



East, Central and Southern Africa—
Health Community (ECSA-HC)

PROJECT GOALS

1. Build a regional network of National TB reference Laboratories (NRLs) for inter-state laboratory quality assurance and management in ECSA Region.
2. Improved Laboratory service provision for quality assured 1st and 2nd line Drug susceptibility testing (DST) accessible to all people in the ECSA region
3. Build capacity of NRLs to undertake epidemiological/monitoring surveys such as DRS and TB disease prevalence

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The Global Fund Regional TB Lab Strengthening Project

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FROM THE EDITOR

For the past 5 years, the East, Central and Southern Africa Health Community (ECSA-HC) in collaboration with the Uganda Supra-National TB Reference Laboratory implements a regional project to strengthen TB diagnosis in the ECSA region. This initiative is funded by the Global Fund and supports 21 countries: Angola, Ethiopia and Liberia joining Botswana, Burundi, Eritrea, Eswatini, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, South Sudan, Tanzania, Uganda, Zambia and Zimbabwe.

We are happy to share that since inception of the project, we have seen Mozambique, Namibia, Tanzania, Kenya, Eswatini, Rwanda and Zambia receiving ISO 15189 accreditation, an international standard requirement for quality and competent medical laboratories.

As we close the year 2020, we also welcome on board our new project countries: Angola, Ethiopia and Liberia and thank their governments for allowing us to support their National TB reference laboratories. As the network expands, we are also privileged to share that the Mozambique NTRL is being supported to achieve the Supra-National Laboratory (SRL) status to support Lusophone countries (Angola, Cape Verde, Guinea Bissau, Sao Tome and Principe), whilst Rwanda is earmarked to support Francophone countries (Comoros and Madagascar). Indeed, the regional network is growing.

In this issue, we share interesting milestones for the period May- December 2020, stay tuned enjoy our newsfeed. For more stories about this project, visit our website:

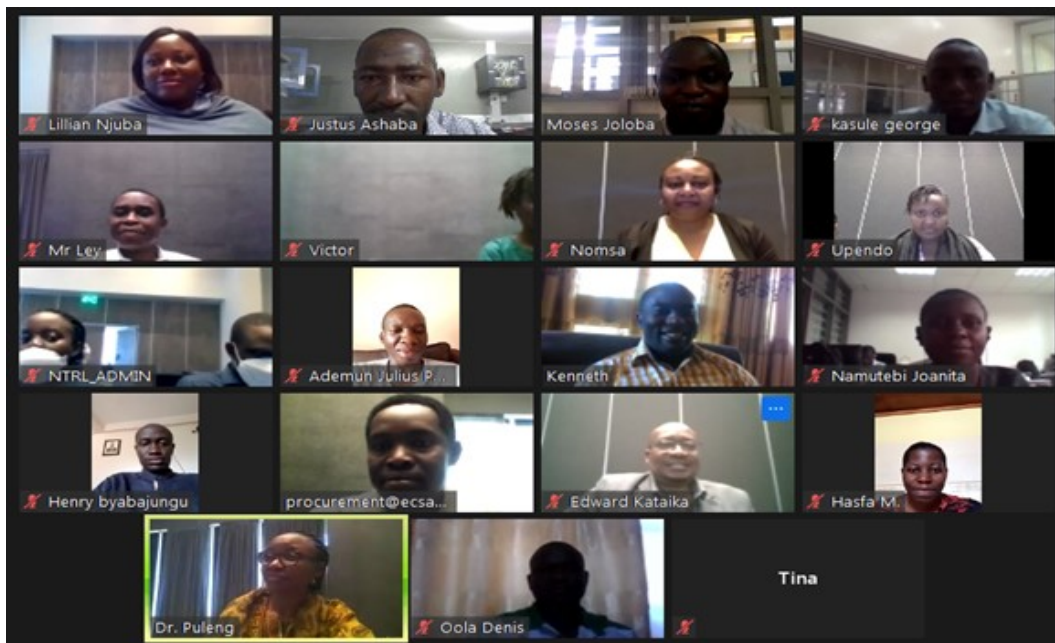
www.ecsahc.org

6TH REGIONAL STEERING COMMITTEE (VIRTUAL) MEETING

With on-going support from the Global Fund, ECSA-HC in partnership with the Uganda SRL conducted the 6th Reginal Steering Committee meeting. Due to the ongoing COVID-19 pandemic with which came global travel restrictions, the meeting was conducted virtually. The Regional steering Committee constitutes of Managers from the National TB Program, National TB reference Laboratories from the 21 project countries, regional partners in TB and the civil society. This platform enables countries to learn from each other, address common issues affecting the countries and agree on project activities for upcoming year.

The 6th Regional Committee meeting was held on the 2nd September 2020 and giving welcoming remarks were the Director General of ECSA-HC, Professor Yoswa Dambisya and the Director of Uganda SRL, Professor Moses Joloba. In this meeting, we were honored by the presence of the Global Fund, represented by Samiha Raza and our sister SRL, the Benin SRL represented by Professor ...

The need to re-think project implementation towards a blended implementation approach, exploring the use of both virtual (online) support and on-site (physical) Technical Assistance to accommodate travel restrictions imposed by project countries due to the COVID-19 pandemic was key in all the discussions. To facilitate this, countries agreed to upgrading of the existing Uganda SRLs' online training platform to enable distance learning using big data systems to accommodate video demonstrations and illustrations.



ECSA HC and SRL Uganda embrace the use the zoom network tele meetings to virtually conduct the 6th Annual Regional Steering Committee meeting (RSC) on 2nd September 2020

ECSA COUNTRIES MAKE REMARKABLE PROGRESS TOWARDS ISO 15189 ACCREDITATION

Global Fund regional TB laboratory strengthening project started in 2015, with a baseline of two NRLs having attained ISO 15189 accreditation, these included Uganda and Mozambique (Maputo NTRL), the first phase of the project aimed at support a minimum of two other NRLs towards attaining ISO 15189 accreditation by June 2019.

Through rigorous support and technical assistance targeted at improving LQMS across project countries, the project surpassed the target of two additional NRLs and attained an additional three country NRLs being certified for ISO 15189, including Kenya NTRL, Tanzania CTRL, Namibia NTRL bringing the number of NRLs that have attained ISO 15189 as of June 2019 to five, with Uganda NTRL and Mozambique managing to maintain their accreditation status. As a result of its outstanding performance, the Regional project was awarded an additional funded phase starting July 2019 until June 2022, with a target of achieving a total of nine NRLs that have attained ISO 15189 accreditation, including the five from phase one being support to maintain and even upgrade their certifications, and an additional four NRLs joining the lot.

To date, the efforts from phase 1 of the project, spilled over into phase 2, realising a fast-paced improvement in knowledge and practices within LQMS across the project countries. As of August 2019, Eswatini NTRL attained ISO accreditation after being assessed by SADCAS and successfully addressing all non-Conformities, in January 2020 Rwanda was accessed by KENAS and remotely supported by SRL Uganda to address non conformities, and there after attained ISO 15189 accreditation, and in March 2020 Nampula Laboratory in Mozambique was accessed by the Portuguese accrediting body IPAC, and recommended for accreditation upon address non conformities identified, To date Nampula lab has address NCs however has not yet been certified owing to delays caused by the COVID 19 pandemic disruptions in work proceedings.



Laboratory staff in Tanzania preparing media during a TA visit



Rwanda Laboratory team reviewing their QMS documents, as they prepared for assessment.

ECSA COUNTRIES MAKE REMARKABLE PROGRESS TOWARDS ISO 15189 ACCREDITATION

Botswana NTRL through remote support from SRL applied for accreditation in May 2020, and was accessed by SADCAS in August 2020 and has since been accredited after addressing non-conformities identified. Zambia CDL was supported by SRL Uganda to prepare for and apply for ISO 15189 accreditation and between 10th and 11th December 2020 was accessed by SADCAS and recommended for accreditation pending resolution of non-conformities. Malawi and Mauritius NTRLs are currently under going support from SRL Uganda to prepare and apply for accreditation in 2021.

Each of the five country NRLs from phase 1, including Uganda, Mozambique, Kenya, Tanzania and Namibia have successfully maintained ISO 15189 accreditation, with Namibia expand their scope of accreditation from only Microscopy to cover 1st and 2nd line LPA and cultures, in April 2020, and an additional three countries having received accreditation including Eswatini, Rwanda, and Botswana, bringing the total to eight countries within the ECSA sub region that have attained ISO 15189 accreditation with support from the regional Global Fund TB lab strengthening project. Additional two countries have been accessed and recommended for certification upon resolution of NCs, including Mozambique Nampula Lab and Zambia CDL and two more NTRLs (Malawi and Mauritius) are currently being supported to prepare and apply for ISO 15189 accreditation in 2021.



Review of LQMS documents during the assessment visits for Zambia CDL 10th and 11th December 2020



Zambia CDL top management and SRL Mentor after recommendation for ISO 15189

SOMALI (MOGADISHU NTRL) SUPPORTED TO STRENGTHEN IMPLEMENTATION OF WHO RECOMMENDED DIAGNOSTICS

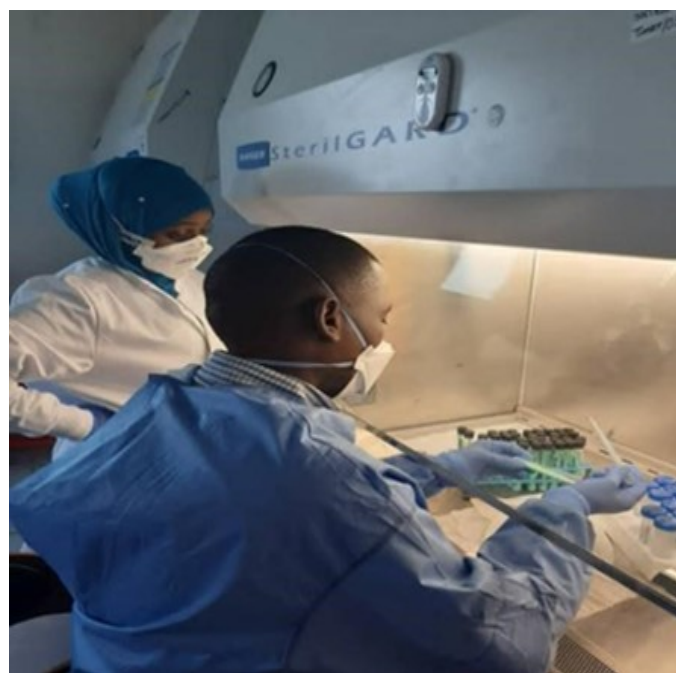
At project inception, in 2015, Somalia (Hargeisa and Mogadishu NTRLs) was classified among level 3 project countries, following the baseline assessment conducted to rate their capacity in conducting various TB diagnostic techniques.

Over the project implementation period, the Laboratory in Mogadishu, with continuous support from SRL Uganda, has developed competency to adequately perform microscopy and GeneXpert MTB/RIF® tests. The laboratory has also established Line, probe assay test (LPA) and LJ culture to support diagnosis and follow DR-TB patients in the country.

Samples for DR-TB Patients were initially referred to SRL Uganda for testing, however this was disrupted by country lockdowns in the context of the COVID 19 pandemic. The challenge presented an opportunity to support the Lab to urgently develop internal capacity to perform the minimum culture and susceptibility testing methods in order to support and sustain the DR-TB program.



An SRL mentor illustrates LJ interpretation during the December 2020 Technical Assistance visits.



An SRL Mentor demonstrates LJ Culture inoculation during the December 2020 Technical Assistance Visit



IMPLEMENTATION OF WHOLE GENOME SEQUENCING (WGS) AT SRL UGANDA



With the support from the regional Global Fund TB lab strengthening project, the illumina Miseq NGS was installed at SRL/NTRL Uganda in September 2019. Five (5) Lab technicians from the Uganda SRL have undergone training in the use of the equipment and the application of the technology. Between December 2019 and May 2020, 618 samples were received from Tanzania, Malawi, Liberia, South Sudan and Somalia for Whole Genome Sequencing.

The team at SRL Uganda has developed a molecular database for the compilation of the knowledge accumulated on the genes and mutations that not only underlie in-host but also *in-vitro* genotypic and phenotypic variations in *Mycobacterium tuberculosis*.

The outbreak of the COVID 19 Pandemic, created havoc across the globe, but also availed an opportunity for research, with SRL Uganda partnering with the Molecular Microbiology Laboratories (MML) to

conduct a rapid assessment across East African border towns to trace the spread of the pandemic, and also to use the WGS technology to study gene mutations in the COVID 19 strain across the region



SRL staff during DNA extra and processing of samples for WGS A trainer from orienting SRL staff on how read and interpret WGS bi data

Upcoming Events (January — March 2021)

1. *Support for development and implmentaion of NSPs in Liberia and Kenya*
2. *Short Term TA missions in Mozamibique and Namibia.*
3. *Support for QMS in Malawi and Zambia.*
4. *TA for New Diagonistics in Lesotho.*
5. *Support for TSRS in Botswana and Zambia.*
6. *Bench Marking visit for new DST drugs Tanzania, Eswatini*

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