

USAID's Act to End Neglected Tropical Diseases | West Program

FY2020 Annual Work Plan

Cameroon



Cameroon FY20 Annual Work Plan

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LIST OF ACRONYMS

ALB	Albendazole
APOC	African Program for Onchocerciasis Control
CAR	Central African Republic
CBTI	Community-Based Treatment with Ivermectin strategy
CCU	Central Coordination Unit
CDD	Community Drug Distributor
CDTI	Community-Directed IVM Treatment strategy
CRFiMT	Research Center on Filariasis and other Tropical Diseases (Centre de Recherche sur les Filarioses et autres Maladies Tropicales)
COSADI	District Health Committees (Comités de Santé des Districts)
COSA	Health Area Health Committees (Comités de Santé des Aire de Santé)
EU	Evaluation Unit
FTS	Filariasis Test Strips
FY	Fiscal Year
HD	Health District
HKI	Helen Keller International
ICT	Immunochromatographic
IDP	Internally displaced person
IEF	International Eye Foundation
IVM	Ivermectin
JRSM	Joint Request for Selected PC Medicines
LF	Lymphatic Filariasis
MZB	Mebendazole
MDA	Mass Drug Administration
MINCOM	Ministry of Communication
MINEDUB	Ministry of Primary Education
MINESEC	Ministry of Secondary Education
MMDP	Morbidity Management Disability Program
MOH	Ministry of Public Health (MOH)
NCEOLF	National Committee for the Elimination of Onchocerciasis and Lymphatic Filariasis
NGDO	Non-governmental Development Organization (used to refer to IEF, PERSPECTIVE, and Sightsavers)

NTD	Neglected Tropical Disease
OSF	Ophthalmo Sans Frontières
OV	Onchocerca Volvulus
PBF	Peacebuilding Fund
PC	Preventative Chemotherapy
PCR	Polymerase Chain Reaction
PNLO	Programme National de Lutte contre l'Onchocercose (National Program for OV control)
PNLCé	Programme National de Lutte contre la Cécité (National Program for Blindness Control)
PNLSHI	Programme National de Lutte contre la Schistosomiase et les Helminthiases Intestinales (National Program for SCH and STH control)
RFHP	Regional Funds for Health Promotion
RTI	Research Triangle Institute
SAFE	Surgery, Antibiotic therapy, Facial cleansing and Environmental change
SAE	Serious Adverse Event
SCH	Schistosomiasis
SSI	Sightsavers International
STH	Soil Transmitted Helminths
TAP	Trachoma Action Plan
TAS	Transmission Assessment Survey
TEO	Tetracycline Eye Ointment
TF	Trachomatous Inflammation
TIS	Trachoma Impact Survey
TRA	Trachoma
TSS	Trachoma Surveillance Survey
TT	Trachomatous Trichiasis
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WHO	World Health Organization
ZTH	Zithromax®

TECHNICAL NARRATIVE

1. NATIONAL NTD PROGRAM OVERVIEW

In 2010, Cameroon started uniting vertical, disease-specific programs into an integrated Neglected Tropical Disease (NTD) program with the support of USAID through the RTI-managed NTD Control Program, which was implemented by HKI. The Central Coordination Unit (CCU) of the MOH, created in 2012, coordinates integrated control activities for priority preventive chemotherapy (PC) NTDs—lymphatic filariasis (LF), onchocerciasis (OV), schistosomiasis (SCH), soil-transmitted helminths (STH), and trachoma—at the national and regional levels. Three national programs are involved in the control and elimination of PC NTDs:

- The National Program for OV Control (PNLO), which focuses on OV and LF
- The National Program for Blindness Control (PNLCé), which focuses on trachoma
- The National Program for SCH and STH control (PNLSHI)

Cameroon started to implement OV control activities in 1987, with the mass drug administration (MDA) of ivermectin (IVM) in the Northern region. MDA then spread to the South and Centre regions between 1990 and 1992 using community-based treatment with ivermectin strategy (CBTI). Following the establishment of the PNLO in 1993, Cameroon expanded expanded CBTI OV control activities to five regions. In 1999, Cameroon switched to Community-Directed IVM Treatment strategy (CDTI) with support from the African Program for Onchocerciasis Control (APOC) and USAID starting in 2010. LF elimination activities began in 2008 with MDA in nine health districts (HDs) in the Northern and Far North regions with support from WHO and the Mectizan® Donation Program. From 2010-2012, Cameroon conducted LF mapping using immunochromatographic (ICT) testing, with the support of USAID and APOC. In 2012, USAID support extended IVM + albendazole (ALB) MDA to 137 HDs.

The PNLCé was established in 2000. Cameroon launched its first trachoma MDA using azithromycin eye drops in 2008. From 2008 to 2010, Cameroon organized annual MDAs as part of a pilot project implemented by the non-governmental organization (NGO) “Ophthalmo Sans Frontières” (OSF). USAID support to trachoma activities started in 2010 with trachoma mapping using the WHO simplified coding system (2010-2012). In 2011, USAID supported Cameroon’s first MDA with oral in eight HDs in the Far North region; MDA was scaled up to all 21 districts warranting MDA in three years.

The PNLSHI was established in 2003, though activities for SCH and STH control began as early as 1983 and 1985 respectively. Mapping for SCH and STH was conducted from 1985 to 1987 during a pilot project supported by USAID and the Ministry of Higher Education and Scientific Research. Treatments started in 2006 and were expanded to the national level in 2007 with deworming campaigns in schools. The program began to receive support from USAID through the RTI-managed NTD Control Program from 2010. Between 2010 and 2017, Cameroon received USAID support for the annual in-school MDA targeting children ages 5-14.

According to Cameroon’s National Strategic Plan for NTDs LF, trachoma and OV are targeted for elimination as a public health problem and SCH and STH are targeted for control. USAID’s Act to End NTDs | West is working to build capacity, ownership and leadership of the PNLO, PNLCé, and PNSHI and the MOH to ensure that NTD elimination and control objectives are achieved and that progress is sustained by Cameroon in the long-term. This support includes management of trachomatous trichiasis, scale up of

LF morbidity management, dossier development, MDAs, and disease specific assessments (DSAs) related to OV, LF, Trachoma, SCH and STH.

The Act | West consortium has targeted several activities in the drive to improve the quality of NTD activities. As part of this work, HKI and Act | West will be developing an MDA checklist after a holistic review of the MDA tools. This checklist will be shared across all of the HKI implementing countries.

There is also a focus on ensuring DSAs are implemented with the highest quality. There are several activities described in this work plan which aim to ensure high quality implementation of DSAs and that HDs meet the criteria to advance to assessments.

2. IR1 PLANNED ACTIVITIES: LF, TRA, OV

i. Lymphatic Filariasis

a. Previous and current FY activities and context

Cameroon has made tremendous progress in eliminating LF. The national goal is to eliminate LF as a public health problem by 2020. LF mapping was conducted in 2010-2012 using immunochromatographic card (ICT) testing, with the support of USAID and APOC. A total of 162 out of 189 HDs were classified as endemic for LF after this initial mapping. A mini-transmission assessment survey (TAS) was organized in fiscal year (FY) 16 in 31 HDs (all considered endemic with *loa loa*) using filariasis test strips (FTS) to determine if certain HDs were indeed endemic for LF. The results revealed that 25 HDs, plus six partial HDs, were not endemic for LF (see section on co-endemicity with *L. loa* below). Based on these results, a total of 137 HDs should be considered endemic for LF.

Of these 137 HDs, 103 are co-endemic with OV, and 87 of these 103 HDs are also co-endemic with *Loa*. The 87 LF/OV/*Loa* co-endemic districts were eligible for IVM+ALB MDA because there had been prior treatments with IVM.

As of quarter three (Q3) of FY19, Cameroon has met the criteria for stopping MDA for LF in 136 districts: a total of 16,419,463 inhabitants are considered no longer at risk of LF infection. Thirty-seven HDs out of a possible 38 entered the surveillance phase (TAS2) in FY18 and 37 HDs passed TAS2. Kolofata HD was not surveyed in FY18 due to ongoing insecurity in the area.

Data collation for the LF elimination dossier began in FY18 under the guidance of the PNLO and in partnership with ENVISION. Historical data has been collected, verified and reported in the data section of the dossier template. The National Committee for the Elimination of OV and LF (NCEOLF) will oversee this process. The dossier requires LF morbidity management reporting. Through HKI's Morbidity Management and Disability Prevention project (MMDP, funded by USAID), the Cameroon Ministry of Health has carried out 106 hydrocele surgeries in five HDs in the North and Far North regions. In addition to these surgeries, the MOH trained two national trainers, seven doctors from district hospitals and 25 nurses in hydrocele surgery. MMDP also supported the lymphedema management training for 148 patients, 46 family members, 88 nurses from health areas and five national trainers. Data analysis during this project indicated that only 115 out of 3598 health centers nationwide were able to manage lymphedema cases in compliance with WHO standards. There is no official estimate of the hydrocele morbidity burden in Cameroon, but based on the experience and data collected from the pilot phase of hydroceles surgeries and lymphedema cases management in five HDs, the project estimated 3,500 hydroceles cases and 2,500 lymphedema cases nationwide. The MMDP Project provided support for the development of a national strategic plan for LF morbidity and disability management which will be

validated after the Ministry of Health updates the current draft of the document. The MMDP project in Cameroon closed at the end of June 2019. Act | West will support a meeting to validate the national strategic plan in FY20.

TAS and MDA interruption

The current epidemiological situation for LF is summarized in the table below:

Survey	Results	# HD targeted for the survey	Next step
Mini-TAS (FY16)	Re-classified as non-endemic among the initial 162 HDs	31 ¹	N/A
TAS1 in FY14	All EU have passed	5	TAS2 in FY18
TAS1 in FY16	All EU have passed	33	TAS2 in FY18 ²
TAS1 in FY17	All EU have passed	87	19 HDs conducted TAS2 in FY19 35 HDs expected to conduct TAS2 in FY20 33 HDs expected to conduct TAS2 in FY21 ³
TAS1 in FY18	All EU have passed	11	TAS2 expected in FY21
TAS2 in FY18	All EU have passed*	37	TAS3 expected in FY21
TAS2 in FY19	the survey is ongoing	19	One EU was unable to conduct the survey in FY19 because of flooding. The survey is postponed to FY20

b. Plan and justification for FY20

MDA:

No MDA is planned for LF in FY20.

DSA:

In total, 136 out of 137 HDs have met the criteria for stopping MDA. Akwaya HD, in the Southwest region, is the only district that has not met the criteria to stop MDA. TAS1 is not planned in FY20 due to the difficult

¹ Of the 31 HD, 25 HDs were fully targeted and surveyed and 6 HDs were partially targeted and surveyed.

² Only 37 HD underwent and passed the TAS2 in FY18 out of a possible 38. The survey was postponed in the remaining HD (Kolofata) due to insecurity.

³ TAS2 in these 33 HDs will not be conducted in FY20 due to insecurity in these HDs.

security situation in the Southwest and Northwest regions. The security situation in this HD and the changes in the population resulting from population displacement and migration are assessed regularly by the Government of Cameroon. Act I West will continue to monitor the situation, and coordinate with MOH working in the Southwest region, who are best placed to advise on the timing to conduct this survey. In addition, MOH staff working at the regional delegation of public health for the Southwest region will advise about the best timing to conduct this survey.

In FY20, the country will conduct a TAS2 in 35 HDs grouped in 12 EUs; further details related to this survey are provided below under the M&E section. Additionally, one EU (Mada HD) was unable to complete TAS2 in FY19 as the HD was inaccessible due to heavy flooding during the rainy season. TAS2 evaluation in this EU has been postponed to early FY20.

At this stage, Cameroon's LF needs are limited to monitoring, establishment of a national plan for morbidity and disability management, and preparation of the elimination dossier.

ii. Trachoma

a. Previous and current FY activities and context

Background

The National Program for the Control of Blindness (PNLCé), aims to eliminate trachoma as a public health problem by 2020. The program uses the WHO recommended SAFE strategy: TT surgery (S), antibiotic therapy (A), facial cleanliness (F) and environmental improvement (E). The SAFE components are supported by other projects specifically focused on trachoma or integrated into broader projects related to water, sanitation and hygiene promotion. USAID provided support for antibiotic therapy (A) under the ENVISION project and TT surgery (S) under the MMDP project. Overall, 21 out of 22 HDs requiring mass antibiotic treatment reached the criteria to stop MDA and 3,380,924 people are no longer at risk for trachoma, the final HD Kolofata is awaiting a TIS when security allows. However, twenty-one HDs underwent a trachoma surveillance surveys in FY19 and preliminary results indicate that Goulfey HD (6.91% TF) and Makary (10.01% TF) may require MDA in FY20.

Trachoma Mapping

USAID provided support for trachoma mapping from 2010 to 2012 using the WHO simplified coding system. Of 189 HDs, a total of 135 HDs in the south of the country (covering seven regions) were not suspected of being endemic. Furthermore, no cases of trachomatous inflammation - follicular (TF) were reported by the MOH at the time of the mapping and, because of a good water supply, the MOH considered trachoma to be unlikely in these seven regions. Cameroon has since organized mapping in the remaining 54 HDs in the Far North, North and Adamaoua regions. Of these 54 HDs, five were not endemic for trachoma (TF<5%).

The annual administration of Zithromax® (ZTH) and tetracycline ointment (TEO) in the 49 endemic HDs started gradually, first in the 8 HDs of the Far North where TF≥10%, then in 8 additional HDs where TF≥10%, and finally, MDAs were extended to 5 HDs with TF between 5-9.9% (without Kolofata). The initial mapping carried out by OSF in Kolofata in 2006 revealed a prevalence of TF of 31.5%. The first MDA using azithromycin eye drops was launched in 2008. In Kolofata, from 2008 to 2010, MDAs were organized each year as part of the aforementioned pilot project using the same eye drops. In January 2013, an impact study conducted in 41 villages showed a slight increase in the prevalence of TF and a fourth MDA campaign was then conducted in the most affected areas.

The PNLCé, with support from ENVISION, conducted a trachoma prevalence survey in the Minawao refugee camp in August 2018. The results indicated that TF and TT prevalence were 0% and 0.71% respectively. While the results indicate that MDA is not required, the MOH will mobilize resources from Sightsavers through the AccelerateTE project for active outreach for the management of TT cases.

During a June 2018 trachoma action plan (TAP) development workshop, the PNLCé agreed to include indicators in the National Health Information System to collect evidence on whether there is any trachoma in previously unmapped districts. The WHO Trachoma Focal Point recommended that the MOH establish a national data collection system in all regions to confirm that no cases of TF and TT were reported by the health facilities. Thus, trachoma indicators will be inserted into the district health information systems (DHIS) by the end of December 2019. The WHO Trachoma Focal Point also recommended the PNLCé conduct baseline mapping in six HDs in the Eastern Region, as mapping in the neighboring Central African Republic (CAR) revealed two HDs with a TF prevalence of TF \geq 30% and one HD with TF from 10 to 29.9%. These three HDs border six HDs in the Eastern region of Cameroon: Garoua-Boulai, Yokadouma, Moloundou, Ndelele, Batouri and Kete. A baseline survey was conducted in 2018 and showed TF prevalence $<$ 5% in all but one of the EUs, and therefore MDA is not required. Difficulties with accessibility during the survey in the remaining EU (12 villages) mean that a definitive TF prevalence cannot be determined at this time. A re-visit of these twelve villages is currently underway with Act | West support. Results will be available in November 2019 and a determination on whether MDA is required will be made at that time.

MDA

Cameroon started Trachoma MDA in 2011 in eight HDs in the Far North region. From 2012 to 2013, MDAs were conducted in an additional eight HDs from the Far North region (5) and the North region (3), and later in overall 21 HDs. By 2016, in accordance WHO guidelines, all 21 targeted HDs completed the required rounds of treatment and moved on to conduct TIS. No trachoma MDA in Cameroon has been planned since FY17, however in FY20 MDA will be planned in Goulfey HD and Makary HD following recent TSS results (see section b below entitled “*Plan and justification for FY20*” – page 12).

Kolofata HD in the Far North region was treated by OSF from 2008-2010 with azithromycin eye drops. OSF funded an impact survey in Kolofata in 2011; TF prevalence was 3.1%. However, the methodology used differed from WHO guidance. Another survey in 2013 (again, not using WHO methodology) indicated that TF was 5.2% with 4 communities \geq 10%. Thus, MDA (azithromycin eye drops) was conducted in the four communities \geq 10%. Furthermore, because the HD did not receive oral Zithromax (ZTH), the PNLCé planned an impact survey in FY15 and again in FY17. Due to the ongoing security issues in Kolofata the survey has been postponed until security allows. It should be noted that the ongoing insecurity in Kolofata HD has led to the creation of an internally displaced persons (IDP) camp in Mora HD (bordering Kolofata) in 2015, as most the population from Kolofata HD now live in this IDP camp, the MOH has decided to also survey this camp during the planned TIS.

Surveys

In July 2014, the MOH conducted TIS in seven HDs (Bourha, Hina, Koza, Mogode, Roua Meri and Petté). Five HDs (Bourha, Hina, Koza, Mogode, Roua) met the criteria for stopping MDA (TF $<$ 5%) and the other two (Meri and Petté) had a TF prevalence between 5% and 9.9%. After an additional round of MDA in FY15 in these two HDs, the TIS was completed in 2017 and both HDs had TF $<$ 5%.

In FY15, five HDs in the Far North (Goulfey, Kousséri, Makary, Mokolo and Guidiguiss) were scheduled for TIS. These assessments were postponed several times due to insecurity in the region, but they were ultimately conducted in FY16 in two of the five targeted HDs (Mokolo and Guidiguiss) and met the criteria to stop MDA. The TIS for the remaining three HDs (Goulfey, Kousséri and Makary) were postponed to FY17 for security reasons and, when conducted, results showed a TF prevalence <5%. To date, Kolofata has not been re-evaluated due to security issues.

Three HDs from the North Region (Poli, Rey-Bouba and Tcholliré) and one HD from the Far North (Tokombere HD) planned a TIS for FY16 but postponed until FY17.

As a result, fourteen HDs (i.e. three from the North [Poli, Rey Bouba and Tcholliré] and eleven from the Far North [Goulfey, Kousséri, Makary, Moutourwa, Yagoua, Guéré, Maroua 3, Gazawa, Tokombéré, Meri and Petté]) completed a TIS in FY17 using Tropical Data (see Table 2). The results showed that TF prevalence in the 14 HDs were <5% in children age 1 to 9 years and that MDA could be stopped.

Table 2 below summarizes results of TIS completed in Cameroon:

Year	Type of Survey	Region (HD)	Results TF/ (age 1–9 years old)	Comments
FY14	TIS	Far North region (Bourha, Hina, Koza, Mogode, and Roua)	<5%	
FY14	TIS	Far North (Meri and Petté)	5%–9.9%	1 MDA in FY15, 2nd TIS postponed until FY17 due to insecurity
FY16	TIS	Far North (Mokolo and Guidiguiss)	<5%	
FY17	TIS	- Far North region (Goulfey, Kousséri, Makary, Moutourwa, Yagoua, Guéré, Maroua 3, Gazawa and Tokombéré) - North region (Poli, Rey Bouba and Tcholliré)	<5%	
FY17	2nd TIS	Far North region (Meri and Petté)	<5%	
FY19	TSS	- Far North region (Bourha, Gazawa, Goulfey, Guéré, Guidiguiss, Hina, Kousséri, Koza, Makary, Maroua 3, Meri, Mogode, Mokolo, Moutourwa, Petté, Roua, Tokombéré et Yagoua) - North region (Poli, Rey Bouba and Tcholliré)	<5% (*) (except for Goulfey HD and Makary HD)	Goulfey HD (6.91% TF) requires one MDA round Makary HD (10.01% TF) requires three MDA rounds

(*): preliminary results

In accordance with WHO guidelines, trachoma surveillance surveys (TSS) were planned in seven HDs in the Far North region in FY18 (Bourha, Mogode, Hina, Koza, Roua, Mokolo, Guidiguiss) but were postponed until FY19 due to scheduling conflicts of required personnel (graders, recorders, and principle investigators in these HDs often had other activities planned during the proposed dates) . In addition, the remaining 14 HDs were eligible to complete a TSS during FY19. To date, the TSS are completed in these 21 HDs and preliminary results indicated that Goulfey HD (6.91% TF) and Makary (10.01% TF) will require one and three MDA rounds of MDA, respectively. Before embarking on any additional rounds of MDA, it is essential to understand the reasons for the TSS failure. In the IR1 section below, activities to understand the TSS failure and to map out solutions to address the reasons for the failure are elucidated.

TT surgery

Sightsavers has provided support for TT surgeries in the Far North region since FY13. In addition, the USAID-funded MMDP project provided technical and financial support to MOH for TT surgeries in the Far North and North regions starting in FY15. A TIS conducted in FY17 with USAID funding showed that eight HDs (Goulfey, Guéré, Moutourwa, Pété, Tokombéré, Yagoua, Poli and Rey Bouba) had TT prevalence higher than 0.2% in those ≥ 15 years, indicating a need for active TT surgical outreach.

Plan and justification for FY20

MDA:

According to TSS preliminary results, two of the 21 HDs from the Far North region, Goulfey HD (6.91% TF) and Makary (10.01% TF) will require trachoma MDAs in FY20. Goulfey HD would need one MDA round whereas Makary HD would require three MDA rounds. These MDAs, using oral Zithromax, will target 322,965 people.

DSA:

Twenty-one HDs (please see table 2 above) that had passed TIS underwent TSS during FY19. Preliminary results from this TSS suggest additional MDA rounds are needed in Goulfey HD and Makary HD in FY20. Additionally, a TIS is planned in Kolofata HD in FY20 if the security situation improves. Given that some of the population from this HD have migrated and established an IDP camp in Mora HD (bordering Kolofata), a TIS will be conducted in this IDP camp as well in FY20.

iii. Onchocerciasis

a. Previous and current FY activities and context

Background and Mapping

Cameroon aims to eliminate OV by 2025 although it is not in the current list of USAID targeted countries for elimination. OV is present in all 10 regions, and baseline epidemiological surveys conducted in 1993 showed an average national prevalence of 40%; 113⁴ of 189 HDs are considered meso-endemic or hyper-endemic for OV. The PNLO was established in 1993 and developed a national strategic plan for the elimination of OV in Cameroon. The final validation meeting of this strategic plan is planned for January 2020. The program has received financial and technical support from USAID since 2010 as part of the RTI-

⁴ Previously, there were 111 HDs. The increase is due to the new distribution of HDs.

managed NTD Control Program. The PNLO has employed the CDTI strategy for OV treatment. In 2017, the PNLO established the national committee for the elimination of onchocerciasis and lymphatic filariasis (NCEOLF), which coordinates OV elimination activities. The first meeting of the committee was held in January 2018. This led to the creation of three subcommittees: the first to develop guidelines for OV elimination in Cameroon, the second to define quality assurance standards for operations and the third to draft the national strategic plan for OV elimination.

MDA

The first OV control activities began in 1987 with mass distribution of IVM in the North region, and then in the South and Centre regions between 1990 and 1992 using CBTI. Cameroon expanded OV control activities to five regions through the CDTI strategy and, from 1999 onwards, switched to CDTI in all target regions. IVM has been administered in 12 HDs. It has also been administered in combination with ALB in 101 HDs as part of the integrated treatment of LF and OV. Of the 113 endemic HDs receiving IVM treatment, 103 are co-endemic with *L. loa* and LF; 87 are co-endemic for OV, FL and *L. Loa*; 16 for OV and *L. loa* only and finally, 10 are endemic for OV only.

The below table shows OV endemicity rates in all HDs. Results from the rapid epidemiological mapping of onchocerciasis (REMO) classified health areas from the surveyed health districts depending on the prevalence of nodules (hypo area: 0-19%; meso: 20-30%; hyper: 30% and above). A district is considered mixed if it has the three types of areas.

Endemicity Rates	# Districts	Comments
Non-endemic	5	None are under treatment
Hypo-endemic	71	None are under treatment
Meso-endemic	15	
Hyper-endemic	84	
Hyper/meso/hypo	10	7 are mixed (hyper-, meso-, and hypo-endemic areas). 3 are mixed (hyper- and hypo-endemic areas)
Meso and mixed	4	Mixed meso- and hypo-endemic area.
Total	189	113 under treatment

Since the IVM distribution has been implemented for many years, the risk for serious adverse events (SAEs) after administration has been reduced. SAEs occur mainly in previously untreated individuals with high parasite loads of *L. loa*. To reach the goal of elimination, it is necessary to extend the IVM MDA to the 71 hypo-endemic HDs. This expansion could increase the number of SAE cases in areas where IVM has never been administered. The MOH has planned to map these hypo-endemic HDs and if needed treat them, but the PNLO has not yet been able to complete the mapping. For the moment, all meso-endemic and hyper-endemic HDs are part of the MDA. In addition, if an HD has multiple endemic profiles (hyper/meso/hypo), it is designated 'endemic above treatment threshold', but only hyper and meso-endemic areas will be included in the MDA campaigns with IVM.

b. Plan and justification for FY20

MDA:

The PNLO plans to conduct the OV MDA in the 113 eligible HDs during FY20. The MDA campaign includes several events including review/planning meetings at national and regional levels, technical capacity building seminars for health staff and community-based distributors, a social mobilization/awareness component, mass distribution of the drugs themselves to the eligible populations in endemic communities and the monitoring of activities. These activities are budgeted in the regional FAAs. See *Integrated MDA activities below*.

DSA:

No DSAs planned for onchocerciasis in FY20.

iv. IR1 Integrated MDA Activities

In FY20, the Act | West project will continue to provide technical and financial support to the MOH in its fight against LF, OV and TRA.

a. Strategic planning

Activity 1: Regional Advocacy Meetings to improve local fundraising to support the NTDs program (with mayors of the Littoral and West regions)

In FY19, Act | West held advocacy meetings during 10 town halls in the Littoral region, which were chaired by the RDPH. HKI and PersPective attended these meetings and held discussions with local authorities. The meeting objectives were to enhance and maintain the support of local government structures for the National NTD Control Program. The meeting focused on identifying possible and sustainable solutions to keep CDDs engaged and involved. As next steps participants recommended that each city includes a budget line for NTDs within their yearly budgets.

In FY20, Act | West will continue these activities with 20 other town halls from the Littoral and West regions (10 mayors in each region). Perspective, an NGO with good experience in community resources mobilization, will facilitate these meetings in order to give to the mayors the tools needed to contribute effectively to the process of local resources mobilization. Meeting topics will include general overview of NTDs, how mayors can convince household to motivate their CDDs, and how to develop reports to share with Community leaders. Perspective will also conduct practical exercises.

Activity 2: Assessment Meeting of the Subcommittees of the National OV & LF Elimination Committee (NOLFEC)

In FY18, the MOH held the first session of NOLFEC with the main results being the creation of three sub-committees:

1. A committee for planning, M&E and research which will develop guidelines for OV elimination in Cameroon, including standardized protocols and framework;
2. A committee for treatment and control which will work on quality assurance for interventions including population census and data from treatment, monitoring, evaluation and research;
3. A committee to prepare a National Strategic Plan for OV elimination in Cameroon which will determine elimination strategies including treatment in hypo-endemic areas, treatment where loiasis is co-endemic, where and when to implement biannual treatments, where and when to stop MDA, as well as the necessary vector control strategies.

The participants also made additional recommendations to the Committee Secretariat, the PNLO and partners. Among these recommendations, one was to collect all available data from all sources (both in the country and from ESPEN) regarding the epidemiological status of OV (prevalence and intensity of infection) and IVM distribution (dates and coverages) in the country. Data should be taken, where possible, from the HD level or even at the health area level and are to be used to update the mapping of endemic status and treatments for OV and L. loa. The next meeting in FY20 will be an opportunity to revamp the committee (as the members have not reconvened since FY18), remind stakeholders of their commitments, and assess the progress made in implementing the recommendations made in FY18. Thirty-two participants from the MOH and partner organizations are expected to attend this meeting. Act | West will contribute to the cost of the meeting along with other NGOs.

Activity 3: Workshop to Review TSS Results

TSS were recently completed in 21 HDs (18 EUs) in FY19. Preliminary results indicate that two of the 21 HDs had TF prevalence $\geq 5\%$ among children ages one to nine years of age (6.91% in Goulfey HD and 10.01% in Makary HD). The two HDs may require one and three MDA rounds of MDA, respectively (MDA is planned in FY20). It should be noted that the preliminary results have not yet been validated by the TSS principal investigator and the national program. Upon validation of the survey results, and before another round of MDA is implemented, Act | West will support the PNLCe to holistically review all survey data, both longitudinally (to understand overall epidemiological trends) and at the overall training and in field methodology, challenges encountered during the TSS. This will lead to a joint data workshop with USAID, FHI 360, HKI, Tropical Data, WHO and the PNCLé during which participants will review MDA and survey data and any other factors that could have led to the TSS failure.

There is no WHO-guidance to investigate TSS with TF $\geq 5\%$; however, the Act | West Consortium with the assistance of WHO and Tropical Data (among others) will support the PNLCé to investigate two likely scenarios: survey quality and MDA coverage. Among the topics proposed, the following aspects will be analyzed during the workshop:

- Survey quality
 1. Analysis of the TSS survey data with emphasis on survey quality
 - Review of the training prior to survey implementation
 - Review of graders and scores to ensure that the TSS survey team were able to identify TF reliably
 2. A review of clusters from both the previous TIS and FY19 TSS results to look for any patterns in the distribution
- MDA coverage:
 3. Examine cluster level coverage data (if possible)
 4. Investigate population movements in the surveyed regions (the northern regions of Cameroon have experienced population migration, insecurity and instability)
- Other
 5. F&E data within the surveyed regions will be compared from baseline, TIS and TSS, as the PNCLé has indicated that there was a recent cholera epidemic in this area and WASH activities may not have been sufficiently implemented;

The workshop will result in the development of a protocol for a strategic response to the TSS failure in these HDs. Act | West will support the MOH in the implementation of this plan and allow for flexibility in insecure zone with ITI inputs to secure AZT donation. If required, the strategy will include re-grading a sample of TF + and TF- children with different graders to independently confirm results. In consultation with the WHO, the FHI 360 Trachoma Focal Point will support the MOH and HKI to develop next steps in response to TSS failure (develop a checklist/SOP). The Act | West consortium will encourage the PNLCé to implement this workshop in Q1 or early Q2 of FY20.

Activity 4: Support to the Development & Validation Workshop of the Trachoma Strategic Plan (2020-2025)

The TAP meeting, which took place in June 2019, enabled the country to gather and review historical trachoma data related to all components of the SAFE strategy, aiming to define inputs to use during the development of the trachoma elimination dossier. While the TAP is focused on the collection of historical data and development of the trachoma elimination dossier, the current trachoma strategic plan (expiring in 2019) focuses on activity implementation for the elimination of trachoma by 2020. As the country moves towards the elimination of the disease, a new strategic plan should be developed to address the current needs of the country, such as setting a trachoma national surveillance system, not only in the HDs which conducted MDAs but in the whole country. Act | West will provide technical and financial support for the organization of one four-day development workshops and one two-day validation workshop of the new strategic plan 2020-2025. The participants will come from the CCU, PNLCé, WHO, Sightsavers and HKI. The validation will include representatives of the DLMEP, the DCOOP, the DAJC, the CCU, PNLCé, WHO, SSI, HKI. These workshops will be co-funded by Act | West and WHO, *please see Budget Narrative, section 4 a.5.*

b. MDA Supervision

Activity 1: Supervision of OV MDA campaign in 113 HDs

MDA for OV is organized every year in hyper and meso-endemic communities. It concerns all those over 5 years of age. In FY20, it will target more than 11 million participants in the 113 HDs endemic for OV. Before the start of this treatment, the CDDs will count all the residents in the households of each community. Based on this census, the CDDs will receive the IVM tablets from the health center nurse to treat the eligible population according to guidelines from the training session. IVM administration is administered according to height with a dose pole. To cover all targeted areas, CDDs will use either door-to-door method or population grouping. At the end of the campaign, the CDDs use their respective registers to write summary reports. In FY20, the health staff as well as the NGO supervisors will provide CDDs with coaching at the village level during the updating of registers in order to minimize the risk of error and incorrect data. The treatment data will then be sent from the community level to the MOH central level according to the health pyramid in Cameroon.

To ensure the quality assurance of the community-based MDA, several supervisors conduct field trips during the campaign: the nurses in charge of the health areas, the members of the HD management teams, the NTD staff of the RDPHs, the MOH central level and NGOs. In 2015, the MOH developed a quick survey form, with ENVISION support that is currently used to provide coverage trends. In addition, the Supervisor's Coverage Tool (SCT) was introduced by ENVISION in Cameroon, but not systematically rolled out with a training. In FY20, Act | West will support a training to roll out the SCT for MDAs.

MDA supervisors are from different levels as summarized in the table below.

Implementing level	Supervisors
Central level	HKI, IEF, PERSPECTIVE, SSI, PNLO, CCU
Regional level	Staff from the regional delegations of public health of the 10 regions
District level	District management teams of the 113 OV district
Health area level	Nurses of health areas from the 113 OV districts

c. Monitoring and Evaluation

Activity 1: Trachoma Impact Survey in the Kolofata HD and Mora IDP camp

Prior to the first MDA in 2008, the trachoma prevalence in Kolofata HD among children aged 1 to 9 was $\geq 30\%$. OSF then conducted three mass treatment campaigns from 2008 to 2010 using azithromycin eye drops. An impact survey conducted in 2010 revealed a decrease in the TF prevalence to 3.1%. In January 2013, a trachoma prevalence study was conducted in 41 villages in the district, showing an increase in prevalence to 5.2% and 4 villages in the district had $TF \geq 10\%$. The PNLCé chose to conduct another MDA in communities whose TF prevalence was $> 5\%$, using azithromycin eye drops.

Mora HD had an initial TF prevalence of 4.50% based on the results of the 2010 survey conducted with USAID resources. This district was therefore not eligible for MDA. However, due to the multiple attacks perpetrated by Boko Haram in the city of Kolofata, a significant proportion of the population has left the city, and are now at an internally displaced people (IDP) camp in Mora HD. The PNLCé has decided to assess the TF prevalence in this camp in order to clarify how this situation has impacted prevalence in the Mora IDP camp.

The TIS in Kolofata HD and the Mora IDP camp was initially planned for 2015. It was postponed first to FY17 and then to FY19 for security reasons. Unfortunately, the security situation remained unstable due to Boko Haram attacks. If conditions improve in these localities, Act | West will support the PNLCé in the implementation of this TIS in FY20. If the TF prevalence is $\geq 5\%$, the PNLCé will need tetracycline eye ointment and will work with ITI to order Zithromax for FY21.

Activity 2: TAS2 in 12 Evaluation Units in 35 HDs in the EAST, LITTORAL, SOUTH and WEST Regions

In FY17, 87 HDs successfully passed TAS1. WHO recommends that TAS2 be performed after a period of two to three years following TAS1. Based on this recommendation, 19 Health Districts are currently completing TAS2 in FY19. Of the 68 HDs that still need to carry out TAS2, 33 are located in the Northwest and Southwest regions where security conditions are still not favorable. Consequently, the PNLO plans to conduct TAS2 in 35 of the 68 HDs in FY20. During the planning phase, the PNLO will submit the protocol to Act | West for comments one month before the start of the survey. The training of trainers at the national level will be done by staff from the Research Center on Filariasis and other Tropical Diseases (CRFiMT) with the help of the PNLO and NGDO partners. The latter will be responsible for training surveyors at the regional level. The surveyors are laboratory technicians recruited at the HD level. Prior to field data collection, laboratory technicians are trained at the regional level by national staff and NGDOs. These trainings include a pre-test and a post-test to evaluate their performance. The logistics during the period of field data collection involve two laboratory technicians assigned to each EU, as well as a supervisor (who is also a team leader) and a driver. Community members are also involved as mobilizers. Electronic field data collection will use smartphones. Act | West will provide technical support

for the smartphones equipped with ODK (Open Data Kit) Collect technology. The remote server will be hosted on <http://www.ona.io/> (mobile data collection platform), a platform upon which the MOH can have access to monitor the data collection in real time. Act | West will fund the costs of conducting this survey and supervision.

Activity 3: Trachoma situational analysis in 3 out of 10 regions

Trachoma mapping was conducted in 2010-2012 in 54 HDs of three out of ten regions. To date, all eligible HDs in the three surveyed regions have conducted MDA of azithromycin; these HDs also completed impact surveys and in May 2019 they began surveillance surveys, except for Kolofata and Mora IDP camp. As for the remaining seven regions, the WHO has recommended to Cameroon during the Trachoma Action Plan (TAP) that a study be conducted to demonstrate the absence of active trachoma in these regions rather than a full mapping. With this in mind, the PNLCé has planned a situational analysis in the districts of seven out of ten regions. For the first stage, Act | West will provide financial support for the survey in three out of seven targeted regions. Discussion will be held with eye care providers in all regions to determine which three are the priority regions to be studied in FY20. During this study, the investigators will examine the documents available in the health facilities and interact with the health staff, in order to investigate whether cases of TF and TT have been diagnosed during patient visits. Results from this study will be used by the MOH to update the trachoma elimination dossier and inform next steps for the targeted HDs. Lessons learned from this first stage will also be used to plan studies in the remaining four of the seven regions in FY21. Act | West will also finance the supervision that will be conducted by HKI and several NGOs (IEF, PERSPECTIVE and SIGHTSAVERS).

d. Dossier development

Activity 1: Trachoma elimination dossier development (quarterly meetings, PNCLÉ)

In order to move forward with the development of the trachoma elimination dossier, the PNLCé held a meeting in May 2019 (with participants from USAID, FHI 360, HKI, SSI and the NTDs Central Coordination Unit of the MOH). During this meeting, three working groups were set up: one to focus on the S component (headed by Sightsavers), a second to focus on the A component (headed by HKI), and a third group to focus on trachoma surveys (headed by the NTD Coordination). As next steps, each group will collect information about the country achievements and highlight the remaining steps to accomplish in order to meet the dossier requirements. A restitution meeting for these working groups took place on August 20, 2019 and the PNLCé recommended that all groups should update their text by developing the work done prior USAID's support, especially under OSF. In FY20 quarterly meetings will be organized by the PNLCé, where participants from the MOH, HKI, Sightsavers and WHO will evaluate the progress towards the development of the dossier. Act | West will provide technical support for ensuring that the most up-to-date data on disease prevalence, trichiasis surgery and MDA are taken into account by the MOH. The participants will also review the results of the trachoma situational analysis described above and discuss their inclusion in the dossier. The PNLCé would like to get a complete version of the elimination dossier with all available information by the end of FY20.

Activity 2: LF elimination dossier development (three meetings, PNLO)

To date, the MOH has not commenced drafting of the LF elimination dossier although the PNLO began collating available data in FY18. Meetings related to the LF elimination dossier were planned in FY19 but postponed due to calendar conflicts with stakeholders (MOH and WHO country office). In FY20, Act | West will provide technical and financial assistance for conducting three meetings related the LF elimination dossier. The first meeting will be a two-day workshop which will be attended by the PNLO,

WHO, Research Center on Filariasis and other Tropical Diseases (CRFiMT) and partner NGDO staff (HKI, IEF, Sightsavers and Perspective). This 1st meeting will allow the participants to analyze the documents required for the dossier, collect the available information in-country, set a work timetable and evaluate the level of progress towards the completion of the elimination dossier. The two remaining one-day meetings will serve to update the dossier. Act | West will finance the costs of the coffee break and stationery only for these activities.

3. SUSTAINABILITY STRATEGY ACTIVITIES (IR2 and IR3)

v. Data Security and Management

NTD Data Management and Security

The MOH and its partners have tools to collect data from treatment campaigns. These include CDD registers, health area data summary sheet, health district data sheet, and regional database. These tools are updated and re-produced each year prior to MDA, with the exception of CDD registers that are updated every three years. The flow of data collected from the community level to the central level is as follows:

- The CDD collects data at the community level using the aforementioned CDD register. At the end of the campaign, he/she writes a report and submits it to the health agent in the health area along with the register.
- The health agent collects the reports from each CDD in their respective coverage area and fills out the summary data sheet that is submitted to the HD. A copy is kept in the health center.
- The HD analyzes the data and inserts them into the electronic data sheet before submission to the RDPH.
- The RDPH collects the data sheets from each HD and completes the regional database before submission to the central level.

At each level, the manager performs data analysis and feedback to improve data quality. Based on previous supervision, CDD reports contained a number of inconsistencies as the level of education among CDDs is not high and they often do not have a calculator to perform basic arithmetic. In addition, the CDD register often contains incomplete information. Therefore, the summary written by the health area nurse using the CDD reports contains inconsistent data. At the health area and HD levels, newly assigned staff have also difficulties in data analysis. In FY20, four health center staff from each health area will visit villages just after the MDA to assist CDD in filing in registers and making required calculations. This is in addition to the supervisors from the central, the regional, the district, and health area levels who will also assist CDDs while they are filling in the registers.

At the end of the data collection campaign, CDD registers are kept at the health center level. The summary data sheets are kept in file folders at the health areas level. Data summary sheets are kept in electronic databases in the computers at the health district and RDPH levels. At the central level, data are still kept in the PNLO staff computers. This is a data security concern, as data can get lost if the personal computer crashes; or if the staff member resigns or retires. As a response, the MOH in collaboration with the CRFiMT will implement a short-term project aimed at improving NTD data integration, *see section Mainstreaming NTD data into national database below.*

Activity 1: Training of Data Managers in the 113 HDs endemic to OV in the analysis of the data collected during MDA campaign

At the request of the PNLO, the MOH has appointed data managers in each HD. Unfortunately, the last supervision reports indicate that most of these agents do not have the tools to compile the data. The report also outlined some deficiencies in data analysis techniques. This situation weakens the HD management teams and increases the workload of the District Chief Medical Officers. To address this, Act | West will provide technical and financial support for the training of HD data managers. This training will take place at the level of the Regional Delegations of Public Health (RDPH), and it will be paired with the regional review/planning meeting.

Activity 2: Annual community data collection and review in the villages of the 113 HDs endemic to OV

In order to improve the quality of data collected at the field level by the CDDs, data collection and review meetings will be organized in each village by the health staff at the health area level, during the ten days when they travel through the villages in their respective areas. During these sessions, the health agent will gather all the CDDs from the village to provide support in data verification and report preparation and each CDD will receive their community treatment register. The review sessions aim to remove most of the errors during data collection before they are sent into the health system.

Activity 3: Annual Meetings (at the 113 HDs OV level) about the analysis of the data collected during MDA campaign

At the end of the community data collection and review, the health area agents will take part in a data review meeting at the HD level. This is to analyze the data summary obtained from the communities. The performance of each HD will be assessed with the help of the health area staff whose closeness to the CDDs and communities can help to explain the reasons for poor coverage (if any) and propose remedial actions. At the end of these meetings, the health area staff will work with the CDDs who provided inconsistent data in order to make the required adjustments before the regional review/planning meeting. Act | West will provide financial support by covering the per diems and travel costs of health area staff and the costs of a coffee break. Act | West will also finance the supervision of this activity at the central level (PNLOC, Coordination Unit, NGDO).

Mainstreaming NTD data into national database

During the past two years, the USAID-funded ENVISION project has provided support to the development of a country integrated NTD database (CIND). A consultant was recruited to enter the historical data into the database under the supervision of MOH. However, managing this database has the following shortcomings:

- long waiting period before the data from each campaign is available and ready to be entered into the CIND
- difficulties in obtaining integrated and historical data
- long delay in bug management
- centralized integration process creating a heavy workload for one person

Given these deficiencies, the MOH in collaboration with the CRFiLMT will implement an 11-month project titled Feasibility, Effectiveness and Acceptability of Integration NTD data with Preventive Chemotherapy in a DHIS2 data workshop in Cameroon, supported by USAID and UKaid (via a grant from the African NTD Research Network in collaboration with COR-NTD). The objective of this project is to quantify and describe the challenges related to the integration of NTD data in the national DHIS2 platform and to make recommendations for the improvement of the program. The activities of this short-term project include the collection of data based on the experience of using DHIS2 (regions, HD), the training of national data managers, and the import of data. This project will allow the effective integration of data and the

involvement of several agents in data collection. Act | West will provide technical assistance to support these activities (LOE only).

vi. **Drug Management**

NTD Drug Quantification and JRSM

During the FY20 OV MDA, Act | West will provide technical and financial support to the PNLO as part of the mass distribution of IVM. This medicine is a donation of Mectizan® Donation Program (MDP) and is available in the country thanks to the technical support of WHO. The CCU in consultation with all NTD programs makes a collective order to be sent to WHO. The quantities are estimated based on data from the previous year. The order is then analyzed and validated by WHO.

Activity 1: Capacity building of the data managers of the 113 HD endemic to OV in the use of inventory management tools

Health district data managers play a major role in drug management as they help assess drug needs at the regional level and monitor the drug quantities available to health areas. A joint inspection mission conducted in May 2019 by WHO and MOH revealed a number of anomalies related to drug management (this document can be shared with FHI 360 and USAID). WHO has therefore recommended the systematic use of revised stock management tools, which are already available at the Central level (at CENAME) and at the Regional level (in FRPS). Indicators on the targeted population, the quantity of drugs needed, the quantity of drugs distributed, the quantity of lost drugs and the returned drugs are mentioned on the tool.

At the Central level, the order for drugs is made by the National Program which makes available to CENAME the distribution of drugs by Region. Quantities are estimated based on the population from the 2005 national census applied to the growth rate.

At the regional level, the RDPH makes available to the Regional Funds for Health Promotion (RFHP) the quantities of drugs needed for each district. Quantities are also estimated based on demographic population. Districts obtain their supplies at the regional fund level and are responsible for distributing medicines in health areas. To distribute the drugs to health areas, the district's data manager relies on the census done by CDDs at the community level. This CDD census helps inform of dynamic demographic changes from one village to the next due to events such as bad weather or insecurity. Field supervision conducted by health personnel and HKI/NGDO staff during the drug distribution allows for adjustments to the quantity of drugs needed to avoid shortages.

The next step will be to set up these tools in the HDs and train the data managers. Act | West will support the training and set-up of these inventory management tools at the HD level during the annual regional review/planning meeting. In FY20, pharmacists from MOH at the central level will participate in the second day of this meeting to review drug management with the data managers of each HD. The expected outcome is to put in place at the district level mechanisms which will mitigate the risk of misusing the drugs (monitoring of expired dates, improving the storage conditions, drug packaging to respect when sending the drugs to the field and when returning them to the regional level).

Activity 2: Financial Support to PNLO for the Transport of Ivermectin and FTS from the Point of Entry (port or airport) to the National Purchasing Center for Essential Drugs and Products (CENAME)

Medicines are sent to Cameroon where they are exempt from customs duties at the point of entry (airport or port). Due to limited financial resources, the MOH sometimes faces the problem of having to pay for the removal and transportation of medicines from the point of entry (port or airport) to the CENAME store. Ports of entry (ports or airports) have often no spaces that are equipped to preserve medicines. In order to reduce storage delays, the Act | West project will provide financial support to a local freight

forwarder responsible for the transportation of the medicines and FTS from the points of entry to CENAME.

Once the drugs are stored at CENAME, the distributions will begin in the regions through the RFHP according to the regional inputs established by the National Program. After they obtain the drugs from the regions, the HDs will supply drugs to the health areas which will, in turn, supply the CDDs. The costs of the logistics needed to transport the medicines from CENAME to the Communities are borne by the state. FTS are stored at CENAME until the beginning of the LF surveys.

Another major concern remains the stock of unused drugs after the MDA campaign. The previously mentioned joint inspection mission conducted in May 2019 by WHO and MOH recommended the systematic use of drug management tools at all levels to reduce the loss of drugs. These new tools which will start being used in FY20 include a section designed to track drug delivery throughout the MDA campaign (the number of tablets received, the number delivered on the field, the number of tablets in stock at the end of drug distribution) as well as the number of pills swallowed during the MDA. The MOH will incorporate the usage of these tools in the routine training of nurses for the MDA.

Reverse Logistics and Waste Management

Activity 3: Support to PNLO for the Recovery of the Unused Ivermectin at the End of the MDA Campaign in the 113 HDs

The MOH will hold annual community data collection and review meetings in the villages of the 113 OV endemic HDs, led by the health staff of the health areas. At the end of these meetings, the CDDs will give them unused medicines along with the community treatment registers. A reconciliation of the drugs dispensed compared to treatment registers is done during this meeting. Health area staff will then take these drugs back during the data review meetings organized at the HD level, which will, in turn, bring them back at the regional level during the Annual Regional Review/Planning meetings. The remaining drugs are stored at the regional warehouse.

Monitoring and Management of Adverse Events (AE) and Serious Adverse Events (SAE)

Large quantities of drugs are distributed to the population during the MDA and some adverse events are expected. The risk for adverse events following IVM administration, after many years of treatment, has decreased due to reduced prevalence and parasite load— adverse events (especially SAEs) mainly occur in treatment-naïve individuals with a high *L. loa* parasite load. To that end, notification and summary forms are available in the CDD registers and the summary registers. When a side effect occurs in a community, it should always be reported to the health area chief by the CDD. The district chief will then receive a notice sheet sent by the health area chief.

The management of a moderate or minor case is usually symptomatic and does not necessarily require hospitalization. A serious case automatically requires hospitalization in a district hospital. A patient with suspected SAE will be referred to a hospital for assessment and management. The notification is then made to the MDP within 24 hours of the SAE. All this is done in accordance with the current National SAE Care Protocol of the Country written in 1999. Act | West will explore the possibility of working with the relevant national programs to update this protocol.

The management of SAE is discussed by PNLO during routine training (training of health personnel and CDD).

More generally for SAE as well as mild and moderate adverse events, the PNLO will also continue to carry out sensitization through CDDs and field health personnel, using communication channels such as community radios, aimed at giving population information on the expected side effects but also

emphasize more strongly that severe cases are rare and mainly occur in people who are taking the treatment for the first time and who have a high parasite load of *Loa loa*.

vii. Integration and HSS Activities (IR2)

USAID's sustainability framework for Act to End NTDs | West aims to 1) ensure the sustainability of SCH and STH control programs and 2) sustain elimination of LF, trachoma and onchocerciasis in the long term. The six desired outcomes are:

- **Financing:** The MOH mobilizes sufficient domestic funding to support NTD programing needs.
- **Services:** Deworming and morbidity management services are provided through sustainable delivery platforms.
- **Information Systems:** Data collection, reporting and analysis of NTD indicators are mainstreamed into HMIS.
- **Operational Capacity:** The health and education systems have the capacity to organize, implement and manage NTD operations independently.
- **Policy:** NTD core functions are included into national health and education policies.
- **Coordination:** NTD programing and financing are coordinated within the health system and across sectors.

Act | West will work with Cameroon's NTDP to strengthen country environment for implementation and management of NTDs.

Activity 1: Workshop to develop NTD indicators for the Performance-Based Funding (PBF) system

Performance-Based Funding (PBF) is an approach to the Result-Based Management (RBM) system, defined in terms of the quantity and quality of services offered to populations with the inclusion of vulnerable people. The country has experience with PBF since 2006 in the Eastern Region. In 2011, Cameroon started PBF in 26 HDs in four regions of the country (Littoral, East, North-West and South-West) with \$25 million funding from the World Bank. Due to the good results of this project the Government provided \$1,116,400 for PBF in the Littoral region in 2014.

The beneficiaries of PBF may be the local service structures of MOH (regional public health delegations, HDs, health areas) or health facilities (FOSA). Beneficiaries are paid on the basis of their results and the evaluation is done through a scoring grid. For example, health facilities are evaluated and paid based on:

- output indicators (or quantity indicators);
- quality indicators;
- equity indicators;
- the bonus of quality improvement.

A major benefit of PBF is maintaining motivation. In FY20, Act | West will fund a workshop conducted by the NTDs CCU to develop a set of indicators that can be presented to FHI 360/USAID as part of a PBF system funded by USAID relating to activities of future MDA campaign.

The purpose of the workshop is to develop performance indicators linked to better performance during MDA and data collection and analysis, as well as define a PBF mechanism and appropriate target based on these indicators. The funding to reward the communities and the districts will come from the local fundraising by community leaders like mayors and others who will serve as key partners in this effort. It is anticipated that this PBF system will first be rolled out in the Littoral and West regions and will be linked

to the results of the regional advocacy meetings planned in those two regions. The next steps after setting these indicators include:

- HKI will share these indicators and proposed PBF mechanism with FHI 360 and USAID for review and approval to ensure that they are relevant SMART indicators and align with USAID priorities.
- After approval, HKI will provide support to the MOH central level in rolling out these indicators and PBF mechanism in the West and Littoral regions. The MOH will share the approved indicators with the other NTDs stakeholders (including staff from the regional level and the health district level). This will be done prior to the beginning of the next MDA campaign, during regional kick off meetings or coordination meetings.
- During the MDA campaign, the two regions will continue to receive USAID's funding following the FAA/FOG mechanism in place.

After the MDA and data collection are completed in the two regions, HKI and other NGOs (PersPective, IEF and Sightsavers) will use the opportunity of the regional appraisals to support the MOH in identifying the HDs and the communities which will have met the performance indicators in the two regions.

Activity 2: Support the MOH in improving coordination of NTD Activities

Cameroon's national NTD program has seen much success in the fight against NTDs, however there is still room for improved coordination and communication regarding NTD activities. For example, a lack of communication between the NTD program and the NTD stakeholders has often led to delayed implementation due to difficulties in planning and execution. NTDs national collaboration platforms existed in the past, but currently stakeholders only meet in instances where there is an urgent problem encountered during the implementation of activities. In addition, the NTDP is facing a lack of financial, human, and material resources which jeopardize some key components such the timely and accurate delivery of services and the motivation of CDDs; therefore, increased and targeted advocacy will be essential in the steps towards a sustainable NTD program.

In FY20, Act | West will take the following steps to support the MOH in having a sustainable NTD program as well as improved coordination and timely implementation of NTD activities:

1. Develop a stronger advocacy plan to highlight NTD work to the MOH:

The development of the advocacy plan will be done during a four-day workshop and bring together the heads of the NGOs; the heads of the Directorate for the Control of Diseases, Epidemics, and Pandemics; the heads of the Directorate for Pharmacy, Medicines, and Laboratories; the heads of the Cooperation Division; and the heads of the Directorate of Financial Resources and Assets. During this meeting, participants will develop an advocacy plan that provides solutions to enable the sustainability of the national NTD program and addresses the following:

Identify the financial, human, and material resources the MOH can mobilize locally to enable the country to implement additional SAC deworming activities and to motivate CDDs

Review the advocacy targets and strategies to reach them. Local mayors and city councils will be targeted to support a portion of NTD activities within their yearly budgets, to help pay for CDD motivations and social mobilization within their health areas.

Define the measures the MOH must take to reduce staff shortages in the health areas, improve the delivery process for drugs and other inputs to the operational zones (notably the test kits for surveys), and validate an MDA campaign waste management plan.

2. Encourage the MOH and the DLMEP to reactivate the NTD National Technical Committee, with HKI taking a strong supporting role within the committee. Act |West will support quarterly committee meetings which will also bring together the WHO and other the NGOs. These meetings will allow the NTD community to speak with a unified voice to the MOH and help improve coordination.
3. Reinforce specific preparatory meetings for the PNLCé, to ensure surveys are done on time/minimize delays. HKI will conduct monthly preparatory meetings with the PNCLE during the three months preceding the beginning of any disease specific assessment. These meetings will be at no cost to ACT | West.
4. Support a temporary consultant at the PNLCé:

One of the major problems encountered by the program is a lack of human resources and staff capable of providing relevant technical support to the National Program Coordinator for monitoring activities and the PNLCé commitments. A temporary consultant would provide more efficient follow-up on the implementation of disease specific assessments (drafting of protocols and reports by the deadlines). At the moment this scope of work is not done by the PNLCé due to lack of human resources, it is instead completed by university staff members with numerous other obligations often leading to delays in program implementation. The consultant will also support updates to the database for the trachoma elimination dossier under the supervision of the National Coordinator.

viii. Activities Planned: SCH, STH, Post-Validation Monitoring/Verification (IR3)

a. Schistosomiasis

Previous and current FY activities and context

MDA

The first national MDA campaigns for SCH and STH in schools were launched in 2007 with the support of Children Without Worms (Mebendazole donation). Other campaigns were supported by USAID in 2010 for mapping and MDA. Epidemiological mapping conducted in 1985-1987 and 2010-2012 identified 153 HD as endemic (prevalence > 0%). Cameroon receives donations of praziquantel (PZQ) from MERCK through WHO. For the FY17 exercise, the National Program had planned MDA for 84 HD targets (4 HD added due to the redistricting of some HD) through school and community treatment. A teachers' strike in some areas (North West and South West) prevented implementation of the school strategy as planned; these regions have been treated according to a community strategy. In 2018, there was no funding for MDA, however, some regions used last year's remaining unused drugs to organize mini deworming campaigns.

SCH Surveys

During FY18, SCH surveys were conducted in 12 HDs with the support of ENVISION. Twelve additional HDs were surveyed in the Northwest, Southwest and West regions with Sightsavers funding. In addition, another 08 HDs were surveyed in the Central region. As in previous surveys, the Kato-Katz technique and urine filtration were used. The final 24 HD survey report was submitted in August 2018. For those, the

prevalence ranged from 0 to 37.56%. Also during FY18, USAID and ENVISION were unable to provide support for the treatment of SCH/STH but MOH used its own resources with the support of the Ministry of Basic Education and the Ministry of Secondary Education to conduct a smaller deworming campaign in 22 HDs, using the unused drugs remaining from the MDA campaign of FY17. This campaign targeted only the SCH.

During FY19, Act | West planned to conduct SCH/STH surveys in 45 HDs in the North and Far North regions, these surveys will be postponed to October FY20. Knowledge of the exact epidemiological situation of the HDs will help MOH to better allocate available resources during the implementation of SCH campaigns. No SCH/STH surveys are planned for FY20.

Plan and justification for FY20

MDA:

No MDA is planned for schistosomiasis in FY20 with USAID funding.

DSA:

No DSA is planned for schistosomiasis in FY20.

b. Soil-Transmitted Helminthiasis

Previous and current FY activities and context

MDA

With the launch of LF MDA in the Country, school-aged children received a second round of ALB in the LF endemic HD. For school-based deworming, parents of children who were not enrolled in school took them there on the day of treatment. Children aged 1 to 5 years were also treated twice a year as part of the Action Week of Health and Nutrition for Infant and Kindergarten (SASNIM), during which a set of services, including MEB, is distributed to children under 5 years old. In fiscal year 2018, as USAID was unable to provide financial support for the treatment of STH, the activity was not completed. In the SCH-STH surveys funded by ENVISION (12 HDs), Sightsavers (12 HDs) and Good Neighbors (8 HDs), STH data was also collected. The final investigation report for 24 HD was submitted in August 2018. For those, the prevalence ranged from 0.63% to 70.68%

Plan and justification for FY20

MDA:

No MDA is planned for STH in FY20 with USAID funding.

DSA:

No DSA is planned for STH in FY20.