



Food and Agriculture
Organization of the
United Nations



GLOBAL SOIL
PARTNERSHIP



**Fourth meeting of the
Asian Soil Laboratory Network (SEALNET)
30 June – 2 July 2020**

30 June

7:00 – 7:15 CET | Opening of the meeting and approval of the agenda

Gina Nilo, SEALNET Chair

Lucrezia Caon, GSP Secretariat

7:15 – 7:50 CET | Individual laboratory presentations

- **Afghanistan**, Soil Laboratory of Soil Research Directorate, *Hameedullah Ahmadzai*
- **China**, The Chinese University of Hong Kong, *Derrick Lai and Thomas Lui*
- **Pakistan**, National Reference Soil Laboratory, *Humair Ahmed*

| Status of soil laboratories: overview

Filippo Benedetti, GSP Secretariat

7:50 – 8:00 CET | Global Soil Laboratory Network updates

Nopmanee Suvannang, GLOSOLAN Chair

Lucrezia Caon, GSP Secretariat

8:00 – 8:20 CET | Global assessment 2020: presentation of regional findings

| Discussion on regional priorities in soil laboratories – formulation of requests and proposals

Moderator: Lucrezia Caon, GSP Secretariat & Gina Nilo, SEALNET Chair

8:20 – 9:00 CET | Presentation and discussion of the results of the GLOSOLAN PT 2019

Christian Hartmann, IRD France

9:00 – 9:10 CET Break

9:10 – 11:00 CET | Training on external quality control (PT)

Case studies: how to take action in case of low performance in PT

5 minutes presentation per country

- The case of **Bhutan**

Tsheten Dorji, Soil & Plant Analytical Laboratory, Bhutan

- The case of **Indonesia**

Laili Purnamasari, Laboratorium Pengujian Balai Penelitian Tanah - Indonesian Soil Research Institute, Indonesia

- The case of **India**

Sanjay Srivastava, ICAR-Indian Institute of Soil Science

- The case of **Japan**

Yuji Maejima and Takashi Kanda, Soil Inventory Unit, National Institute for Agro-Environmental Sciences, NARO

- The case of the **Philippines**
Gina P. Nilo, Laboratory Services Division – Bureau of Soils and Water Management, Philippines
- The case of **Thailand**
Chanida Charanworapan, Office of Science for Land Development (OSLD)
- The case of **Viet Nam**
Do Duy Phai, Central Analytical Laboratory – Soils and Fertilizers Research Institute, Viet Nam

Discussion on the case studies

The case of the Pacific Soil Laboratory Network (ASPAC)

Rob De Hayr, GLOSOLAN Vice-Chair

Downscaling GLOSOLAN and SEALNET PTs

5 minutes presentation per country

- The organization of national PTs in **China**
Wang Hong, Institute of Agricultural Resources and Regional Planning (IARRP) of Chinese Academy of Agricultural Sciences (CAAS)
- The organization of national PTs in **Indonesia** [TBC]
Laili Purnamasari, Laboratorium Pengujian Balai Penelitian Tanah - Indonesian Soil Research Institute, Indonesia
- The organization of national PTs in **Thailand** [TBC]
Chanida Charanworapan, Office of Science for Land Development (OSLD)
- The organization of a national PTs in **India**
Dr. Ashok K Patra, Director, ICAR-IISS
- The organization of national PTs in the **Philippines**
Gina P. Nilo, Laboratory Services Division – Bureau of Soils and Water Management, Philippines

Moderator: Christian Hartmann/IRD France, Gina Nilo/SEALNET Chair, and Lucrezia Caon/GSP Secretariat

Reference document available at <http://www.fao.org/3/ca7522en/ca7522en.pdf>

11:00 CET

| Wrap up and closure of the day

1 July

7:00 -9:00 CET | Training on internal quality control

Rob De Hayr, GLOSOLAN Vice-Chair

- Overview of internal quality control measures
- How to prepare and use internal quality control soil samples
- How to introduce internal QC samples in analytical batches
- QC charts - how to interpret the results of internal QC: QC charts and development of estimates of Measurement of Uncertainty using a top down approach
- How to take action in case of bad results
- Presentation from the labs that already have QC procedures in place

Reference document available at:

- **Basic Guidelines for Preparing a Sample for Internal Quality Control.** Available at <http://www.fao.org/3/ca9320en/ca9320en.pdf>
- **Guidelines for Quality Management in Soil and Plant Laboratories. (FAO Soils Bulletin - 74).** Available at <http://www.fao.org/3/W7295E/W7295E00.htm>
- [For those that have access to it] **ISO Guide 80:2014(E) Guidance for the in-house preparation of quality control material (QCMs)**

9:00 – 9:10 CET *Break*

9:10 -10:00 CET | Training on internal quality control - continuation

10:00 -11:00 CET | Training on health and safety

Hanane Aroui, IRD France

11:00 CET | Wrap up and closure of the day

2 July

7:00 – 10:00 CET | **Training on the interpretation of laboratory data**

Phil Moody, University of Queensland, Australia

7:00 – 7:30 CET -Why do soil analyses?

(Refer to ASEAN Guidelines for Soil and Nutrient Management)

- Soil survey/inventory
- Problem solving soil constraints

7:30 – 7:45 CET -What methods are SEALNET labs using for the key soil properties that SEALNET is focusing on for QA/QC?

(Refer to SEALNET 2020 internet survey for soil pH, EC, organic C, total N, available P, available K)

7:45 – 8:30 CET -If different methods are being used, can the results be compared?

(Refer to SEALNET 2020 internet survey for soil pH, EC, organic C, total N, available P, available K)

- Review methods being used for soil pH, EC, organic C, total N, available P, and available K, and refer to the soil C, N, P and K pools and cycles to highlight possible differences in results for different methods.

8:30 – 9:00 CET -Can interpretive guidelines for the key soil properties be harmonised across SEALNET?

(Refer to SEALNET 2020 internet survey for soil pH, EC, organic C, total N, available P, available K & ASEAN Guidelines for Soil and Nutrient Management)

9:00 – 9:10 CET *Break*

9:10 – 9:30 CET -Case study: Provide key properties for two soils.

- Discuss results and implications for management

9:30 – 9:45 CET -Taking soil samples

- Overview of the principles of taking representative soil samples

9:45 – 10:00 CET -Summary

Reference documents available at:

- **ASEAN Guidelines on Soil and Nutrient Management Technical Report (PDF Available) · May 2017.** Report number: ISBN (e-book) 978-616-445-746-1. Available at <https://www.researchgate.net/publication/319329318> ASEAN Guidelines on Soil and Nutrient Management
- **Gourley CJP and Weaver DM (2019) A guide for fit for purpose soil sampling, Fertilizer Australia, Canberra.** Available at <https://www.fertilizer.org.au/Portals/0/Documents/Fertcare/Fertcare%20Soil%20Sampling%20Guide.pdf?ver=2019-06-17-095413-863>

10:00 – 11:00 CET

| SEALNET position in GLOSOLAN

- Decision on the SOPs to harmonize in 2021 and identification of regional leaders
- Opinion on the need to update the FAO Soils Bulletin 74 – “Guidelines for Quality Management in Soil and Plant Laboratories” - (<http://www.fao.org/3/W7295E/W7295E00.htm>)

Moderators: Nopmanee Suvannang, GLOSOLAN Chair and Lucrezia Caon, GSP Secretariat

11:00 CET

| Closure of the meeting