REPORT OF A JOINT MISSION
Mozambique, 10–17 December 2019

TO REVIEW
THE NEGLECTED TROPICAL
DISEASE PROGRAMME
AND SUPPLY CHAIN
MANAGEMENT FOR
DONATED PREVENTIVE
CHEMOTHERAPY MEDICINES
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**Abbreviations and acronyms**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CMAM</td>
<td>Central de Medicamentos e Artigos Médicos/central medical store</td>
</tr>
<tr>
<td>JAP</td>
<td>joint application package</td>
</tr>
<tr>
<td>JRF</td>
<td>joint reporting form</td>
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<tr>
<td>JRSM</td>
<td>joint request for selected PC medicines</td>
</tr>
<tr>
<td>LF</td>
<td>lymphatic filariasis</td>
</tr>
<tr>
<td>NPO</td>
<td>national professional officer</td>
</tr>
<tr>
<td>PC</td>
<td>preventive chemotherapy</td>
</tr>
<tr>
<td>SCH</td>
<td>schistosomiasis</td>
</tr>
<tr>
<td>STH</td>
<td>soil-transmitted helminthiases</td>
</tr>
<tr>
<td>WASH</td>
<td>water, sanitation and hygiene</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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</table>
1. Background

The World Health Organization (WHO) recommends preventive chemotherapy (PC) as part of strategies to control and eliminate lymphatic filariasis (LF), onchocerciasis, schistosomiasis (SCH), soil-transmitted helminthiases (STH) and trachoma. A major challenge observed in the past few years concerns the accuracy of information on medicines donated to countries in which these neglected tropical diseases (NTDs) are endemic and the discrepancies between the quantities of PC medicines supplied and the data reported on treatment. As a result, significant quantities of medicines remain unaccounted for globally. To better understand and address this issue in Mozambique, the Ministry of Health officially requested WHO to provide technical assistance. The Expanded Special Project for Elimination of Neglected Tropical Diseases (ESPEN) of the WHO Regional Office for Africa facilitated a joint mission by the WHO Department of Control of Neglected Tropical Diseases at headquarters, the WHO Country Office in Mozambique and the NTD team at the Ministry of Health of Mozambique on 10–17 December 2019 to reconcile reported data and actual stocks of medicines available in the country, confirm any expiry of medicines used for treatment of NTDs amenable to PC, explore the reasons for any expiry and implement corrective measures to minimize expiry of medicines in future. The members of the mission team and the persons met are listed in the annex to this report.

The objectives of the mission were:

- to conduct a rapid review of the supply chain management system for PC-NTD medicines, assess the status of the inventory of PC medicines and provide technical support to address challenges affecting the supply chain management system;
- to assist the Ministry of Health of Mozambique in completing the joint application package (JAP) for PC medicines; and
- to conduct a rapid analysis of PC programme implementation and provide technical support to address any identified challenges.

The mission involved meetings with colleagues from the WHO Department of Control of Neglected Tropical Diseases at headquarters, the WHO Country Office in Mozambique and the Ministry of Health of Mozambique. The team visited the national NTD programme and the regional warehouse in Maputo. (There are five other warehouses located throughout the country: three in Maputo and two in the central and northern regions.) At each level, meetings were held with technical and/or administrative staff and with health personnel involved in the national NTD programme and in supplying and/or distributing medicines through mass treatment.

Briefing and/or debriefing meetings were held with the WHO Representative of Mozambique, the Director of Public Health, who leads control of communicable diseases including NTDs, the NTD Programme Manager and his team, and the Regional Disease Control Officers in the district health administrations of the areas visited. The meetings discussed the objectives and findings of the mission, including the status of programme implementation, reconciliation of unaccounted for medicines and proposed recommendations to improve management of the PC-NTD programme, supply chain management of NTD medicines and related activities.

1.1 NTDs in Mozambique

Mozambique, a country in southern Africa, is divided into 161 districts across 11 provinces, with an estimated population in 2019 (projected from the 2007 census) of 28.2 million people.
In 2019, 34 districts required MDA for trachoma, 99 for LF, 161 for SCH and 153 for STH. Mapping has been completed for all five NTDs treatable through PC, although uncertainty remains about the predicted hypo-endemic status of onchocerciasis in some districts. The country is also endemic for other NTDs that are amenable to case management, including leprosy, human African trypanosomiasis, rabies, cysticercosis and snakebite envenoming.

The economic and political environment in Mozambique has gradually improved since the signing of a peace accord in late 2016 between the ruling party, the Mozambique Liberation Front (Frente de Libertação de Moçambique), and the opposition party, the Mozambican National Resistance (Resistência Nacional Moçambicana). However, the country faces a new security threat in the northern province of Cabo Delgado, where insurgents have been attacking rural villages since late 2017. This has affected some NTD programme operations.

1.2 Meeting with the WHO Country Office Mozambique and the Ministry of Health NTD team

As the WHO Representative for Mozambique and the National Professional Officer (NPO) for NTDs were on leave at the time of the mission, the team met with the NPO for noncommunicable diseases and the colleague in charge of essential medicines, pharmacovigilance and regulatory portfolios. The Country Office team was briefed on the objectives of the mission. It reviewed the agenda and provided some basic information regarding Mozambique, the Country Office and the local NTD context. Existing data on unaccounted-for PC medicines were provided to the team, specifically on albendazole for LF and for STH, and praziquantel for SCH; both medicines were supplied directly via WHO.

The interim NPO arranged a working session with country staff, particularly the logistics assistant dealing with securing "Moz numbers" for pre-shipment inspections, processes and "green light" and customs clearance with the central medical store/Central de Medicamentos e Artigos Médicos (CMAM). She explained that CMAM issues a Moz number for pre-shipment inspection after the Country Office submits a request for green light. It was noted that it is a requirement to comply with this process, which takes 1–4 months before NTDs medicines are shipped to Mozambique.

It was noted that there was confusion with respect to the relative responsibilities of the various levels of WHO and DHL regarding customs clearance. The Country Office has requested clear guidance from the WHO Regional Office for Africa or from WHO headquarters in this regard. It was agreed that the regional office should link with headquarters to provide this information.

1.3 Meeting with the national NTD programme manager and the Director of Public Health in charge of communicable diseases; Ministry of Health

1.3.1 Meeting with the Director of public health in charge of communicable diseases

The team met with the Director of Public Health, a senior official in the Ministry of Health responsible for communicable diseases including NTDs. The objectives of the mission were presented and advocacy to improve the supply chain of NTD medicines was one of the discussion points; WHO requested the Ministry of Health to give this due emphasis. The discussion also included a suggestion for more intersectoral collaboration among WASH and NTD within the Ministry of Health, and the Ministry of the Environment; and conversation about the financial and programmatic commitment of the Government for the elimination of NTDs in Mozambique to ensure sustainability and effectiveness/efficiency of available
resources. In this regard, the Director proposed to incorporate an NTD budget line in the new national Health Sector Strategic Plans 2020–2024.

According to the Director of Public Health, most challenges in the NTD supply chain result from the country’s vertical system, which is difficult to control. The main operational issues are lack of capacity at lower levels of the system; unclear job descriptions generating confusion in the field among nurses, pharmacists and health care workers; task-shifting; and overall poor quality of information. These challenges are compounded by issues in the supply chain system. Throughout the meeting, the Director of Public Health expressed her wish to know how Mozambique can learn from best practices that have proved efficient in other countries.

Discussions also concerned the Moz number associated with national importation regulations for medicines. The 1–4 months required to get the green light for any incoming shipment is both too long and highly variable from one shipment to the next, which impacts the whole supply chain for NTD medicines. The Director of Public Health proposed that the Ministry of Health should discuss the matter with CMAM and address the Moz number issue. The team advocated that the Ministry of Health should discuss the issue with the customs department for a waiver or any acceleration of process or special status for the NTD medicines, so they do not wait in the queue in the same way as other commodities.

1.3.2 Meeting with the national NTD programme

The team then met with the national NTD programme to review and adjust the final mission agenda. The objectives of the mission were presented to the coordinator, including the issue of unaccounted-for medicines.

The national NTD programme has six colleagues, who support each other according to the workload; it has no specific structure and there are no job descriptions. Anyone does everything from time to time to support the programme, but staff have no specific area of competence. The programme lacks a dedicated data manager and a monitoring and evaluation (M&E) manager. A dedicated supply chain focal point is needed to monitor country logistics with CMAM and provinces.

1.3.3 Meeting with the central medical store/CMAM

A meeting was held at the central medical store/CMAM to understand the management processes for receiving, storing and distributing medicines to regions/provinces, and the reporting system. It is important to note that CMAM offices and the physical warehouse are situated in different locations.

The team met first with the head of distribution and the other colleague in charge of procurement and importations to learn from their processes and analyse their supply chain data.

1.4 Procurement, Moz number, green light request and customs clearance process

According to the current process, the national NTD programme usually shares the forecasted needs (through the JRSM; joint request for selected PC medicines) with the Country Office, the Regional Office for Africa and WHO headquarters; the CMAM is based on the annual treatment plans. Some products and medicines require import authorization, mostly shipments with delivered duty paid (DDP) incoterms. Praziquantel, albendazole and ivermectin are usually shipped under delivered at place (DAP) incoterms; diethylcarbamazine citrate is shipped under DDP. It is a requirement that all medicines entering the country comply with pre-shipment inspections before shipment to Mozambique.
When a shipment is planned, documents are sent to the Country Office to prepare and submit the request for green light to CMAM. When it is done, CMAM mandates INTERTEK Mozambique to conduct a pre-shipment inspection in the country of origin by providing a Moz number. Obtaining the Moz number from CMAM takes a long time, after which the supplier needs to collaborate with INTERTEK at the country of origin. It was noted that this process is lengthy because INTERTEK must coordinate with its corresponding office in the country of origin and an inspection report must be shared with CMAM after the inspection before CMAM can give the green light. This challenging process involves delays in communication with the suppliers, who often submit non-compliant invoices or other documents, which causes confusion and non-respect of local import procedures. It was stated that pre-shipment inspection is done mainly to check the nature of the goods and their quantity and price; the inspection is mostly physical. It is only when inspection reports are made available that CMAM can issue the green light for shipment.

Previously, the time from submission of documents to the green light request and submission to CMAM averaged 3–4 days for the inspection reports; unfortunately, shipments since 2018 have been taking 1–4 months.

When the medicines arrive in the country, DHL or the Country Office clearing agent conducts formalities, releases the goods and transports them from points of entry to the CMAM warehouse for unloading.

2. **Receipt, storage and distribution of donated medicines**

2.1 **Meeting at the CMAM office**

Regarding receipt and storage of medicines, it was noted that the warehouse sections usually receive a weekly delivery from the clearing agents or the Country Office. During receipt of medicines, attention is paid to physical inspection, checks, verification of batches and quantity and quality of medicines. Once the process is completed, medicines are entered into the internal stock recording system. However, this system was not recording medicines per different donor until 2016, so it was not possible to track the total quantity received from a specific donor until that time. Thereafter, it is possible to register medicines by donor or funding source.

Importantly, the CMAM warehouse has fully functional internal systems and an expert review panel for management of medicines and can provide almost real-time information at central and provincial levels. The country has a total of six warehouses (one in Maputo and five in other locations throughout the country).

For distribution, it is not possible to know how a specific medicine is managed for a specific donor, except for azithromycin; thus, it is difficult to identify the quantities of medicines distributed per donor, as medicines are managed in a common basket without any possibility of differentiating sources of funding. This is a major issue that can generate many implications for reporting on medicines, adverse effects and accountability.

For dispatch to regions, no consideration is given to the donor source for each type of medicine. Since distributions are based on the national NTD programme's distribution plans, medicines donated via WHO are dispatched to regions along with other medicines from other sources; they are not managed separately at the lower level of the system and are therefore not monitored and accounted for.
In response to these issues, the team requested to meet with the head of CMAM to advocate for and address improvements with the head of distribution; however, he stated that it was above his responsibilities and decision-making power.

2.2 Visit to the CMAM warehouse

The team visited the warehouse of CMAM, which is located at almost 30 km from the CMAM office, to meet with the warehouse manager and present the mission objectives, which were to learn from their processes and assess the available balance of medicines at the central level through physical inspection of the warehouse.

The warehouse in Maputo is a modern structure that was built and inaugurated in 2009. It has very good storage conditions, including air conditioning, generators ensuring a permanent electricity source, a temperature monitoring system and standard operating procedures (job aids). Medicines were well organized on racks. Brand-new handling equipment, fire extinguishers, security, individual protective equipment (EPI, Equipement de Protection Individuelle), electronic recording systems and technologies were in evidence.

According to the warehouse manager, the warehouse receives requisitions from health facilities through the internal electronic system, called MAX. Products are distributed from central level directly to provinces; districts are responsible for collecting medicines from the province and moving them to health centres and communities.

The warehouse manager presented the theoretical stock to the team during the visit, which comprised the following quantities of PC-NTD medicines:

- 320 000 tablets of praziquantel, with a very close expiry date of 31/01/2020;
- 15 264 300 tablets of albendazole, with expiry dates varying from May 2020 to January 2024; and
- 26 709 tablets of azithromycin.

Having noted these figures, the team requested CMAM to provide information on the in-country available quantities of WHO donated medicines, as the warehouse management system is operational and allows the provincial stocks held centrally to be viewed. We noted a very collaborative approach between the national NTD programme and CMAM. As a result, we received the following information on the available balance of medicines (Tables 1–4).

Table 1. Available balance stock of medicines at the central level

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Pack size</th>
<th>Lot number</th>
<th>Expiry date</th>
<th>Available balance stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albendazole; 400 mg; comp</td>
<td>200</td>
<td>368803</td>
<td>30/10/21</td>
<td>24 468 600</td>
</tr>
<tr>
<td>Ivermectin; 3 mg; comp</td>
<td>500</td>
<td>R02474</td>
<td>31/01/21</td>
<td>14 554 500</td>
</tr>
<tr>
<td>Praziquantel; 600 mg; comp</td>
<td>500</td>
<td>180347</td>
<td>31/03/21</td>
<td>439 000</td>
</tr>
</tbody>
</table>
Table 2. Quantities of medicines shipped to provinces from 2017 to 2019

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Quantity shipped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albendazole; 400 mg; comp</td>
<td>101 120 400</td>
</tr>
<tr>
<td>Ivermectin; 3 mg; comp</td>
<td>135 670 000</td>
</tr>
<tr>
<td>Praziquantel; 600 mg; comp</td>
<td>33 323 260</td>
</tr>
</tbody>
</table>

Table 3. Available balance stock of medicines at the provincial level

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Early expiry date</th>
<th>Available quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albendazole; 400 mg; comp</td>
<td>30/10/2020</td>
<td>6 006 969</td>
</tr>
<tr>
<td>Ivermectin; 3 mg; comp</td>
<td>31/01/2020</td>
<td>16 077 011</td>
</tr>
<tr>
<td>Praziquantel; 600 mg; comp</td>
<td>31/01/2020</td>
<td>3 747 923</td>
</tr>
</tbody>
</table>

From this table, we note that a total of 2 553 553 + 320 000 = 2 873 553 tablets (comp) of praziquantel will expire on 31 January 2020.

Table 4. Overall balance of medicines available in Mozambique both national and provincial stocks

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Pack size</th>
<th>Available balance stock country wide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albendazole; 400 mg; comp</td>
<td>200</td>
<td>30 479 988</td>
</tr>
<tr>
<td>Ivermectin; 3 mg; comp</td>
<td>500</td>
<td>30 637 089</td>
</tr>
<tr>
<td>Praziquantel; 600 mg; comp</td>
<td>500</td>
<td>4 191 962</td>
</tr>
</tbody>
</table>

Because CMAM does not have a coding system to properly track medicines donated via WHO at provincial level, it is difficult to calculate the balance of WHO donated medicines currently available in the country from the above figures.

2.3 Working session with the national NTD programme

The team conducted a working session with the national NTD programme to better understand the progress of, and challenges to, programme implementation and discuss potential mitigation strategies and recommendations.

The national coordinator provided a presentation on the level of achievement for the five NTDs currently addressed through PC.
The health system in Mozambique is decentralized to allow provincial health management; the central level has a coordinating role. Health programmes are planned and implemented at the provincial level, including in relation to activities relevant to NTDs. The actual implementation unit, however, is the district, where health facility workers and community volunteers implement MDA within schools and communities.

The national NTD programme is under the National Directorate of Public Health. It coordinates NTD activities with the provinces through joint planning, organization of central level trainings, technical support, resource mobilization and medicine management related to MDA campaigns. Trichiasis surgeries are managed separately by the Ophthalmology Department of the Ministry of Health.

The figures below summarize national performance against PC-NTDs, using data submitted to WHO for the 2018 implementation year.

Country profile

<table>
<thead>
<tr>
<th>Country</th>
<th>Lymphatic filariasis</th>
<th>Onchocerciasis</th>
<th>Schistosomiasis</th>
<th>Soil-transmitted helminthiases</th>
<th>Trachoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mozambique</td>
<td>Req PC</td>
<td>No PC required</td>
<td>Req PC</td>
<td>Req PC</td>
<td>Req intervention</td>
</tr>
</tbody>
</table>

Based on available data provided during the mission, 161 implementation units (IUs) in the country require PC for LF, onchocerciasis, STH and/or SCH.
High-level national indicators based on the 2018 joint reporting form (JRF)

### LF: NTD mapping in Mozambique

**LF:** Mapping was completed in 2013 and 114 endemic districts were identified in which more than 20 million people required PC in 2018.

In 2018, 16,502,496 people were treated in all IUs, achieving 100% geographical coverage and 81.4% national treatment coverage. Of the 114 IUs, 109 (95%) achieved effective coverage (> 65%) for all ages, which is very encouraging. Sustained high coverage was achieved for the 3 consecutive years 2016–2018. PC was not conducted in 2012 or 2015.
According to JRF 2018, in 2018 none of the IUs stopped treatment for LF. However, we learnt from the programme that, in 2019, 15 IUs with a total population of 2.7 million no longer required PC. This will be reported in the 2019 JRF. In 2019 implementation of PC fell due to lack of funding from the ASCEND project through Crown Agents.

**SCH:** Mapping has been completed and SCH is prevalent throughout all 161 IUs in Mozambique. The most prevalent species is *Schistosoma haematobium*.

In 2018, 56 IUs implemented PC for SCH and treated 3 490 880 school-age children (SAC), achieving 34.8% geographical coverage and 19.4% national coverage for all age groups (51% for SAC). Unfortunately, none of the IUs in which PC for SCH was implemented achieved the targeted threshold of effective coverage of 75%. One of the big gaps we observed was lack of targeting of high-risk adults for SCH PC, which was probably related to a lack of funding for procurement of praziquantel targeting adults. We encourage the country to scale up PC for SCH for populations for qualifying IUs and high-risk adult populations.

**STH:** Mapping of STH has been completed and all IUs are endemic for STH. In 2018, 125 IUs implemented PC for STH and 5 810 314 people were treated; six IUs received PC despite prevalence estimates below the target threshold. The geographical and therapeutic coverage of PC for STH therefore was 77.7% and 51.1% respectively. We noted that none of the IUs achieved the effective coverage (all ages) threshold of 75% set by WHO. The trend in treatment from 2009 to 2018 showed incremental scale up of PC for STH.

**Trachoma:** A total of 66 districts are endemic for trachoma, all of which implemented the required elements of the SAFE strategy in 2019, based on the most recent prevalence data. The country is planning to submit a dossier to WHO in 2024 requesting validation of elimination of trachoma as a public health problem.

It was noted that the country has formed a review committee comprising the national NTD programme, the WHO Country Office, WASH Programme, Sightsavers, the United States Agency for International Development, Light for the World and RTI International.

The country mentioned that it will require technical assistance from WHO to successfully complete preparation of the national dossier. It was reported that a total of 17 people had been trained to contribute to undertaking trachoma prevalence surveys.

**Onchocerciasis:** Based on 2001 data generated from a rapid epidemiological mapping of onchocerciasis (REMO, using nodule palpation rates) exercise, onchocerciasis is hypo-endemic in Mozambique. As this does not warrant MDA, the country was not treating onchocerciasis as a public health problem, and no public health-level intervention had been completed to date. With the recent shift in the target in Africa from control of onchocerciasis as a public health problem to interruption of transmission, the country has commenced planning for PC. Towards that end, the programme is working with various partners and has conducted a pilot survey using antibody-based diagnostics; this method of ascertainment is more sensitive and specific than REMO. Once the pilot results are reviewed by WHO’s Onchocerciasis Technical Subgroup, a wider onchocerciasis elimination mapping process is planned.
2.3.2 Medicine management

The team noted that the national NTD programme usually prepares distribution plans by province and by districts. A guideline was available. Districts were requested to provide requisitions to the national NTD programme and CMAM, including the available stock. This process helps the programme to check all available medicines at the district and provincial levels before approving the requisitions and preparing a distribution plan to be submitted to CMAM for distribution.

According to the distribution plans sent by the national programme to CMAM, only WHO-donated medicines are supposed to be distributed; sometimes, districts report receipt of other medicines which are non-WHO donated medicines.

Before any MDA is conducted, provincial and district trainings in data management, pharmaceuticals management and completion of reporting forms are conducted by a team of trainers and trainees that includes the chief district medical officer, districts pharmacists, community drug distributors, health care workers and community activists and volunteers.

It was noted that the programme uses various approaches to conduct MDA, notably schools, markets and communities, and a zonal treatment approach with a survey team for coverage surveys since 2018.

Once treatment is completed, the summary forms are filled in and sent back from the community to districts and from the districts to provincial and national levels and are verified by data managers at each level to validate data compilation. After each MDA, the remaining balances are brought back to the districts and from the districts to the provinces.

According to data shared by the national coordinator, the team noted treatment information for the year 2019 as follows:

- STH round 1: 13 262 155 treated
- STH round 2: 1 080 896 treated
- LF: 8 781 000 treated
- SCH round 1: 4 534 000 treated
- SCH round 2: 1 191 502 treated

Since a mean of 2.5 tablets of praziquantel is required per treatment, 4 534 000 + 1 191 502 treatments would result in approximately 14 313 755 PZQ tablets being used. However, the country had a theoretical stock of only 7 million tablets of praziquantel, leaving a shortfall of more than 7 million tablets. The national programme cannot explain the source of this additional stock. This may be due to poor accounting systems for medicine management at the sub-national level, in which sources of medicines are not recorded. The tablets could therefore have come from any source including stocks procured for routine health service delivery but subsequently utilised for MDA. Neither the Ministry of Health nor CMAM systems could precisely identify the source of medicines after they leave the national warehouse. We recommended that a means for tracking medicine source after CMAM dispatches medicine to the subnational level be created (please see recommendations below).

2.4 Meeting with partners

The national programme has several partners working specifically on PC-NTD diseases, including ASCEND, Light for the World, the Liverpool School of Tropical Medicine’s Centre
for Neglected Tropical Diseases (CNTD) Integrated Control of Schistosomiasis and Intestinal Helminths in sub-Saharan Africa (ICOSA) project, the Schistosomiasis Control Initiative (SCI), Sightsavers and RTI International.

CNTD provided funding for PC against LF/STH and SCH/STH MDA in districts identified by the national programme and supported transmission assessment surveys and LF morbidity case management, until March 2019. SCI provides direct support for sentinel site and spot-check surveys for SCH and STH. Sightsavers, RTI and Light for the World support the Ministry of Health on trachoma elimination. Some partners are ramping up current projects and a new partner, ASCEND, is trying to bridge part of the gap created by CNTD’s departure.

WHO Mozambique appointed a new NTD NPO in 2016 to provide technical support to the Ministry of Health and serve as a consignee for medicine donations.

WHO highlighted the need for complementary interventions in addition to PC and recommended that WASH activities be complemented and harmonized with those of NTDs. Infections responsible for several NTDs, including SCH, trachoma and STH, are transmitted because of poor access to water, sanitation and hygiene. It is important to improve access to water and sanitation and enhance hygiene practices to avoid reinfection. Collaboration of the national programme with the WASH sector is currently limited. Partners and potential partners in this sector, including WaterAid, World Vision, the United Nations Children's Fund and Save the Children, should be encouraged to work together to support the programme and maximize the impact of WASH interventions to control, eliminate and eradicate NTDs. This could include, for example, using the prevalence of NTDs to guide decisions on where to deploy WASH-related resources and to measure the impact of WASH interventions.

The team met with the in-country partners, RTI and ASCEND, to learn from their implementation success, achievements, collaboration perspectives and best practices on how they can better collaborate with the national programme to address major challenges.

It was noted that RTI will incorporate a health system strengthening component within its activities in the coming years as per the country operation workplan. As national programme staff require some capacity-building, the RTI team promised to work collaboratively to contribute to this process.

Regarding the Moz number issues and pre-shipment inspections, RTI has managed these issues in the past through senior management visits to assess the situation and high-level discussion and negotiation with the Ministry of Health and CMAM to address the Moz number delays.

3. Recommendations

3.1 Ministry of Health/national NTD programme to:

- Conduct MDA urgently using the 2.8 million tablets of praziquantel identified by the mission as being available in central and provincial warehouses and which are due to expire by the end of January 2020.
- Grant an exemption to the special requirement of pre-shipment inspection by CMAM before the green light for shipment of a health product or NTD medicine, or accelerate the process to prioritize NTD medicines, as they are donated under the oversight of WHO to assure their quality.
• Request CMAM to start coding by source of medicine while dispatching medicines to provincial warehouses and update the country logistics management information system accordingly. (Medicine dispatched from CMAM is currently not identified by source, making it difficult to track and report donated medicines.)
• Increase scale up of PC significantly in all IUs that require intervention to achieve full geographical coverage, particularly for SCH and STH.
• Increase LF geographical and therapeutic coverage urgently and conduct MDA in 2020 to increase and maintain the previously high levels of coverage.
• Negotiate with ASCEND/Crown Agents to release committed funding as soon as possible in sufficient amounts to maintain scale-up of LF, STH and SCH MDA.
• Strengthen collaboration with WASH actors and sectors to accelerate elimination of NTDs nationwide.
• Use the country integrated NTD Database (CIND) or DHIS2 to manage national NTD programme data and undertake reporting.
• Submit the JRF 2019 (reporting PC treatments in 2019) to accompany the JRSM 2020 (medicine request).

3.2 WHO Country Office Mozambique to:
• Ensure that the 2.8 million tablets of praziquantel that are due to expire shortly are urgently used in an epidemiologically-justified MDA campaign.
• Initiate high-level discussion to negotiate exceptional exemption of pre-shipment inspection of NTD medicines provided by WHO; CMAM has agreed to investigate this issue and meet with the WHO Country Office in Mozambique.
• Hold a high-level discussion to negotiate the coding of NTD medicines by source during dispatch from the central medical store to provinces and districts.
• Support capacity-building of the NTD team on the importance of JAP standard medicine management and reporting.
• Follow up on timely submission of the JAP application and review, with technical input, to ensure that resources are available to implement the programme.
• Follow up closely with ESPEN and other partners to scale up LF, SCH and STH MDA nationwide and increase the currently low geographical and treatment coverage.
• Support the NTD team to complete the recommendations to the Ministry of Health/national NTD programme (see section 3.1).

3.3 WHO Regional Office for Africa/ESPEN to:
• Provide urgent funding to allow distribution of the soon-to-expire 2.8 million tablets of praziquantel; if time does not allow for financial transfer, request the Ministry of Health to pre-finance from other sources and transfer the funds later.
• Follow up on the issues related to exemption of pre-shipment inspection and coding of NTD medicines by source during dispatch to the African Region.
• Provide funding to the WHO Country Office in Mozambique to coordinate the NTD implementation partners in the country and support steering committee meetings.
• Work closely with the Ministry of Health/national NTD programme to prepare and submit timely applications for medicine and focus on inventory and management.
• Support the Ministry of Health/national NTD programme to complete the recommendations (see section 3.1).
3.4 WHO headquarters to:

- Follow-up with respect to submission of the revised JRSM 2019 (see section 3.1).
- Support the WHO Regional Office for Africa and the WHO Country Office in Mozambique (see sections 3.2 and 3.3).
Annex. Members of the mission team and key persons met

Members of the mission team

1. Mr Modeste Tezembong, Supply Chain Management Officer, WHO Regional Office for Africa/Expanded Special Project for Elimination of Neglected Tropical Diseases, Brazzaville, Congo
2. Dr Afework Tekle, Project Manager, Department of Control of Neglected Tropical Diseases, WHO Headquarters, Geneva, Switzerland
3. Dr Raquel Maguele Dulce, NPO noncommunicable diseases, WHO Country Office Mozambique
4. Dr Ana Fernandez, NPO essential medicines, WHO Country Office Mozambique

Key persons met

Ministry of Public Health of Mozambique

1. Dr Rosa Marlene Cuco, Director of Public Health in charge of communicable diseases, MISAU (Ministério de Saúde)
2. Dr Marilia Massangai, Chief of Department of Neglected Tropical Diseases, MISAU (Ministério de Saúde)
3. Henis Mior, NTD programme staff
4. Decio Sitoe, Fellowship, NTD programme
5. Dr Kamila Magaia, Chief of Distribution department, CMAM
6. Mr. Neves Pedro, Distribution department, CMAM
7. Mr. Sergi Artur Gomes, Warehouse Manager, CMAM

PSM/CHEMONICS Mozambique

1. Mr Jose Luis Mutembo

RTI International

1. Dr Mawo Fall

ASCEND-Crown Agents/Mozambique

1. Mr Ercilio Salomao Jive

WHO Country Office Mozambique

1. Dr Thomas Valdez, Health System Adviser, Acting WHO Representative
2. Dr Raquel Maguele Dulce, NPO noncommunicable diseases, acting NPO NTDs
3. Dr Ana Fernandez, NPO Essential Medicines
4. Ms. Elizabeth Cadeado, Logistics Assistant
5. Mr. Oscar Chalmasse, Operations Officer