

[4] Mapping using immunochromatographic cards (ICT) cards in all 14 HDs and baseline Mf survey for LF in 6 other HDs was funded in 2005 and 2007, respectively, by the WHO Regional Office for Africa (AFRO). Mapping for Oncho was completed in 2005 with technical and financial support from the WHO.

activities have been integrated and implemented through the existing national health system through the appointment of a national program manager and budget line and assigned focal persons (FP) at the district level. Training manuals, frequently asked questions (FAQs), posters, guidelines, and pre-service training curriculum have been developed by the NTDP to ensure that those involved in the MDA are knowledgeable and able to respond to the targeted populations' questions and concerns. Innovative in-process and end-process independent monitoring of MDAs using mobile phone applications were developed in 2011 and have been revised annually using various applications: Episurveyor, Magpie, CommCare.

Table 1: NTD partners working in country, donor support and summarized activities

Partner	**Location (Regions/States)**	**Activities**	**Is USAID providing direct financial support to this partner?** (Do not include FOG recipients)	**Other donors supporting these partners/ activities?**
HKI	National level, all 14 HDs	Provide direct overall technical assistance to the MoHS in advocacy, strategic planning, implementing, supervision, M&E and capacity building	Yes	No
APOC	12 HDs for Oncho only	Provide financial support for training of health staff and CDDs and supervision of MDAs in hyper and meso endemic communities.	No	Several
Sightsavers	12 HDs for Oncho only	Provide financial support for training of health staff and CDDs, and supervision of MDAs	No	DFID

Note: APOC formerly provided approximately $100,000 per annum but did not provide support in 2015 and is closing at the end of 2015, and Sightsavers support is approximately $20-30,000 per annum. These funds are pooled with the major USAID funding.

National NTD Program Overview

Lymphatic filariasis

Mapping in 2005 showed that all 14 HDs are LF endemic and baseline LF Mf surveys were performed in 2007 and 2008[5] Geographic MDA coverage of 100% for LF was achieved in 2010 with inclusion of the urban settings in WA and the 12 provincial districts. Drug distribution is conducted using campaign strategies by CHWs in the WA[6] and CDDs supported by MCHAs-in-training in the 12 provincial districts. An impact assessment[7] in 2011 and a Pre-TAS in 2013 for LF both showed a reduction in mf prevalence. In the Pre-TAS, 12 HDs were paired into 6 evaluation units (EUs) due to the small population sizes to share one sentinel site in one HD and a second site in the other HD was used as spot-check site. Four of the six EUs (made up of the HDs Bo, Pujehun, Kambia, Port Loko, Tonkolili, Kono, Bonthe and Moyamba), had mf prevalence <1% and qualify for TAS in FY2015[8], but TAS has not taken place due to the Ebola outbreak, and has now been rescheduled for FY2017, as the NTDP made the decision during FY16 workplanning that the population would not be ready to accept blood samples being taken from healthy children, as this is associated with Ebola.

The 2 EUs that failed the pre-TAS include Bombali + Koinadugu and Kailahun + Kenema. This was due to the fact that at least one site in each EU had mf prevalence >1%. Two additional MDAs have been completed in FY2014 and FY2015 in the 4 districts that 'failed' the pre-TAS and they are now qualified for another Pre-TAS. This is also scheduled for FY2017 in order to allow the populations to gain more trust and confidence in health workers post-Ebola. All these 4 HDs share borders with Guinea and/or Liberia where full scale-up of MDAs to 100% geographic coverage has not yet been achieved by their national NTDPs. Whist the Ebola outbreak has hindered the cross-border control efforts with Guinea and Liberia, HKI will facilitate with FHI360 to organize a cross border meeting for Sierra Leone, Guinea and Liberia to deliberate and draw on concrete solutions from FY2016 onwards. Both RWA and UWA in the WA will have completed five rounds of effective MDA by the end of FY15; pre-TAS will also be conducted in these two HDs in FY17.

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

Onchocerciasis

Through studies conducted with financial and technical support from APOC between 2003 and 2005, it was shown that the 12 HDs had meso-endemic (prevalence between ≥20 and <60%) and hyper-endemic (prevalence ≥60%) areas with an estimated at-risk population of 3 million that had to be treated with

[5]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. *Parasite Vectors.* 2012; 5(10). doi:10.1186/1756-3305-5-10

[6] 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.

[7] 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.

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

ivermectin (IVM). The WA (RWA and UWA) and the Island of Bonthe were not endemic for oncho (though the rest of Bonthe district is). From 2002-2006, CDTI was implemented in 8,451 meso-endemic or hyper-endemic villages. In 2007 albendazole was added to the strategy in 6 districts. 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. In order to make a decision about oncho MDA after LF MDA that is projected to stop in 2017, another impact assessment survey is proposed in FY17 to determine the prevalence status in previously meso- and hyper-endemic areas and the need of IVM MDA in hypo-endemic areas that have benefitted from MDA for LF since 2008.

Schistosomiasis

Prior to the USAID funding in 2008, there was no SCH control program, although evidence from earlier studies indicated that both intestinal and urinary forms of SCH were prevalent in the north-east. Mapping in 2008-09 found moderate to high prevalence of *Schistosoma mansoni* in 7 HDs (Kono, Koinadugu, Kenema, Kailahun, Bo, Bombali and Tonkolili)[9] with 1.8 million people at risk, and low prevalence in the five coastal districts (Port Loko, Kambia, Moyamba, Pujehun and RWA). Bonthe and UWA had zero prevalence. In 2009, annual MDA started targeting only SAC in 6 endemic HDs and scaled up in 2010 to include all SAC and at-risk adults in 7 highly or moderately endemic HDs (any adult living in the rural areas of the 7 endemic 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%)[10].

In FY16, prevalence assessment for SCH will be conducted in 12 HDs and the results will be used to redefine treatment strategies for SCH in Sierra Leone. This assessment was approved and would have been conducted in FY15 but was postponed due to the Ebola outbreak. Similarly, MDA in the 5 coastal HDs had been planned for FY14 but the recent Ebola outbreak necessitated its deferment *pro tempore.* However, these low prevalence districts will be re-assessed in 2016 to determine whether MDA is warranted in these HDs, along with the impact assessment for the 7 districts that had received 5 rounds of MDA in recognition of increasing and ongoing internal migrations.

Soil Transmitted Helminths

Mapping in 2008 showed moderate to high prevalence of STH in 12 HDs[11]. One round of MDA-STH for everyone above 5 years of age is implemented through MDA-LF under USAID funding. The second round of MDA-STH 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. The second MDA for STH has so far been made

[9] 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.
[10] Sesay S, Paye J, Bah MS, et al. Schistosoma mansoni infection after three years of mass drug administration in Sierra Leone. *Parasite Vectors*. 2014; 7(14). doi:10.1186/1756-3305-7-14.
[11] 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.

possible by the donation of mebendazole to HKI between FY2009 and FY2013. In FY2011, FY2012 and FY2013 the second MDA for STH was also conducted in 8, 12 and 1 HDs, respectively, by school-teachers. This second round of MDA-STH has not been conducted in each district every year because it is dependent year after year on available funding and the timely arrival of drugs. Prevalence assessments for STH, scheduled for FY15 but postponed to FY17 due to the Ebola outbreak, would have been conducted alongside SCH but the timing for MDA for LF in FY2016 made the integration of this assessment impossible (since the window of time between the MDA and the SCH assessment is <6 months). This assessment will be conducted in FY2017 alongside TAS to help decide whether MDA-STH will continue where MDA-LF has been stopped. There is plan to include a second deworming of SAC in the GoSL's post-Ebola recovery plan.

HKI also supports the 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 within 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.

Trachoma

Mapping was conducted with USAID funds in 2008 in the 5 northern HDs that border with districts in Guinea where trachoma was endemic. Prior surveillance reports from MoHS suggested that trachoma may be a public health problem in these border HDs. The prevalence of trachomatous inflammation-follicular (TF) in children aged 1–9 years in all districts was <5% and MDA with azithromycin was not warranted in line with WHO guidelines. The prevalence of trachomatous trichiasis (TT) in persons ≥15 years was <0.1% (or less than 1 case per 1,000 people) among those studied and so intervention for TT were also not conducted. Although training to identify TF and TT cases in the communities has been integrated in the annual training of trainers (ToT) for MDA-LF-onchocerciasis, no surveillance has yet been put in place for trachoma. The National Eye Care Program and CBM can provide trichiasis surgery when cases are referred for treatment. However, payment is based on a cost-recovery mechanism and the fees may not be affordable for most of those affected. The NTDP is planning to include trachoma surveillance and outreach surgical camps for TT in the next Master Plan for 2016-2020.

Table 2: Snapshot of the <u>expected</u> status of the NTD program in COUNTRY as of September 30, 2015

		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 09/30/15		No. of districts expected to be in need of MDA at any level: MDA not yet started, or has prematurely stopped as of 09/30/15	Expected No. of districts where criteria for stopping district-level MDA have been met as of 09/30/15	No. of districts requiring DSA as of 09/30/15
					USAID-funded	Others[1]			
Lymphatic filariasis[12]	*14*	*14*	*0*	*0*	*14*	*0*	*0*	0	Pre-TAS: *6* TAS: *8*
Onchocerciasis		*12*	*2*	*0*	*12*	*12*	*0*	*0*	*0*
Schistosomiasis		12	2	0	7	0	5	0	12
Soil-transmitted helminths		14	0	0	14	0	0	0	0
Trachoma		0	14	0	0	0	0	0	0

1 MDA for Oncho was co-supported by USAID and Sightsavers in FY15.

PLANNED ACTIVITIES

Project assistance

NTD activities supported by USAID and other partners for FY16

In order to allow USAID to respond to ADS Chapter 205 requirements of "integrating gender equality and female empowerment into USAID's program cycle," please highlight any gender-focused activities in the work plan.

[12] TAS and Pre-TAS was not implemented due to Ebola virus disease outbreak in the Country. These assessments have been re-scheduled for FY17

The MDA activities target at-risk populations for each of the 4 PC NTDs endemic in Sierra Leone, aiming for equitable coverage for both males and females. However, social mobilization on market days have specifically targeted women, who make-up the majority of the traders in the markets. 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 may have 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 (2008 – 2013). 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.

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[13] who are still seen as threats to women by communities. Since 2013, the proportion of female independent monitors has been approximately 25% compared to less than 15% when this activity began.

Strategic Planning

[Budgeted: Review meeting for NTDs (FOG); Support MoHS to develop NTD Master Plan (ODC); TIPAC (TA not budgeted)]

The NTDP, with technical assistance from HKI and WHO, developed a five year NTD Master Plan, 2011-2015, which covered 4 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, the NTDP, in collaboration with WHO and HKI, will hold a workshop to invite stakeholders, DHMTs, and senior MoHS staff from DPC to develop a new five-year strategic plan (2016-2020) according to new WHO guidelines. This plan will prioritize post-MDA surveillance for NTDs, cross border control strategies for NTDs and a policy for morbidity management. As in previous years, HKI will work together with NTDP to create the FY17 work plan for END in Africa support.

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. Following the review meeting, the annual NTD work plan is

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

developed by the NTDP in collaboration with HKI and other NTD partners in a series of macro planning meetings conveyed to agree on the target population for each MDA. Modified strategies and timeframes need to be assimilated into the NTDP workplan to mitigate factors such as delays in funding, late arrival of drugs, and unforeseen competing MoHS activities or emergencies, such as the cholera epidemic in FY2012 and the Ebola outbreak in FY2014.

With technical and financial support from the END in Africa project/Deloitte, the NTDP staff, senior officials of the MoHS including the Director of Finance and the Program Manager for Health System Strengthening, and HKI NTD staff will receive training on the Tool for Integrated Planning and Costing (TIPAC). The TIPAC will be updated with the program output data for 2010-2015. The training will also include the use of TIPAC as an advocacy tool.

NTD Secretariat

[Budgeted: Vehicle Repair and Maintenance (NTDP & NASH) (ODC); Administrative Cost for the NASH+NTD Programme Secretariat (ODC)]

NTD Secretariat

Maintenance and fuel costs of existing NTDP program vehicles have been included in the NTDP operations budget. Available funds have made regular maintenance of the NTDP vehicles possible and have enhanced the NTDP staff's capability to supervise the activities at all levels. At the district level, the cost of hiring of motorcycles and cost of fuel has also been included in the district budget to help the district NTDFP effectively supervise NTD activities and also organize cross border meetings. 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 social mobilization, CDDs training and MDA. 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 and stationeries, computer and accessories, internet running cost and fuel for office generator.

Vehicles for the entire operation of the NTDP have been provided exclusively by APOC. However, the last set of vehicles supplied to the program five years ago was taken away from the program to support the fight against Ebola. Though now returned, they have been over-used, broken-down and need urgent replacement. With APOC now folding-up and currently providing no funding to FY2016 budget, the NTDP is appealing to USAID to extend their support to the program with vehicles to avoid the risk of delaying the implementation of activities in FY2016. The Minister of Health pledged his support to fill in some of the gaps that will be left by APOC: specifically, paying salaries to drivers, security personnel, the storekeeper for NTD drug storage, and other essential staff that were receiving salaries from APOC.

Advocacy

[MRU Cross Border Meetings (FOG); Advocacy Meetings for PCT SCH-STH (FOG); Advocacy Meetings for ONCHO-LF (FOG); Advocacy Meetings in the Western Area (FOG); Development/Validation/Dissemination

Workshop on NTD Curriculum Development for Tertiary Institution (FOG); Special Advocacy meeting in Districts with High LF Prevalence (FOG); Participation in Meetings (ODC)]

Government-to-government advocacy in FY2016 will be enhanced through the Mano River Union (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 within MoHs and partners. The risk of cross-border recrudescence of NTDs and synchronizing MDAs in the border communities will be addressed in the next MRU meeting in October 2015 to develop a regional NTD strategy and define roles and responsibilities for risk-mitigation.

At the district level, advocacy meeting will be held for each MDA lead by the DHMTs at each district headquarter town targeting councilors and/or the city mayors, religious leaders, paramount chiefs, civil society, media and other related groups will be targeted. The aim of this meeting is to solicit support from these stake holders for the NTD program and help raise awareness in their localities.

Special advocacy will be held in FY2016 with technical assistance from Deloitte to help the NTDP on how to solicit local funds from private institutions such as the banks, mining companies, mobile phone companies and other business entities to address morbidity management for LF. Since current USAID funds in Sierra Leone are not targeting this aspect of the elimination drive for LF, it is hoped that these private institutions will help the national NTDP through their corporate social responsibility to address this gap (see Technical Assistance section).

Over the years, GoSL support to the NTDP has been limited to administrative support. The 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, disease epidemics such as cholera outbreak in 2012 and the current Ebola outbreak) and more than available resources are needed to address them. However, in FY2016 the NTDP will strategically target political support through the Minister of Health and Sanitation to include support to NTDP in the Ebola recovery plan. Specifically, the Parliamentary Budget Oversight Committee for Health will be targeted 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. Advocacy will also be conducted for timely disbursement of allocated NTD-funds.

The MDA-LF in the WA will be launched in FY 2016 at the national level by a formal presentation of ALB and IVM to the Minister of Health and Sanitation for the attention of the GoSL and will be reported nationally in the media. This will raise awareness on the huge contributions being made towards NTD control globally and within Sierra Leone. The launch will also target other senior MoHS officials, local authorities and GoSL dignitaries, including the Minister of Education and Parliamentarians as keynote speakers. 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). This will raise

awareness of the degree of external support the NTDP receives and demonstrate that the GoSL also needs to show equal interest.

Since 2011, private medical professionals in the WA have collaborated with the NTDP during MDAs in the WA 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 FY2016, 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) (should any occur).

Since workers within the mining sector are more likely to miss MDAs conducted within communities for the PC NTDs, the NTDP has to establish collaboration with mining companies to ensure that their workers are treated by their medical staff during the period of MDAs in these communities. This collaboration was established with Sierra Rutile in FY2013 and with African Minerals in FY2014. In FY2016, 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.

Among the 4 HDs (2 EUs) that failed the pre-TAS, special advocacy meetings will be continued in these HDs in FY2016 to which paramount chiefs, section chiefs, civil society groups, police and councilors will be invited by the NTDP and partners. Furthermore, pre-MDA press briefings will be held and reported by community radio, social media and local newspapers in these districts with the aim of improving the knowledge, attitude and practices (KAP) of opinion leaders, community members and also health workers. This might lead to higher MDA compliance within these districts during MDA.

Finally, HKI, with funding from END in Africa, will assist the NTDP to develop a curriculum on NTDs that will be used in tertiary educational programs. The objective is to ensure as new cadres of health workers begin to work at PHU or district-level health facilities that they are already aware of NTDs and understand the control and elimination mechanisms. This will make them more effective in the implementation of these activities and may reduce the need for training in the future.

Social Mobilization

[Budgeted: Social Mobilization in the Western Area; for ONCHO-LF (FOG); for SCH-STH (FOG); IEC Materials (ODC)]

Social mobilization is conducted at various levels. At the national level, advocacy meetings are organized for the NTDP to share information on planned activities with decision-makers within the MoHS and also with parliamentarians, medical professionals, Non-Governmental Organizations (NGOs) and Community-Based Organizations (CBOs). 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 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. Lessons learnt from the recent past suggest that some communities listen to religious leaders more than traditional leaders, as they are considered to be closer to God and their messages are more in line with God's will. This was also evidenced during the Ebola outbreak, as community compliance to Ebola prevention messages increased when the religious leaders were engaged by a local NGO "FOCUS 1000" to lead community sensitizations efforts.

Religious leaders, therefore, will be specifically targeted in FY2016 and encouraged to participate in awareness-raising prior to and during MDAs to help maintain/improve compliance to treatment. In addition, social mobilization on market days within border districts will specifically 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. In addition, special advocacy meetings will be held between the NTDFPs of the seven districts bordering on Guinea and Liberia, as well as representatives from those NTDPs with supervision of NTDP and partners just prior to the MDAs. The purpose of these meetings is to ensure that Sierra Leoneans currently on the other side of those borders are mobilized to return to Sierra Leone to receive treatment, since MDA has not been scaled up to full national coverage in either Guinea or Liberia.

Television, public mega-screens and social media (Facebook) are used for MDA-LF in the WA: a short animation film was produced in FY2011, and a short comic sketch produced by 'Wan-Pot'[14] in FY2012 was modified in FY2013 and will be revised and used again in FY2016. Youth groups will also be contracted to make street announcements.

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 MDA-SCH in schools and MDA-LF in the WA.

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 revised FAQs and jingles translated into the main local languages (Mende, Temne, Limba, Krio, Kissi, Loko and Kono) that have been revised to include issues about MDA in the context of post-Ebola settings. The FAQs can be used as an anchor by the interviewer to address public concerns on NTDs and also respond 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 pre- and during MDAs.

[14] Arguably the most popular theater group in Sierra Leone.

The media used in social mobilization depend on the population. During the civil war of 1991-2002, 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.

Capacity Building/Training

[Budgeted: Training of Trainers-ONCHO LF (FOG); Training of Supervisors – SCH (FOG); Refresher Training 12 Districts PHU Staff Oncho-LF (FOG); Training PHU Staff Western Area (FOG); Refresher Training PHU Staff SCH-STH (FOG); Training, Community Health Workers, Western Area (FOG); Refresher Training of CDDs (FOG); M&E Training Workshop (ODC); Training of Technicians for LF Surveillance (FOG); SCH Impact Assessment (budgeted FY15 FOG)]

- Describe specific capacity building needs in country, and how the proposed USAID-supported training and other capacity building activities will address those needs
- For refresher training, provide detail on the timeframe since the last training, and the rationale
- All planned USAID-supported training (including supervisors, MDA, M&E) should be included in Table 3, and should ALSO have a corresponding narrative description.
- For M&E training, please include it in Table 3, with a footnote that the narrative description is found in the M&E section.
- Include details on post-training follow-up/monitoring during this project year as well as future year follow-up to ensure skills retention and application

Annual training/refresher training will be provided for health personnel. 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 KAP. Details of planned trainings/refresher trainings for FY2016 is shown in Table 2 below. Lessons learned include the fact that the annual trainings/refresher trainings are required to mitigate the effect of frequent transfer of staff to new positions, attrition, new recruitment and selection of new CDDs.

As the NTDP prepare to start post-MDA LF surveillance, training of more district laboratory technicians will be conducted at the Makeni NTD laboratory on the microscopic diagnosis of LF mf from blood collected between 10pm and 2am.

The NTDP in Sierra Leone was unable to participate in workshops specifically organized by WHO on M&E in 2013, except for the TAS training in Harare. Both the NTDP and HKI M&E staff therefore need training on NTD M&E tools including the WHO joint reporting and joint drug request forms, data quality assurance

(DQA) and the national database. Once trained, these staff will train the M&E staff in the DHMTs, to strengthen the overall NTD data management system.

Table 3: 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)
		New	Refresher	Total trainees			
MoHS/DHMTs	MDA LF-oncho-STH	5	34	39	1	Bo	Sightsavers
Supervisors	MDA SCH-STH	0	79	79	1	Kenema and Makeni	
PHU staff	MDA SCH-STH MDA LF-oncho-STH MDA LF & STH	120 400 30	276 717 80	396 1,117 110	1 1 1	7 HD 12 districts RWA & UWA	
CHWs	MDA LF STH	930	1320	2250	1	RWA&UWA	
CDDs	MDA LF oncho & STH	TBD	29000[15]	29000	1	All PHUs in 12 districts	Sightsavers
Independent monitors	MDA LF oncho, SCH & STH	25	20	45	1	HKI conference hall	

[15] 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. It is expected that fewer CDDs might return once the Ebola epidemic is over.

Technicians	LF surveillance	14	0	14	5	NTD Lab Makeni	
Technicians	SCH impact assessment	18	6	24	2	NTD Lab Makeni	

Mapping (Location in Budget: N/A)

Mapping for all targeted PC NTDs has been completed, including hypo-endemic oncho villages; there are no gaps. No mapping is required in FY2016.

MDA

[Budgeted: MDA ONCHO-LF in 12 Districts (FOG); MCHA-LF-District Head Quarter Towns (FOG); MDA-LF-Western Area (FOG); MDA SCH in 7 Districts (FOG); Feeding of School Children Prior to PZQ (FOG); Supervision of Hard to Reach Areas (FOG); Materials: MDA Oncho-LF (ODC); Branded Caps/T-Shirts for CDDs (ODC)]

In FY16, the planned MDAs include:

- LF/STH MDA: in 14 HDs targeting 5.8 million persons
- Oncho MDA through LF MDA: in 12 HDs targeting 3.4 million persons
- SCH MDA: in 12 HDs (depending on the re-assessment results in 5 coastal HDs) targeting 507,816 school aged children (SAC) and 774,259 at-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 2016 alongside MDA LF-oncho-STH in 12 districts. The FY2014 round was missed due to the Ebola epidemic but the FY15 MDA is still scheduled to be implemented in September/October 2015.

In the 12 rural HDs, MDA-LF-oncho-STH will be implemented over a period of 6-8 weeks 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 of the 12 provincial HDs. The FY15 MDA was shifted to June–July 2015. In FY16 MDA will be done in March 2016. In the work places in the mining sectors MDA will be carried out by their medical staff at the same time in FY16 to ensure coverage especially of males outside their census-villages.

MDA-SCH will be implemented mostly by health workers assisted by CDDs in June 2016 lasting 7 days as both a community and a school-based campaign. Food will be provided for the school enrolled children by the school authorities prior to PZQ administration. A maximum of five hundred leones (SLL500) will be provided per child to enable the school teachers prepare food for the kids. Adults and out of school children will be encouraged to eat at home prior to treatment. The second round of STH will occur during MDA-SCH as the supply of mebendazole is already available in the NTD-Makeni stores.

Hard-to-Reach (HTR) communities in Sierra Leone are located in remote locations requiring boat-hiring for riverine fishing villages or motorcycle-hiring in areas inaccessible by road but also in over-crowded, sometimes insecure, urban slums. These communities require special social mobilization targeting the leaders of civil society groups, such as motorcycle riders associations, ex-combatants and drivers' unions, with tailored messages for dissemination. In addition, reaching employment-seeking-migrants within the mining/industrial sector requires collaboration and coordination with medical providers within the mining companies so they include MDAs for PC NTDs as part of the care they provide to their workers.

Seven of the 12 HDs share borders with neighboring MRU countries: Kambia, Bombali, Kono, Koinadugu (with Guinea), Kailahun (with Liberia and Guinea), and Kenema and Pujehun (with Liberia). Although the NTDP in Liberia has conducted 2 MDA rounds for LF, both Liberia and Guinea have yet to reach 100% geographical coverage for LF. Synchronization of MDAs for NTDs so that communities in the border areas are not missed, has also not been achieved in the 3 MRU countries. To help improve NTD control along these borders, pre-MDA cross border meetings are planned for FY2016 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 increased number of doses required to provide MDA will need to be added to the village census, compiled at PHU and district level and included in the quantity of the drugs distributed by the NTDP to the district NTDFPs. In addition to house-to-house distribution, MDA-LF on market-days, similar to the urban platform, is also proposed to reach people crossing into Sierra Leone for trade. The market days usually last for 1-3 days and during market days that fall within the MDA period traders and visitors in the border markets will be sensitized on eligibility/exclusion criteria, dosage and clear information that the drugs should be taken only once, and then treated.

Table 4: USAID-supported districts and estimated target populations for MDA in FY16

NTD	Age groups targeted (per disease workbook instructions)	Number of rounds of distribution annually (add additional rows for different	Distribution platform(s)	Number of districts to be treated in FY16	Total # of eligible people targeted in FY16

		treatment frequencies)			
Lymphatic filariasis	*Entire population above 5 years*	*1*	*Community MDA*	*14 HDs*	*5,834,037*
Onchocerciasis	*Entire population above 5 years*	1	Community MDA	12 HDs	*3,434,534*
Schistosomiasis	SAC (5-14) and at risk Adults in selected communities	*1*	*Schools based and Community*	*7 HDs*	*507,816 for SAC and 774,259 HRA*[16]
Soil-transmitted helminths	*Entire population above 5 years*	2	School based and Community	14 HDs	*5,834,037*
Soil-transmitted helminths	*SAC*	2	School based	14 HDs	*507,816*
Trachoma	N/A	0	N/A	N/A	0

MDA Challenges

Table 5 and the bullets below the table are intended to review both programmatic performance in meeting coverage targets, as well as PROJECT's efforts to make course corrections as needed to address poor district performance. Please include data on the latest round of MDA for which districts have complete treatment information.

Table 5: Explanation of low USAID-supported program and epidemiological coverage

NTD	Epi coverage targets	Number of districts with complete coverage information *	Number of districts that did not meet coverage targets*	Reason(s) for poor district performance	Proposed remediation actions (bulleted list, with detailed narrative below table)
Lymphatic filariasis	>=65% epi	14 HDs	Epi: 0	None	None
			Program: 0	None	None

[16] The PZQ application for 2016 requested approximately 2.2 million doses of drug for 12 HD; however, during workplanning, it was determined that only the 7 districts that are known to require treatment will undergo MDA; SCH evaluations in FY16 will determine future treatment strategy in all 12 HD.

	coverage	14 HDs			
Onchocerciasis	>=65% epi coverage	12 HDs	Epi: 0	None	None
		12 HDs	Program: 0	None	None
Schistosomiasis	>=75% epi coverage of SAC	N/A	Epi: 0	None	None
		7 HDs	Program: 0	None	None
Soil-transmitted helminths	>=75% epi coverage of SAC	N/A	Epi: 0	None	None
		13 HDs	Program: 0	None	None
Trachoma	>=80% epi coverage	N/A	Epi: N/A	N/A	N/A
		N/A	Program: N/A	N/A	N/A

Note: While all HD have met minimum targets, the data to populate this table was from FY14 for the 12 HDs for LF-Oncho-STH except for the WA, which is from FY13. SCH data are also from FY13. This is because the WA missed FY14 MDA for LF-STH and SCH MDA also missed FY14 treatment due to EVD. LF-Oncho-STH MDA for FY15 in 12 HD is currently ongoing and data are not yet complete.

According to NTDP reports, all MDAs in every district since 2010 have surpassed the minimal required epidemiological and programmatic coverage for all targeted PC NTDs. The NTDP reports have also been verified by reports of the independent monitoring conducted during MDAs that has so far shown very minor differences between reported coverage and coverage provided by the independent monitors. The independent monitoring is usually also planned to purposefully bias HTR communities. 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.

Lessons learned from previous MDA rounds incorporated to improve coverage in all districts

The most important lesson learned from previous MDAs is the proper use of the 'window of opportunity' and independent monitoring. "Window of opportunity" refers to timeframes for implementation of MDAs agreed by all stakeholders in Sierra Leone that are based on observations made during past MDAs and knowledge of the traditional practices of the populations being targeted. The window of opportunity should be respected whenever possible. If, for whatever reason, that is not possible, like in the case of the Ebola outbreak, then the NTDP and partners should prepare a contingency plan, even if that requires some flexibility by the donor. Most commonly, this would involve moving the MDA from one fiscal year into the beginning of the next.

There are 3 MDAs in country and these windows of opportunity will be discussed by disease:

MDA-LF-Oncho-STH in 12 HDs: The October-November timeline is when CDDs can volunteer: after the rainy season and before the harvest, Christmas and traditional festivities. Synchronization for MDA-LF for this timeline has been agreed by the MRU-NTD forum. Delayed approval of NTD-budgets or late arrival of drugs compound MDA challenges and can compromise coverage. In FY2011 and FY2012, independent monitoring found 78% and 74% overall coverage, respectively. However, in FY2013, the timeframe for the MDA-LF-Oncho-STH in 12 HDs timeframe was 'staggered' due to the national elections and was further challenged by the cholera epidemic. Health workers were focusing more on the cholera epidemic and the public was nervous about the quality of the water they had to drink when taking NTD medicines (independent monitoring: 69% overall coverage). In FY2014, MDA-LF-Oncho-STH in 12 HDs started late due to late approval of the NTD budget (independent monitoring: 72% overall coverage). In FY 2015, the MDA was rescheduled eight months later due to the Ebola outbreak.

MDA-LF-STH in the WA was attempted in 2009 using the CDTI+ strategy but coverage was found to be extremely low. This was principally due to massive internal displacement during the war and post-conflict migrations into non-rural settlements that do not have clear community boundaries, leadership or assigned health centers. As a result, the MDA strategy was changed in the WA, copying the national immunization day approach used for mass polio immunization campaigns taking place at the time. The WA has 30 administrative zones. Within each zone, CHWs are selected, trained by the PHU staff as drug distributors, assigned and given per-diems to perform MDA in designated streets on a day-to day basis.

MDA-LF-STH in the WA should ideally be performed pre-rains: June. However, the late arrival of ivermectin in 2011 necessitated its deferment to post-rains: September. In FY2012 MDA-LF-STH in the WA was brought forward to early September due to the national elections and the perceived threat of insecurity. It was, however, seriously challenged by extremely heavy rains during 3 of the 5 day campaign. As a result, additional days and strategic public locations were added to allow the DHMT-WA to 'catch up' using special teams. In FY2014 MDA-LF-STH in the WA was missed entirely due to the Ebola outbreak. In both FY2015 and FY2016 MDA will be implemented at the end of September/early October when rains have eased. (Coverage from independent monitoring was FY2011: 79%, FY2012: 75%, FY2013: 82%).

MDA-SCH in 7 HDs: It was anticipated in 2009 that school going children in heavily parasitized communities would experience minor adverse events if praziquantel was given in school-time as many would not have eaten that morning[17]. As a result, funds were distributed to head-teachers to feed their school children on the day of the MDA. When distributing to 'at-risk' adults, both the public and the health workers are informed that food must have been taken before praziquantel was administered.

The window of opportunity for MDA SCH is in June prior to the closure of schools for the rainy season. In FY2013, this was postponed to September due to the late arrival of PZQ in the country and this posed

[17]Hodges MH, Dada N, Warmsley A, et al. Mass drug administration significantly reduces infection of Schistosoma mansoni and hookworm in school children in the national control program in Sierra Leone. *BMC Infect Dis*. 2012; 12(16): 1471-2334. doi:10.1186/1471-2334-12-16.

many challenges to the DHMTs who have to cope with multiple programs in the calendar-year. Coverage from independent monitoring was FY2011: 82%, FY2012: 81%, FY2013: 73%. Like MDA for LF-STH in the WA, in FY2014, MDA for SCH was missed entirely due to the Ebola outbreak. In both FY2015 and FY2016 MDA will be implemented in September.

In-process and end–process independent monitoring 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 HTR from recent campaigns (NTDs, vitamin A supplementation or vaccinations) or those expected to have particular challenges in the current MDA. The in-process results are relayed via HKI to the NTDP and onwards to the DHMTs as those challenges can be quickly resolved. End-process results are helpful to validate coverage especially in HTR locations where the NTD burden is highest and MDA distribution is weakest.

Specific messages that will now be included in the IEC strategy

Independent monitoring not only provides a quantification of coverage but also qualitative data on the public's perception of NTDs and MDA. Suspicion especially amongst young adults that the drugs are contraceptives and would make them infertile or decrease their fertility was reported. Males were sometimes worried about the effect of NTD treatments on their potency, and some teenage girls sometimes think that NTD medicines can help abort unwanted pregnancies. Fear of communities to take MDA drugs because they are misconstrued as Ebola medicine has also been raised. For example in Kailahun, some residents think the dose pole is used to measure people's heights for the production of appropriate sizes of Ebola burial plastic bags. The FAQs that were already updated for the FY15 MDA will be revised to address these fears among community members and will be incorporated into the integrated training manual in FY16 so that misconception surrounding Ebola and NTD drugs can be addressed at all levels.

Monthly live, interactive national radio panel discussions are intensified in different radio stations several days before and during MDA and response is provided to questions that are phoned-in or sent by SMS messages to address the public's concerns and squash rumors that sometimes arise during MDA. The development of standard 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 FY2012 and Ebola in FY2015 and FY2016.

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 FY2016.

Expected challenges with meeting future coverage targets, and how they will be addressed

The outbreak of Ebola Virus Disease (EVDs) in May 2014 has had a significant impact on the three MDAs; MDA-SCH and MDA LF-STH in the WA were both missed in FY2014. TAS scheduled for September 2014 has now been postponed to November 2016 (FY17) and FY2015 MDA Oncho-LF-STH scheduled for October-November 2014 was rescheduled to May-July 2015. Because these activities were rescheduled, timing for FY16 activities will be different from previous years.

While districts overall may have achieved the minimum required epidemiological and programmatic coverage, coverage may vary within a district. Among the 4 HDs that failed the pre-TAS, 3 HDs have LF mf prevalence ≥1%. Each of these HDs has unique MDA challenges.

First, Kailahun district experiences cross border in-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. This will be especially challenging post EVD in FY2016.

Next, Bombali shares 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[18] regarding witchcraft which can affect the MDA compliance. It is believed that *"Elephantiasis is sickness God has brought" to punish the wicked.* In FY2014 and FY2015 special advocacy meetings were conducted by the NTDP and HKI in the Kamakwe chiefdom headquarter town that was attended by various stakeholders who pledged increased commitment to NTD activities. In FY2016 another such meeting will be held, and other strategies will be implemented, including the establishment of community self-monitoring groups.

Finally, Koinadugu district also shares a 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 FY2016 can help reach these cattle herders who may reside in Guinea but frequently travel to Sierra Leone or vice versa.

Drug and Commodity Supply Management and Procurement

[Budgeted: Distribution of Logistics &Drugs, Storage & Clearing Oncho-LF 12 Districts (FOG); Distribution of Logistics and Drugs: SCH (FOG)]

Following annual training/refresher training CDDs conduct a village census using the village register. The data is collated by the PHU in-charge, compiled by district NTDFPs and then forwarded to the national

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

NTDP. The results of the eligible village census data are used to request the quantity of drugs needed for MDA. In FY2016, this will include an additional request to provide for cross-border migrants in 7 HDs. 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 the drugs to them also. 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 focal persons. Post-MDA, the remaining drugs are quantified and returned to the NTD warehouse in Makeni through the various PHU staff and the NTDFPs.

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 Sierra Leone Pharmacy Board (SLPB). The NTDP will immediately inform HKI and WHO, 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 continue in FY2016. Funds for distribution of logistics are located in the FOGs.

Supervision

Support to NTDP for supervision

[Budgeted: Vehicle Rental for FOG Activities (ODC)]

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 NTDFP to effectively supervise. 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 SCH prevalence assessment in FY2016.

WHO guidelines, MoHS regulations and monitoring mechanisms

[Budgeted: NTD Task Force Meeting (ODC)]

During the annual NTD Taskforce 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 sub award are to provide technical support to NTDP and financial oversight. The HKI NTD Program Coordinator works closely with the national NTDP Manager and other senior MoHS staff to ensure adherence to guidelines and regulations: for example, observation of post-TAS scaling down of MDAs, or modification of exclusion criteria for the different MDA-LF, which in the local context was extended from 1 to 2 weeks post-partum due to the high maternal mortality rate in Sierra Leone. HKI will work with FHI360 to ensure the NTDP is represented in international technical NTD meetings scheduled in FY2016 especially the M&E trainings.

Actions that identify and address potential issues/bottlenecks during MDAs

[Budgeted: Independent Monitoring of MDA Oncho-LF and SCH-STH 12 Districts & WA (ODC); Monitoring & Supervision of MDA ONCHO-LF & SCH-STH 12 Districts (ODC); Monitoring of Adverse Drug reaction (ODC)]

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 mal-practice 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 MDA-STH when and where it is performed independently of MDA-SCH 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.

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[19]. 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 can be used to ensure that enough sites in this category are included. However, it is

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

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 FY2016.

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.

How data collection is followed through pre-established procedures and protocols

[Budgeted: Collecting, Reporting, Analysis - Oncho LF (FOG); Collecting, Reporting, Analysis - MDA Schisto (FOG)]

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 tours the districts to collect these collated reports and assist with the checking and if necessary visits 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. HKI will continue to work with the NTDP to adhere to all WHO guidelines including the adoption of the new WHO joint drug request and joint report forms. Data quality will be improved by the utilization of mobile applications to send summary reports initially from district to national level but in the longer term from PHU to district

level. This was first introduced by HKI to the NTDP in FY2013 and the NTDFPs received further training in FY2014. Further support will be required in FY2016 to establish this.

Issues encountered during MDA and how they could be overcome

Each MDA encounters unique barriers which are often predictable from previous independent monitoring debriefings or a general understanding of the MoHS and the pressures and additional programs of emergencies it is encountering. In-process monitoring is able to identify these swiftly and help the NTDP and DHMTs justify and focus whatever additional support is required within days. In 2010, the launch of the universal distribution of long-lasting insecticide-treated nets occurred at the start of MDA-LF-oncho-STH in 12 HDs and kept both PHU staff and volunteers pre-occupied. In-process monitoring clearly demonstrated after 6 weeks that coverage had not reached effective levels and MDA was extended for a further month.

The transfer/leave/attendance at international or national meetings of key health personnel in the month prior to MDA when organization needs to be finalized and roles and responsibilities of other health staff confirmed can have a profound impact on coverage in the district affected as there is such a critical shortage of trained, capable health personnel. The DHMTs are encourage 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 of their colleagues. This can be achieved by rotating personnel who are nominated to attend the training and not limited to the 'In-charges' of the health facilities. The adoption of the NTD training curricula into MCHA training curricula will provide the opportunity for the MCHA in training to learn about NTDs before even they are posted to the health centers after the completion of their course. MCHA constitute over 80% of PHU staff in all the 14 HDs.

Drug shortages at some PHUs occurs in the WA. This was due originally to internal displacement during the war and now a more permanent settlement as 'displaced' families elect to stay in the WA but move around looking for space and affordable accommodation. There may also 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 with daily debriefing of the DHMT-WA enables drug shortages to be corrected overnight. As the WA is the commercial center of Sierra Leone, many persons visit for trade on a regular/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 on stand-by to re-supply them if necessary as was the case in 2010. 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. 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 had been highly effective at resolving issues in both

the provinces and the WA, maintaining the momentum of the MDA and achieving effective coverage. Rumors vary from the side effects to be encountered 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 instigate negative rumors and fears regarding Ebola. Further modification of IEC materials, advocacy, social mobilization and radio discussions will be implemented to achieve effective coverage.

Non-compliance appears due to experience of previous side effects especially when the individuals have not participated in previous MDAs. To overcome this, health workers and CDDs are trained on recognition and management of common side effects and referrer of SAEs.

It is often a challenge to achieve high MDA coverage in hard to reach areas (HTRs). Special strategies will continue to be employed to reach the hard to reach areas (HTRs) with MDA drugs include hiring boats to access riverine areas, hiring motorcycles to reach hard to reach terrain and targeting the leaders of special groups such as motorcycle riders association, drivers' union with specially tailored messages that could be disseminated to the entire members of the group.

Short-Term Technical Assistance

[Budgeted: Schistosomiasis Expert meeting (ODC); Support MoHS to Develop NTD Master Plan (ODC); Other TA not budgeted]

Table 6: Technical Assistance request from END in Africa

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
SCH expert committee meeting	To review current treatment strategy for SCH in 7 HDs	Experts to make an informed decision about SCH	2 days

To update the TIPAC for FY2016 and training NTDP to raise funds locally	The NTDP has indicated that they cannot do the updating of the tool on their own. The NTDP will also request Deloitte to help with training to raise funds locally.	Expertise on TIPAC and Fund raising	2 weeks
Orientation on DQAs and WHO joint reporting and joint drug request formats, and the National NTD database and roll-out	The NTDP has indicated the need to train on the DQAs and the WHO Joint Reporting Format to help strengthen the national data management system for effective M&E	Expertise on the DQAs and use of the WHO reporting and request forms and database management	2 weeks
Review of the 2011-2015 NTD Master Plan and development of NTD Master Plan for 2016-2020	The current NTD Master plan will expire in 2015 and there is a need to have a new NTD Master Plan	Expertise on PC NTDs	1 week

Technical assistance (TA) will be requested by the NTDP for the following activities in FY2016:

- **SCH expert committee meeting/workshop**: the NTDP is requesting technical assistance from HKI and FHI360 to hold a meeting to review and make an informed decision about treatment strategy for SCH following the impact evaluations and reevaluations of prevalence also planned for FY16.

- **TIPAC**: The TIPAC will need to be updated to reflect Sierra Leone's FY2016 data, and as such the National NTDP is requesting external support for this effort. Also, TA for training of NTDP staff on raising funds to address LF morbidity from private sector will also be requested from Deloitte in FY16, as the NTDP and HKI have little experience in this domain and also have no current support for hydrocele surgery or lymphedema management.

- **Data Quality Assessment Orientation, Joint Application/Reporting Form Orientation, NTD Database:** In FY2016, the national NTDP will need TA to better understand the data quality assessments, which will allow the National Program to assess the quality of reported NTD data in Sierra Leone and the ability of current NTD data management systems to collect, transmit, document and report quality data. During this visit, the NTDP will also request an orientation in the use of the WHO Joint Reporting Forms and Joint Request Forms to help with drug requests and MDA

reporting. A TA will also be requested by the NTDP in FY2016 to train the National Program in the use of the National NTD Database.

- **Development of the next NTD Master Plan for Sierra Leone:** The NTDP is requesting a TA to help review the NTD Master Plan 2012-2015 and provide guidance on critical elements that should be included in the follow-on Master Plan (2016-2020) to allow Sierra Leone to reach all WHO elimination and control objectives.

M&E

Data Quality Assessments and National NTD database roll-out

[Not budgeted (TA)]

The NTDP will require technical assistance from the END in Africa Project to strengthen their data management, create a national NTD database, train their staff on its maintenance and perform the DQA. It is anticipated that the national database will be rolled out in FY2017 after the national population census that will be performed in 2016. It is expected that preliminary results of the 2016 population census will help in the establishment of these new tools and improve planning and reporting. Actual implementation of DQA will be done in FY17 after receiving training in FY16; this training will also orient the NTDP on the specific ways in which the results may be used.

Disease Specific Assessments

[Budgeted: SCH Impact Assessment (Budgeted FY15 FOG); TAS/Post TAS1 LF 12 Districts (FOG); Materials NTD Surveys (ODC)]

In FY2016, DSAs will be conducted based on WHO guidelines: an impact assessments for SCH in 7 HDs will be conducted in April 2016 and a re-assessment in 5 coastal districts. The impact assessment for SCH will help the NTDP to know the current SCH situation following 5 rounds of MDAs in 7 HDs that were classified as having moderate or high baseline prevalence and in the 5 costal HDs that were classified as having low prevalence and have never been treated. The results of the assessment will also determine if the treatment strategy of SCH will be revised. An expert committee meeting will be held after the survey in FY16 to get an informed decision on treatment strategy for SCH and this will require TA (see STTA section above).

TAS in 8 HDs and Pre TAS in 6 HDs were on course for assessment in FY14 when the Ebola outbreak was declared a public health state of emergency by the President of Sierra Leone. This has now been re-programed for FY17 to allow communities to fully recover from post-Ebola trauma and also to regain confidence in the health system after the damaging relationships between the population and health sector due to EVD. However, pre survey activities, such as listing of primary schools for TAS in 8 HDs,

social mobilization at communities for Pre TAS in 6 HDs will be conducted in FY17 and has been included in the budget.

M&E strategy: transition to post-treatment surveillance strategy

Transition to post-MDA-LF surveillance is anticipated in 8 HDs in FY2017 following successful implementation of TAS and if the districts pass. Preparations include further training of district/private sector laboratory technicians on the identification of microfilaria from blood samples as part of their routine work and during screening for army and police employment/recruitment and University entrants screening. Currently the major strategy includes Post MDA TAS 1&2 scheduled every 2 years following the pass of TAS. Cross border control to prevent recrudescence of LF from other districts and/or from neighboring Guinea and Liberia will focus on synchronizing NTD activities within the MRU and modifying distribution strategies to ensure coverage amongst traditional and employment seeking migrants. During the surveillance phase in the 8 HDs, ALB and IVM will be available at the NTDP store to treat positive cases.

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

The 2004 national population census was conducted 2 years after the end of the civil conflict in Sierra Leone[20] 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 has been used during NIDs for polio, measles and yellow fever vaccinations.

To ensure high quality DSA results, the 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 FHI360 and 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.

The HKI questionnaires, 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 application to be used in FY2016 has changed from Magpie/CommCare to ONA which is equally user-friendly and has additional features: synchronization with the webhost to prevent double data entry and GIS recording to confirm location being monitored

Mhealth

[Budgeted: Mhealth (ODC)]

In FY13, mhealth was introduced to NTD focal persons so that they can send district data to the M&E Officer of the NTDP. Since the application works best using Android smart phones, the NTDFPs will be

[20] Civil conflict was between 1991 and 2002.

trained on the use of this application so that districts data will be sent immediately to facilitate easy reporting of drug coverage and milestones achieved for FOGs.

In addition, the independent monitors use these smart phones for daily reporting during both In- and End-Process monitoring. In FY16, this technology will continue to be used to help timely reporting and swift actions during MDAs.

Table 7: Planned Disease-specific Assessments for FY16 by Disease

Disease	No. of endemic districts	No. of districts planned for DSA	Type of assessment	Diagnostic method (Indicator: Mf, ICT, hematuria, etc)
Schistosomiasis	12	12	Impact of MDA/re-evaluation of prevalence	Kato-Katz

Planned FOGs to local organizations and/or governments

Table 8: Planned FOG recipients

FOG recipient (split by type of organization)	Number of FOGs	Activities
NTDP	1	• Distribution of drugs and other logistics MDA LF-Oncho-STH in 12 HDs • MDA LF-Oncho-STH in 12 HDs • MCHA-MDA LF-Oncho-STH in 12 HDs • Collection, Analysis and Reporting LF-Oncho-STH in 12 HDs • Annual review meeting • Training of Trainers: LF-Oncho-STH in 12 HDs • Advocacy Meetings for PCT LF-Oncho-STH in 12 HDs

		• Training and Refresher Training for PHU staff for LF-Oncho-STH in 12 HDs • Social mobilization for MDA LF-Oncho-STH in 12 HDs • Cross-border meeting for 7 HD prior to MDA LF-Oncho-STH • Special advocacy meeting for HD with persistently high LF prevalence • MDA SCH in 7 HD
NTDP	2	• Collection, analysis and reporting for MDA-SCH in 7 HDs • Training of supervisors for MDA-SCH in 7 HDs • Training and refresher training of PHU staff for MDA-SCH in 7 HDs • Advocacy and social mobilization for MDA SCH in 7 HDs • Social mobilization for MDA SCH in 7 HDs • Distribution of Logistics and Drugs for MDA SCH in 7 HDs • Feeding of schoolchildren prior to MDA SCH in 7 HDs • NTD Curriculum Development for Tertiary Education Training Institutions • Supervision and Materials for HTR areas • Impact assessments/re-evaluation of prevalence for SCH in 12 HD • Training of technicians for LF surveillance • Training and refresher training of CDDs
DHMT-WA	3	• Advocacy in the WA (RWA and UWA) • Advocacy with private practitioners • Social mobilization in WA • Training of PHU staff in WA • Training of CHWs in WA • MDA LF-STH in WA

Looking Ahead

If additional funding were made available, what gaps and/or other key activities in COUNTRY would you wish to address before the end of PROJECT?

Include identified gaps or activities in Table 9, and describe them further in narrative format.

One major gap is the lack of funds for LF morbidity management if the NTDP is to achieve a full elimination. In 2010, the CDDs estimated the backlog of people living with hydrocele or lymphedema as 23,500 and 8,300, respectively. Support from Johnson & Johnson has been limited to the training of the doctors and the 200 surgeries performed during 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. The Chief Medical Officer has indicated the need for the MoHS to support NTD-morbidity management, proposing that hydrocele surgeries could be performed free by

the district medical superintendents. This will require support from other partners for provision of surgical consumables, and for referrals. HKI and NTDP will advocate with the NGO liaison office of the MoHS for support from other NGO partners working with disabilities.

The NTDP also requires assistance with the purchase of vehicles, if funds can be allocated. The NTDP had vehicles provided by APOC; however, the MoHS took these vehicles to assist in the Ebola response. The vehicles have since been returned but are not road-worthy. Two vehicles were included in the FY16 workplan budget for consideration.

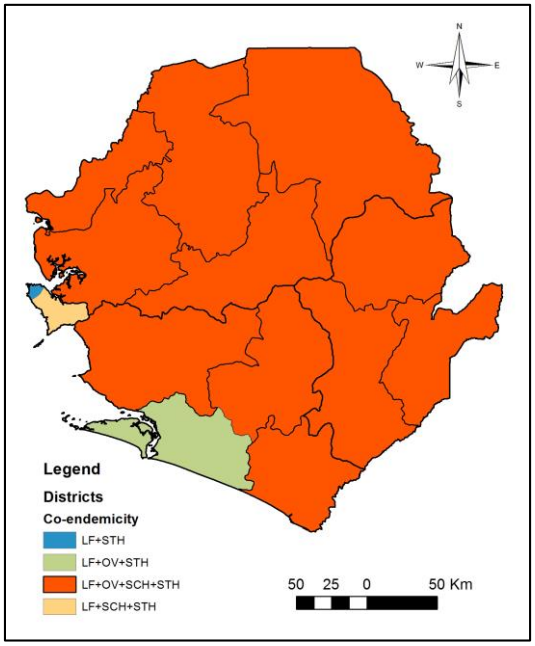
Table 9: Remaining gaps to be addressed

Identified gap or activity	**Would external support be needed – funding or technical (outside of existing partners)?**	**Estimated time needed to address activity**	**Estimated cost to carry out activity**
LF Morbidity Management	Yes - funding	To start in FY2016	$ 2,212,867.01
Vehicles for NTDP	Yes- funding	To start in FY2016	$40,000/vehicle (2 vehicles)

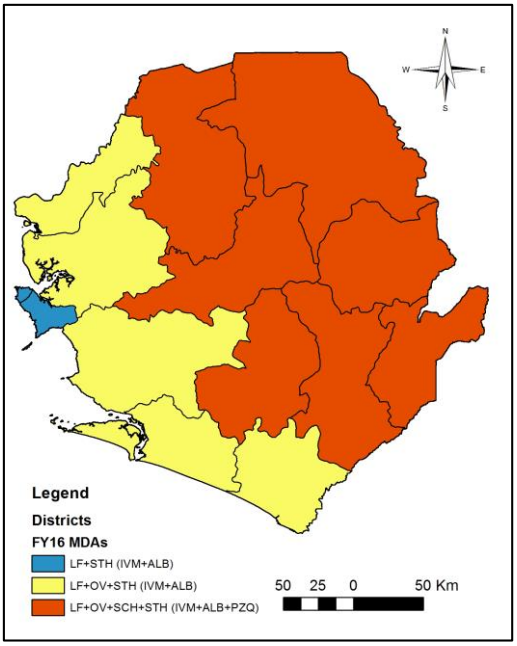
Maps

The maps below show that all 14 HDs of Sierra Leone are endemic for at least 2 PC NTDs and are targeted for MDA and DSAs for at least 2 PC NTDs.

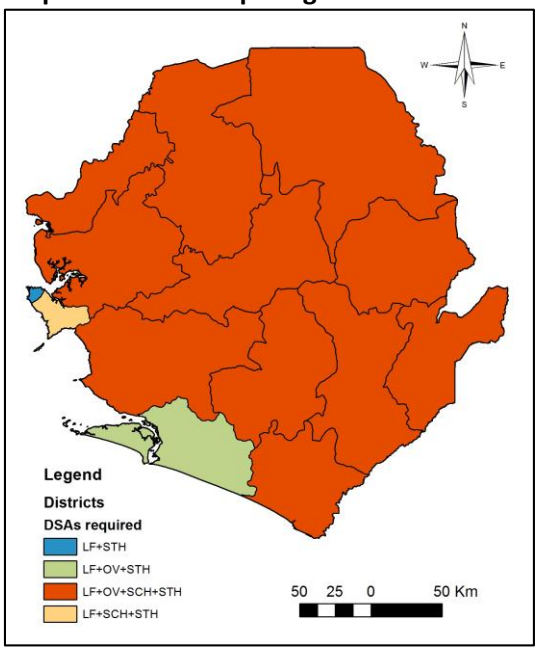
Map 1: Disease Co-endemicity



Map 2: MDAs for FY16



Map 3: Districts Requiring DSAs



Note: 8 districts have already met the criteria to conduct TAS 1; however, the NTDP wishes to conduct these in November 2016 (FY17) to enable the population to recover from Ebola trauma. The 6 other districts are ready to conduct pre-TAS; however, for the same reason as above, pre-TAS will be conducted in FY17 as well. STH assessments are needed but will be coupled with TAS 1. Only the SCH surveys will be conducted in FY16.

APPENDICES

1. **Country staffing/partner org chart (replicated from overall work plan) (PDF)**
2. **Work plan timeline (MS Word)**
3. **Work plan deliverables (MS Word)**
4. **Table of USAID-supported provinces/states and districts—refer to this in the narrative instead of listing out all districts/sub-districts (MS Word or MS Excel)**
5. **Program Workbook (MS Excel)**
6. **Disease Workbook (MS Excel)**
7. **Country budget (MS Excel)**
8. **Travel Plans (MS Word or MS Excel)**