

Improving TB Diagnosis in the ECSA Region



East, Central &
Southern Africa
Health Community

The Global Fund Regional TB Laboratory Strengthening Project:
Supporting Uganda SRL and other countries to improve TB Diagnosis in the Region

ANNUAL PERFORMANCE REPORT 2018

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Mandate of ECSA-HC

The mandate of ECSA-HC is to promote and encourage efficiency and relevance in the provision of health services in the region.

Vision

To be the leader in health in East, Central and Southern Africa, contributing towards the attainment of the highest standard of physical, mental and social well-being of the people in the region

Mission

ECSA Health Community recognizes health as a fundamental human right. As an inter-governmental organization, ECSA promotes the highest standards of health for the individuals, families and communities through advocacy, capacity building, brokerage, coordination, inter-sectoral collaboration and harmonization of health policies and programmes.



ABBREVIATIONS AND ACRONYMS

BPF	Best Practices Forum
CDC	US Centers for Disease Control and Prevention
DR-TB	Drug Resistance TB
DST	Drug Susceptibility Testing
ECSA HC	East, Central & Southern Africa Health Community
GF	Global Fund
HMC	Health Ministers Conference
LIS	Laboratory Information System
LJ	Lowenstein Jensen
LPA	Line Probe Assay
LQMS	Laboratory Quality Management Systems
MDR-TB	Multi-Drug Resistance TB
NTP	National Tuberculosis Program

NTRL	National TB Reference Laboratory
PPM	Pooled Procurement Mechanism
QA	Quality Assurance
QMS	Quality Management Systems
SP	Strategic Plan
SRL	Supranational Reference Laboratory
TA	Technical Assistance
TB	Tuberculosis
TSRS	TB Sample Referral System
USAID EA	United States Agency for International Development, East Africa
WGS	Whole Genome Sequencing
WHO	World Health Organization
XDR-TB	Extensively Drug Resistant TB



A section of officials from SRL Uganda, ECSA-HC and Global Fund at a recent meeting in Kampala, where Global Fund committed to the extension of funding for the Regional TB Lab strengthening project increasing the number of beneficiary countries from 18 to 21.

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Embracing Continous Training & Mentorship



SRL Uganda staff pose for a photo after a Laboratory Quality Management Systems Training

Foreword by the Director-General of ECSA-HC

It gives me great pleasure to present to you our annual performance report for the year 2018. This annual report is specifically for the project titled - *The Global Fund Regional TB Laboratory Strengthening Project: Supporting Uganda SRL and other countries to improve TB Diagnosis in the Region.*

This report highlights activities which were undertaken in the aforementioned reporting period from January 1st to December 31st 2018. Throughout this period, ECSA-HC, Uganda SRL and all the participating NTRLs exhibited commendable commitment to the continued improvement of TB diagnosis in our region. I am particularly pleased that we managed to achieve most of our targets, and even exceeded some of them.

During the reporting period, two progress updates were submitted to the Global Fund. Measuring performance against indicators and targets, the project performed well in all the last three periods scoring an A2 rating for the respective periods.

Notably, under strengthening of laboratory quality management systems, Mozambique and Uganda managed to maintain their ISO 15189 accreditation while Uganda was assessed for the ISO 17043 accreditation in proficiency testing and recommended for accreditation. We are delighted that the accredited NTRL in Mozambique has initiated steps towards becoming an SRL. This should make it the fourth SRL on the continent and enable it to serve the Lusophone countries. I congratulate everyone who has in one way or another contributed to this milestone.

The Uganda SRL has continued to perform diligently the mentorship, technical assistance and training roles to the NTRLs in the region, which explains the overall improvement in performance across the board. NTRLs continued to meet at different levels to network and share best practices as well as for peer to peer learning and mentorship.

We carried on with improvement of our systems and technical capacity to keep abreast with the latest trends and technologies in the diagnosis of TB. Working with different partners, we also continuously innovated different approaches that put the individual needs and circumstances of the people we serve at the center of our programming, especially in light of arising challenges such as multidrug TB resistance.

Measuring performance against indicators and targets, the project performed well in all the last three periods scoring an A2 rating for the respective periods.

I am also delighted to report that Global fund has committed to extend support for this Regional TB Lab Strengthening project funding for three more years to support national TB diagnostic facilities in the East, Central and Southern Africa region, bringing the number of beneficiary countries from eighteen (18) to twenty-one (21).

I would like to most sincerely thank Global Fund, the governments and ministries of health from the ECSA



Prof. Yoswa M. Dambisya
Director General

countries, and all our stakeholders without whose financial and technical support we could not have realized the above achievements. We appreciate the partnership and collaboration with all the institutions where we work and all the staff with whom we have worked during the reporting period.

I hope you enjoy reading our report!

Training in Session



A consultant from SANAS (left) and SRL Uganda staff during a Laboratory Quality Management Systems training

SRL UGANDA ACCELERATES THE FIGHT AGAINST TB IN THE ECSA REGION



Prof Moses Joloba, Director SRL Uganda

1.0

INTRODUCTION

1.1 Background of the Regional Project

The ECSA-HC Global Fund Regional TB Lab grant (QPA-T-ECSA) covers 18 countries of the ECSA region namely; Botswana, Burundi, Eritrea, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, South Sudan, Eswatini, Tanzania, Uganda, Zambia and Zimbabwe. Five of the eighteen countries (Kenya, Uganda, Tanzania, Zimbabwe and Mozambique) which are targeted in this grant are high burden TB countries (HBCs). The sub-region has porous borders with three other high burden TB countries- South Africa, Ethiopia, and Democratic Republic of Congo.

Through this grant ECSA-HC is supporting its Sub-recipient, the Uganda Supranational Reference Laboratory (SRL) to improve quality and diagnostic capacity of the National TB Reference Laboratories (NRLs) in the region as well as build their capacity to support the TB Laboratory networks in their countries. This will have a positive impact on TB care and prevention as well as programmatic management of MDR-TB.

1.2 East Central & Southern Africa Health Community (ECSA-HC)

The East Central and Southern Africa Health Community (ECSA-HC) is a regional inter-governmental health organization established in 1974 by member states, under the Convention for the establishment of the Commonwealth Regional Health Community for East, Central and Southern Africa. It was established as a permanent mechanism for fostering and promoting

regional cooperation in health among member states in acknowledgement of the fact that health and disease do not observe borders. The mandate of ECSA-HC is to foster and encourage regional cooperation in health and to strengthen capacity to address the health needs of its member states, so as to attain the highest standards of health for the people of the region. Currently the ECSA-HC membership includes Kenya, Lesotho, Malawi, Mauritius, Eswatini, Tanzania, Uganda, Zambia and Zimbabwe. ECSA-HC has more than 40 years' experience in health and is the largest health-specific organization in the East, Central and Southern Africa region outside of the UN system. ECSA-HC enjoys regional and global confidence and strong collective support of all its member states hence occupying a rare position to provide leadership on various health related issues.

1.3 Uganda Supranational TB Reference Laboratory (Uganda SRL)

The Uganda Supranational TB Reference Laboratory (SRL) is a government entity under the National TB and Leprosy Program (NTLP) in the Ministry of Health. In April 2013, through the support of the ECSA-HC led East African Public Health Laboratory Networking Project, the Uganda National TB Reference Laboratory (NTRL) received the status of Supra National Reference Laboratory making it a recognized center of excellence capable of supporting laboratories in other countries. The status was awarded by the World Health Organization (WHO) after recognizing NTRL's progressive advancement in the diagnosis of TB. The Uganda SRL is currently the third SRL in Africa after Algeria and NICD in South Africa and one among the 29

SRL's around the world. This new status recognizes the laboratory as a leader in Tuberculosis (TB) diagnosis and monitoring, training, laboratory best practice and provider of the highest levels of quality assurance. Currently, the SRL is formally linked to all the 17 project countries in the region, namely; *Kenya, Lesotho, Malawi, Mauritius, Eswatini, Tanzania, Zambia, Zimbabwe, Burundi, Seychelles, Somalia, Botswana, Mozambique, South Sudan, Eritrea, Namibia and Rwanda*. The Support being provided under the GF project includes External Quality Assurance (EQA), technical assistance for Drug Resistance Surveys, training, mentoring, developing Quality Management Systems and other forms of Technical Assistance as maybe required in line with the above and to address the prevailing TB challenges in the region.

Under the Global Fund project, the SRL is in the process of procuring a Whole Genome Sequencing (WGS) machine which allows simultaneous identification of all known resistance mutations as well as markers with which transmission can be monitored.

WGS provides resolution superior to that of other current methods in that it is useful in defining outbreaks and is able to provide resistance testing in less than a week.

Availability of this technology at the SRL implies that more countries in the region will have access to sequencing services at a low cost. As a regional training center, this also widens the training scope of WHO TB recommended diagnostic and surveillance techniques. The sequencer will also open up new areas of research that will contribute to the sustainability agenda of the SRL.



SRL Uganda officials in a brainstorming session



2.0

THE ECSA-HC GLOBAL FUND REGIONAL TB LABORATORY STRENGTHENING PROJECT

The East, Central and Southern Africa – Health Community (ECSA-HC) in collaboration with the Uganda Supranational Reference Laboratory was awarded a Global Fund grant of USD 6,136,774 to support the Uganda SRL and other countries to improve TB Diagnosis in the ECSA Region. The four year Global Fund grant will support National TB Reference Laboratories in 18 countries to improve TB diagnosis. The countries include all the nine ECSA member states and nine non-Member States namely: *Botswana, Burundi, Eritrea, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, South Sudan, Eswatini, Tanzania, Uganda, Zambia and Zimbabwe.* ECSA-HC is playing a facilitating and coordinating role as the Principal recipient (PR) and the Uganda SRL is the Sub-recipient (SR). ECSA-HC as the PR has the responsibility to oversee the implementation of the project by the SR and is also responsible for managing the financial, procurement and monitoring and evaluation aspects of the project.

Project Goals

- a) Build a regional network of NRLs for inter-state laboratory quality assurance and management in the ECSA countries;
- b) Improve Laboratory service provision for quality assured 1st and 2nd line drug susceptibility testing accessible to people in need; and
- c) Enhance impact of rapid molecular TB diagnostic testing in the region and building capacity of NRLs to undertake epidemiological/national level disease monitoring surveys such as Drug Resistance Survey (DRS) and TB disease prevalence.

Countries under the Regional TB Lab Strengthening Project



Project Strategies

- To establish a regional network of 18 National TB Reference Laboratories among the ECSA countries;
- To provide quality training to NRL lab staff of the 18 countries and to provide Supranational TB Reference laboratory (SNRL) services to the region- prioritized by country needs; and
- To provide technical support for conducting anti-TB Drug resistance surveillance, TB prevalence surveys, and Expansion of rapid TB diagnostic testing.

Key Activities

- Strengthen networking of TB NRLs of ECSA region, including supporting a robust EQA microscopy system; and joint supervisory visits (with other SRLs);
- Provide technical assistance (TA) to assess and support implementation of the Lab components of TB NSPs, National-Level TB Specimen referral systems for Culture and Drug Susceptibility Testing (C&DST);
- Convene project inception (initial/project start up stakeholder meeting) and annual Regional Stakeholders Consultative/Advocacy meetings, convene Annual Regional Advisory Panel (RAP) and Regional Steering Committee (RSC) Meetings, and Project Closure meeting;

- TA to support impact assessment of Gene Xpert/rapid diagnostics under programmatic conditions for detection of TB/MDR-TB;
- Establish inter-state technical collaboration: Establish a community of practice (platform for sharing knowledge and knowledge exchange), knowledge management platform and documentation of best and promising practices, conference presentations, publications, and annual reports;
- ISO accreditation for NRLs in selected countries;
- Provide TA and conduct trainings for improving laboratory systems;
- Conduct project monitoring visits to selected project sites;
- Conduct Mid and End-term evaluation; and
- Provide TA for DRS, TB Prevalence Surveys and Routine Surveillance of DR-TB.

2.4 Minimum Service Package

For ease of implementation of this project, countries were prioritized based on intended services provided by SRL (Table 1). This table was a result of country consultation before the inception of the project. Level 1 countries comprise of NRLs that do not have the capacity for TB bio-safety level 3 facilities, and culture & 1st line DST. All other countries were categorized as level 2. For operational purposes, level 3 countries were identified as those which would help lead regional level initiatives and foster NRL-NRL supports. Over the implementation period of the project countries have been able to move from one level to another (Table 2) due to capacities built resulting in change in needs.

Table 1: SNRL Minimum Service Package

Priority	SNRL Minimum Service Package	Countries
Level 1	EQA Microscopy FL DST (Direct Service Provision) GX Plan and Placement TSRS (Microscopy/integrated NTP-Integration Advocacy for LABS	Somalia South Sudan Eritrea Seychelles Mauritius Burundi
Level 2	Lab QMS FL DST (Capacity strengthening) SL DST (referral) Lab NSP GX country-wide; EQA TSRS (C&DST) TB/HIV integrated Labs/Platforms Community/CSO Participation OR-Country level-partnership	Lesotho Malawi Mozambique Eswatini Zambia Tanzania Zimbabwe
Level 3	Accreditation DRS guidance Prevalence Survey guidance Robust TSRS SL DST Candidate SRLs (one and two) Integrated Laboratory Platforms Community/CSO Leadership Advocacy for Labs-Regional Integration OR-Capacity regional perspective	Kenya Namibia Uganda Botswana Rwanda

Table 2: SNRL Minimum Service Package (2018)

Priority	SNRL Minimum service package	Countries
Level 1	EQA Microscopy FL phenotypic DST GX plan and placement TSRS (microscopy / integrated) NTP integration Advocacy for LABS	Somalia, South Sudan, Eritrea, Seychelles, Liberia
Level 2	LAB LQMS EQA Microscopy FL phenotypic DST (capacity strengthening) SL DST (referral) Lab NSP GX countywide EQA, TSRS (C&DST) TB/HIV integrated lab platforms community/CSO participation OR- country level partnerships	Mauritius, Burundi, Lesotho, Malawi, Eswatini, Zambia, Zimbabwe, Angola

Priority	SNRL Minimum service package	Countries
Level 3	Accreditation DRS guidance Prevalence survey guidance Robust TSRS SL DST Candidate SRL (3) TB/HIV integrated lab platforms community/CSO leadership Advocacy for LABS-regional integration OR- capacity regional perspective	Tanzania, Kenya, Botswana, Rwanda, Ethiopia
Level 4	Support to other countries	Uganda, Mozambique, Namibia

2.5 Acceleration and continuation of the project

Based on programmatic and financial performance of the project at the beginning of this third project year, the Global Fund requested ECSA HC to accelerate planned year 4 activities in year 3 and apply for continuation funding. An acceleration plan was developed including new activities; and consequently Global Fund has committed to the extension of the funding.

A regional dialogue meeting brought together stakeholders of the project to discuss priorities for the continuation phase of the project. These discussions together with findings from the project's mid-term review conducted in 2017 informed a proposal for continuation funding which was submitted to Global Fund in April 2018; both the within and above allocation funding were approved. The new grant is expected to commence in July 2019 following grant negotiations expected to be conducted early in 2019.



UGANDA SRL SUPPORTS AFRICA

Supranational[®]
Reference Laboratory
Timely Accurate Diagnostics for a TB-Free Africa

ECSA MS

- Kenya
- Lesotho
- Malawi
- Mauritius
- Eswatini
- Tanzania
- Uganda
- Zambia
- Zimbabwe



Non- ECSA MS in the GF Project

- Burundi
- Botswana
- Eritrea
- Mozambique
- Namibia
- Rwanda
- South Sudan
- Seychelles
- Somalia
- Liberia

3.0

KEY ACHIEVEMENTS DURING THE REPORTING PERIOD

Strengthening of Laboratory Quality Management Systems towards Accreditation

Laboratory Quality Management Systems entails all aspects and processes involved in operationalizing a laboratory including leadership and management. Mentorship on QMS through long and short-term technical assistance visits in the countries involved, review and updating of manuals, guidelines and standard operating procedures for all processes and ensuring that activities are carried out by qualified personnel as per standards in place. Together with various in-country implementation partners, the project has been supporting countries to strengthen Quality Management Systems in their National TB Reference Laboratories towards accreditation. ECSA HC promotes smart partnerships among partners in countries in order to leverage resources.

Accreditation provides the assurance that laboratories are adherent to internationally recognized standards critical to diagnose disease, including drug-resistance forms in line with the first pillar of the End TB strategy “Integrated, patient-centered care and prevention”. During the reporting period, Namibia was awarded the 15189 ISO accreditation while Kenya and Tanzania have been assessed and recommended for accreditation. Rwanda and Eswatini have applied for assessment.

Mozambique and Uganda SRL managed to maintain their 15189 ISO accreditation while Uganda SRL was

assessed for the ISO 17043 accreditation in proficiency testing and recommended for accreditation.

The accredited NTRL in Mozambique has initiated steps towards becoming an SRL which is one of the key outputs of the project; this will make it the fourth SRL on the continent and enable it to serve Luso-phone countries.

Implementation of WHO recommended diagnostics

In line with the first component of the first pillar of the End TB strategy that calls for early diagnosis of TB including drug sensitivity testing and the third pillar that promotes rapid uptake of new tools as well as interventions and strategies. All 18 project countries are able to perform first line phenotypic and or genotypic DST.

Mentors from Uganda SRL provide technical assistance to countries in line with these strategies through provision of short (14 days) and long (28 days) term technical assistance to project countries to ensure adherence to WHO recommendations for new diagnostics, culture and DST including Gene-Xpert, Liquid culture (MGIT) and Line Probe Assay (LPA). Capacity for second line DST has been strengthened in 4 countries, namely, Namibia, Eswatini, Rwanda, and Zimbabwe. South Sudan's NTRL was supported to initiate MGIT culture and LPA testing.



Laboratory Information Systems

In order to generate valid data on Tuberculosis, the WHO promotes use of electronic health information systems. Such systems require costly long-term investment in infrastructure and human resources.

Following preliminary assessment and gap analysis in the laboratory information management system at country level, installation of the TB Laboratory Information System (LIS) is done by the Uganda SRL mentors upon expression of need. Staff are trained on the use of the system and monitoring of laboratory quality indicators using the system. The electronic system enables efficient capturing of information from peripheral laboratories at the NTRLs for analysis, reporting and use in TB programming and decision making. The system was installed in Malawi during the reporting period and maintained in South Sudan, Somalia and Tanzania.

Surveys

Surveys are conducted in countries in order to establish the burden of the disease as well as to study trends and impact of interventions. Results of surveys inform TB programs on successful and limited interventions which in turn inform the programs' development of efficient and effective strategies towards ending TB. Through the project, countries are supported during protocol development and implementation of prevalence and drug resistance surveys; this includes review of the progress of the survey, assessment of enrollment, laboratory data management and analysis.

During the third year of implementation, Tanzania and Eswatini successfully completed their national DRSs with support from Uganda SRL. After protocol development, Eswatini successfully completed two pilot exercises and has initiated a prevalence survey. Lesotho and Burundi have also been supported in prevalence survey protocol development.

Proficiency testing capacity for external quality assurance

External Quality Assurance (EQA) is essential for monitoring performance of laboratories and ensuring the quality of laboratory services is maintained. EQA also offers valuable information that can be used to identify and assess the use of technology, identify gaps in laboratory performance and training needs.

All the 18 project countries participated in EQA for microscopy, GeneXpert and DST where they all performed adequately at an average of 80%. Some countries are planning to embark on preparation of panels for their national networks including Mozambique and Zimbabwe with support from Uganda SRL.



Technical assistance and Training

Laboratory personnel play a crucial role in attaining health objectives through provision of effective, efficient, accessible, viable and high-quality services. Many countries in the ECSA region are constrained in the numbers of laboratory human resources due to lack of clear policies for capacity development in many resulting in staff shortages that contribute to impaired attainment health care objectives.

In order to strengthen management systems in the NTRLs, managers from all project countries were trained on Laboratory management at the Uganda SRL. One of the goals of this project is to strengthen in-country capacity in laboratory testing. Short and long-term technical assistance were provided in implementation of new diagnostics for detection of TB/DR TB and QMS in Botswana, Seychelles and South Sudan according to needs.

Since the project's focus is provision of technical assistance through mentorship, new SRL mentors were trained through mentorship during these TA visits.

Benchmarking

As recommended by the project's mid-term review, the project adopted the innovative benchmarking approach which offers opportunities for experience sharing and learning through visits to the Uganda SRL. Six project countries participated in these visits during the reporting period focusing on a wide array of laboratory components including; laboratory information systems, quality management systems, drug sensitivity testing, EQA and laboratory management.



4.0

IMPLEMENTATION OF YEAR 3 ACTIVITIES (1ST JANUARY– 31ST DECEMBER 2018)

This section highlights implementation of the year 3 Work plan that was approved by the project's Regional Steering Committee.

Activity 1.1: Technical assistance and joint supervisory visits by SRL and other SRLs

Supervisory visits were scheduled to be conducted in the first and third years of the project in all the 18 Project countries in order to determine progress made since baseline assessment for all NTRLs so as to inform areas of focus for provision of technical assistance in these countries.

As per the workplan approved by the project countries during the regional steering committee meeting held in Kampala in December 2017, supervisory visits were conducted in all the 18 countries.

The specific objectives of the visits included the following; To assess country NTRL progress from baseline to-date using The Progress Score Card; To administer a long-term training evaluation to establish retention of skills and knowledge acquired and; To determine challenges experienced when filling quarterly reporting template submitted to the SRL and conduct relevant training to address challenges identified if any to the appropriate personnel.

Overall, in all the countries visited, NTRL staff were satisfied with the support received from the Uganda SRL through the project. Mentors are knowledgeable and

skilled on various aspects of TB laboratory management and testing techniques and are able to adequately provide the support required by the laboratories.

Trainings offered by Uganda SRL were deemed timely and relevant to country needs.

After the visits, key findings were shared with the NTRLs and NTPs and action points for the countries and project agreed upon for follow up.

Activity 1.2: Technical assistance to assess implementation of Lab Specific National Strategic Plans

This activity has been changed to convening NTRL managers in Kampala to discuss development of laboratory components of the National Strategic Plans. The aim of the workshop is to equip them with skills needed in development of TB laboratory components of strategic plans which are not comprehensive in most countries. The decision to change this activity was reached after realizing that countries do not have funds for strategic plan development workshops within their country budgets to be supported by TA from the project.

Activity 1.3: Convene Joint Annual Regional Steering Committee (RSC) Meetings

The Regional Steering Committee was established to facilitate learning among participating countries and enable countries to take stock of progress, project performance, discuss challenges, share experiences and draw lessons. The goal of the Project Steering Committee meeting is

to bring together the key stakeholders directly working on the project to review the progress on implementation and discuss how to further strengthen the working relationships to achieve the expected deliverables of the project. The Terms of Reference for the Regional steering committee are as follows:

- Review the project work plans and budget.
- Review the implementation of country activities and support each other in finding solutions where there are challenges.
- Review and advise on the project coordination and management.
- Review project reports and coordinate the implementation of agreed actions within their member countries.
- Provide oversight on monitoring and evaluation of the project activities, out-puts and achievements.
- Review documented best and promising practices for sharing in the region and beyond.
- Share Information, knowledge and knowledge products emanating from the countries' implementation of project activities.
- Review and endorse the quarterly and annual reports from the project.
- Identify opportunities for new partnerships and advocacy for the project.
- Any other business brought before the RSC by one of its members.

The Regional Steering Committee (RSC) is composed of National TB Program Managers and National TB Reference laboratory Managers from all the project countries together with representatives from key development partners and Civil Society Organizations (CSOs) in the region. The role of the committee is to oversee and monitor implementation of the project's activities as well as verification and endorsement of project documents such as project work-plans.

This 4th RSC meeting held in November 2018, brought together National TB Program and Reference Laboratory Managers from all the 18 project countries together with Ethiopia which is expected to be part of the project in the next phase, representatives from key development partners and Civil Society Organizations (CSOs) from the region.

The opening of the meeting was officiated by the Deputy Director of the National Institute of Health of Mozambique. Thereafter remarks from ECSA-HC were delivered by the Director of Programs representing the Director General followed by the Director of Uganda SRL.

The Project's Performance vs the Performance Framework and Financial Performance updates for the period of January to September 2018 were presented. The current status of NTRLs was compared to the status at the inception of the project highlighting significant strides made in all the project countries. Mozambique the host country, one of the three accredited laboratories in the region presented their plans for becoming a supra-national laboratory as was agreed in the previous RSC meeting.

Representatives from countries discussed implementation of different aspects of laboratory activities ranging from eLIS, prevalence and drug resistance surveys, implementation of new diagnostic methods, and Laboratory Quality Management Systems.

The challenging issue of Human Resources in the laboratory in the region was discussed from the African Association of Laboratory Medicine's (ASLM) perspective.

Critical in the meeting was a discussion on Whole Genome Sequencing (WGS) that was introduced by Prof. Moses Joloba, the SRL Director Uganda. The discussion was timely in anticipation of availability of a sequencer at the Uganda SRL next year that is being procured with Global Fund's support.

Year 4 planned activities and country specific work-plans based on country needs and recommendations from previous TA visits were presented and discussed.

Activity 1.4: Conduct Project monitoring visits by PR (ECSA) to countries annually

The work-plan states that ECSA-HC shall make monitoring visits to the countries from 2017 (Project FY2), through to end of project in 2019 (Project FY4). The monitoring visits are aimed at assessing data quality and project support to countries.

The objectives of the monitoring visits include; 1) To determine the status and functionality of M&E systems and responsibility and assess the capability of responsible

unit to coordinate and facilitate generation and reporting of data 2) To strengthen capacity of M&E systems at ECSA-HC, Uganda SRL and project countries 3) To follow up implementation of GF activities in the countries and documentation 4) To identify capacity and resource needs and how these can be met 5) To document best practices and build conducive environment for future projects. ECSA-HC as the PR conducted project monitoring visits to countries to ensure data quality, compliance to TORs and general project support. A total of nine countries were visited during the reporting period.

Findings

Uganda SRL continues to support NTRLs by providing Proficiency Test (PT) panels for External Quality Assurance (EQA) for microscopy, GeneXpert, culture and DST. Almost all countries are now receiving panels from Uganda with those receiving from other SRLs appreciating timeliness of the panels from Uganda.

Through the TAs from the SRL, country efforts and those of other partners, all NTRLs now have the capacity to conduct 1st line DST either through phenotypic or genotypic testing; 15 countries excluding South Sudan, Seychelles and Somalia have capacity for 1st line DST using phenotypic testing. Countries have received on the job training through long- and short-term technical assistance visits as well as benchmarking visits in LPA and phenotypic DST as well as in development of technical documents for QMS including SOPs for DST using MGIT, LJ and LPA.

Most NTRLs are heavily dependent on partner support for procurement of lab supplies and maintenance, with

Global Fund being the major funding partner followed by USAID and CDC.

Activity 1.5: Technical Assistance to implement new diagnostics for detection of TB/MDR-TB in 17 countries

The project's aim is to support countries to adopt, adapt, smoothly implement and roll out new technologies. During the reporting period, three countries (Namibia, South Sudan, Zimbabwe) were supported to strengthen Gene-Xpert, Liquid culture (MGIT) and LPA.

Activity 1.6: Technical assistance by SRL mentors to improve QMS in NRLs and engage 3 NRLs (candidate list will be developed after 1st Year) for Accreditation

Laboratory Quality Management Systems involves all aspects and processes in the laboratory including leadership and management. A good quality management system ensures that manuals, guidelines and standard operating procedures are in place for all processes and are up to date, and that activities are carried out by qualified personnel in accordance with the manuals in place. A number of guiding tools have been developed to assist NTRLs to implement quality management systems that meet international standards for accreditation some of which include the International Organization for Standardization (ISO) standard 15189 and the WHO guide for stepwise laboratory improvement process towards accreditation in the African Region (SLIPTA). During the reporting period, nine countries (Eritrea, Kenya, Namibia,

Seychelles, South Sudan, Eswatini, Tanzania, Zimbabwe) were provided with TA in QMS.

Activity 1.7: Meeting of 18 NTP/NTRL Managers on Sharing Best Practices

The 11th Best Practices Forum and the 27th Director's Joint Consultative Committee Meeting were held from 26 to 28 June 2018 at the Mount Meru Hotel in Arusha, Tanzania. The aim of the BPF meeting is to share best practices and research evidence, identify relevant health policy issues for making recommendations to the Health Ministers Conference, towards the improvement of health programming and outcomes in the region.

The overall theme of the meeting was "Universal Health Coverage: Addressing the Health Needs of the Underserved". The project participated under the "Tackling Anti-microbial Resistance in the Region" sub-theme. Discussions revolved around countries' experiences in tackling anti-microbial resistance; the role of the Stepwise Quality Laboratory Improvement Process Towards Accreditation (SLIPTA) to tackle anti-microbial resistance in the region; and the role of sequencing in diagnosis and surveillance in the region.

Given the increasing Antimicrobial Resistance (AMR) in the region particularly in drug resistant TB, the meeting recalled previous ECSA HMC's resolutions. These resolutions urged the Member States to (1) establish and/or strengthen laboratory services for monitoring MDR and XDR TB and conduct assessment studies to evaluate the magnitude of MDR and XDR TB and (2) to strengthen disease surveillance systems and laboratory diagnostic

capacity at community, sub national and national levels to tackle outbreaks, emergencies and antimicrobial resistance. Recommendations of the meeting included:

1. Acceleration of the implementation of resolution ECSA/HMC65/R2 (2018) that urged Member states to develop and/or strengthen Multi-sectoral National Action Plans on AMR in line with the Global Action Plan and report to the 69th HMC.
2. Acceleration of the implementation of resolution ECSA/RHMC/48/R7 (2009) that urged the Member States to establish and/or strengthen laboratory services for monitoring MDR and XDR TB and conduct assessment studies to evaluate the magnitude of MDR and XDR TB.

The secretariat was directed to support the Member States to implement the recommendations and to facilitate knowledge sharing on tackling AMR in the region.

Activity 1.8: TA for Drug Resistance Survey or TB Prevalence Survey

During the reporting period, Technical support for drug resistance survey was provided for Eswatini (DRS and PS) and Tanzania (DRS).

Activity 1.9: Short term TA by SRL Uganda mentors to support countries in New Diagnostics and TB C&DST

Short term Technical assistance is an onsite support conducted for a period of up to 14 days during which the consultant from Uganda SRL visits the laboratory and has face to face contact with the laboratory staff. During the reporting period, short term technical assistance was provided to three countries namely: Somalia, Malawi and Mauritius.

Activity 2.0: Long term TA-up to 1 month supporting countries by Uganda SRL in New Diagnostics and TB C&DST

Long term technical assistance is support provided to the TB laboratories for a period of 28 days. Kenya and Eswatini benefitted during the reporting period.

Activity 2.1: Trainings in-house and on-site to 18 officers on Laboratory management

As per the approved GF budget, three trainings were to be conducted over the four years of project. These trainings are: Quality Management Systems in year one, Biosafety & Biosecurity in year 2 and Laboratory Management in year three. Laboratory managers from all the project countries participated in this training in Kampala, Uganda.

Activity 2.2: Dispatch of PT panels by SRL Uganda to countries

Uganda SRL dispatches proficiency test panels to countries once a year. During the reporting period, microscopy PT panels were sent to all the 18 countries. With the exception of Seychelles, all the countries had adequate performance for smear microscopy. The Lab is conducting root cause analysis and plan of action which will be used by the Uganda SRL to assist in addressing the challenge. In some project countries, SRL supplied more than the NTRL with PT panels, these are: Zambia-Zambart, Zimbabwe-Bulawayo, Mozambique-Nampula, Tanzania-Mbeya and Somalia-Mogadishu.

Panels for DST were sent to 14 countries, namely, Uganda, Eritrea, Botswana, Mauritius, Eswatini, Malawi, Zimbabwe, Kenya, Rwanda, Tanzania, Mozambique, Lesotho, Zambia and Burundi. Kenya and Zambia did not have adequate performance and Burundi's biosafety cabinet had broken down so they were unable to provide results.

Activity 2.3: Printing of documents following Advocacy Workshop - activity 6.2

The main advocacy documents for the project are the brochures and quarterly newsletters. Three online newsletters were produced covering the first three quarters of the year.

Activity 2.4: ECSA participation in annual TB Union conference and ECSA best practice forum/Health Ministers conference to support advocacy

The project participated in the 48th TB UNION Conference in the Hague, Netherlands. This provided an opportunity for networking with TB experts from the region and worldwide and to be updated on the latest advances in TB diagnostics.

Activity 2.5: Financial management monitoring visits to SRL

The financial management monitoring visits is a quarterly activity envisaged to monitor the spending of funds by the SRL and verification of goods purchased under the grant. Nine monitoring visits were conducted during the reporting period. Finance Officers for the PR and SR were also recruited during the period.

Activity 2.6: Joint Annual Work planning meeting by ECSA and SRL

The aim of the planning meetings between the PR and SR is to jointly review progress in the implementation of the grant. Three meetings were held; first meeting was convened in Nairobi to discuss acceleration of year 4 activities and proposal writing for continuation of the grant; the second meeting was in Arusha where the

team worked on consolidating the continuation funding application documents; in August a planning meeting was held in Kampala to discuss implementation of the acceleration plan including financial and procurement updates and to verify the Performance Update report before submission to GF.

Activity 2.9: Mentorship of new SRL mentors

As part of capacity building, new SRL mentors joined the experienced SRL mentors to the countries in a twinning approach to expose them to the regional project activities and what is expected of them. New mentors participated in activities related to Laboratory Information Systems.

Activity 3.1: Benchmarking visit to the Uganda SRL

The mid-term review of the project conducted last year found that benchmarking visits to the Uganda SRL are very useful for countries. The benchmarking visits provide an avenue for knowledge exchange between participants as well as with the Uganda SRL to equip them with requisite knowledge and skills required to successfully manage a Tuberculosis Laboratory as well as to perform various laboratory tests. During the reporting period, eight project countries visited the Uganda SRL for the benchmarking visits.





5.0 PROGRESS UPDATE

The Progress Update and Disbursement Request (PU/DR) is both a progress report on the latest completed period of project implementation and a request for funds for the following execution and buffer period. The purpose is to provide an update on the programmatic and financial progress of the grant, as well as an update on fulfillment of conditions, management actions and other requirements. The Progress Update (PU) is usually mid-point report for immediate corrective measures with no financial or “Disbursement Request. The scope of the progress update covers the following areas:

1. Progress against coverage Indicators
2. Disaggregation of coverage indicators where necessary
3. Work Plan Tracking Measures
4. Procurement and Supply Management
5. Grant Management &
6. Evaluation of Grant Performance

A PUDR was submitted in February 2019 for the period of January – December 2018 while a PU was submitted in August 2018 covering January – June 2018.

5.1 Performance Framework: Output/Coverage Indicators and Targets

The Performance framework was developed and approved by GF before project inception. Since approval, minor changes have been made and subsequently approved by GF. The PF outlines the goals, indicators, work-plan tracking measures, baseline-targets, chosen data sources and reporting periods. In the approved performance framework, there are four modules namely:

1. Module 1: TB Care and Prevention
 - 3 Coverage Indicators
 - 6 Work plan Tracking Measures (WPTM)
2. Module 2: MDR TB
 - 6 coverage indicators
 - No Work Plan Tracking Measures
3. Module 3: Program Management
 - No coverage indicators
 - 2 WPTM
4. Module 4: Health Systems Strengthening (HSS) which covers Health Information Systems (HIS) and M&E.
 - No coverage indicators
 - 3 WPTM



5.2 Performance against Indicators and Targets

Six progress updates have been submitted to the Global Fund. The project performed well in all the last three periods with the following ratings:

Table 13: Performance against Indicators and Targets

Progress update	Period	Rating
P1	1st Nov – 30th June 2016	A2
P2	1st July – 31st December 2016	A2
P3	1st January 2017- 30th June 2017	A2
P4	1st July – 31st December 2017	A2
P5	1st January - 30th June 2018	A2

5.3 Progress Update (July-Dec 2018): Output Coverage Indicators

The following is the summary of the coverage indicators to be submitted to GF for the reporting period July- Dec 2018:

Table 14: Progress Update (July-Dec 2018): Out/put Coverage Indicators

Indicator	Baseline	Target	Achievement (Jul – Dec 2018)	Achievement Ratio (%)	Comment
Percentage of laboratories showing adequate performance in external quality assurance for smear microscopy among the total number of laboratories that undertake smear microscopy during the reporting period	5/18	17/18	17/18	100%	17 countries had adequate performance for smear microscopy (Lesotho, Mozambique, Malawi, Zimbabwe, Tanzania, Kenya, Burundi, Rwanda, Eswatini, Somalia, South Sudan, Uganda, Zambia, Mauritius, Eritrea, Botswana and Namibia). Seychelles did not have adequate performance; the Lab is conducting root cause analysis and plan of action which can be used by SRL to assist in addressing the issue. In some project countries SRL supports more than the NTRL. These are: Zambia-Zambart, Zimbabwe-Bulawayo, Mozambique-Nampula, Tanzania-Mbeya and Somalia-Mogadishu.
Number and percentage of NRLs that have received ISO Accreditation	1/4	3/4	4/4	120	Four Labs are accredited, these are Kenya, Namibia, Mozambique and Uganda. Uganda SRL also achieved ISO 17043 accreditation for the provision of PT panels. Tanzania was assessed and nonconformities have been addressed, they are waiting for accreditation certificate. Eswatini assessed in March 2019.
Number of supervisory visits conducted by ECSA HC, Uganda SRL and other SRLs per year		17/17	17/17	100%	Supervisory visits were conducted in all project countries. SRL Millan was involved in the visit to Mozambique Maputo and Nampula Labs. Brisbane, Antwerp and NICD were unable to attend due to conflicting schedules.

Indicator	Baseline	Target	Achievement (Jul - Dec 2018)	Achievement Ratio (%)	Comment
MDR TB-5: Percentage of DST laboratories showing adequate performance on External Quality Assurance	3/11	15/18	13/18	87%	Panels were sent to 14 countries, namely, Uganda, Eritrea, Botswana, Mauritius, Eswatini, Malawi, Zimbabwe, Kenya, Rwanda, Tanzania, Mozambique, Lesotho, Zambia and Burundi. Namibia also received a panel from National Health Laboratory Service. 5 countries (Tanzania, Uganda, Namibia, Mozambique and Eswatini) participated in both phenotypic and genotypic techniques among which 4 passed both techniques. However, Mozambique-Nampula and Maputo passed only genotypic. Countries that participated in only phynotypic techniques are 5 (Eritrea, Mauritius, Malawi, Zimbabwe and Kenya), among which only Kenya did not have adequate performance. Countries that participated in only genotypic techniques include Zambia, Rwanda and Lesotho, among which only Zambia did not have adequate performance. In summary, 13 countries demonstrated acceptable proficiency. Kenya and Zambia did not have adequate performance while Burundi's biosafety cabinet was down so they were unable to provide results.
Number of sample strains (isolated during surveys and surveillance) sent to and retested by the SRL	400	400	25	6%	Samples received during this reporting period were from Eswatini DRS. The DRS surveys are ongoing in Malawi and Tanzania. Samples are expected to be sent between January and June 2019. Countries prefer to send samples to SRLs that already have Genome sequencers. The project is in the process of procuring a sequencer through GF support, which will give us the advantage of being prioritized.

Indicator	Baseline	Target	Achievement (Jul - Dec 2018)	Achievement Ratio (%)	Comment
MDR TB-2: Number of bacteriologically confirmed, drug resistant TB cases (RR-TB and/or MDR-TB) notified	100	200	119	69%	Samples were received from Somalia (Galkacyo, Mogadishu and Hargeisa) and Malawi. The highest percentage came from Mogadishu. As it may be recalled from previous discussions, as we improve capacity for DST in the countries, we expect a decrease in the number of samples sent to Uganda SRL. Examples: South Sudan and Burundi now have the capacity in-country, therefore do not send samples to Uganda. However, from time to time, we may receive a few samples from countries for confirmation of results that are inconclusive at country level. In this reporting period, Malawi sent 2 samples for confirmatory purposes.
Number and percentage of NTRLs able to provide 1st line DST	11/18	17/18	18/18	117%	Target was achieved and exceeded. All countries have capacity for 1st line DST, either through phenotypic or genotypic testing. 15 countries excluding South Sudan, Seychelles and Somalia have capacity for 1st line DST using phenotypic testing.
Number and percentage of NTRLs able to provide 2nd line DST to 100% of patients	4/18	14/18	14/18	100%	14 out of 18 countries (Eswatini, Tanzania, Kenya, Mauritius, Mozambique, Burundi, Rwanda, Zambia, Zimbabwe, Eritrea, Botswana, Namibia, Lesotho and Uganda) have capacity for 2nd line DST. We have added Lesotho on our list compared to previous reporting period as the Lesotho lab has been supported for re-opening.

Indicator	Baseline	Target	Achievement (Jul - Dec 2018)	Achievement Ratio (%)	Comment
Number and percentage of MDR-TB patients receiving 2nd line DST (denominator MDR-notified)	60	60	143	120	Samples were received from Somalia (Galkacyo, Mogadishu and Hargeisa), Burundi, South Sudan and Malawi. For all countries sending samples for 1st line DST, 2nd line DST is done concurrently. Burundi had equipment breakdown of the biosafety cabinet and therefore sent samples to Uganda SRL. In Malawi, the 2 samples were for confirmation.

5.4 Progress Update (July-Dec 2018): Work Plan Tracking Measures

Table 15: Progress Update (July-Dec 2018): Work Plan Tracking Measures

Activity	Activity details- milestones/ targets	Progress Status	Milestones and reasons for deviation from work plan activities
To strengthen networking of TB NRLs of ECSA region, including robust EQA microscopy system; and joint supervisory visits (with other SRLs) (1)	Increased number of NTRLs that change destination of DST proficiency Test from abroad to Uganda SRL	Completed	Previously some countries received PT panels from NICD South Africa. It was agreed during our monitoring visits that the Uganda SRL sends PT panels to all countries as we noted that countries relying on NICD ended up not having any PT panels. Namibia will start receiving in 2019 as discussed during the monitoring visit to Namibia.
To provide TA to assess and support implementation of the Lab components of TB NSPs, National-Level TB Specimen referral systems for C&DST	Sensitization and capacity building workshop on development/ implementation of lab specific strategic plans	Advancing	Communication to countries was made, ToRs developed and facilitator identified. All the necessary logistics were at advance stage by end of December 2018. The workshop will take place in January 2019 and will be reported on during the subsequent reporting period.

Activity	Activity details- milestones/ targets	Progress Status	Milestones and reasons for deviation from work plan activities
Annual Regional Steering Committee (RSC) Meetings and Project Closure meeting	Annual advocacy meeting held by RSC	Completed	The annual Regional Steering Committee was successfully held in November 2018 in Maputo, Mozambique. All project countries, partners and some CSOs participated. Ethiopia, proposed to be on next phase of the project also participated.
TA to support implementation of new diagnostic methods.	Identifying gap of the diagnostic required every year	Completed	Two TAs to support new diagnostic were conducted in South Sudan to initiate LPA and MGIT as per the need. Other countries did not have the need for TA during the reporting period.
To establish inter-state technical collaboration: Establish a community of practice (platform for sharing knowledge and knowledge exchange)/Knowledge management platform and Documentation of Best and Promising Practices/ Conference Presentations/ Publications/Annual Reports	One policy brief on TB priority areas developed	Completed	One policy brief was developed and disseminated during the regional steering committee.
'Provide TA for DRS, TB Prevalence Surveys and Routine Surveillance of DR-TB	TA provided to conduct DRS and/or TB prevalence Survey of the 11 target countries	Completed	Eswatini, Malawi and Lesotho received support for DRS and PS.



6.0 PROJECT MANAGEMENT



Some of the officials from the Global Fund, ECSA-HC and SRL Uganda at a project review workshop in Kampala



PROJECT COORDINATION

Project Management Unit (PMU)

The project management unit (PMU) was established at the beginning of the project and is now fully constituted. The core PMU is composed of the following officers:

Dr Puleng Ramataboe

Project Coordinator

Ms Nomsa Mulima

Manager, Knowledge
Management and M&E

Dr Miriam Urasa

Senior Program Officer-
Technical

Mr Hamis Bani

Program Officer,
Procurement

Ms Upendo Letawo

Program Officer, M&E

Ms Mariam Golugwa

Program Officer, Finance

Other Members of the team (extended PMU) are:

Prof Yoswa M. Dambisya

Director General (Project Manager)

Mr Edward Kataika

Director of Programs

Mr Julius Ley

Senior Accountant

Ms Lillian Njuba

Director of Finance

Mr Sibusiso Sibandze

Director of Operations &
Institutional Development

6.1.2 Project Implementation Unit (PIU)

The project Implementation unit is based at the Uganda SRL is headed by the Director. The PIU is comprised of the following:

1. Director SRL
2. Laboratory Manager
3. SRL Coordinator
4. Data Manager
5. Technical Supervisor
6. Quality Officer
7. Operations officer
8. Finance officer
9. M&E Officer
10. Laboratory Technologists - 4 positions
11. Laboratory Mentors - 5 Positions
12. Laboratory Mentor - Information and Data

6.2 Finance

The total amount disbursed to the Principal Recipient (PR) up to December 2018 was USD 5,283,025. According to the Financial Report submitted to the GF, by the end of December 2018, the PR had expensed up to USD 4,218,286. Procurement through the Pooled Procurement Mechanism (PPM) was at 29.6% due to delays in procurement processes; this is expected to be solved in the next reporting period.

6.3 Procurement

ECSCA-HC procured items for both the PR and SR as per the work plan in accordance to GF and ECSCA procurement rules and regulations. Procurement of commodities and lab reagents for the Uganda SRL is in the process though the GDF Pooled Procurement mechanism was done.





7.0

LEARNING AND SHARING

PR's Overall Self-Evaluation of Grant Performance

Overall performance has been good as per the GF ratings of A1 for all the reporting periods.

Planned Changes in the Program

Based on the acceleration plan that was approved by Global fund in November 2018, the following activities were to be implemented in the period of January to June 2019. These activities include:

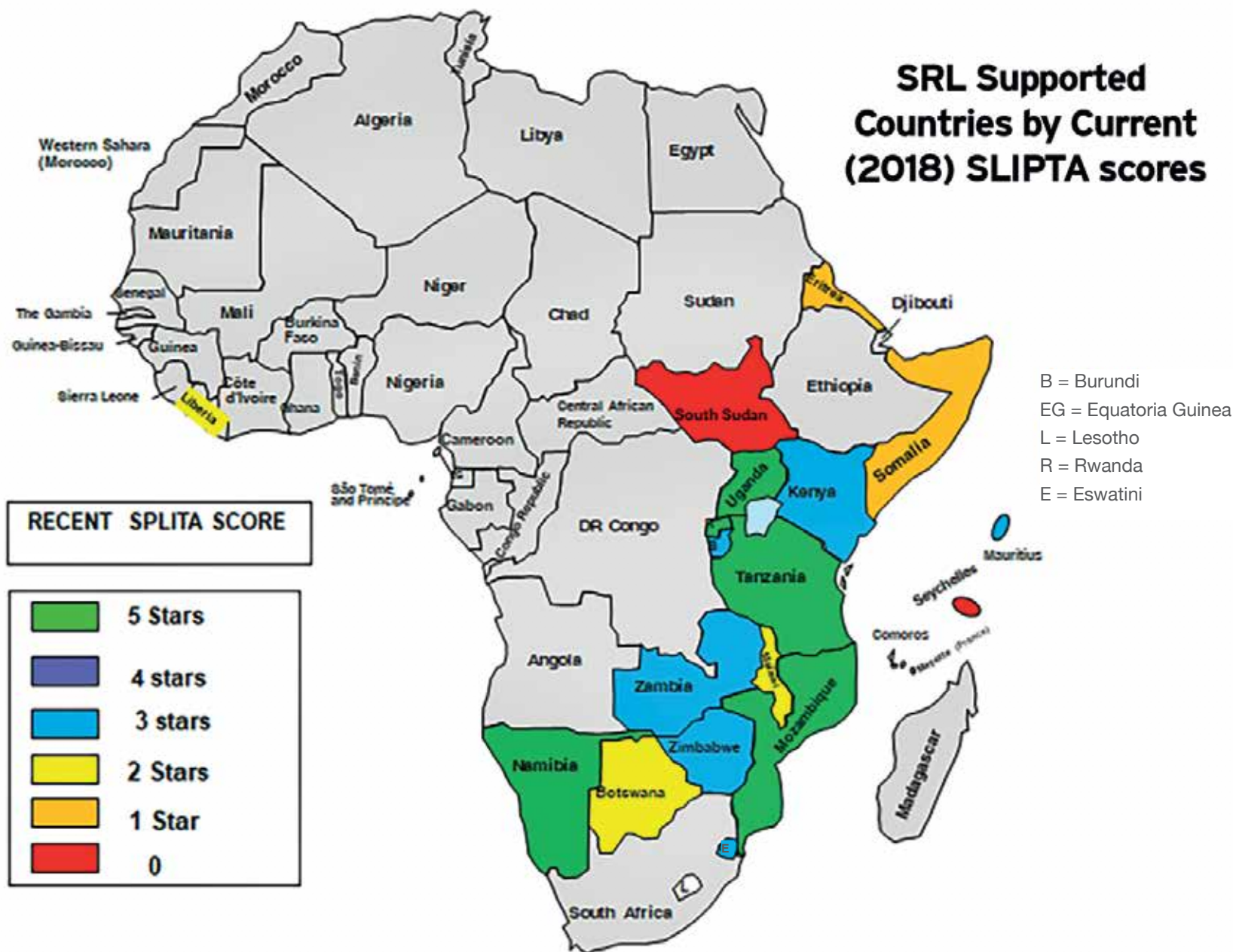
1. Training of laboratory managers on development of TB lab strategic plans.
2. Training of laboratory data personnel on lab data management.
3. Training of lab managers on TB network assessment.
4. Peer to peer assessment visits between project countries.
5. Procurement of a Whole Genome Sequencer and its reagents.
6. Training of Uganda SRL mentors on mentorship skills.

External factors beyond the control of the Principal Recipient that have impacted or may impact the Program

Conflicting priorities between the project and respective NTRLs.



SRL Supported Countries by Current (2018) SLIPTA scores





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