Togo

Control of Neglected Tropical Diseases

Annual Work Plan

October 2011 – September 2012

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For further information, please contact: Rachel Bronzan, MD, MPH
Medical Epidemiologist and Technical Lead for Togo
HDI
6537 19th Avenue NE
Seattle, WA 98115
+1 404 451 1971
rachel@hdi.no

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Acronyms and Abbreviations

ALB – Albendazole
CAMEG – la Centrale d'Achats des Médicaments Essentiels Génériques et des consommables médicaux
CDD – Community drug distributor
DISER – Division d'Informations Statistiques, Etudes et Recherche
FEFO – First to expire, first out
FHI – Family Health International 360
GSK – GlaxoSmithKline
HDI – Health & Development, International
IEC – Information, education and communication
IVM – Ivermectin
LF – Lymphatic filariasis
MDA – Mass drug administration
MDP – Mectizan Donation Program
MOH – Ministry of Health
NTD – Neglected tropical diseases
PHU – Peripheral health unit
PZQ – Praziquantel
SAE – Severe adverse event
STH – Soil-transmitted helminths
TAS – Transmission assessment survey
UNICEF – United Nations Children's Fund
USAID – United States Agency for International Development
WHO – World Health Organization

Executive Summary

FY 2012 is the third year that integrated control of neglected tropical diseases (NTDs) is being implemented in Togo with USAID funding through HDI. In FY 2012, the following activities are planned:

Support Togo's NTD Planning Process
Nationwide MDA for schistosomiasis, onchocerciasis, and soil-transmitted helminths

- Community based distribution platform
- Schistosomiasis – Target 25 of Togo's 35 districts and more than 1.6 million people
    - Target group for schistosomiasis will be expanded to include treatment of school age children (SAC) in areas with prevalence <10% in the northern half of the country
    - Implementation unit is the peripheral health unit
- Onchocerciasis – Target 28 districts and more than 2.5 million people
    - Implementation unit is the district
- Soil-transmitted helminths – Target 24 districts and more than 1.3 million school age children
    - Implementation unit is the district
- Praziquantel, ivermectin, and albendazole will be given simultaneously, as this is the second or third MDA for all target populations
- Training, implementation, and data collection will be coordinated with the distribution of albendazole and vitamin A by the Nutrition Program/UNICEF to children under five years of age

Training – Cascade training of more than 17,000 people
Supervision – Joint effort by MOH and HDI
Short term technical assistance requests

- Conduct onchocerciasis situation analysis
- Coverage survey design
- M&E training for select MOH personnel
- Supply chain management training for select MOH personnel
- Training on environmental mitigation best practices

Financial Management – Improved skills within HDI and the MOH through Deloitte and Touche training
Surveillance and Management of Any Severe Adverse Events
Transition to post-elimination activities

- Lymphatic filariasis
    - Transmission assessment survey in 2012 to confirm that transmission has been interrupted
    - Continuing nationwide surveillance for LF
    - Ongoing nationwide trainings in lymphedema management for those afflicted with LF

Facilitation of collaboration and coordination between MOH, HDI and other partners
Expansion of cost-efficiencies of the program
Monitoring and Evaluation

- Coverage survey

Background

FY 2012 is the third year that integrated control of neglected tropical diseases (NTDs) is being implemented in Togo with USAID funding through HDI. This year is the first year that the funding is administered through FHI. Other partners who have contributed to integrated control of NTDs in Togo include the National Malaria Control Program, the Global Fund, Plan-Togo, UNICEF, the National Nutrition Program, Sight Savers, World Health Organization, US Centers for Disease Control and Prevention, Mectizan Donation Program, Children Without Worms, IMA World Health, Croix Rouge, and Handicap International. Togo began planning its integrated NTD control program in 2003 and successfully piloted integrated NTD mapping and integrated MDAs in one district starting in 2005.

Schistosomiasis, onchocerciasis, and soil-transmitted helminths (STH, primarily hookworm) are endemic in Togo (Table 1, Annex 2). Nationwide mapping (excluding Lomé) was conducted for schistosomiasis, trachoma, and soil-transmitted helminths from October to December 2009; follow-up detailed cluster surveys for trachoma were conducted in three districts in 2011. Schistosomiasis is endemic in all 30 districts outside of Lomé and STH are endemic in 24 districts; the prevalence of active trachoma is below 1% in all districts. Onchocerciasis is present in 28 districts; mass drug administration (MDA) with ivermectin has been ongoing for more than twenty years in some areas, but onchocerciasis persists and a situation analysis is needed to understand why and to plan interventions to address this problem. Seven districts were endemic for lymphatic filariasis (LF), but after between 6 and 9 years of MDA in those districts, transmission of LF was interrupted; the last MDA for LF occurred in 2009. Post-MDA surveillance for LF continues nationally, but additional steps are necessary in early 2012 to certify elimination.

Table 1. Integrated NTD activities in Togo by disease

Disease	Number of endemic districts	Number of non-endemic districts	Number of districts needing mapping**	Number of districts with ongoing MDA	Number of districts needing MDA, but MDA not yet started
Schistosomiasis	30	5	0	30*	0
Soil-transmitted helminths	24	11	0	24	0
Lymphatic filariasis	0	35	0	0	0
Onchocerciasis	28	7	0	28	0
Trachoma	0	35	0	0	0

*All 30 districts that are endemic for schistosomiasis have ongoing MDAs, but five of those districts will not have MDA in 2012 because they were treated last year and do not have any PHUs where the prevalence is ≥50%; see details regarding PHU-level implementation for praziquantel below (first bullet), in the footnote to Table 2, and in Annex 3, the END in Africa Work Plan Workbook Togo 2011-2012.

** The 5 districts of Lomé commune have not been mapped because existing data suggest these diseases are neither transmitted nor found frequently enough in Lomé through importation to justify MDA treatments.

In June 2010, Togo conducted an integrated MDA for schistosomiasis, onchocerciasis, and STH in the northern 15 districts. In August 2011 an integrated MDA was conducted in all 30 endemic districts. This was the first nationwide distribution of praziquantel, ivermectin, and albendazole to appropriate target groups, and included the distribution of long-lasting insecticide treated bed nets to every household through the National Malaria Program, the Global Fund, and Plan-Togo, and the distribution of albendazole and vitamin A to all children under five years of age through UNICEF and the National

Nutrition Program. This complex integrated activity was led by a large committee headed by the chief of the Minister of Health's cabinet.

There are several unique aspects of Togo's NTD Program that warrant mention.

- First, Togo mapped schistosomiasis, STH, and trachoma using a novel protocol from the Centers for Disease Control and Prevention. Each of Togo's 549 peripheral health units (PHUs) in the 30 endemic districts was sampled as part of the mapping in 2009. As a result, the prevalence of schistosomiasis and STH is known for each PHU. Because schistosomiasis is a highly focal disease, the Ministry of Health chose the PHU as the implementation unit for schistosomiasis. As a result, praziquantel reaches more of the people who are infected, and there is less unnecessary treatment of uninfected people, than if treatment were implemented based on a district-wide estimate of prevalence. This creates some complexities that must be kept in mind when reviewing Togo's work plan, treatment projections, or MDA coverage data. Albendazole distribution is still based on district level prevalence.
- Second, drug distribution occurs through community-based, house-to-house distribution for all age groups. Details on the rationale behind this approach can be found in the Drug Distribution Platform section on page 9.
- Third, only the northern half of the country was treated in 2010, and then both north and south were treated in 2011. Consequently, in PHUs targeted for MDA with praziquantel every other year (where prevalence of schistosomiasis is 10-49%), treatment will occur in the north in 2012 and in the south in 2013.
- Finally, now that the Togo MOH and NTD Program will begin treating all school age children twice during their primary school years in areas with schistosomiasis prevalence <10%, the first round of treatment will occur in synch with the treatment of the 10-49% prevalence groups. So, the first year of treatment for these low-prevalence areas will occur in 2012 in the north and in 2013 in the south (see Table 3).

Goals for the year October 2011 – September 2012

- The primary program goal for FY 2012 is to maintain nationwide integrated control of NTDs in all five regions in which NTDs are endemic. MDA for onchocerciasis, schistosomiasis and STH is planned for May 2012. Thirty districts endemic for schistosomiasis, 28 districts endemic for onchocerciasis, and 24 districts endemic for STH will be included in the May MDA.[1]
- LF control activities will continue in 2011-2012. The LF Program has conducted morbidity management on a national scale for persons affected by lymphedema, although IMA World Health funding for that activity has ended (see Annex 3). Surveillance for LF is ongoing and is described in detail in the monitoring and evaluation section.
- In 2012 there will be a focus on increasing MOH capacity for data management and monitoring and evaluation (M&E), strengthening the existing supply chain management, and conducting M&E activities to assess program performance. A situation analysis of areas where onchocerciasis control is not succeeding will be conducted to help troubleshoot and plan next steps for the onchocerciasis program.

Main Activities

HDI will support the Ministry of Health (MOH) with the following essential activities:

Support NTD Planning Process

The MOH led the planning, management, and implementation of the integrated and logistically complex national MDA in 2011. HDI will support the MOH in continuing this leadership in 2012 in the following ways:

- Togo has a Five-year Strategic Plan for NTD Control which was updated in 2011. However, at the recommendation of HDI, the MOH is drafting an amendment to include MDA with albendazole for women of child bearing age and treatment of school age children with praziquantel twice during primary school in areas where the prevalence of schistosomiasis is <10%.
- Using Togo's Five-year Strategic Plan, WHO NTD treatment guidelines, and data from the Togo census, as well as data from the 2010 and 2011 MDAs, HDI will work with the MOH to confirm the target geographic regions and populations for MDA and to develop the treatment projections for 2012.
- HDI will assist the MOH in developing the Annual Work Plan for the National NTD Program and operational micro plans at the regional and district levels. The HDI resident representative and/or logistics manager attends all central-level meetings related to MDA planning and preparation; these meetings occur at least bi-weekly in the three to four months prior to the MDA. Some of the operational micro plans are in place after two integrated MDAs and decades of MDAs for onchocerciasis, but improvements will be developed based on review of the 2011 MDA process.
- HDI will provide training and technical assistance to the MOH for identifying the best baseline population data for calculating at-risk and target populations for the MDA, as well as for calculating drug needs and completing procurement requests (using both the FHI/USAID drug needs tool and the WHO tool).

[1] See also Togo's Strategic Plan for NTDs, attached.

Mapping

- There are no remaining gaps in disease mapping and no mapping is planned.

Scaling up NTD National Program

- The integrated MDAs reached national scale in 2011. As in 2011, the 2012 MDA will continue coverage of the 30 districts in Togo where at least one of the target NTDs is prevalent. The target population will be expanded for schistosomiasis and STH.
- For schistosomiasis, the 2012 MDA will additionally target school age children in areas with prevalence <10% as the first step toward the WHO target of treating all children in low prevalence areas twice during their primary school years. For logistical purposes, this additional target will occur in the north in 2012 and in the south in 2013.
- For STH, the 2012 MDA will target school age children (as in 2011) with the addition of a second round of treatment (in November) in districts where the prevalence of STH is ≥50%.

Mass Drug Administration

Timeline

- The MDA will take place in early May 2012 and will occur over two weeks. Microplanning and final production of necessary tools will occur in February, community mobilization and IEC will begin in March, training of trainers and training of drug distributors will occur in April. This will be at least the second MDA for all target areas, so all three drugs (ivermectin, praziquantel, and albendazole) will be given simultaneously.

Target populations

- In FY 2012, target populations will be expanded to reach every WHO-recommended target group (see also Scaling Up NTD National Program, page 7), as follows:
  - Praziquantel (PZQ) for schistosomiasis
    - Prevalence ≥50% → treat all persons age 5 years and older every year
    - Prevalence 10-49% → treat all school age children every two years
    - Prevalence <10% → in 2010/2011, no treatment; in 2012, target expanded to include treatment of all school age children twice during primary school
  - Ivermectin (IVM) for onchocerciasis
    - Prevalence ≥40% → treat all persons age 5 years and older in villages with population <2,000 once per year (twice per year in the highest prevalence areas)[2]
    - Prevalence <40% → no treatment
  - Albendazole (ALB) for soil-transmitted helminthiasis
    - Prevalence ≥50% → in 2010/2011, treat all school age children once per year; in 2012, target expanded to treat school age children twice per year

[2] The results of an old study conducted by the onchocerciasis program demonstrated that villages with more than 2000 people received fewer black fly bites and had a significantly reduced risk of infection with onchocerciasis, and treating only villages with fewer than 2000 people then became OCP standard procedure. Twice yearly treatment is conducted in selected areas based on outdated prevalence estimates. This is further evidence of the need to conduct a situation analysis for the onchocerciasis program, to align program activities with needs as indicated by current data (see Short Term Technical Assistance, Table 6, #1 and Transition to Post-elimination Strategy).

- Prevalence 20-49% → treat all school age children once per year
- Prevalence <20% → no treatment

In 2012, the at-risk and target populations will be calculated using enumeration data from the 2011 MDA. Previous MDAs used census data from 1980, projected to the present, but those estimates were inaccurate, which resulted in wild variations in coverage estimates (sometimes over 100% of the official population). Although a new national census was conducted in Togo in 2010, the results are not yet available; should the results become available, they could be used for these calculations. For each disease the target group by age, number of districts, and total target population are shown in Table 2.

Table 2. Target districts and estimated target populations for 2012 MDA*

NTD	Target group by age	Number of districts	Targeted Population
Schistosomiasis	School age children and adults	23	1,585,087
Schistosomiasis	School age children only	2	18,841
Onchocerciasis	Entire population age 5 years and older	28	2,567,114
Soil-transmitted helminths	School age children	24	1,319,727

*As described in the Background section, Togo implements schistosomiasis treatment at the public health unit (PHU) level, based on the prevalence of schistosomiasis at the PHU level, so not every person in the districts listed will be treated, and the estimated number of people to be treated is equal to the sum of the people in targeted PHUs, rather than the sum of the populations of all of the districts. Details on target populations can be found in the END in Africa Work Plan Workbook Togo 2011-2012, included with this work plan. As mentioned in the footnote to Table 1, five districts (Ave, Golfe, Lacs, Vo, and Danyi) will not have MDA for schistosomiasis in 2012 because they were treated last year and there are no PHUs where the prevalence is ≥50% (where yearly treatment would be indicated).

Geographic targets

- In 2010, only the three northern regions (Kara, Savanes and Centrale) were targeted. In 2011, the two southern regions (Plateaux and Maritime) were added. Consequently, those groups which are targeted every two years with praziquantel for schistosomiasis are treated in even years in the north and odd years in the south. The following table summarizes which groups are targeted in the northern versus southern regions each year. Details on past and planned MDAs are included in the Historical Data sheet of the Baseline Data Excel workbook, included with this work plan.

Table 3. Geographic targets by disease prevalence and year

	2010		2011		2012	
	North	South	North	South	North	South
Schistosomiasis ≥50%	YES	NO	YES	YES	YES	YES
Schistosomiasis 10-49%	YES	NO	NO	YES	YES	NO
Schistosomiasis <10%	NO	NO	NO	NO	YES	NO
Onchocerciasis ≥40%	YES	NO	YES	YES	YES	YES
Onchocerciasis <40%	NO	NO	NO	NO	NO	NO
STH ≥50%	SOME AREAS	NO	YES	YES	YES	YES
STH 20-49%	SOME AREAS	NO	YES	YES	YES	YES
STH <20%	NO	NO	NO	NO	NO	NO

Drug distribution platform

- Drugs are delivered to the target population by community drug distributors (CDDs) through community based distribution for all target population age groups. The integrated MDAs utilize this approach because it has been used by the onchocerciasis program for more than 20 years, and by the LF program to eliminate LF, with great success. There are several justifications for this approach:
    - A recent study suggests that community based distribution is more cost effective than school-based distribution, particularly when adults are also being targeted.[3] The study's authors found this to be due to the "low proportion of the population targeted and treated by the school based system".
    - In Togo, all three of the drugs used in the MDAs are distributed to adults as well as children, so community based distribution will be necessary. Utilization of both community and school based distribution platforms would significantly increase the cost and complexity of distribution.
    - Children who do not go to school are more heavily infected than children who do go to school,[4] and these are the children who would likely be missed through school based distribution.
- The community based distribution system works well and reaches individuals who go to school or work outside the home. The community drug distributor (CDD) goes to his or her designated households when (s)he knows people are likely to be home. As a member of the community, the CDD has good knowledge of when this will be (e.g. early morning, late evening, etc.). Treatments are administered to all appropriate people. If any household member is absent, an appointment is made to return when that person is expected to be home. At least three visits are made before the CDD can register a person as being "not at home".

Social Mobilization and IEC

- Radio spots and town criers will advertise the upcoming MDA several weeks prior to the start.
- The CDDs will engage the local communities and use flip charts to educate target populations about the prevention and treatment of NTDs.
- There are 3,500 flip charts that need to be produced in FY 2012; all other flip charts are in the field and radio spots have already been developed.
- HDI will produce a success story to share with stakeholders.

Distribution of Drugs and Supplies

- Drug applications were submitted in early October. In 2012, ivermectin is donated by the Mectizan Donation Program, albendazole for school age children is donated by GlaxoSmithKline through Children Without Worms, and praziquantel is procured by FHI (Table 4).
- As successfully done in previous years, drugs will be delivered from Lomé to each region by the MOH using CAMEG vehicles (CAMEG - la Centrale d'Achats des Médicaments Essentiels Génériques et des consommables médicaux). Each district will then collect its supply of drugs from the regional warehouse. Each public health unit (PHU) will collect its supply of drugs from the district and will distribute the drugs to individual CDDs.

[3] Leslie J, Garba A, et al. Schistosomiasis and Soil-Transmitted Helminth Control in Niger : Cost Effectiveness of School Based and Community Distributed Mass Drug Administration. PLoS Negl Trop Dis. 2011 Oct; 5(10):e1326.

[4] Husein MH et al. (1996). Who misses out with school-based health programmes? A study of schistosomiasis control in Egypt. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 90:362-365.

- At each step, drugs are dispatched with an inventory form stating the name of each drug, the quantity being distributed at that level (district, PHU, or village), the date the drugs are being distributed to that level, and the expiration date. The signatures of both the person delivering and the person receiving the order are included at each transfer point. At the end of the MDA the inventory form must be returned to the next level up with an indication of how many doses of each drug were used, along with any unused drugs. Supply chain management and accountability of drugs has been excellent in Togo, but efforts will be made to cultivate greater expertise within the MOH by identifying a person from the MOH who can receive training on supply chain management along with the HDI-Togo logistics coordinator who has been overseeing these activities.
- Unused drugs will be returned to the district level by district transport, and collected by central level vehicles and returned to Lomé. Unused drugs that can be used in the next MDA will be stored at CAMEG in Lomé. Damaged drugs will be collected and incinerated at the regional level.

Table 4. Drug Needs and Procurement

Drug	Source of drug (procured or donated)	Quantity of drug	Date of Donation Application (MM/YR)	Expected delivery date of drugs (MM/YR)
IVM	DONATED	9,765,500 tablets	COMPLETED	PENDING
ALB	DONATED	1,607,500 tablets	03/3011	02/2012
PZQ	PROCURED	3,962,292 tablets	10/2011	02/2012

- In all cases the “First to Expire, First Out” (FEFO) method is used; as previously, the drugs with the earliest expiration date at each distribution level will be the first drugs distributed.

Training

- A training-of-trainers approach will be used to train personnel at all levels involved in the implementation of MDA. Including CDDs, more than 17,000 people will be trained (Table 5). The 2012 campaign will be integrated with the distribution of albendazole and vitamin A to children under five years of age, but it will not include distribution of bednets. Therefore it will be logistically similar to the 2010 campaign. Most personnel involved will have participated in prior MDAs.
- The National Coordinator for NTD Control, the National Coordinators for the individual NTD programs and the HDI team will conduct the training of regional and district supervisors. These supervisors will in turn train the level below them, the peripheral health unit (PHU) nurses. The regional and district supervisor/trainers will consist of the regional and district medical directors, the regional Program Directors for the individual NTD programs, and the district NTD Focal Point persons.
- For the training-of-trainers session for PHU nurses, a nurse from the dispensary of each of the PHU requiring MDA will be trained on the implementation of the MDA at their respective district headquarters. These nurses will return to their PHUs and will conduct the annual retraining of the CDDs from that PHU on implementation of the MDA. Training for the nurse trainers will occur no more than two weeks before MDA, and training of the CDDs will occur within one week of the MDA. In 2012, training will emphasize the practical aspects of MDA implementation, with post-training evaluation to ensure each trainee is competent in performing all necessary tasks. Training curriculum contents are being updated accordingly.
- Most of the CDDs will have participated in at least one MDA prior to 2012, but all CDDs will receive a refresher training immediately prior to the MDA on the correct administration of the drugs. The

training of CDDs will be the final step of the cascade training for the MDA. This will include an individual treatment guideline for each CDD highlighting the drugs that will be distributed in their village(s) and the target population for each of those drugs. Use of the dose poles will also be reviewed during the training.

- Training on identification, management, and reporting of serious adverse events will be included at all levels of the training cascade.
- Supply chain management will be specifically addressed in the training manual and at all levels of the training cascade.

Table 5. Training Events - New Personnel and Refresher

Training Group	Topic	No. to be Trained	No. Training Days	Location	New training or refresher training?
MOH at central level	Supervision skills and how to train trainers	18	3	Lomé	Refresher
Trainers	Supervision skills and how to train trainers	102	3	Lomé	Refresher
Supervisors	MDA procedures and training of community drug distributors	626	3	District Headquarters	Refresher
Drug distributors	IEC and drug distribution procedures	16500	2	Peripheral health units	Refresher and new (combined)

Supervision

- Primary responsibility for supervision lies with the districts. The PHU nurse will be responsible for assuring effective roll-out of the MDA in their PHU. The district supervisor (three per district) will visit PHU dispensaries, receive feedback from the PHU nurse, visit any problem area or CDD identified by the PHU nurse, and select a subset of CDDs to follow and assess. The regional supervisors will, at the very least, visit any problem areas identified by district supervisors. National and HDI supervisors (including the director of pharmacy) will make spot checks and visit problem areas as needed. The national level supervisors will include representatives from each of the NTD programs. Standardized supervision forms are used by all supervisors.
- At the end of the MDA, a team of supervisors will travel to each district and collect the treatment reporting forms and all unused drugs, as was successfully implemented in 2011 to address issues identified in 2010. They will review forms for consistency and accuracy while in each district and will bring copies to Lomé. After data have been entered and analyzed, the supervisors will review reported geographic, epidemiologic and programmatic coverage and will investigate any unusual findings. They will also investigate any discrepancies between the reported coverage and the results of the post-MDA coverage survey.
- Supervisors will monitor drug inventories during the MDA through communications from CDDs to PHU nurses to district level supervisors. Drug shortages in any village or PHU will be resolved by redistribution of drugs from elsewhere in the corresponding PHU or district.

Short Term Technical Assistance

Table 6. Technical Assistance Requirements

Task	Technical skill required	Number of Days required
1. Conduct a systematic review of existing onchocerciasis program data to confirm and identify geographic areas of persistent elevated prevalence of onchocerciasis (three areas are currently known) and next steps for control in these areas. Assist in evaluating need for reinforcing control activities in border areas.	Strong knowledge of onchocerciasis control. We would like the technical assistant to review existing data at the onchocerciasis control program office in Kara and conduct field visits to selected areas of high prevalence of onchocerciasis to assess community and environmental factors possibly affecting program effectiveness (such as vector control strategies, or geographic coverage measured through MDA coverage rates, etc.)	6-8 weeks in Togo
2. MDA coverage validation survey - design phase – consultation is needed to review proposed study design including sampling	Expertise in designing NTD coverage surveys	1-2 days (in the form of periodic email/phone contact)
3. MDA Coverage validation survey - implementation phase	Expertise in implementation of field surveys	1-2 weeks in Togo
4. Conduct training on M&E for the integrated NTD program and for M&E personnel from pertinent individual NTD programs and develop a set of integrated monitoring and evaluation indicators.	Knowledge of appropriate indicators for M&E of integrated NTD programs and ability to train MOH personnel on M&E	1 week in Togo or at regional NTD Program training on M&E
5. Creation of a peer-reviewed publication of the results of the 2011 MDA, including the results of the post-MDA survey conducted by the Togo MOH	Experience writing peer-reviewed publications and knowledge of literature related to program process evaluation and review.	Email/phone correspondence and 1 week in Togo
6. Training of MOH and HDI personnel on supply chain management strategies	Expertise in supply chain management	Less than 1 week
7. Environmental mitigation and management	Implementation of environmental mitigation measures and monitoring activities	Less than 1 week
8. Assistance with protocol development and sampling for the Transmission Assessment Survey for LF	Knowledge of the WHO TAS protocol and ability to adapt this protocol to areas where ivermectin MDAs are ongoing for onchocerciasis such that it meets WHO requirements for certification of LF elimination	Email/phone correspondence and 1-2 weeks in Togo

Justification of Short Term Technical Assistance requests

1. In a special meeting in Lomé, members of the onchocerciasis control program gave a detailed presentation of the history of the onchocerciasis program, including vector control efforts that began under the WHO's Onchocerciasis Control Program (OCP) in the 1970s and mass drug

administration with ivermectin beginning as early as 1987. Since the demise of OCP the Togo Onchocerciasis Program continues to work ardently. Selected surveillance activities are ongoing in 280 villages, including skin snip surveys. There appear to be three areas where the prevalence of onchocerciasis remains high in spite of the program's valiant efforts. However the data are not fully organized and much of the knowledge and understanding of the history of onchocerciasis control activities in Togo lies with two senior personnel who are near retirement. The team needs assistance in thoughtfully organizing and analyzing the data to understand what is and is not known about the state of onchocerciasis in Togo today, to identify where problems lie, and to identify any additional needs for technical assistance in 2013. This technical assistance (in 2012) may identify reasons why there is still a high prevalence of onchocerciasis in certain areas and may identify solutions; the TA may also identify areas where MDAs could be stopped and/or areas where further investigations, surveys, or TA are needed to fully describe the epidemiology and to develop and elaborate an improved onchocerciasis control plan. While the target population and geographic areas will remain the same in 2012 as they have been in recent MDAs, we hope to elicit information that will allow us to improve the program next year, possibly reducing the areas targeted once or twice yearly with ivermectin MDA.

2. HDI will assist the MOH in developing a protocol for a coverage validation survey to be conducted after the May 2012 MDA. There has not yet been a validation of the estimated programmatic coverage of the integrated NTD MDAs. This will be a critical tool for assessing whether the program is functioning, as well as for improving any weak areas. Due to old population estimates for Togo, coverage rates from the 2010 and 2011 MDAs were unreliable, sometimes over 100% of the official population. Additionally, for the onchocerciasis program, which is now struggling to understand the current epidemiology of onchocerciasis, a coverage survey will provide important information regarding the three areas where prevalence remains high. HDI will develop the protocol but TA is requested to have the protocol reviewed and input provided as needed, particularly with respect to sampling.
3. As above, the MOH will need technical assistance in implementing the coverage validation survey. This technical assistance can be provided by HDI, but additional assistance may be needed.
4. The MOH has a set of indicators that they use for monitoring and evaluation of integrated NTD control, however these indicators need to be reviewed and revised and should include guidelines on how to properly collect and interpret the indicators. To date, much of this work has been accomplished through significant input from HDI; this training will allow the MOH to more effectively and more independently lead the M&E component of the integrated NTD program.
5. The MOH has expressed a desire to have the results of the 2011 MDA, including preparatory activities, drafted into a manuscript for peer-reviewed publication. This will be an important contribution to the literature, and will share lessons learned with other countries aiming to implement similar programs.
6. The MOH received verbal feedback after the assessment of the supply chain management (SCM) system in Togo. While the system was found to be working well, the recommendation was to have a training to strengthen knowledge of the details of supply chain management both within the MOH and within HDI, the latter having been the lead responsible party for SCM for the Integrated NTD Program at the central level. This training would improve MOH competency at SCM and would help the MOH become fully independent at SCM that meets US government standards.
7. Technical assistance is requested on proper implementation of environmental mitigation measures and monitoring activities to ensure that Togo meets the environmental standards required under this grant.
8. Togo must implement a TAS in 2012, in keeping with WHO requirements for moving toward certification of Togo as having eliminated LF. Technical assistance is requested for protocol

adaptation (especially sampling) for the TAS. The current LF coordinator has the necessary laboratory knowledge but lacks the experience to adapt the protocol for implementation in Togo.

Financial Management

- The HDI NTD Program Accountants at Headquarters and in Togo have several years of experience working with funding from USAID and are familiar with the regulations. Every month a field budget is proposed and approved, within the bounds of the approved award budget. Each month, each budget line is compared against the actual budget, and each entry verified in Togo will be reviewed and approved by Headquarters to ensure compliance with USAID regulations. The Program Manager reviews each month's financial report to again verify that expenses are in accordance with the work plan. Monthly financial reports with program narrative reports will be submitted to FHI within 30 days after the end of the reporting period. Additionally, several individuals from HDI-Togo and HDI-Headquarters attended a training provided by Deloitte and Touche in Togo in November 2011.
- The MOH will receive all flow down financial regulations through the subaward granted to them. They will also be instructed to review USAID reporting requirements and regulations. Additionally, MOH staff attended the training session provided by Deloitte and Touche in Togo in November 2011.
- Upon completion of the MDA, the original receipts will flow from the MOH system to HDI for review and recording in HDI's accounting system together with the supports for each entry.
- HDI will comply with financial sampling of records by FHI following the MDA and will take any corrective action as indicated by FHI after the sampling reviews. FHI also has direct, view-only access to the financial accounting system and can carry out any inspection or analysis desired at any time.
- HDI will assist the MOH in reviewing and updating the Funding Gap Assessment Tool based on the anticipated needs for 2012 when the latest version becomes available; some of the key partners involved in the 2011 MDA will not be participating in 2012 so the funding gap will differ from 2011.

Management of Serious Adverse Events

- All Serious Adverse Events (SAE) will be reported immediately by the government of Togo to HDI, and HDI will notify Bolivar Pou, the Project Director for NTDs, Africa, at FHI Headquarters within 24 hours of receipt of the information. Mectizan SAEs will also be immediately reported to MDP and albendazole side effects will be reported to GSK. Identification, management, and reporting of SAEs will be taught at the trainings. Reporting of adverse events will be through established channels as previously done. The CDD will refer the patient immediately to the PHU dispensary. Serious cases will be hospitalized at the district hospital. From the dispensary or hospital, the case will be reported to the district supervisor and regional supervisor and details of the case will be sent by email or fax. This approach is in accordance with Togo's national system of pharmacovigilance. The regional supervisor will report immediately by phone to the HDI office in Lomé and the MOH.
- The MOH will identify a master's degree student to develop a protocol to verify adverse events (i.e. an operational research project for a master's thesis). This protocol will validate the findings from the established SAE reporting system and will provide data to the NTD program. This will be implemented in the month following the MDA.

Transition to Post-elimination Strategy

- LF has been eliminated from Togo and is no longer a target disease for MDA. HDI will support the MOH in its ongoing surveillance program for LF. Nighttime blood slides, collected monthly from patients being treated for malaria, are screened for microfilaria at 41 laboratories in the 35 districts of Togo. Additionally, in border areas not served by these laboratories, where the risk of LF is higher due to its presence in neighboring countries, specially trained nurses at peripheral health centers will, four times per year, collect blood spots on filter paper from 20 adults living in the area and forward them to Lomé for analysis. Due to a lack of funds, surveillance slides collected in 2011 have not been processed; funding is needed to complete this important activity. Identification of a case of LF will prompt further investigation and testing and appropriate treatment. Additionally, HDI will support LF morbidity management for affected individuals.
- A transmission assessment survey (TAS) is needed in 2012 to confirm interruption of LF transmission in Togo, according to WHO recommendations; TA (#8) will be requested for assistance with implementation (protocol development and sampling).
- The prevalence of active trachoma is less than 1% in Togo. While trachoma is no longer a target disease for MDA, HDI will continue to support IEC on the importance of facial hygiene.
- TA (item #1) has been requested to conduct a situation analysis of onchocerciasis control in Togo; this is the necessary first step in determining whether Togo is near elimination of onchocerciasis and where and when Togo should change from control activities to primarily surveillance activities.

Facilitate Collaboration and Coordination

- HDI will continue to support the MOH in its collaborations with other partners and programs whenever those partners are conducting related field activities. MDAs will typically involve the Nutrition Program/UNICEF, and in the future may again involve the Malaria Program when another bednet distribution is needed. Coordination of these activities is achieved through weekly or biweekly meetings with all partners who plan to implement field activities at the same time through a shared platform.
- The Togo MOH has been highly effective at coordinating donor support and available resources to achieve MOH goals. In 2011, none of the partners participating in the nationwide integrated MDA had sufficient funds to implement their activities nationwide alone, and only through the leadership and coordination of the MOH was the highly integrated nationwide campaign made possible.
- A stakeholder meeting will be held March 6-8, 2012. Attendees will include the Director General for health, the coordinator of each NTD program, the focal point for the Integrated NTD program, the regional director for all six regions in Togo, representatives from the Nutrition Program, the Ministry of Education, and the Ministry of Social Action, and most partners listed in the Background (top of page 4). The goals of the meeting are to inform participants about the objectives, targets, and process of the MDA, outline a general action plan for the campaign, develop detailed work plans for principle activities, and review and refine the budget based on contributions from all partners.
- In 2012, HDI will advocate for increased commitment from the government and donors in support of the NTD Program by disseminating the achievements of the program and using the program's success to leverage commitment at the annual stakeholders meeting and elsewhere. HDI will focus on identifying and supporting champions of integrated NTD control. HDI will specifically advocate for increased direct support from the government of Togo by highlighting that program sustainability is improved when domestic commitment is strong.

Cost-efficiencies

- Cost savings have been achieved through integration of training, transportation of drugs, combined registers for all drugs and all diseases, IEC materials, and field work for MDAs for onchocerciasis, schistosomiasis, and soil-transmitted helminths. These cost efficiencies will continue in the upcoming MDAs.
- Cost savings in the same areas have been achieved in 2011 by coordinating NTD work with the work of the Nutrition Program/UNICEF and the Malaria Program/Plan-Togo/Global Fund. In 2012, only the Nutrition Program/UNICEF will be conducting field work that can be integrated with the NTD Program.
- Cost efficiencies have been achieved because this program is now established and MDA tools (IEC materials and dose poles) are now available in most geographic target areas. In 2012 only 3,500 additional flip charts need to be produced to complete a full complement if IEC materials for all drug distributors.
- Further cost efficiencies may be achieved by streamlining training when the program becomes more routine, and possibly by improving data transfer so that fewer forms are needed and/or necessary forms are streamlined.

Monitoring & Evaluation

Timeline

- The timeline for reporting and completion of the M&E deliverables is shown in the Timeline in the last section of this document. The program will utilize the existing M&E framework and tools supplied by FHI.

Data Management

- The Division d'Informations Statistiques, Etudes et Recherche (DISER) in the MOH has increased its role in the collection and analysis of data from the integrated NTD program MDAs but staff shortages prohibit DISER from taking full ownership of this process. HDI will identify and support a statistician to be seconded to the MOH at DISER who will oversee data management and analysis specifically for the integrated NTD program. This person will be responsible for ensuring accurate estimation of total, at-risk, and target populations, as well as monitoring and evaluation indicators.
- Data collection will utilize the established community registers that are familiar to the CDDs. Treatment and drug inventories from the CDDs will be compiled by PHU nurses into PHU-level treatment and drug reporting forms.
- The PHU-level data forms will be entered into a database created by DISER. Data quality will be increased by double entry and thorough cleaning of all data. Data quality will be determined by assessment of data uniqueness, accuracy, internal consistency, and completeness. Spot checks of data from randomly selected sites will be conducted in which the original data sheets will be compared with the data files. Data will be screened for outliers. Outliers will be inspected manually and a decision on how to properly handle each outlier will be made individually and using outside data sources if needed (i.e. contacting a locality to verify population data). The newly identified statistician who will be seconded to the MOH will supervise all data management with backup from the HDI technical lead.
- A more comprehensive list of integrated NTD indicators will be developed (technical assistance has been requested for this activity – Table 6, item #4). This process must include discussion from all related NTD programs so that the data and needs of all disease programs will be included. As part of

this process, the utility of indicators originally developed for the integrated NTD program in 2005 will be reviewed.
- As suggested by the M&E consultant from FHI, a set of Standard Operating Procedures for collecting and analyzing data for monitoring and evaluation of the program will be developed.

Program Assessment
- A coverage survey will be conducted after the May 2012 MDA to validate coverage rates reported through the MDA. This has not previously been conducted and will be critical to helping 1) either confirm that program implementation is proceeding as believed or identify areas where it is not (to initiate processes to strengthen problem areas), 2) assess coverage in the three geographic areas where onchocerciasis prevalence is persistently high to inform next steps for onchocerciasis control, and 3) understand whether the household distribution platform is effective for reaching the target populations, especially school age children. The MOH would like to include several simple questions to assess the communities' experience of the MDA; this information may help identify causes of any low programmatic coverage. Technical assistance (Table 6, #2 and #3) has been requested for this activity.

Impact Assessment
- Surveillance for lymphatic filariasis will be conducted as described in the Transition to Post-Elimination Strategy section.

Program Review and Community Feedback
- Twice yearly program performance reviews will be held at the central level. These meetings will be informed by the results of the MDA and the coverage survey.
- Results from the 2011 MDA will be used to 1) improve population estimates (which in 2011 were based mostly on 1980 census data) and target population estimates by drug package, 2) validate drug inventory and identify areas where there were drug shortages or surpluses, 3) identify any areas where drug distribution was not in accordance with population targets, 4) amend training in 2012 to improve issues identified in #2 and #3, and 5) verify the names, populations, and endemnicities of PHUs that were redistricted since preparation for the 2011 MDA took place (peripheral health units are periodically merged or new ones created according to local needs).
- Drug inventory data will be compared with drug counts. Inconsistencies will be investigated by HDI personnel and any supply chain issues will be addressed before the next MDA.
- Programmatic coverage rates will be calculated from the treatment data. Areas of low (<85%) or high (>100%) programmatic coverage will be examined to determine what may have led to such results. If necessary, adjustments in population estimates will be made in preparation of the next year's treatment projections.
- Irregularities or gaps in treatment algorithms, drug supply chain management, and data collection will be examined by a joint MOH/HDI team and problem areas will be specifically addressed during training prior to subsequent MDAs.
- The MOH conducted a survey after the 2011 MDA to examine and document the strengths and weaknesses of the implementation process. The MOH will identify a public health consultant within Togo to analyze and write up the results of this study. These data will be combined with the results of the 2011 MDA to create a peer-reviewed publication of the impressive Togo 2011 integrated MDA for NTDs. TA (item #5) will be provided to help with data analysis and draft a peer-reviewed paper in English. Depending on the results of the 2011 post-MDA survey, a formal evaluation of the

MDA process may be planned by the MOH for 2013 (strengths, weaknesses, and specific issues related to varying degrees of integration across different disease programs).

- The Togo MOH feels that an important part of the MDA process is to provide community feedback on the results. Results of the MDA will be disseminated to the communities through religious and traditional community leaders and radio spots. Communities will be able to see how their performance compares with the performance of all other communities in the area. Community response to this feedback will be assessed in the supplemental questions to the coverage survey.

Proposed Plans for Additional Support to National NTD Program (will be considered on a case-by case basis)

HDI is seeking funds to provide surgery to the 11 women with trichiasis identified during the HDI trachoma cluster survey in early 2011, and additionally to the estimated 550 other people suffering from trichiasis in the three surveyed districts. It is standard good-practice and an ethical obligation to, at the very least, treat those individuals identified through the trachoma cluster survey who suffer from trichiasis. Sight Savers is being approached for funding.

Cost Share

Financial contributions from HDI and the Togo government (detailed in the budget) total $293,000 and include MOH contributions of staff at central, regional and district levels for the project (particularly for supervision), PHU nurses, other public health personnel involved in the project (accountants, vehicles for supervision, hospital expenses for persons hospitalized with SAEs related to MDA drugs), and community drug distributors' time.

Travel Plans

Two HDI headquarters personnel will travel to Togo for the May MDA training and/or field work. One headquarters staff person will be present for implementation of the coverage survey in June 2012. Two headquarters staff personnel will attend the two bi-annual performance review meetings (February and August 2012).

Staffing

Dr. Anders Seim is Executive Director of HDI. At headquarters level, Stephanie Richard is the Project Manager for the Togo Integrated Control of NTDs Project, Dr. Rachel Bronzan is the Technical Lead, and Brent Bell is the Accountant. Dr. Gabriel Anthony is the Resident Representative of HDI in Togo for the project, Kokou Emmanuel Abalo is the in-country Accountant, and Michel Datagni is the in-country Logistics Manager.

Environmental Monitoring Plan

This program makes every effort to limit its impact on the environment. Dose poles, laminated flip charts, and village registers used in the MDA are durable and reusable. Reports will be circulated electronically whenever feasible. Short-term technical assistance (Table 6, #8) will be requested from FHI on environmental mitigation measures and monitoring activities. Damaged drugs will be collected and incinerated at the regional level.

Timeline

Timeline of Major Activities: Togo integrated NTD program Oct 2011 – Sep 2012

2011-2012	*Month (October-September)*											
Activity	O	N	D	J	F	M	A	M	J	J	A	S
Finalize drug applications	X										X	
MDA								X[1]				
Microplanning for 2012 MDA begins					X							
Finalize and print out training materials					X							
Training of central, regional, district trainers							X					
Training of PHU nurses							X					
Training of CDDs							X					
Community mobilization						X	X					
IEC						X	X					
Coverage survey									X			
M&E – Post-MDA review meeting									X			
M&E – Generate coverage reports									X			
M&E – Finalize and distribute coverage reports										X		
Dissemination of MDA results back to the community										X		
Stakeholder meeting						X						
Bi-annual performance review meeting with all MOH NTD program personnel[2]						X					X	
Semi-annual reports						X						X

[1] – Spring MDA – ivermectin (donated by MDP), albendazole and praziquantel nationwide as needed

[2] – Bi-annual meetings will be used for program performance review; March meeting will include preparations for the spring MDA; August meeting will include FHI/USAID work planning meeting

Annex 1: Government NTD Five Year Work Plan

Annex 2: END in Africa-Disease Distribution – Baseline Data Form Togo 2012

Annex 3: END in Africa – Work Plan Workbook Togo 2011-2012

Annex 4: Summary of Togo's Lymphedema Management Program

Togo's Integrated NTD Program Lymphedema Morbidity Management

Since 2003, Togo's program for the Integrated Control of NTDs has been incorporating new diseases and activities whenever possible, and this includes the alleviation of suffering by those afflicted with these NTDs.

USAID began supporting disability alleviation for lymphatic filariasis (LF) by supporting IMA (subsequently "IMA World Health") through the World Bank from 2007: www.imaworldhealth.org/targeted-disease-control/communities-fight-neglected-tropical-diseases-in-haiti.html (accessed February 6, 2012, including a success story from Togo on IMA's front page). IMA's grant for this activity has come to an end.

The almost 1,000 people whose dignity was restored by that project will in most cases be able to continue the self-treatment that has gained them a life without further progression of the disease toward worsened "elephantiasis", and without the stench from their own bodies which they would otherwise normally suffer as part of "elephantiasis". Many can take care of themselves, while some manage with the help of a close relative or neighbor who has been trained.

Yet, the IMA project did not reach enough of the people in Togo who have LF-lymphedema, and assistance-providers for the most severely afflicted continue to need some supervision. Togo's national LF team under the NTD program is requesting **$6,797.84** to continue training, re-training and supervising those who provide assistance to lymphedema sufferers, and to produce radio spots and flip charts for use as they reach out to more. The aim is to help those most severely afflicted while reaching out to more of the people who got LF before its transmission was interrupted by Togo, to help prevent progression of clinical disease and the worsened poverty and dependence on others that always result if that progression is not halted.

LF causes permanent damage to the body's lymphatic vessels, damage which persists even after the parasites have died. Once the lymphatic vessels are damaged, ordinary bacteria and fungi that cross the skin, especially in moist corners, between toes (like "athletes foot"), or through cracks in damaged skin on barefoot individuals in a hot, humid climate, are what causes progression toward full-blown "elephantiasis". Daily hygiene with soap and water, simple exercises, protective yet open footwear, and careful attention to the afflicted limb is enough to alleviate the suffering, allow people to re-commence social- and in many cases economic activity, and even stop further progression of the disease. For more details on how this works, see for example: www.amaurycoutinho.org.br/english/index_english.html (accessed February 6, 2012) where a book produced by HDI and a booklet from CDC are featured.

All Togolese children born today face a future free of LF with its indignities and guaranteed poverty, assuming LF monitoring along Togo's borders continues to be effective until its neighboring countries have also interrupted LF transmission. An additional investment of about $6,800 will prevent many, many people from having a leg the size of a telephone pole, will ensure a dignified, economically productive future for many of those already afflicted with LF in Togo, and will prevent relapses in those most severely afflicted.

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Relevant selections from the IMA World Health website

IMA World Health's USAID-supported lymphoedema management activities in Togo (and India): www.imaworldhealth.org/targeted-disease-control/communities-fight-neglected-tropical-diseases-in-haiti.html (accessed February 6, 2012)

Success Story: IMA at work

For 15 years, a 50-year-old Togolese woman had suffered from painful swelling in her legs with LF. A clinic wrongly advised her to have an amputation, an unnecessary and potentially fatal decision for LF patients. Desperate, she entered a government morbidity management program supported by IMA. After learning proper techniques for washing, exercising and elevating her leg, her condition is greatly improved and her swelling is minimal.

IMA's program in Togo actively monitored nearly 1,000 LF cases in 2009. As a result, people once alienated from neighbors, suffering greatly and unable to work, can once again become contributing members of society.

Background

Togo is a small tropical country in sub-Saharan West Africa. Once a major hub for slave trade, Togo's central economic activities are now focused on agriculture, mining and commercial trade.
In recent years Togo has endured political turmoil, setbacks from rising global food and fuel prices and damaged crops from flooding; as a result, hunger and poverty remain huge challenges for the small coastal country. World Bank data indicates that about 62% of Togo's population of 6.5 million lives below the poverty line.

Our Work in Togo
Combating Disease
IMA collaborated with the Togolese Ministry of Health to implement the morbidity management program in Togo to treat symptoms of Lymphatic Filariasis (elephantiasis), a disfiguring and disabling neglected tropical disease commonly found in some of the world's poorest areas.