



a world free of NTDs

MOZAMBIQUE Work Plan

FY 2018

Project Year 7

October 2017–September 2018



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ENVISION Project Overview

The US Agency for International Development (USAID)'s ENVISION project (2011–2019) is designed to support the vision of the World Health Organization (WHO) and its member states by targeting the control and elimination of seven neglected tropical diseases (NTDs), including lymphatic filariasis (LF), onchocerciasis (OV), schistosomiasis (SCH), three soil-transmitted helminths (STH; roundworm, whipworm, and hookworm), and trachoma. ENVISION's goal is to strengthen NTD programming at global and country levels and support ministries of health (MOHs) to achieve their NTD control and elimination goals.

At the global level, ENVISION—in close coordination and collaboration with WHO, USAID, and other stakeholders—contributes to several technical areas in support of global NTD control and elimination goals, including the following:

- Drug and diagnostics procurement, where global donation programs are unavailable
- Capacity strengthening
- Management and implementation of ENVISION's Technical Assistance Facility (TAF)
- Disease mapping
- NTD policy and technical guideline development
- NTD monitoring and evaluation (M&E)

At the country level, ENVISION provides support to national NTD programs by providing strategic technical and financial assistance for a comprehensive package of NTD interventions, including the following:

- Strategic annual and multi-year planning
- Advocacy
- Social mobilization and health education
- Capacity strengthening
- Baseline disease mapping
- Preventive chemotherapy (PC) or mass drug administration (MDA)
- Drug and commodity supply management and procurement
- Program supervision

M&E, including disease-specific assessments (DSAs) and surveillance

In Mozambique, ENVISION project activities are implemented by RTI International in support of the Ministry of Health.

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ACRONYMS LIST

| | |
|----------|-------------------------------------------------------------------------------|
| ALB | Albendazole |
| AFRO | WHO Africa Regional Office |
| CMAM | Centre for Drugs and Medical Supplies |
| CNTD | Liverpool Centre for Neglected Tropical Disease |
| DFID | UK Department for International Development |
| DHIS | District Health Information System |
| DPS | Provincial Health Directorate |
| DQA | Data Quality Assessment |
| DSA | Disease-Specific Assessment |
| END Fund | End Neglected Tropical Diseases Fund |
| FOG | Fixed Obligation Grant |
| FY | Fiscal Year |
| GET 2020 | WHO Alliance for the Global Elimination of Blinding Trachoma by the Year 2020 |
| GTMP | Global Trachoma of Mapping Project |
| HKI | Helen Keller International |
| HMIS | Health Management Information System |
| HQ | Headquarters |
| ICOSA | Integrated Control of Schistosomiasis in Sub-Saharan Africa |
| ICT | Immuno-chromatographic Test |
| ICTC | International Coalition for Trachoma Control |
| IEC | Information, Education and Communication |
| IMF | International Monetary Fund |
| INGO | International Nongovernmental Organization |
| INS | National Institute of Health (Instituto Nacional de Saúde) |
| ITI | International Trachoma Initiative |
| IU | Implementation Unit |
| IVM | Ivermectin |
| KAP | Knowledge, Attitudes, and Practices |
| LF | Lymphatic Filariasis |
| M&E | Monitoring and Evaluation |
| MDA | Mass Drug Administration |
| MECC | Mozambique Eye Care Coalition |
| MISAU | Ministry of Health (Ministério de Saúde) |
| NGO | Nongovernmental Organization |
| NSC | National Steering Committee |
| NTD | Neglected Tropical Disease |
| OV | Onchocerciasis |
| PC | Preventive Chemotherapy |
| POS | Powder for Oral Suspension |
| PZQ | Praziquantel |
| RPA | Resident Program Advisor |
| SAE | Serious Adverse Event |
| SAFE | Surgery–Antibiotics–Facial cleanliness–Environmental improvements |
| SBCC | Social Behavior Change Communication |
| SCH | Schistosomiasis |

| | |
|--------|----------------------------------------------------|
| SCI | Schistosomiasis Control Initiative |
| SCM | Supply Chain Management |
| SCORE | Support of Competitive Research |
| SMS | Short Messaging Service, Text |
| STH | Soil-Transmitted Helminths |
| STTA | Short-Term Technical Assistance |
| TA | Technical Assistance |
| TAS | Transmission Assessment Survey |
| TAF | Technical Assistance Facility |
| TEMF | Trachoma Elimination Monitoring Form |
| TEO | Tetracycline Eye Ointment |
| TF | Trachomatous Inflammation–Follicular |
| TIPAC | Tool for Integrated Planning and Costing |
| TIS | Trachoma Impact Survey |
| TOT | Training of Trainers |
| Trust | Queen Elizabeth Diamond Jubilee Trust |
| TSS | Trachoma Surveillance Survey |
| TT | Trachomatous Trichiasis |
| UNICEF | United Nations Children’s Fund |
| USAID | United States Agency for International Development |
| WASH | Water, Sanitation and Hygiene |
| WHO | World Health Organization |

COUNTRY OVERVIEW

1) General Country Background

a) Administrative Structure

Until recently, Mozambique had 128 districts, divided into 142 implementation units (IUs). In 2015, redistricting resulted in the current demarcation of 159 districts. The subdivision of districts took place in the provinces of Maputo, Manica, Nampula, Tete, and Zambézia. The province of Gaza is also expected to undergo redistricting in the near future. Currently, there are 40 districts requiring mass drug administration (MDA) for trachoma, 113 for lymphatic filariasis (LF), 159 for schistosomiasis (SCH), and 151 for soil-transmitted helminths (STHs). Mapping has been completed for all five neglected tropical diseases (NTDs) treatable through preventive chemotherapy (PC), though there remains uncertainty about the hypo-endemic status of onchocerciasis (OV) in some districts.

Under the coordination of the National Directorate of Public Health, each province is responsible for planning and coordinating the implementation of NTD activities in each IU. The provincial representatives coordinate activities at the provincial level, act as an intermediary body between the district and national level, and report to both provincial and national bodies.

At the central level, the Ministry of Health (MISAU) is organized into two arms: (1) the National Directorate of Public Health, under which the National NTD Program operates, and (2) the National Directorate of Medical Assistance, within which is the Ophthalmology Department. Under both of these arms, the provincial and district directorates of health operate throughout the country. The National NTD Program and the Ophthalmology Department work in close collaboration. The National NTD Program maintains responsibility for managing MDA campaigns for trachoma, LF, SCH, and STH, while the Ophthalmology Department manages trichiasis surgeries. Disease specific assessments (DSAs) for all NTDs are led by the National NTD Program, with the exception of trachoma impact surveys (TISs), which are jointly managed between the two arms. Any operational research is typically handled by the National Institute of Health (INS), which also sits in MISAU at the national level.

The National NTD Steering Committee (NSC), first formed in 2014, continues to hold quarterly meetings to discuss key issues on NTD control and elimination and to make recommendations to the National NTD Program. The NSC represents various government stakeholders such as the Department of School Health, Department of Environmental Health, INS, and the Centre for Drugs and Medical Supplies (CMAM), among others, and is a platform where new results can be shared and new health policies discussed.

b) Other NTD Partners

The National NTD Program in Mozambique is fortunate to have highly committed partners working in collaboration with each other and with MISAU to provide the best possible support to the national program. The collaboration of partners draws on organizations funded by the US Agency for International Development (USAID) and the United Kingdom Department for International Development (DFID) including government, national nongovernmental organizations (NGOs), international NGOs (INGOs), and private donors.

The main partners include the Integrated Control of Schistosomiasis and STH in Sub/Saharan Africa (ICOSA) project, funded by DFID to the Schistosomiasis Control Initiative (SCI) and subgranted to the Liverpool School of Tropical Medicine's Centre for Neglected Tropical Diseases (CNTD). CNTD provides

support for the implementation of LF/STH and SCH/STH MDA in districts targeted by the National NTD program.

In addition to their support of the ICOSA project, CNTD is supported through DFID funding as part of a group of multidisciplinary initiatives based at the Liverpool School of Tropical Medicine in the United Kingdom. The main focus of CNTD's work is to reduce the transmission of LF and support efforts to achieve elimination targets by 2020. In past years, CNTD supported activities such as trainings, sentinel site and spot check surveys for LF, and procurement of diagnostics and office equipment, such as laptops, for the NTD department. In late calendar year 2017, CNTD will support the first transmission assessment surveys (TASs) in Mozambique. These surveys will take place in the 8 LF-endemic districts in Niassa Province. In 2018, they will expand support for TASs to other eligible districts. CNTD also provides support for LF morbidity management and works closely with several leprosy organizations. CNTD will continue to support MDA, TAS, and morbidity case management and hydrocele surgeries until at least 2019, when current funding is expected to expire.

As part of the ICOSA partnership, SCI provides direct support for sentinel site and spot check surveys for SCH and STH. SCI with funding from DFID and through its subgrant to CNTD continues to support SCH MDA at national level. The Schistosomiasis Consortium for Operational Research and Evaluation (SCORE) research in Cabo Delgado came to an end in 2015.

The Malaria Consortium entered the NTD arena in Mozambique in 2014, with support from the Bill and Melinda Gates Foundation. In 2015, the Consortium supported a cross-sectional survey in four districts of Nampula that focused on social and behavior change communication (SBCC), including a knowledge, attitudes, and practices (KAP) survey of SCH, related to the importance of dialogue in communities. The findings of the KAP survey indicated that awareness of the disease was high; however, knowledge of causes and prevention techniques was poor. The Malaria Consortium became an active member in the NTD Steering Committee meetings and annual NTD partners meeting, where it led a subcommittee for strengthening social mobilization prior to MDA.

In 2014, RTI International was selected to serve as the coordinating partner for the Queen Elizabeth Diamond Jubilee Trust (The Trust) to assist MISAU in coordinating the scale-up of trichiasis surgeries. The five-year Trust-funded project is managed by Sightsavers UK through the International Coalition for Trachoma Control (ICTC). The implementing partners, who work closely with MISAU at provincial and district level and closely with RTI at country level, are Sightsavers and Light for the World. The project is focused on building capacity for conducting trichiasis surgical outreach and building the capacity of ophthalmology technicians throughout the country. As the coordinating partner, RTI convenes regular meetings to track progress of project activities and provides technical guidance to the implementing partners. In year 4 (April 2017 to March 2018), RTI will also lead an effort to document trichiasis surgeries managed through the general health system in areas not directly supported by Trust outreach campaigns. The Trust project has a strong emphasis on the 'S' (surgery) component of the SAFE strategy (Surgery–Antibiotics–Facial cleanliness–Environmental improvements), which complements the 'A' (antibiotic) component, led by ENVISION. Partnerships with both organizations and RTI have strengthened since 2014 and are expected to remain strong as RTI rolls out the program into the fourth year. Working under the Trust and ENVISION funding, RTI is able to support MISAU to ensure data related to all aspects of the trachoma dossier are collected.

The relationships with the water, sanitation, and hygiene (WASH) sector are expected to continue to grow as partners including WaterAid, World Vision, United Nations Children's Fund (UNICEF), and Save the Children become increasingly interested in maximizing the impact of WASH activities on NTD control and prevention. Through these partnerships, ENVISION is exploring ways in which some key messages such as the importance of hand and face-washing to prevent eye diseases (among others) can be

disseminated via the various partners' activities (Table 1). Globally, WaterAid is branching its focus to water and health, and in Mozambique, it is interested and engaged in many of ENVISION's activities and eager to participate in ENVISION meetings and trainings. In FY16, WaterAid facilitated one of the WHO modules on WASH from the Program Managers Trainers Course. ENVISION and WaterAid have also collaborated in a local primary school in Maputo Province on Global Hand Washing Day to introduce key messages on trachoma prevention through face and hand washing. WaterAid became a regular member of the Mozambique Eye Care Coalition (MECC) as did Helen Keller International (HKI), among other organizations. It is expected that ENVISION will continue working on community strategies for addressing NTDs and WASH and advocating for the importance of water and sanitation to help reduce the prevalence of NTDs in Mozambique. It is also hoped and encouraged that the partnership can be replicated in other countries. Through these partnerships, ENVISION is able to ensure that both the 'F and E' components of the trachoma elimination strategy are addressed.

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

| Partner | Location (Regions/States) | Activities | List other donors supporting these partners/ activities |
|---------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| SCI (through sub-grant to CNTD) | Central level and in endemic areas for schistosomiasis | SCH/STH sentinel site and spot check surveys beginning in 2011 | UK DFID |
| CNTD | Central level, as well as all areas endemic for SCH and LF | LF/STH and SCH/STH MDA and TAS in districts targeted by the national NTD control program; includes trainings, diagnostics, and supervision | DFID |
| Malaria Consortium | Nampula Province | SBCC in one province with extended funding to do more research; sharing of SBCC lessons at national level meetings | Bill and Melinda Gates Foundation |
| Sightsavers | Nampula and Zambézia provinces | Implementation of trichiasis surgical outreach campaigns. Work with Provincial Health Directorate (DPS) in the provinces. | Queen Elizabeth Diamond Jubilee Trust |
| Light for the World | Cabo Delgado and Sofala provinces | Implementation of trichiasis surgical outreach campaigns. Work with DPS in the provinces. | Queen Elizabeth Diamond Jubilee Trust |
| RTI | Central level | Coordination of trichiasis surgical scale-up, documentation of progress towards achieving trachomatous trichiasis backlog goals nationwide | Queen Elizabeth Diamond Jubilee Trust |

2) National NTD Program Overview

a) Lymphatic Filariasis (combined with STH if appropriate)

The goal of the WHO Global Programme to Eliminate Lymphatic Filariasis is to eliminate the disease as a public health problem by 2020. A study of the geographical distribution of LF in Mozambique was carried out in 2005–2006, and additional surveys followed in 2012 and 2013. LF immunochromatographic tests (ICTs) were used to assess the *W. bancrofti* circulating antigen and found a prevalence ranging from 0%–80%. The disease is widely distributed throughout the country, with 113 districts endemic and nearly 20 million people at risk of contracting the disease. Nampula Province is most affected, followed by Cabo Delgado, Zambézia, and Niassa.

CNTD is the main partner supporting MISAU to eliminate LF and has been supporting MDA in Mozambique since 2010, providing annual treatment with ivermectin (IVM) plus albendazole (ALB) to the entire eligible population in endemic areas, per WHO guidelines. The population treated for LF has increased from 1.6 million in 2009 to 14 million in 2014, preventing 4 million new infections of LF since 2010.

LF morbidity management, including hydrocele surgery, is specifically treated at health facilities on a limited basis through a government-supported system of referral units for corrective surgery. The leprosy program in Mozambique is strong, with self-care groups for the management of lymphedema, adenolymphangitis, and small skin lesions.

The LF MDA is not USAID-funded.

b) Trachoma

All of the 140 suspected trachoma-endemic districts have been mapped. Results showed prevalence of trachomatous inflammation–follicular (TF) among 1–9 year olds of <5% in 75 districts, 5%–9.9% in 28 districts, 10%–29.9% in 22 districts, and ≥30% in 15 districts. The 15 districts with ≥30% TF, all in Niassa Province, were initially mapped at provincial level, prior to the Global Trachoma Mapping Project (GTMP) and ENVISION. Concerns around the methodology originally used and lack of clinical cases in the area led to the recommendation to conduct district-level impact surveys in 2015 after only 1–2 rounds of MDA. These subsequent surveys showed that all districts had <5% TF and did not require MDA. Therefore, these 15 districts are now under surveillance and will conduct trachoma surveillance surveys (TSSs) in fiscal year 2017 (FY17). In the 28 districts with 5%–9.9% TF at baseline, MISAU aims to conduct a single round of MDA followed by an impact survey. In FY16, MISAU conducted MDA in 4 of these districts (i.e., those with 5%–9.9% TF) that are closest to 10% TF, in Tete Province, with support from ENVISION. All 4 of these districts conducted TIS in FY17, and results showed that TF is now below 5% and MDA can be stopped. A single round of MDA in the remaining 24 districts was planned for calendar year 2017, but will not occur until 2018. Among the 22 districts with 10%–29.9% TF, 5 districts of Cabo Delgado Province conducted their third round of MDA in FY16 and completed TIS in FY17. The other 15 districts of Manica, Nampula, and Zambézia provinces will conduct TIS after only two rounds of MDA, rather than the typical three, in October 2017 with ENVISION support. This decision was made after consultation with WHO and is intended to help keep Mozambique on-track to stop MDA for trachoma in all districts by the end of calendar year 2018. This approach may also increase cost efficiency and will provide valuable information to the global trachoma community.

In addition, a detailed re-analysis in March 2016 of the pre-GTMP mapping results from five districts of Nampula Province (USAID funded) showed that baseline prevalence in two districts (Erati and Nacala-A-Velha) was 5%–9.9% TF rather than $\geq 10\%$ TF as originally indicated. As both of these districts have already conducted one round of MDA, impact surveys were conducted in FY17. The results of the survey showed that TF was below 5% in Nacala-A-Velha and MDA can be stopped. In Erati, TF prevalence was reported at 6.29%. One additional round of MDA will be planned for 2018.

Trachoma MDA has taken place with ENVISION support every year since 2013, reaching all districts with baseline TF prevalence of $>10\%$ by 2015. FY17 was anticipated to be the final year of trachoma MDA, with all districts with TF prevalence between 10%–29.9% expected to conduct their third and final round of MDA. In addition, all districts with TF prevalence between 5%–9.9% that had not yet been treated also were targeted for a single round of MDA in FY17. However, due to drug supply issues the FY17 MDA was postponed into FY18. It is important to note that this delay is not considered a missed MDA and should not have any negative epidemiological impact on trachoma transmission. As of the end of FY17, 25 of the 65 districts (39%) initially found to have TF prevalence above 5% are under surveillance.

The ‘A’ component of the SAFE strategy is covered by USAID funding through ENVISION, with the ‘S’ component addressed through The Trust project. However, the ‘F’ and ‘E’ components of the strategy require additional support to reinforce the control and prevention of trachoma. (See section 1.b and *Advocacy* for more information on collaboration with WaterAid.)

Trachoma has made its way up the government agenda over recent years, and the progress made in Mozambique has gained international attention and recognition. The ENVISION project continues to provide technical support to MISAU to fully understand and fill in the WHO trachoma elimination dossier. WHO Mozambique is also engaged and anxious to see this process move forward and may be willing to provide extra technical support should it be necessary.

Trachoma MDA in Mozambique is entirely USAID-funded through ENVISION.

c) Onchocerciasis

OV is endemic in the republics of Malawi and Tanzania, which border Mozambique in the northern and central regions; however, there is still little epidemiological evidence of transmission patterns in Mozambique. In addition, the lack of a rigid border entry system between Mozambique and neighboring countries may facilitate the spread of disease as the movement of people continues. In 1997, the Faculty of Medicine at the Eduardo Mondlane University published a study carried out in Zambézia Province in the district of Milange, confirming the presence of the disease in that area. In 2001, a rapid epidemiological mapping for OV was carried out in Niassa, Cabo Delgado, Zambézia, and Tete with 114 villages selected, though only 97 villages were successfully screened. The results confirmed the existence of the disease at a hypo-endemic level. In 2007, the second rapid epidemiological mapping for OV was carried out, and the results showed that the prevalence of nodules detected had more than doubled.

As rapid epidemiological mapping of onchocerciasis is poor in both specificity and sensitivity, there is a need for confirmation mapping using OV-16. The INS has been granted protocol approval by the Mozambican Bioethics Committee for research in Zambézia, Niassa, Cabo Delgado, Nampula, and Tete. The INS protocol focuses on assessing the presence of OV at the national level, and not at the focal level necessary for determining necessary interventions. The NTD Support Center at the Task Force for Global Health has developed a separate protocol, with the aim of assessing LF and OV together in areas that are IVM naïve, and the NTD Support Center has expressed interest in piloting it in the IVM naïve districts

of Mozambique that may be at-risk for OV transmission. ENVISION continues to assist in coordination of the various stakeholders interested in assessing OV endemicity in Mozambique.

d) Schistosomiasis

SCH is prevalent throughout all IUs in Mozambique. A study of the prevalence of SCH carried out in 2007 by the INS revealed district prevalence varied from 3.6% to 100%, with the national average 43%. The most endemic provinces are Niassa, Cabo Delgado, Nampula, and Zambézia. Almost 27 million people are at risk. Out of the 159 IUs, 45% are hyper-endemic (>50%), 51% are meso-endemic, and 4% are hypo-endemic. Treatment schedules include once per year, once every two years, and once every three years, depending on the baseline prevalence. Therefore, the actual number of districts being targeted for praziquantel (PZQ) in any given year fluctuates, depending on disease prevalence. In FY16 a drug requisition problem with PZQ resulted in delays of MDA. USAID does not support SCH MDA in Mozambique. Districts that are targeted for sentinel site and spot check site surveys are encouraged to use Kato-Katz kits to diagnose both the presence and intensity of infection for SCH and STH. To date, SCI has procured the Kato-Katz kits for MISAU.

The SCH MDA is not USAID funded.

e) Soil-transmitted Helminths

STH intestinal parasites affect the poorest populations, often those living in remote, rural areas, and are prevalent throughout all IUs in Mozambique, with 151 of the 159 districts endemic above the treatment threshold of 20%. A study carried out in Mozambique in 2007 on the prevalence of STH demonstrated a wide distribution of high prevalence ranging from 12% to 81%. Out of the 159 IUs, 73 are hyper-endemic, 78 have a prevalence between 20% and 50%, and 8 have a prevalence of <20%. The most affected provinces are those in the north, namely, Niassa, Cabo Delgado, Nampula, and Zambézia.

The STH MDA is not USAID funded.

3) Snapshot of NTD Status in Country

Table 2: Snapshot of the expected status of the NTD program in Mozambique as of September 30, 2017

| A | B | MAPPING GAP DETERMINATION | | | MDA GAP DETERMINATION | | MDA ACHIEVEMENT | DSA NEEDS | |
|----------------------------|-----------------------------------|----------------------------------------|--------------------------------------------|---------------------------------------------|-----------------------------------------------|--------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| | | C | D | E | F | | G | H | I |
| Disease | Total no. of districts in COUNTRY | No. of districts classified as endemic | No. of districts classified as non-endemic | No. of districts in need of initial mapping | No. of districts receiving MDA as of 09/30/17 | | No. of districts expected to be in need of MDA at any level: MDA not yet started, or has prematurely stopped as of 09/30/17 | Expected no. of districts where criteria for stopping district-level MDA have been met as of 09/30/17 | No. of districts requiring DSA as of 09/30/17 |
| | | | | | USAID-funded | Others | | | |
| Lymphatic filariasis | 159 | 113 | 46 | 0 | 0 | 113 | 0 | 0 | Pre-TAS: TAS1: TAS2: TAS3: |
| Onchocerciasis * | | - | - | - | - | - | - | - | - |
| Schistosomiasis | | 159 | 0 | 0 | 0 | 159 | 0 | - | - |
| Soil-transmitted helminths | | 151 | 8 | 0 | 0 | 151 | 0 | - | - |
| Trachoma** | | 65 | 94 | 0 | 16 | 0 | 24 | 25 | TIS: 15 TSS: 0 |

*OV is believed to be hypo-endemic in Mozambique, and MISAU is conducting surveys in FY16 to determine the extent of transmission.

**Column F: This includes the districts that have received USAID support prior to FY17. None of these districts will conduct MDA in FY17, due to the aforementioned postponement of Zithromax importation and MDA. Includes 15 districts between 10% and 29.9% that will conduct an impact survey in FY18 after 2 rounds of MDA rather than the typical 3 rounds, and 1 district that conducted TIS in FY17 that resulted in TF prevalence of 6.29%, requiring an additional round of MDA.

Column G: Includes 24 districts with baseline TF prevalence between 5%–9.9%, requiring a single round of MDA in FY18.

PLANNED ACTIVITIES

1) NTD Program Capacity Strengthening

a) Strategic Capacity Strengthening Approach

Capacity goals

ENVISION's capacity strengthening goals in FY18 will rely heavily on coaching and mentorship through close collaboration between ENVISION Mozambique staff and their counterparts at MISAU. While the focus of ENVISION's capacity strengthening efforts will continue to be on trachoma, this mentoring goal will benefit the NTD Department as a whole. Also, as the primary partner in Maputo, ENVISION is better positioned to provide day-to-day mentoring on general aspects related to program and supply chain management and M&E. Other partners also support some capacity strengthening, and the ENVISION RPA coordinates activities to avoid duplication of effort and minimize the burden on MISAU. For example, CNTD has led a course for provincial finance managers, Malaria Consortium led social mobilization workshops, and both partners contributed greatly to the Program Manager's Training Course.

Staff from the ENVISION Mozambique team will be responsible for working directly with MISAU to strengthen capacity for planning, budgeting, supply chain management, and M&E. They will be responsible for providing training and follow-up support on any tools, as well as keeping MISAU informed of global developments in NTD guidelines. Capacity strengthening through exposure trips, experience sharing, and supportive supervision will also be emphasized. ENVISION expects its ongoing role to be ensuring relationships with stakeholders, such as CMAM, WHO, drug donors, etc., are maintained and strengthened.

Capacity strengthening strategy

ENVISION's strategic capacity strengthening approach in FY18 will continue to focus on three key areas:

1. **NTD program and financial management**
2. **M&E, data management, and data analysis**
3. **Supply chain management**

b) Capacity Strengthening Objectives and Interventions

Objective 1: Increase national team's M&E knowledge, institute a system for high-quality data, and develop a culture of data use at national, provincial, and district levels

Intervention 1: Recruitment of an M&E officer to provide support and training to MISAU. This individual will report to the ENVISION RPA, and their primary role will be to support all ENVISION M&E activities and provide general M&E support to MISAU, with a focus on strengthening M&E knowledge through the finalization of an M&E plan, on-the-job training of an M&E focal point within the MISAU team, continuation of use of the Integrated NTD Database, and development of the trachoma dossier.

Intervention 2: Support in finalizing national M&E plan. See *M&E* section for more detail.

Objective 2: Strengthen supply chain management capacity at MISAU and improve coordination and communication with CMAM and drug donors

Intervention 1: Recruitment of a drug logistics officer to work closely with MISAU and CMAM. In addition to supporting the drug importation process, this person will provide training and supportive supervision to the MISAU supply chain focal point. The drug logistics officer will encourage regular communication through routine monthly meetings with MISAU and CMAM. See *Drug and Commodity Supply Management and Procurement* for more information on the responsibilities of this individual.

Intervention 2: Supply chain trainings at national, provincial, and district levels, followed by supportive supervision. See *Training and Drug and Commodity Supply Management and Procurement* for more information.

c) Monitoring Capacity Strengthening

The ENVISION RPA is in regular contact with the NTD coordinator to discuss program accomplishments and needs. In FY18, the RPA will ensure that these discussions have a clear capacity strengthening focus at least quarterly. In addition, other routine meetings and deliverables provide an opportunity to assess the efficacy of ENVISION's capacity strengthening activities.

Objective 1: Strengthen capacity of MISAU at national and provincial levels to effectively plan and budget integrated NTD programs

Indicators: National plan finalized, national activity calendar developed and routinely updated, planned activities completed within designated timeframe

Objective 2: Increase M&E knowledge, institute a system for high-quality data, and develop a culture of data use at national, provincial, and district levels

Indicators: National M&E plan finalized, MISAU M&E focal point identified, number of M&E tools MISAU staff trained to use, number of M&E tools in-use by MISAU staff

Objective 3: Strengthen supply chain management capacity at MISAU and improve coordination and communication with CMAM and drug donors.

Indicators: National Zithromax management protocol in-use at all levels, MISAU supply chain focal point identified, TEMF created accurately and on-time, percent of districts receiving drugs on-time

Table 3: Project assistance for capacity strengthening

| Project assistance area | Capacity strengthening interventions/activities | How these activities will help to correct needs identified in situation above? |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a. Strategic Planning | <ul style="list-style-type: none"> Guide NTD and Ophthalmology departments to encourage data use in the Annual NTD Meeting through the <i>Data for Action</i> guide | <ul style="list-style-type: none"> Build capacity in evidence-based decision making, by encouraging the National NTD Program to take the lead in using data to inform the Annual NTD Partner Review Meeting |
| c. Building Advocacy for a Sustainable National NTD Program | <ul style="list-style-type: none"> ENVISION RPA advocate at high MISAU level (Ministry of Health, Permanent Secretary Public National Health Directorate) to increase and improve awareness of NTDs and the need for government funding | <ul style="list-style-type: none"> Funding to NTD program being mobilized for sustainable activities implementation Increase NTD program staff |
| g. Training | (See trainings in Table 7) | |
| h. Drug Supply and Commodity Management and Procurement | <ul style="list-style-type: none"> Recruit drug logistics consultant to assist in collaboration between MISAU and Centre for Drugs and Medical Supplies, oversee packaging of drug kits and reverse supply chain management, as well as provide support with the importation of NTD drugs Supportive supervision during drug importation, transportation, and distribution | <ul style="list-style-type: none"> Build capacity of MISAU to manage drug supply and procurement through providing on-the-job training and coaching Build capacity of CMAM and provincial drug warehouse staff to effectively manage Zithromax and tetracycline through supportive supervision |
| i. Supervision for MDA | <ul style="list-style-type: none"> Joint RTI-MISAU and central, provincial, and district level conduct supervision during training and MDA implementation | <ul style="list-style-type: none"> Build capacity of all those involved in MDA implementation, through enhanced support supervision |
| j. M&E | <ul style="list-style-type: none"> M&E specialist to provide on-job training for the NTD M&E central level staff, and provincial and district data manager involved on the MDA activities Finalization of M&E plan | <ul style="list-style-type: none"> Build capacity of NTD Program in different levels to collect, analyze, and use MDA data Provide framework for NTD M&E activities in the country. M&E specialist to build capacity of MISAU to complete all activities in the national M&E plan. |
| l. Dossier Development | <ul style="list-style-type: none"> Technical guidance from ENVISION for dossier completion | <ul style="list-style-type: none"> Build capacity of MISAU to compile data and develop a high-quality trachoma dossier |
| m. Short-term Technical Assistance | <ul style="list-style-type: none"> Recruitment of short-term consultants to enhance supportive supervision during MDA training, social mobilization, and drug distribution | <ul style="list-style-type: none"> Build capacity at sub-national levels to implement high-quality MDA |

2) Project Assistance

a) Strategic Planning

NTD National Annual Partners Review Meeting: The first NTD National Annual Partners Review Meeting took place in 2013, with support from ENVISION. The meeting continues to occur annually and is the principal opportunity for national and international partners and stakeholders to convene and discuss the progress of the National NTD Program. The meeting takes place over three days and is led by MISAU. Donors, local and international NGOs, WHO, and MISAU staff from national and provincial levels are invited to attend. The primary objective of the meeting is to bring the various stakeholders together to discuss challenges and achievements and plan for the upcoming year. It also provides an opportunity for partners to coordinate support, as well as identify any major funding gaps. All provincial NTD focal points are invited to the meeting with the expectation that they present on the work accomplished in their province over the last 12 months and share gaps and challenges. In 2017, one of the key themes of the meeting was cross-sectoral collaboration, with presentations and discussions from groups such as Housing and Public Development that handle water and sanitation, and the Ministry of Agriculture.

In 2018, RTI will encourage MISAU to build data use into its planning processes through use of the *Data for Action* guide. This will include presentation of the tool to the provincial focal points to build their capacity to use data in planning NTD activities in the future. ENVISION will discuss the application of TIPAC for producing the WHO Joint Request for Select PC Medicines with the NTD coordinator and CNTD to determine whether it would be useful in strengthening the quality of their requests to WHO for non-ENVISION supported NTD drugs. ENVISION will support MISAU to develop a calendar of the major programmatic activities, to which activities supported by other partners will be added. This calendar will be shared with all stakeholders and updated during the NSC meetings. In addition to financial support, ENVISION assists in the organization and planning of the meeting, developing the agenda, and offering other administrative and logistical support that is needed during the meeting. RTI will continue to be responsible for contacting the international partners to inform them of the agenda and logistics, and to take their suggestions to MISAU. Associated costs are for venue, travel of provincial focal points, catering, and translation and printing of materials.

NTD National Steering Committee, central level: The NSC is organized by MISAU and fully supported by ENVISION. Meetings will be held three times a year to discuss technical issues related to the NTD program. The central level NSC is made up of key partners from the various government stakeholders including CMAM, INS, Ministry of Women and Social Affairs, Ministry of Water and Sanitation, and the National NTD Program. Representatives from pharmaceutical companies, and INGOs such as Malaria Consortium and CNTD, and those working with leprosy also participate. When possible, higher level MISAU staff participate and open the meeting. The meeting provides an important platform to discuss technical topics such as supply chain issues, as well as new MISAU policies, strategies to improve progress towards program goals, and input from other sectors such as water, sanitation, and education. MISAU shares results from recent activities and discusses coverage issues and challenges with human resources. Feedback and guidelines generated from regional and international meetings are also presented and discussed with the committee for further comments and recommendations on implementation. The meeting will also provide an opportunity for all relevant stakeholders to assess progress towards annual objectives and review and revise the activity calendar. Minutes from the meetings, including action points and recommendations, are taken by ENVISION and shared with members and a wider audience, where appropriate. The one-day meetings will be held at MISAU, and 13 people are expected to attend each meeting. Costs associated with these meetings include refreshments and printing of materials.

Annual Ophthalmology and Statistics Meeting: Every year, the head of the Ophthalmology Department holds a meeting where ophthalmologists and ophthalmic technicians convene to discuss and reflect on activities of the previous year and plan for the upcoming year. In FY18, ENVISION will provide full support for this meeting, as trachoma control and trachoma data remain high on the agenda with the caveat that a different eye health partner will bear these costs in FY19. The meeting will serve to provide updates on MDA, progress of trachomatous trichiasis (TT) surgeries, information about trainings, and any issues involving publications or data. It will also provide an opportunity to review the data in the trachoma dossier. All provinces will be provided with this information in advance of the meeting and will be expected to review and fill in any gaps, including those related to the F&E components. The outcomes from the meeting will feed into the NTD Department's plans for activities to be conducted jointly; NTD Department participation in the meeting will be expected. In FY18, this meeting will be held in Maputo. ENVISION will provide funding for the meeting space and the travel for approximately 25 people. ENVISION will help facilitate the logistics of the meeting and record and circulate notes.

National Strategic Plan: Mozambique's current national strategic plan covers the years 2013–2017. In FY16 and FY17, ENVISION supported MISAU to revise the national strategic plan for the years 2018–2022. MISAU is waiting for completion of 2017 activities (primarily TAS results) to finalize the plan. ENVISION will provide technical inputs to the strategic plan, which is expected to be finalized and disseminated in Q2 of FY18. There are no costs associated with this activity.

ENVISION Annual Work Plan Meeting: ENVISION will provide support to the NTD Department and the Ophthalmology Department at MISAU for a one-day NTD annual work plan meeting where all potential ENVISION activities will be discussed and later shared with the larger MISAU team and other NTD partners. ENVISION's role is to organize and facilitate the meeting, take minutes, incorporate data into the discussions so that plans and decisions are informed by evidence, and collaborate with MISAU in addressing action points. This meeting allows both ENVISION and MISAU to reflect on challenges and successes of the past fiscal year and discuss expectations for the upcoming year. With the anticipated conclusion of ENVISION-supported MDA in FY18, the meeting will be an important opportunity to analyze progress towards elimination and identify final activities that ENVISION can support during FY19 to ensure the National NTD Program is poised to submit the trachoma dossier. This meeting is a small gathering of RTI and MISAU NTD Department staff, and there are no costs associated with it.

b) NTD Secretariat

Office costs: ENVISION will continue to cover basic operational costs for the NTD Secretariat, including office supplies, paper and toner for printing, and communications in the form of air time. Other partners such as CNTD support the Secretariat through provision of internet access for the NTD Department and electrical equipment like laptops. ENVISION and CNTD communicate with each other, so there is no duplication of efforts in operational costs.

Translations: Translations between English and Portuguese are often needed, as MISAU requires all documents and official communication in Portuguese. Several documents must be translated each year (including the work plan) for either MISAU, USAID, or RTI HQ. When possible, the ENVISION team uses a local translator who is familiar with the technical terminology.

c) Building Advocacy for a Sustainable National NTD Program

Social Communication and Advocacy Working Group: Through participation in the Social Communication and Advocacy Working Group of the NTD NSC, ENVISION will be able to better

understand where the weaknesses are in advocacy and will have an opportunity to work with MISAU to strengthen the NTD program through raising awareness of the diseases, specifically trachoma. There will be no costs associated with taking part in this working group, as the support will be through the RPA's participation in meetings.

Mozambican Eye Care Coalition: ENVISION will continue to participate in the MECC group, which acts as the main eye-care health group in the country with collaboration from INGOs, local NGOs, and MISAU. Recently, other sectors such as Ministry of Education have participated in the meetings and shared their experiences regarding the challenges of eye-care health in schools. This group has been recognized as a lead in eye care in neighboring sub-Saharan African countries. A recommendation during the 2017 MECC meeting was to transform the coalition into an eye-care steering committee by expanding the scope and extending the invitation to other sectors. This transformation is under discussion with MECC members.

Partnership with WaterAid at country level (no costs involved): ENVISION Mozambique's partnership with WaterAid has continued to grow. One of the primary objectives of the partnership is to advocate for a continued and strengthened link between WASH and NTDs through better informing the Water and Sanitation Department of the Mozambican government's commitment to eliminating trachoma as a public health problem by 2020. WaterAid and RTI agree on the importance of continued collaboration, including the sharing of plans and outcomes of activities where there is an overlap between WASH and NTDs and participating in and advocating for each other's activities. This partnership has been commended at higher levels and was recognized at the GET2020 (the WHO Alliance for the Global Elimination of Blinding Trachoma by the Year 2020) meeting in 2016 as a partnership to replicate in other ENVISION/WaterAid countries.

d) Mapping

Baseline mapping for LF, SCH, STH, and trachoma has been completed. As mentioned in the Country Overview, results from previous rapid epidemiological mapping of onchocerciasis studies show that OV is hypo-endemic in Mozambique. Given that rapid epidemiological mapping of onchocerciasis is poor in both specificity and sensitivity, and as neighboring countries push for OV elimination, there is a need for confirmation of endemicity through a more rigorous protocol using OV-16. MISAU is in contact with the NTD Support Center at the Task Force for Global Health to discuss the possibility of piloting a protocol assessing OV in hypo-endemic, IVM naïve areas. INS also developed a protocol to assess OV prevalence that could be used in the areas that are not eligible for the NTD Support Center study because they are receiving IVM through the LF MDAs. INS is seeking funding to conduct this survey. ENVISION will continue to coordinate communication between MISAU and potential donors, as needed.

These activities are not USAID funded.

e) MDA Coverage

Planned FY18 MDA Activities

Table 4: USAID-supported districts and estimated target populations for MDA in FY18

| NTD | Age groups targeted (per disease workbook instructions) | Number of rounds of distribution annually | Distribution platform(s) | Number of districts to be treated in FY18 | Total # of eligible people to be targeted in FY18 |
|----------|---------------------------------------------------------|-------------------------------------------|--------------------------------------------------------|-------------------------------------------|---------------------------------------------------|
| Trachoma | All | 1 | Mixed Community-based (house to house and fixed point) | 25 | 3,561,531 |

As mentioned in the Country Overview, there are forty districts that still require MDA or impact surveys. Of these forty, fifteen have baseline TF prevalence between 10-29.9% and will conduct an impact survey in October 2017. The remaining twenty-five districts have baseline TF prevalence between 5-9.9% and will conduct a single round of MDA in FY18. The ideal timeframe for MDA in the twenty-five districts is late April/early May 2018. Strong and effective communication will be essential to ensure the FY18 shipment arrives in time. In FY18, ENVISION will target nearly 3.6 million people in the 25 districts for trachoma MDA. This includes 24 districts that had baseline prevalence of TF between 5%–9.9% and require one round of MDA and one district, Erati, which has TF prevalence of 6.29% according to the FY17 impact survey. Therefore, FY18 is anticipated to be the final year of trachoma MDA in Mozambique. MDA is planned for all five provinces in April–May 2018, requiring a high level of coordination and collaboration with MISAU throughout the entire planning and implementation process.

In Mozambique, trachoma MDA occurs over a five-day period where mobile teams comprised of two health technicians and two volunteers go from door-to-door or to fixed points, depending on the locality. One health technician is responsible for distributing medicine and the other for recording the distribution on the appropriate reporting forms. The volunteers conduct social mobilization and provide logistical support, like crowd management, during MDA. Pre-MDA activities begin approximately four weeks before MDA with provincial-level training, followed by district training, and finally, a week of social mobilization prior to MDA. These activities are described in further detail below in the respective section of this work plan (*Training, Social Mobilization*).

In support of the FY18 MDA, ENVISION will supply materials needed for the MDA including daily registers, reporting forms, vests, serious adverse event (SAE) forms, dose poles, t-shirts, and banners. The daily registers and treatment reporting forms were printed in FY17. In FY18, ENVISION will need to procure only the SAE and morbidity control forms, t-shirts, vests dose poles, and banners. Banners, t-shirts, and vests are used to identify official distribution points, volunteers, and supervisors, respectively. The drug distributors also receive t-shirts. The use of t-shirts and vests in the campaigns relays a positive image during the MDA and is a way to further promote the work of the national health workers.

Insecurity and political unrest continue to have the potential to impact MDA campaigns. RTI continues to work closely with the Mozambican government to adapt the MDA strategies to enable activities to

proceed with reasonable security. In the past, this has involved a combination of approaches including flexibility with the location of distribution points in the event of security threats and different types of transportation (air and road) to ensure safe arrival of medicines in the provinces and districts.

f) Social Mobilization to Enable NTD Program Activities

Radio messaging: Radio is the most common means of communication in Mozambique, especially community radio at the district level. Messages will be played on local radio stations throughout the districts targeted for MDA with Zithromax and TEO. They are aired four times a day the week prior to the MDA and during the MDA. The messages include the timing and location of MDA, emphasize the safety of the medicine, and encourage the entire population to participate.

Use of megaphones to disseminate information to communities: Megaphones are another common form of sharing information at the community level and are used for various campaigns. They are used to inform people of the timing of MDA and who is eligible to receive treatment. They also allow supervisors to provide basic information on trachoma prevention to the population. In FY18, no new megaphones will need to be purchased, but each district will need a supply of batteries.

Opening Ceremony: The Opening Ceremony/ MDA launch takes place on the first day, of MDA in one district chosen by the MoH (usually, the most populated). The Head of the Province gives opening speech, followed by a popular community leader, encouraging participation in the local dialect, and finally USAID or the ENVISION RPA will welcome people and stress the importance of the MDA. Local theater groups are also invited to perform during the opening ceremony. Through dramatic presentation they depict the risks of trachoma and the importance of MDA. Media representatives (radio and television) will be present and the launch is televised that evening and the day after at both provincial and national level. A press meeting is held before and after the launch takes place. The launch is usually attended by hundreds of people from neighboring communities.

Table 5: Social mobilization/communication activities and materials checklist for NTD work planning

| Category | Key Messages | Target Population | IEC Activity (e.g., materials, medium, training groups) | Where/when will they be distributed | Frequency | Has this material/message or approach been evaluated? If no, please detail in narrative how that will be addressed. |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| MDA Participation | The drugs provided are free and safe for the entire family. Everyone in the family should participate. Timing and location of MDA. | General Population | Radio | Local station 1 week in advance of MDA and during MDA | Radio messages play 4 times per day for 1 week before and during the MDA | No—planned to be assessed through KAP component of coverage survey following FY18 MDA |
| MDA Participation | Identify distribution points Dates and location of MDA. Eligible population | Community Members | Banners | Hung in front of distribution points one week before MDA and during MDA | Displayed daily for 2 weeks | No—planned to be assessed through KAP component of coverage survey following FY18 MDA |

g) Training

National supply chain training: The national supply chain training will involve the provincial NTD focal point, warehouse manager, and data manager from each of the five provinces planning trachoma MDA, as well as 10 national level supervisors, and the central level CMAM staff involved in the management of NTD drugs. The meeting will occur in Maputo over two days and will be immediately followed by the supportive supervision and training of trainers (TOT) for national and provincial NTD focal points.

Supportive supervision and TOT for national and provincial NTD focal points: The NTD coordinator has requested supervision training to strengthen the quality of supervision from the national and provincial supervisors. This training will be combined with the national-level TOT for MDA. A three-day workshop will be held in Maputo and led by the central-level MISAU, with technical and financial support from ENVISION. Two people from each province will be in attendance (NTD focal point and provincial data manager). From the central level, an additional 10 supervisors will be trained, so that there is a ratio of one central-level supervisor per 3 districts targeted. The total number of meeting participants will be approximately 25. The first two days will focus on conducting high-quality MDA, and the third day will be focused on providing effective supportive supervision. It will cover various aspects of supervisory roles and highlight ways to make supportive supervision more effective to have a better impact on staff and the quality of the MDA. Supervisors will share their best practices and challenges of being supervisors during MDA. As a team, the supervisors, MISAU, and ENVISION will identify the gaps in terms of capacity needs and strengthening. This training is seen by the Ministry as strongly needed, and all aspects of MDA for NTDs will be discussed. NTD focal points from all provinces will participate. Input from the

provincial-level supervisors will be valuable in guiding ENVISION on how we can improve supervision in the field.

Trachoma pre-MDA training, provincial training: A cascaded training approach will be used in Mozambique, and those trained at the national level supportive supervision and TOT workshop will be responsible for facilitating provincial-level training one to two weeks after the national training. Trachoma MDA trainings will be planned for all provinces conducting MDA. The trainings will be led by MISAU and will cover relevant information on trachoma MDA, including components of the SAFE strategy, social mobilization, reporting and management of SAEs, distribution and administration of Zithromax and TEO. Results of the DQA that will be conducted following the FY17 MDA will be incorporated into training materials so that an increased emphasis is placed on accurate reporting and data management and review techniques. The provincial training will occur over three days in each province and will support approximately three district health technicians from each district, plus one provincial supervisor per district targeted.

Trachoma pre-MDA training, district training: The three district health technicians trained at the provincial level will train the selected drug distributors (also health technicians) in the districts. They are responsible for administering drugs and filling in registers and will be trained on the same topics that will be covered in the provincial-level training, including trachoma MDA, components of the SAFE strategy, social mobilization, reporting and management of SAEs, and distribution and administration of Zithromax and TEO. Results of the DQA will be incorporated into training materials so that an increased emphasis is placed on accurate reporting and data management and review techniques. Teams of two drug distributors are expected to distribute drugs to 3,750 people during the week of MDA. Also in the districts, the MDA distribution teams will provide a one-day training to community volunteers. The focus is on social mobilization and communicating with local leaders, who are highly influential in health activities including MDA. Volunteers are then better equipped to mobilize their communities, which is their primary responsibility during MDA. In Mozambique, volunteers do not distribute any medications or complete any reporting forms. Those responsibilities are given to the district health technicians who receive a more rigorous training, as mentioned above.

Trachoma Impact Survey Training: To prepare for the trachoma impact surveys targeted in FY18, RTI will train 20 graders 20 recorders and 5 supervisors on the Tropical Data protocol, clinical grading, and use of electronic data capture. In June 2016, three MISAU staff and one ENVISION staff attended the Tropical Data training in Arusha, Tanzania. There is now one certified master grader, one certified grader trainer, and one certified recorder trainer to lead the trainings in the provinces. Training will occur over 3 days prior to the surveys and will include field testing.

h) Drug and Commodity Supply Management and Procurement

Supply Chain Spot Checks ENVISION will support 3-4 supply chain spot checks during FY18. The purpose of these spot checks is to ensure that SOPs are in place and being followed in the provinces (including the use of the newly implanted SKU codes). The ENVISION supply chain officer and MISAU and/or CMAM counterpart will travel to selected provinces to evaluate adherence to the SOPs. This will include verifying stock cards at provincial and district level and visiting peripheral health facilities and private pharmacies to ensure there has been no leakage of donated Zithromax.

Drug repackaging, drug transportation, and delivery to provinces and communities: CMAM manages all pharmaceuticals and medical supplies. It is responsible for importation, distribution, and management of drugs and medical items within Mozambique. ENVISION will continue to serve as a vital link between the ITI and MISAU to ensure that the importation of Zithromax and TEO is carried out in a

timely manner and with open communication. ENVISION, in coordination with CMAM and MISAU, will support the transportation costs of shipping the Zithromax and TEO from Maputo to the province warehouses, to ensure that drugs are pre-positioned before the MDA. This includes support for repackaging the drugs into district kits that also include the social mobilization and other MDA materials. Completing this task at the national level ensures that each district gets the appropriate quantities of materials and reduces burden on the provincial staff. ENVISION will also fund the transport of drugs from the provincial warehouse to the communities, using Provincial Health Directorate vehicles. The donated drugs must arrive in country at least five weeks prior to MDA in order for repackaging and transportation to occur as planned and with minimal costs. In FY18, this will require efficient communication between ITI and MISAU following the FY17 mini-MDA.

Reverse supply chain management: Immediately after the MDA, ENVISION, in close collaboration with MISAU, will provide support for reverse supply management in the five provinces targeted for Zithromax. The conditions at the district level are not always good for storing drugs appropriately to maintain their efficacy or viability, and the long distances between districts make it difficult to keep track of them. The security and accessibility of warehouses at the provincial level is also stronger, which ensures they are stored safely and facilitates tracking of drugs throughout the year. Through the reverse supply management process, ENVISION can train MISAU staff on drug management best practices and inventory monitoring. All expired Zithromax and empty bottles are incinerated as one of the last steps in this activity. The reverse supply chain process is important for both the NTD program and the donating organizations (ITI and Pfizer) to validate the quantity of Zithromax that remains in the country after MDA. These results are also useful for the province and for the facilitation of the requisition process for the following year.

The process takes approximately four days per province, and though led by ENVISION, relies heavily on participation of provincial and district staff. At the end of the MDA, a staff member from ENVISION plus a staff member from MISAU will work with the NTD provincial and district focal points to transport the remaining Zithromax from the district level to the provincial drug warehouse to be stored. This process provides the opportunity to account for the drug stock remaining after MDA, which then helps with the verification of MDA coverage. In addition to taking a physical inventory, the national-level teams involved in reverse supply chain will also verify the quantity of medicines reported to be used during MDA, and triangulate the remaining inventory, quantity reported used, and coverage to identify and follow-up on any inconsistencies.

Management of SAEs: The *Handbook on Serious Adverse Events* was translated and distributed to the provinces and central level in 2015. Supervisors are reminded during MDA training that SAEs occurring during or shortly after MDA should be reported within 24 hours to MISAU, WHO, the drug donation programs, and pharmaceutical companies, and in the case of Zithromax distributions, to RTI. MISAU provides SAE reporting forms as part of each MDA so that supervisors can quickly investigate reports and prevent false accusations. SAE reporting requirements are reviewed during steering committee meetings as well as pre-MDA trainings. In FY18, ENVISION will work with MISAU to reinforce the adverse event and SAE requirements during the NSC meetings, in MDA and supervision trainings, and during supportive supervision trips to the field.

i) Supervision for MDA

Supportive supervision during MDA will occur prior to and during MDA at the provincial and district levels. These supervisory visits are important and help ensure that the correct quantity of drugs has arrived in the selected provinces, that this has been communicated to the central level, and that the drugs have been prepared for distribution to the districts. In addition to the RTI and MISAU staff,

ENVISION will recruit four short-term program officer consultants to supervise the entire MDA process in each province. See the *Short-Term Technical Assistance (STTA)* section for more details on these positions. At the end of trachoma MDA, review meetings will be held in each of the targeted provinces to review reported drug coverage and ensure the drug distributions that were initially planned were conducted in the correct quantities per selected district.

Supervision support before and during the MDA by supervisors to ensure high-level quality of activity:

Supervision at every phase of the MDA is a critical part of the overall activity. Pre-MDA, supervision occurs to ensure that logistically, drugs, information, education, and communication (IEC) materials, and people are where they should be. Distances can be extensive between one distribution point and another, so supervisors need to confirm that there are no hold-ups that could delay the campaign. The ENVISION RPA and NTD coordinator conduct supervision trips with higher level MISAU representation, and in recent years, the head of the Health office and NTD focal point at USAID travelled together to the provincial launch. This trip involves supervision of various districts within the province, ensuring that the campaign is running smoothly. Simultaneously in other provinces, the RTI finance manager, RTI short-term program officers, and members of the NTD Department participate in other launches and carry out similar supervision activities. In FY18, each province will have one national-level supervisor overseeing the entire MDA process, from provincial training to post-MDA review meetings, and additional supervisors during social mobilization and MDA so that there will be one national-level supervisor for every four districts, for a total of 10 national supervisors. As outlined above, these supervisors will be recruited from RTI staff, including the four short-term program consultants, national-level MISAU staff, and provincial focal points in non-trachoma endemic provinces.

Supervisors are responsible for monitoring and collecting data and for reporting the overall progress of the MDA in their province, including social mobilization. They are responsible for ensuring that all procedures and protocol are adhered to and that communication is frequent with the central level.

j) M&E

Trachoma MDA coverage survey: Through the coverage survey, ENVISION hopes to verify the reported coverage and increase confidence in the routinely high reported coverage values across diseases and years. As Mozambique continues to move towards elimination and increases the number of districts conducting impact surveys, results of the coverage survey can provide useful insight if any of the forthcoming impact surveys result in TF prevalence above 5%. The coverage survey will also include a KAP component to bring a better understanding of the factors that influence participation in the MDA, as well as effective forms of social mobilization. The coverage survey will occur in approximately five of the districts conducting MDA in FY18.

Data quality assessment: In FY17, ENVISION is supporting MISAU to improve MDA training, reporting, and data management. A mini-DQA is planned in one province in FY17 to get a snapshot of the current reporting system, and a thorough DQA is planned in FY18 to assess whether the changes made have been effective. Following the standard DQA sampling methodology, one district will be randomly selected from two provinces conducting MDA in FY18. From each of these districts, two teams will be selected, and from each of these teams, three distribution points will be assessed. A central-level team comprised of one RTI staff and one MISAU staff will travel to each province. At the provincial level, the NTD focal point and data manager responsible for the MDA will be expected to join the team in conducting the DQA at the district and lower levels.

Trachoma impact survey: Mozambique has a high success rate for TIS. Of the 26 surveys conducted to date, only one (Erati District in 2017: 6.29%) resulted in TF prevalence above 5%. Baseline prevalence in

Erati was 8.41%, and one round of MDA was carried out in FY15 with a reported coverage of 93.5%. In FY18, ENVISION will support TIS in the fifteen districts with baseline prevalence between 10-29.9%. These include six districts in Nampula province (4 EUs), six districts in Zambezia province (5 EUs), and three districts in Manica province (2 EUs). These districts have conducted two rounds of MDA but the MDA planned for 2017, which was meant to be the third and final round of MDA for the country, was pushed to May 2018. In order to maintain Mozambique’s momentum towards elimination, and after consultation with WHO and global trachoma experts, the Ministry of Health aims to conduct impact surveys in the districts with prevalence between 10-29.9% after only two rounds of MDA. Ten of the fifteen districts are on the lower end of the prevalence range, with baseline prevalence ranging between 10.2-14.5%, of the other five districts the highest reported prevalence is 19.8%. The reported MDA coverage from the previous two rounds of antibiotic distribution in these districts was above the recommended WHO threshold of 80% (with the exception of 1 round of low coverage in Liupo). By conducting impact surveys after only 2 rounds, Mozambique aims to progress more quickly towards elimination, while finding programmatic efficiencies. It is also hoped that these surveys can inform global learning by providing evidence that areas on the lower end of the 10-29.9% TF range may possibly be able to reduce prevalence to below 5% after only 2 rounds of MDA.

For the impact surveys, children between 1 and 9 years will be surveyed for prevalence of TF and trachomatous inflammation-intense, and people ≥ 15 years will be surveyed for prevalence of TT, scarring trachoma, corneal opacity, and visual impairment. The WHO’s simplified trachoma grading system will be used to identify and register trachoma cases, and the Tropical Data service will be employed.

Table 6: Planned DSAs for FY18 by disease

| Disease | No. of endemic districts | No. of districts planned for DSA | No. of evaluation units planned for DSA (if known) | Type of assessment | Diagnostic method (Indicator: microfilariae, filariasis test strips, etc.) |
|----------|--------------------------|----------------------------------|----------------------------------------------------|--------------------|----------------------------------------------------------------------------|
| Trachoma | 65 | 15 | 11 | TIS | Tropical Data Standardized clinical grading |

Development of M&E Plan: While MISAU follows WHO guidelines and recommendations for NTD control and elimination, it does not have an official national M&E plan. During the first half of FY17, ENVISION’s M&E secondment worked jointly with MISAU and other partners to launch the development of an M&E strategy, intended to guide the project to its elimination goals and into the post-treatment surveillance period. In FY18, ENVISION intends to bring on board an M&E officer who will support MISAU to finalize the M&E plan and provide ongoing mentorship to MISAU on M&E related topics.

Integrated NTD database: In previous years, all data were kept in different paper and electronic files, to which a single person had access. In FY17, the WHO AFRO provided in-country support for training on the Integrated NTD Database. RTI’s M&E secondment was responsible for working with MISAU to ensure historical data were entered in the database and to build capacity of MISAU officers to use the database. As of July 2017, data from 2014–2016 for all diseases are in the database. However, MISAU leadership recently expressed an interest in integrating its national NTD database with its national health management information system (HMIS or SISMA in Mozambique), which uses the District Health Information System (DHIS) 2 platform. ENVISION is in conversation with MISAU to understand the

specifics of this request, but the NTD coordinator has confirmed her desire to continue using the integrated NTD database.

k) Supervision for M&E and DSAs

Trachoma Impact Survey: As mentioned above, MISAU has one certified master grader (Head of National Ophthalmology Department), one certified grader trainer (NTD Coordinator), and one certified recorder trainer (RTI-Mozambique Knowledge Management) to lead and supervise TIS. ENVISION will also continue to call upon support from the project’s trachoma focal point in the planning phase of the surveys.

Trachoma Coverage Survey: As FY18 will be the first time Mozambique uses the WHO-recommended coverage survey protocol, the RTI technical advisor for Mozambique will provide training and supervision support during the first coverage survey. This opportunity will be used to build the capacity of the to-be hired M&E specialist, as well as of other members of the MISAU team.

l) Dossier Development

RTI began supporting MISAU to complete the data collection portion of the trachoma dossier in FY16. During the Annual Partners Review Meeting in February 2017, the data were shared with each province for review. Each province was also asked to begin working on compilation of F&E data. RTI will continue to support MISAU with completion of the dossier through technical guidance from the HQ technical advisor, trachoma focal point, and in-country RPA and M&E officer. A dossier workshop will be added to the annual ophthalmology and statistics meeting in September 2017 to develop a plan for finalization of the dossier. Data compiled to date will be reviewed again, and each section of the written dossier report template will be discussed. Workshop participants will develop a plan and timeline for drafting each section. During the annual ophthalmology and statistics meeting in September 2018, the draft dossier will be reviewed. RTI staff will support dossier development in FY18.

m) Short-Term Technical Assistance

Table 7: Technical assistance request from ENVISION

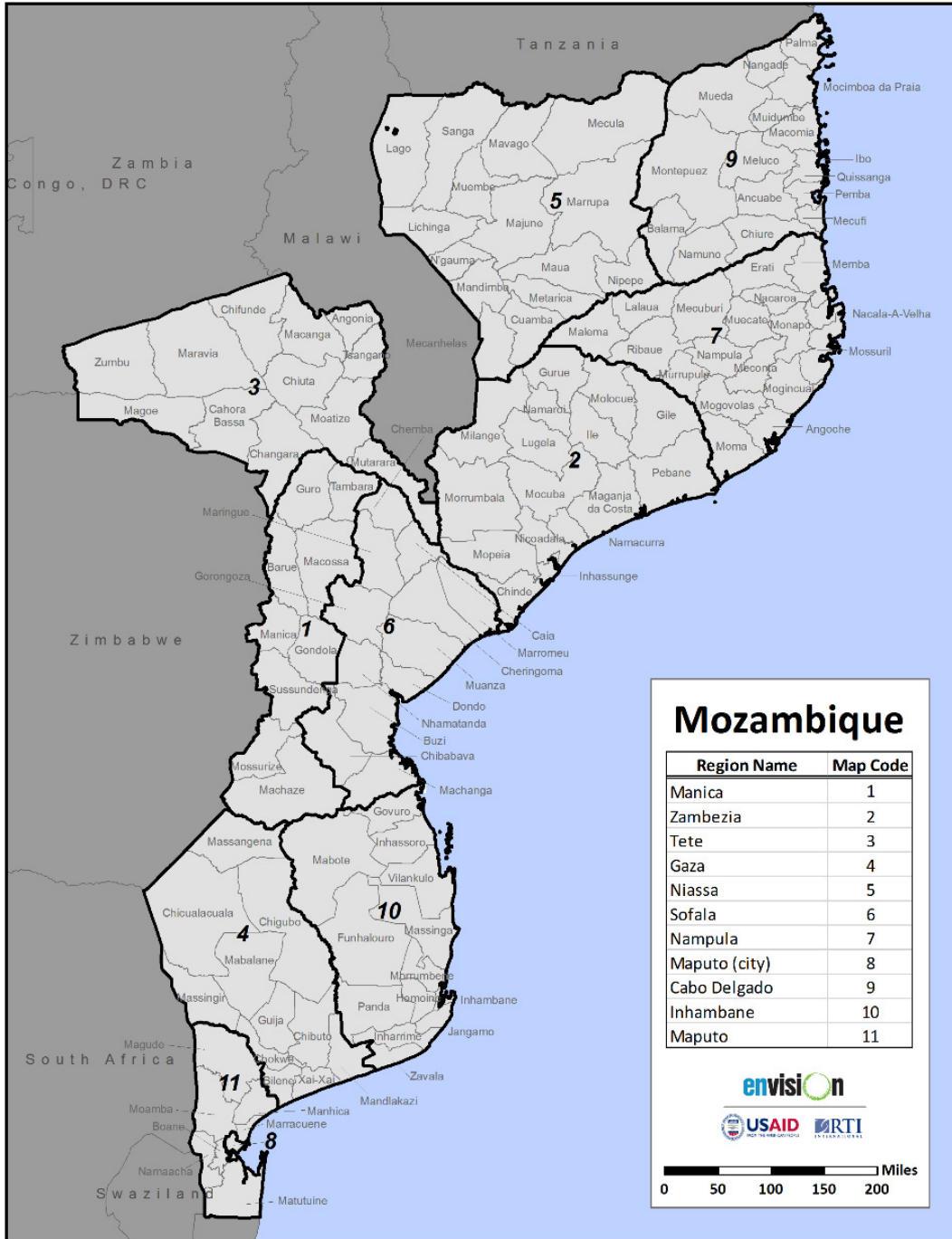
| Task-technical assistance (TA) needed (Relevant Activity category) | Why needed | Technical skill required (source of TA [CDC, RTI/HQ, etc.]) | Number of days required and anticipated quarter | Funding source (e.g., country budget, overall budget, CDC funding) |
|--------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------|--------------------------------------------------------------------|
| External support (e.g., hired consultants) | | | | |
| 4 Provincial Program Officer Consultants | Augment supervision during MDA | Locally recruited, likely master’s level students | 5 weeks during Q3 | Country budget STTA |
| Supply Chain Officer | Establish SKU codes in 4 provinces and conduct spot checks | Supply chain and drug supply management | 20 days during Q1 | Country budget STTA |

Provincial program officers: The primary purpose of the program officers is to supervise the entire MDA process, from provincial training through post-MDA review meetings. They will document the flow of Zithromax through the supply chain to the communities and ensure drug distributors are following proper dosing protocol, reports are completed in a timely manner and with high quality, and drugs are managed according to proper protocol before, during, and after MDA.

Supply Chain Officer: The supply chain consultant will travel to the remaining four provinces (Cabo Delgado, Sofala, Tete, and Nampula) in October to work with the provincial CMAM focal points to establish Zithromax SKU codes. We anticipate moving this position from a consultant to a full-time staff member in FY18.









3) Maps

Updated shapefiles using the new geography of 159 districts are not yet available. The maps below are based on the previous geography with 142 districts.



Mozambique

MDA Geographic Coverage Trachoma

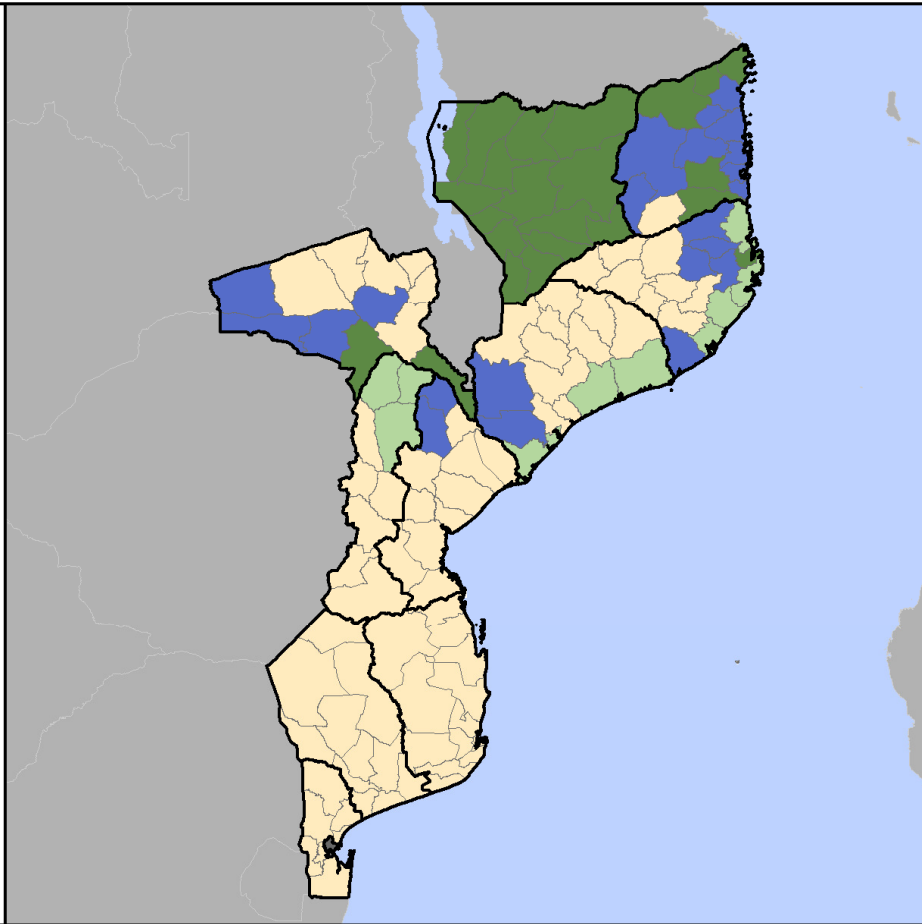
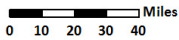
-  Requires mapping/Mapping results pending
-  Not endemic (i.e. below threshold)
-  Endemic but not targeted for MDA
-  FY18 MDA supported by ENVISION
-  FY18 MDA supported by other
-  No longer requires treatment
-  Pending DSA implementation/results
-  Didn't match any of these requirements

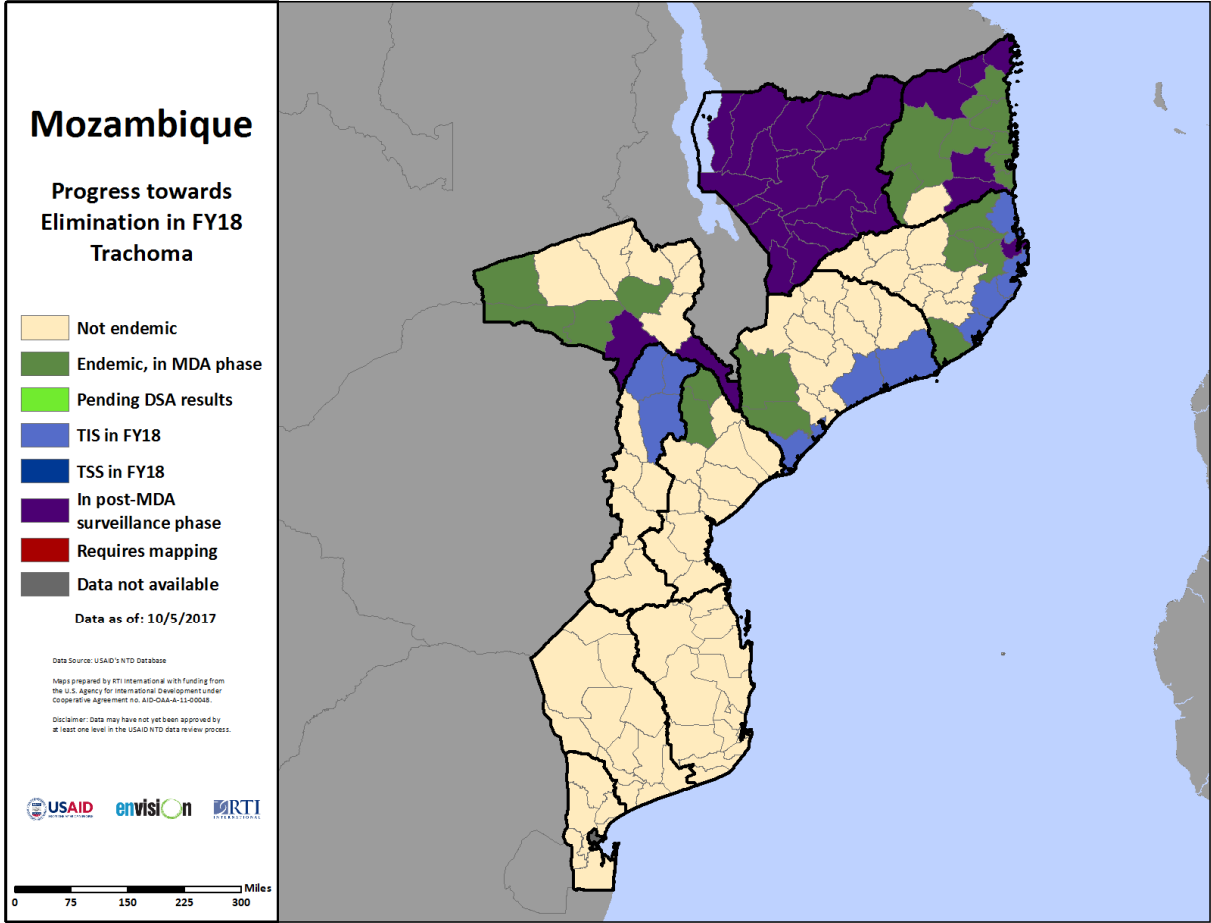
Data as of: 10/5/17

Data Source: USAID's NTD Database

Maps prepared by RTI International with funding from the U.S. Agency for International Development under cooperative agreement no. AID/OAA-14-0008.

Disclaimer: Data may have not yet been approved by at least one level in the USAID NTD data review process.





APPENDIX 1: Work Plan Timeline

| FY18 Activities |
|---------------------------------------------------------------------------------------|
| Management Support |
| Technical/Programmatic support to country teams and national program |
| Project Assistance |
| Strategic Planning |
| NTD National Annual Partners Review Meeting |
| NTD National Steering Committee (NSC), Central Level |
| Annual Ophthalmology and Statistics Meeting |
| National Strategic Plan (no costs) |
| ENVISION Annual Work Plan Meeting (no costs) |
| NTD Secretariat |
| Office Costs |
| Translations |
| Building Advocacy for Sustainable National NTD Program |
| Social Communication and Advocacy Working Group (no costs) |
| Mozambique Eye Care Coalition (MECC) (no costs) |
| Partnership with WaterAid at country level (no costs) |
| MDA Coverage |
| FY18 Trachoma MDA in 5 provinces, 25 districts |
| Social Mobilization to Enable NTD Program Activities |
| Radio messaging (budgeted under subaward) |
| Use of megaphones to disseminate information to communities (budgeted under subaward) |
| Opening Ceremony |
| Training |
| FOG Training for provincial staff |
| National supply chain training |
| Supportive supervision and TOT for national and provincial NTD focal points |
| Trachoma pre-MDA training, provincial training (training and subaward) |
| Trachoma pre-MDA training, district training (budgeted under subaward) |
| Drug Supply Management and Procurement |
| Supply Chain Spot Checks |

| FY18 Activities |
|---------------------------------------------------------------------------------------------------------------------------------------|
| Drug repackaging, drug transportation, and delivery to provinces and communities (budgeted under drug supply management and subaward) |
| Reverse supply chain management |
| Supervision for MDA |
| Trachoma MDA supervision in 5 provinces, 25 districts |
| Monitoring and Evaluations |
| Trachoma MDA coverage survey (MDA FY17) |
| Data quality assessment |
| Trachoma impact survey |
| Development of M&E plan (no costs) |
| Integrated NTD database (no costs) |
| Supervision for Monitoring and Evaluation |
| Trachoma impact survey |
| Trachoma coverage survey |
| Dossier Development |
| Trachoma dossier development |
| STTA |
| Provincial program officers |

APPENIDX 2. Table of USAID-supported Regions and Districts in FY18

| Province | District | Trachoma MDA | Trachoma Impact Survey |
|--------------|-----------------|--------------|------------------------|
| Cabo Delgado | Balama | X | |
| | Ibo | X | |
| | Macomia | X | |
| | Mecufi | X | |
| | Meluco | X | |
| | Mocimboa Praia | X | |
| | Montepuez | X | |
| | Muidumbe | X | |
| | Pemba Metuge | X | |
| | Quissanga | X | |
| Manica | Guro | | X |
| | Macossa | | X |
| | Tambara | | X |
| Nampula | Angoche | | X |
| | Erati | X | |
| | Ilha Mozambique | | X |
| | Memba | | X |
| | Mogincual | | X |
| | Liupo | | X |
| | Moma | X | |
| | Larde | X | |
| | Monapo | X | |
| | Mossuril | | X |
| | Muecate | X | |
| | Nacaroa | X | |
| Sofala | Chemba | X | |
| | Maringue | X | |
| Tete | Cahora Bassa | X | |
| | Chiuta | X | |
| | Magoé | X | |
| | Zumbu | X | |
| Zambézia | Chinde | | X |
| | Luabo | | X |

| Province | District | Trachoma MDA | Trachoma Impact Survey |
|-----------------|------------------|---------------------|-------------------------------|
| | Inhassunge | | X |
| | Maganja Da Costa | | X |
| | Mocubela | | X |
| | Mopeia | X | |
| | Morrumbala | X | |
| | Dere | X | |
| | Pebane | | X |