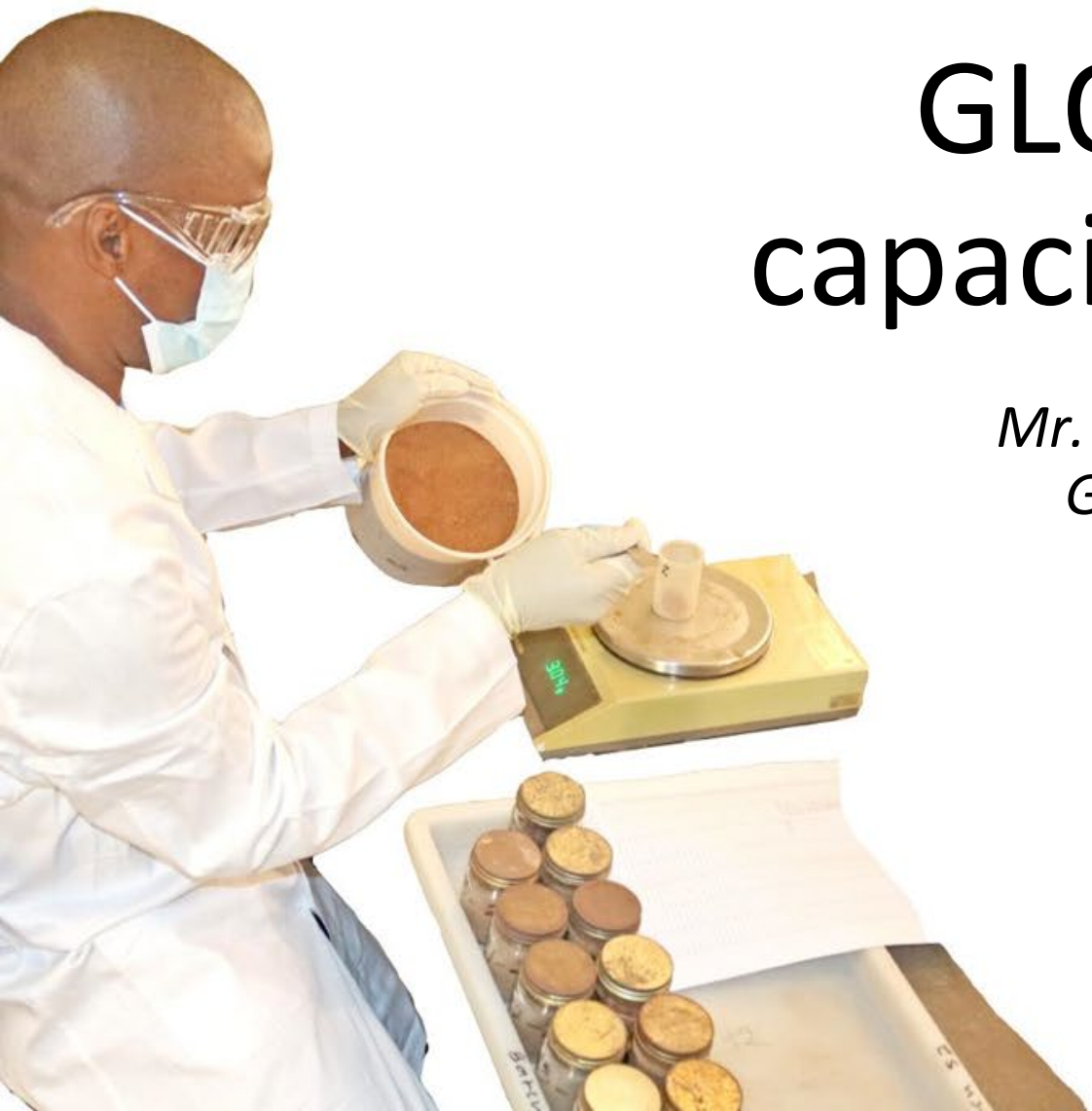


22-24 November 2022

GLOSOLAN capacity building

*Mr. Filippo Benedetti
GSP Secretariat*

6th Meeting of the
**Global Soil
Laboratory
Network
(GLOSOLAN)**



GLOSOLAN
GLOBAL SOIL LABORATORY NETWORK



Work done so far

- Around 55 webinars implemented in 2021-22
- Languages:
 - English
 - French
 - Arabic
 - Spanish
- Over 4000 participants
- Topics:
 - SOPs implementation
 - Soil spectroscopy
 - QA/QC
 - Sample preparation
 - Health and safety

1f .Análisis de fracciones: fósforo

SUELO

Análisis Total Interpretación directa Tablas

pH CE MO CaCO₃
N_k C_t Al_{int} CIC PSB

Análisis fracciones Correlación Calibración

P_{Olsen} K, Ca, Mg, Na sol
N-NO₃⁻ K, Ca, Mg, Na int
Al, H inter

GLOSOLAN training sessions 2021

PHASE 1: Advanced

Client 1 Client 2 Client 3 Client 4 Reception New client bring Only ONE sample

Laboratory has a Spectral Dataset

Take Spectra

Chemometrics will see the population
And will indicate in which the unknown spectra fits, using its model
Or, if does not fit go to traditional and aggregate to the dataset

V. PROCÉDURES

3. Préparation de l'échantillon

Séchage initial

Broyage et tamisage à 2 mm

Homogénéisation à l'aide d'un cylindre tournant

Séchage à l'air libre dans un endroit ventilé ou séchage à l'étuve (température légèrement supérieure à la ambiante (35 ± 5 °C))

Les mottes sont délicatement écrasées et broyées à l'aide d'un pilon et d'un mortier en agate, puis tamisées à 2 mm

L'homogénéisation de l'ensemble du matériau doit se faire en une seule fois

GLOSOLAN training sessions 2021

لليل من أو التحكم في المخاطر التي تؤدي للأخطار الحماية الشخصية (PPE)

يجب ربط الشعر الطويل

نظارات الحماية كاملة

قم بارتداء الملابس الواقية المحددة في تقييم المخاطر

يجب أن يكون معطف المختبر مزرزرا

معرفة "ماذا تستخدم ومتى تستخدم" هو المفتاح لحماية نفسك بشكل صحيح.

قفازات

أحذية مغلقة (لا ترتدي الصنادل أو الأحذية المفتوحة)

Food and Agriculture Organization of the United Nations

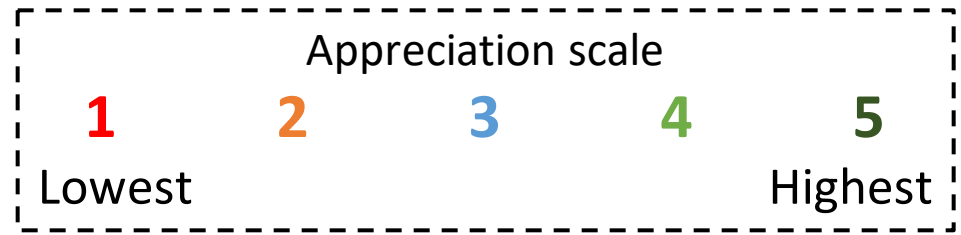
GLOSOLAN training sessions 2021

All material (presentations, video recording, is available at:
<https://www.fao.org/global-soil-partnership/glosolan-old/capacity-development/en/>

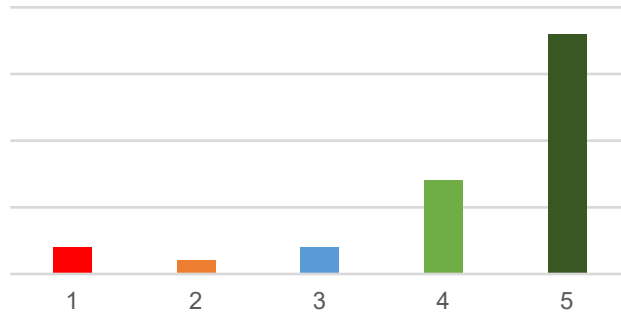
of the **Global Soil Laboratory Network (GLOSOLAN)** | 22-24 November 2022



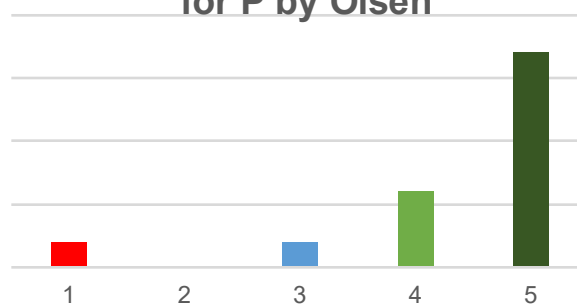
Survey outcomes



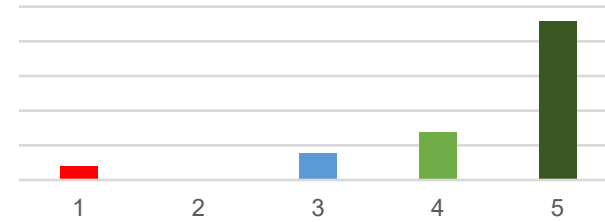
Webinar on GLOSOLAN SOP for sample preparation



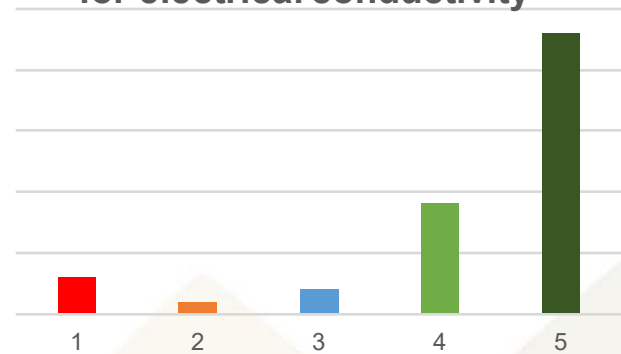
Webinar on GLOSOLAN SOP for P by Olsen



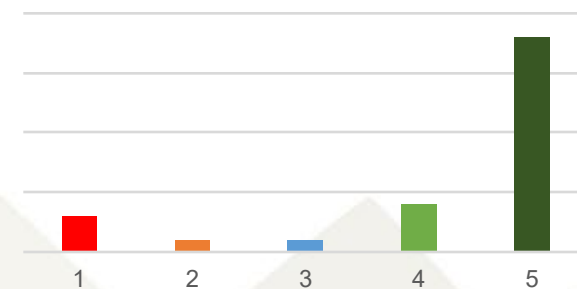
Webinar on GLOSOLAN SOP for SOC by Walkley and Black



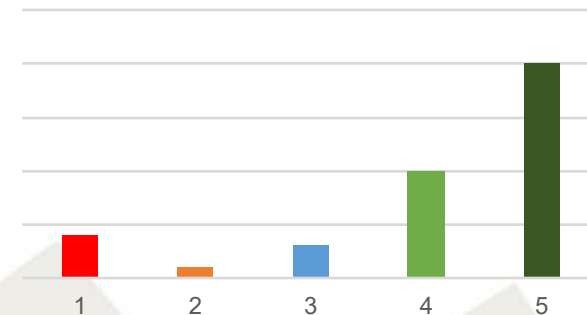
Webinar on GLOSOLAN SOP for electrical conductivity



Webinar on GLOSOLAN SOP for saturated paste extract



Webinar on instruction to soil spectroscopy



Future activities



6th Meeting of the **Global Soil Laboratory Network (GLOSOLAN)** | 22-24 November 2022



Webinar on instrument calibration

- PT outcomes: sometimes errors are caused by instruments
- Starting from the basic instruments (pH-meter, oven, scale)



Webinar on data interpretation

6th Meeting of the **Global Soil Laboratory Network (GLOSOLAN)** | 22-24 November 2022

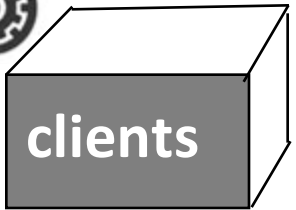
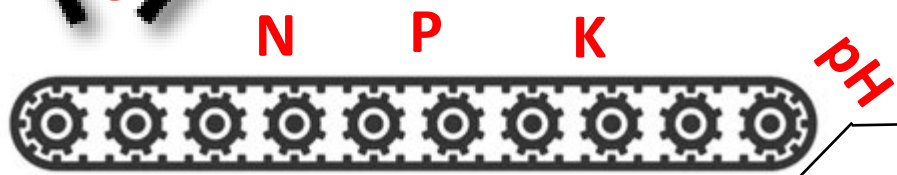




Laboratories:
'factories'
producing data

Results = data
C NPK etc

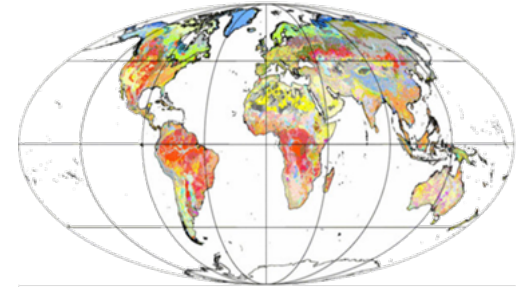
Quantifying
ODD Targets
Ecosystem
services



Traditionally

Nowadays

- Fertilisation
- Mapping
- Scientific conclusions
- Payment for ecosystem services



Webinar on data management

- How to store data in the laboratory: datasets building
- Digitalization
- Applications: soil thematic maps and soil assessments
- To be done in collaboration with



6th Meeting of the **Global Soil Laboratory Network (GLOSOLAN)** | 22-24 November 2022

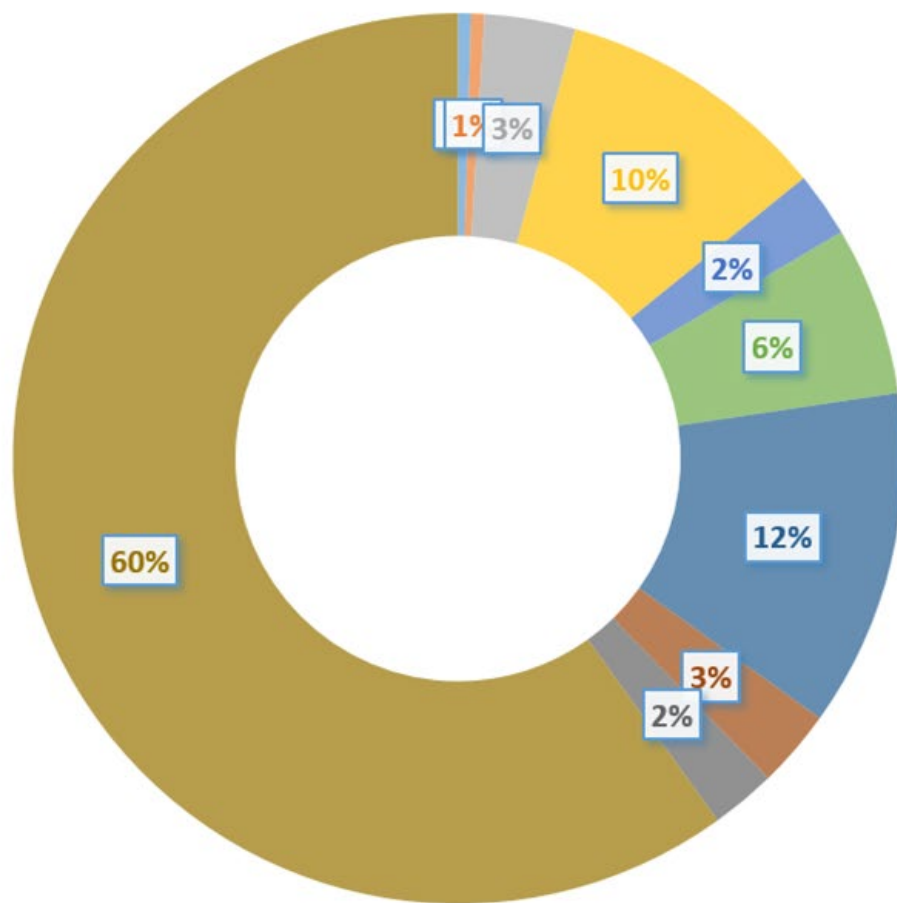


Webinar on PT setting and participation

6th Meeting of the **Global Soil Laboratory Network (GLOSOLAN)** | 22-24 November 2022



Labs participating to the GLOSOLAN PT 2022



- No, we had no interest in participating on it / we did not see the added value of participating in a proficiency test
- No, we are afraid to participate because we do not know how the PT results and the analysis report on our lab performance will be used by GLOSOLAN. We fear to be judged by others if our performance is not satisfactory.
- No because we could not get the soil samples to pass through customs
- No, by the time we registered in GLOSOLAN the registration to participate in the PT 2022 was already closed. However, if possible, we would like to participate in future PTs
- No, this PT focuses on analysis not performed in my laboratory
- No, we have technical problems (e.g. lack of reagents, equipment malfunctioning, lack of staff, closure of the lab, etc.) that are affecting our participation
- No, we just registered in GLOSOLAN and did not know about this exercise. However, if possible, we would like to participate in future PTs
- No, we prefer to participate on PTs organized by other institutions
- No, we wanted to participate but we do not have the equipment to do the SOPs that were requested in this PT
- Yes

Webinar on PT setting and participation

- **How to set a PT**

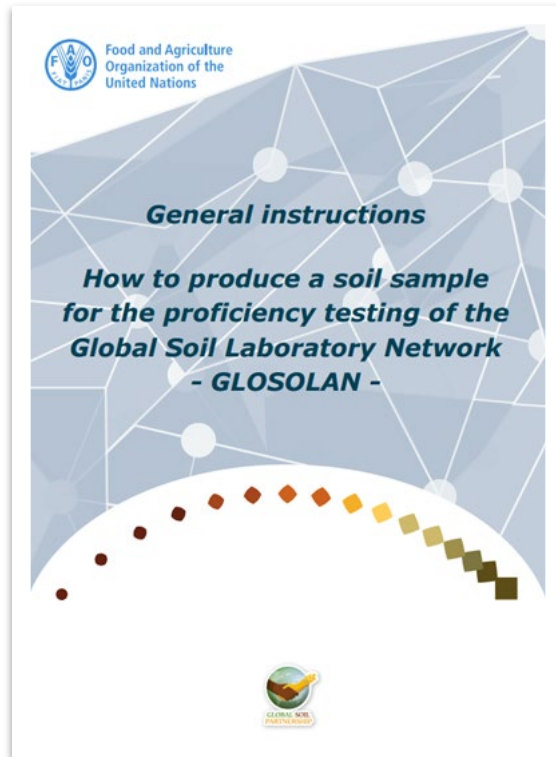
- Which soil parameters to target (and by which method)
- Call for participants
- Sample preparation + sterilization + shipment
- Data collection (GLOSOLAN platform)
- Data processing (statistical analysis)
- Results delivery + overall conclusions

- **Actions to be taken**

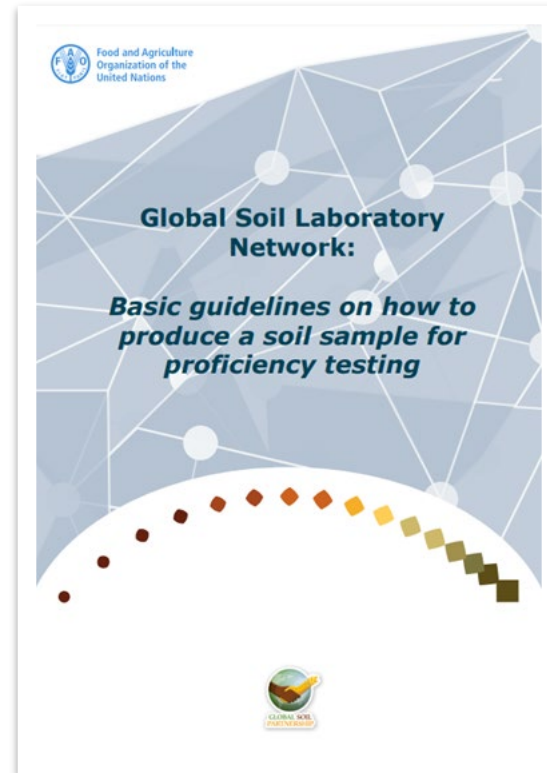
- **Technical details**



Webinar on PT set and participation



[General instructions on how to produce a sample for the GLOSOLAN PT](#)



Basic guidelines on how to produce a soil sample for proficiency testing

[EN](#) | [ES](#) | [RU](#) | [TR](#)



Basic guidelines for preparing a sample for internal quality control

[EN](#) | [ES](#)

6th Meeting of the **Global Soil Laboratory Network (GLOSOLAN)** | 22-24 November 2022



Any other requests/suggestion?
Any volunteer?

6th Meeting of the **Global Soil Laboratory Network (GLOSOLAN)** | 22-24 November 2022





Food and Agriculture
Organization of the
United Nations



GLOSOLAN

GLOBAL SOIL LABORATORY NETWORK

