

3rd Annual Meeting of the International Network on Soil Biodiversity (NETSOB)



The Global Soil Biodiversity Observatory

16-17 January 2024 12:00 - 14:00 hrs CET

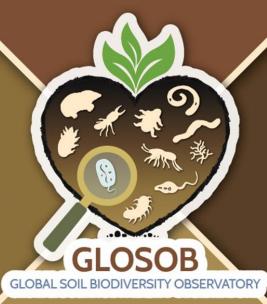


#### GOAL

Monitor and forecast the condition of global soil biodiversity and how human activities' impact its role in providing ecosystem services.

#### HOW

Countries will be responsible for measuring, monitoring, and sharing soil biodiversity information of hotspots according to NETSOB's harmonised methodologies/protocols and country capacities (3 tiers).



#### **WHAT**

GLOSOB will strengthen national capacities of:

- Laboratories: use of state-of-the-art methods and tools to measure soil biodiversity according to standard operating procedures (SOPs).
- National experts: interpretation of soil biodiversity data and information.
- **Institutions**: measure, map and monitor soil biodiversity
- Land users: sustainable use, and management and conservation of soil biodiversity for sustainable and resilient agriculture, bioremediation, and ecosystem restoration
- Policy makers: performing evidence-based decision-making.

#### MISSION

Serve as the Observatory providing with global soil biodiversity data and information for guiding evidence-based decision-making.

## Define essential biodiversity measurements

- Limited membership
- Moderate membership
- Full membership

# How does GLOSOB work?

Report back to CBD, member parties & policy makers

## Assess national capacities & infrastructure

 Determine membership level

# Build national capacities & infrastructure (if needed)

- Training program
- Acquire equipment

### Increase national capacities & infrastructure

 Advance capacity to next membership level

#### **Build GLOSOB database**

 Follow GSP data sharing policy

#### Choose sites for monitoring

- Hotspots
- Land uses & intensity gradient
- Local agreements/permits

#### Secure funding for work

#### Begin monitoring program

- Data processing, storage, sharing
- Incorporate measurements into national surveys

Establish/strengthen
National Monitoring Systems





Membership Tier	Bioindicators#	How to Measure it
Limited	Enzymatic activity	Acid Phosphatase, N-acetylglucosamine, xylosidase, cellobiohydrolase, B-glucosidase
Limited	Aggregate Stability	Water stable soil aggregates
Limited	Nutrient Cycling	N mineralization (available & total), Total C, Organic C, Available P
Limited	Soil physical properties	Bulk density, pH, soil structure, CEC
Limited	Soil Biomass	SIR, Nematode
Limited	Soil Respiration	Soil respiration
Limited* Moderate	Population Abundance	16S, ITS, Nematode*
Limited* Moderate	Taxonomic Diversity	16S, ITS, 18S sequencing, Nematode*
Moderate	Intraspecific Genetic Diversity	16S, ITS, 18S sequencing
Moderate	Litter Decomposition	Litterbags
Moderate* Full	Mesofauna	Dry extraction*, COI barcoding
Moderate* Full	Macrofauna	Hand sorting*, COI barcoding
Full	Root Traits	Root scans, weight, total N
Full	Functional Diversity	Shotgun sequencing, ITS (FunGuild)





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# Thankyou



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