



Food and Agriculture
Organization of the
United Nations

5th Meeting of the **Regional Soil Laboratory Network for Africa** (AFRILAB)

15 November 2023

Updates from AFRILAB
and report on the in-
person AFRILAB
training in Dakar

*LESEGO MOOKETSI-SELEPE
AFRILAB CHAIR*

AFRILAB
AFRICAN SOIL LABORATORY NETWORK



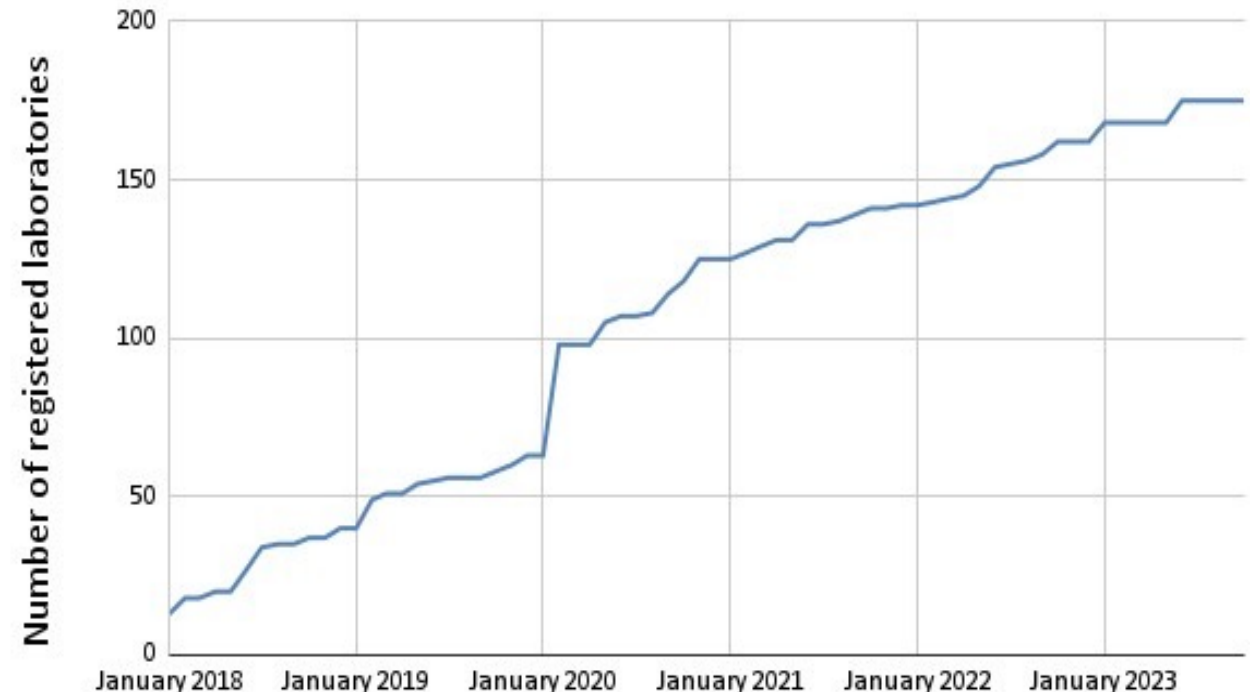
AFRILAB

Current status of AFRILAB:

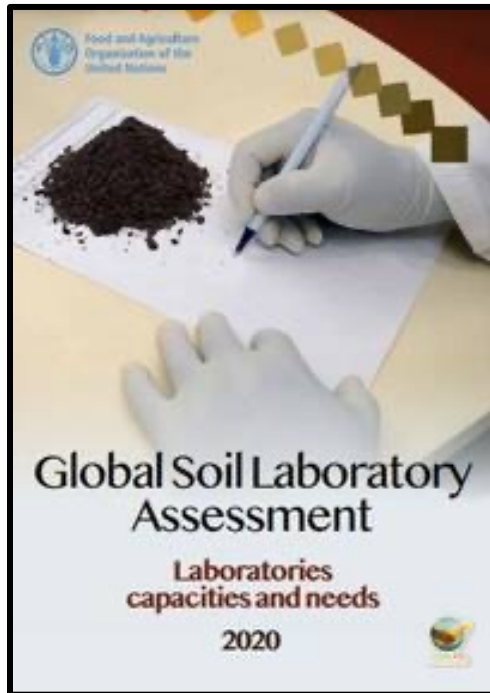
- 180 laboratories
- 40 different countries

Benin, Botswana, Burkina Faso, Cameroon, Cape Verde, Chad, Cote d'Ivoire, Democratic Republic of Congo, Djibouti, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Niger, Nigeria, Republic of Congo, Republic of Guinea, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Somalia, South Africa, South Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe

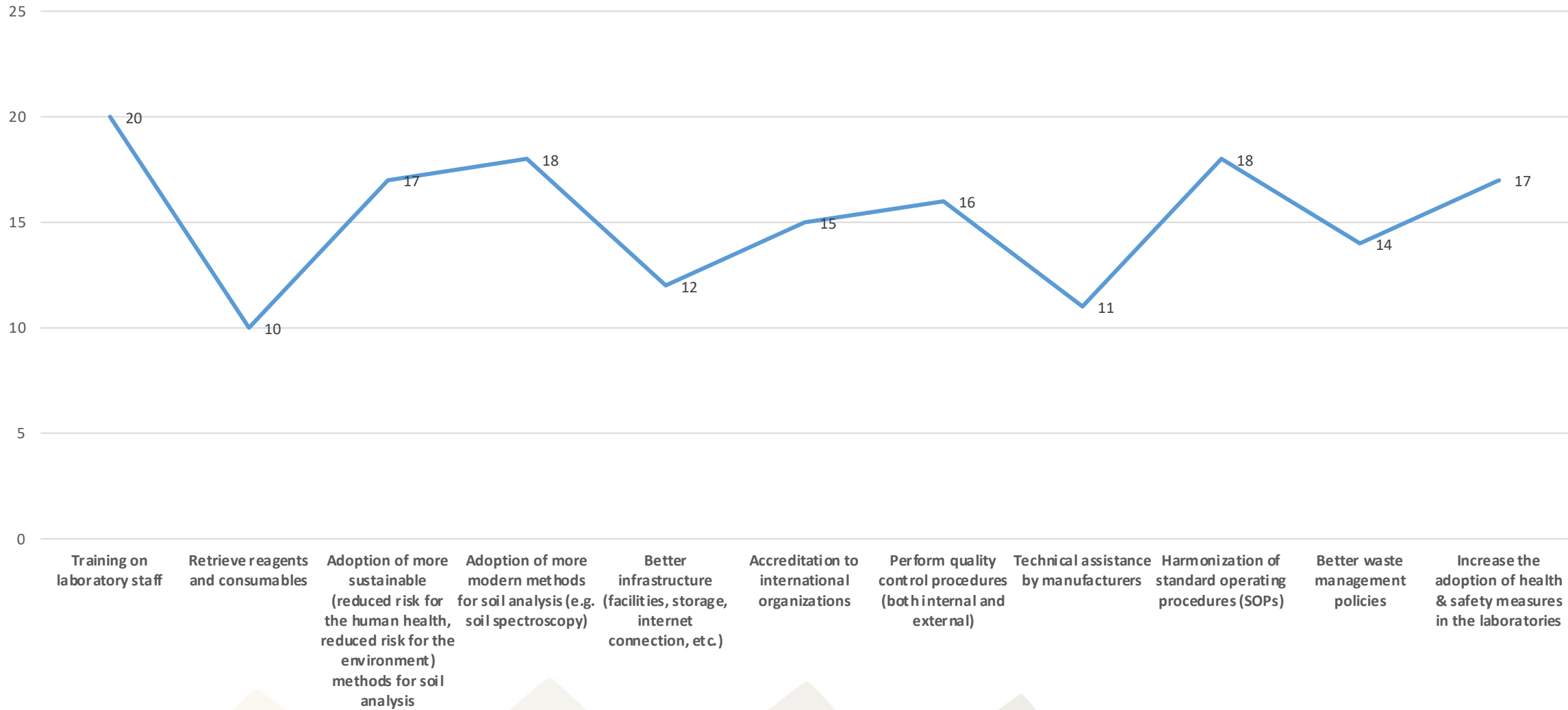
AFRILAB network growth



NEEDS AND PRIORITIES



AFRILAB main needs outlined in this assessment report shown in chart below



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CAPACITY DEVELOPMENT

- 1) Training through webinars
- 2) Support with equipment
- 3) In-person training

1) Training through webinars

- Most of AFRILAB members have attended webinars covering:
 - Wet chemistry
 - Dry chemistry
 - Health and Safety
 - Quality assurance and quality control (QA/QC)

V. PROCEDURES

3. Preparation of material

Initial Drying



Air drying in a ventilated area or drying Oven at slightly above ambient temperature is preferable ($35 \pm 5 \text{ }^\circ\text{C}$)

Disaggregation and sieving at 2 mm



Clods are crushed gently and grounded with the help of wooden pestle and mortar and then sieved at 2 mm

Homogenization with a barrel roller



Homogenization of the whole material should be done in one time

GLOSOLAN
training sessions
2021



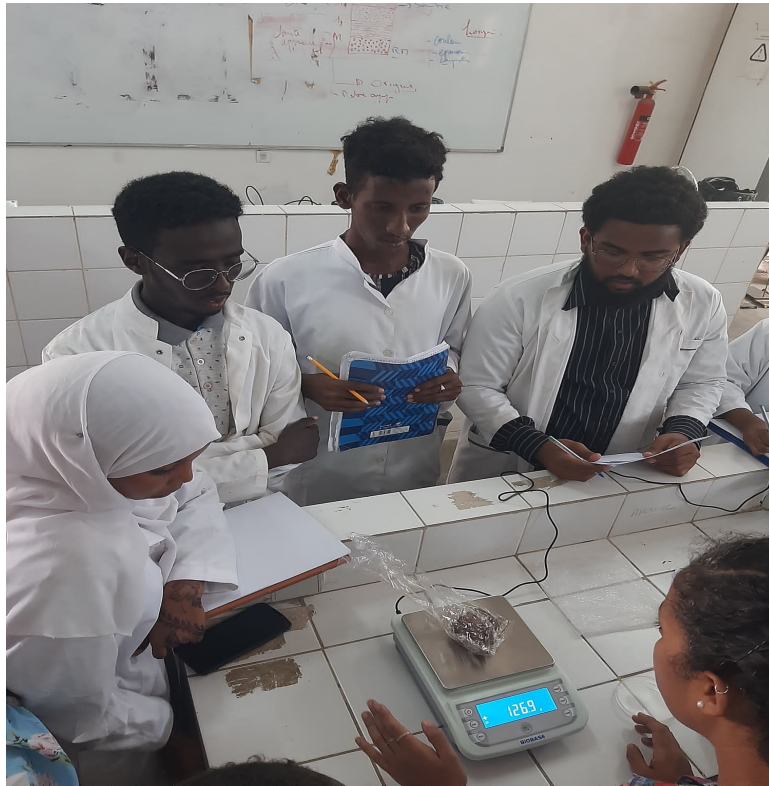
2) Support with equipment

Country	Laboratory	Financial support/ donor
Kenya	National Agricultural Research Laboratories	PhosAgro
Uganda	The National Semi Arid Resources Research Institute (NaSARRI)	China International Center for Economic and Technical Exchanges (CICETE), Ministry of Commerce
Rwanda	The Analytical Laboratory for Soil and Plant	China International Center for Economic and Technical Exchanges (CICETE), Ministry of Commerce
Zambia	Zambia Agriculture Research Institute – National Soil Advisory Laboratory	PhosAgro
Botswana	Soil and Plant Analytical Laboratory	PhosAgro

3) In-person training

- Where it come from?
 - a) GLOSOLAN PT results
 - b) Strong request from AFRILAB members
 - c) Deeper discussion within GLOSOLAN

- Implementation
- 1. In-person workshop in Djibouti December 2022



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2. RECSOIL in Togo and lab training
3. Lab training in Rwanda
4. World Soil Day event and laboratory training in Djibouti

These trainings will be detailed in the coming presentations.

5. And finally...REGIONAL IN-PERSON TRAINING OCTOBER 2023



Raising confidence in quality measurements from soil laboratories in Sub-Saharan Africa

Dakar, 23-27 October 2023



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- Over to soil lab technicians
- 40 Sub-Saharan countries represented
- Training given by local institutions (IRD, ISRA) and some of the members of the AFRILAB and GLOSOLAN Steering Committees

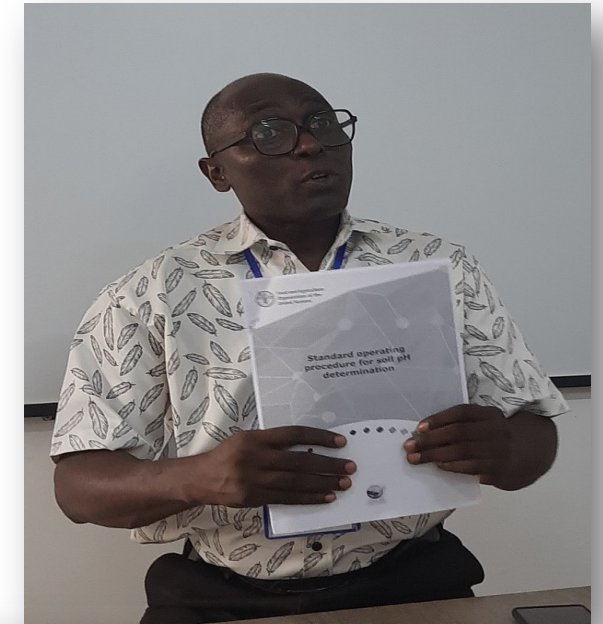


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Topics covered

- Quality control in the laboratory
(equipment calibration, preparation of internal reference material)
- External quality control (how to participate to PTs)
- Health and safety in the laboratory
- Basic chemical and physical soil analysis:
 - Soil organic carbon (SOC) using Walkley-Black method
 - Soil pH
 - Soil electrical conductivity (EC)
 - Total carbon and nitrogen by Dumas
 - Soil bulk density





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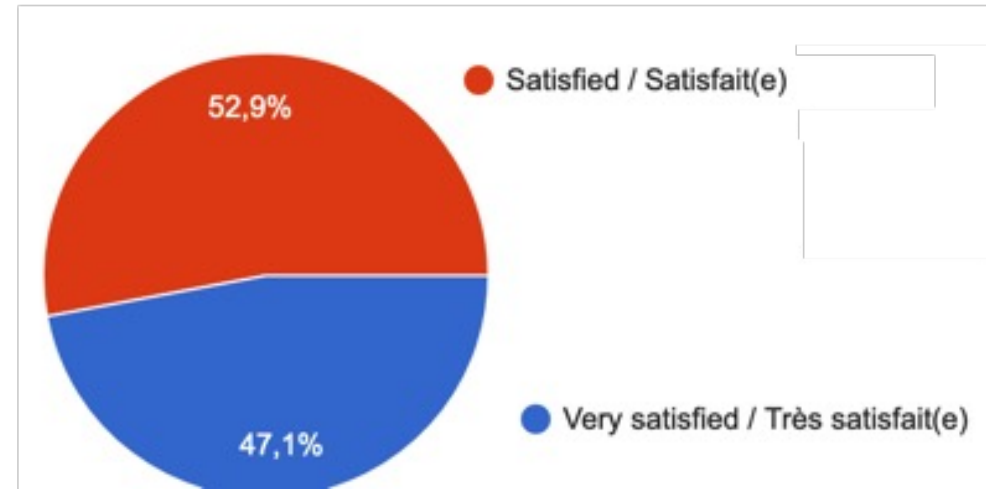




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Participants' feedback



WHO MADE IT POSSIBLE

- Support from the SoilFER project
- The support of FAO staff in Dakar (FAO-SN and FAO-SFW)
- The support from IRD and ISRA
- Months of preparation...
 - Call launched among AFRILAB: selection of participants from **over 200 candidates who responded**
- The support from AFRILAB Steering Committee and the trainers



RECOMMENDATIONS

- Apply benefits from these trainings to improve quality of your results
- Build NASOLANS and make regular updates of their profiles
- Reference laboratories must prepare annual reports and share them with their country GSP focal point.
- Share information with your directors/management



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Thank you

