



Food and Agriculture  
Organization of the  
United Nations

# 3<sup>rd</sup> 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.

## 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.

## 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).



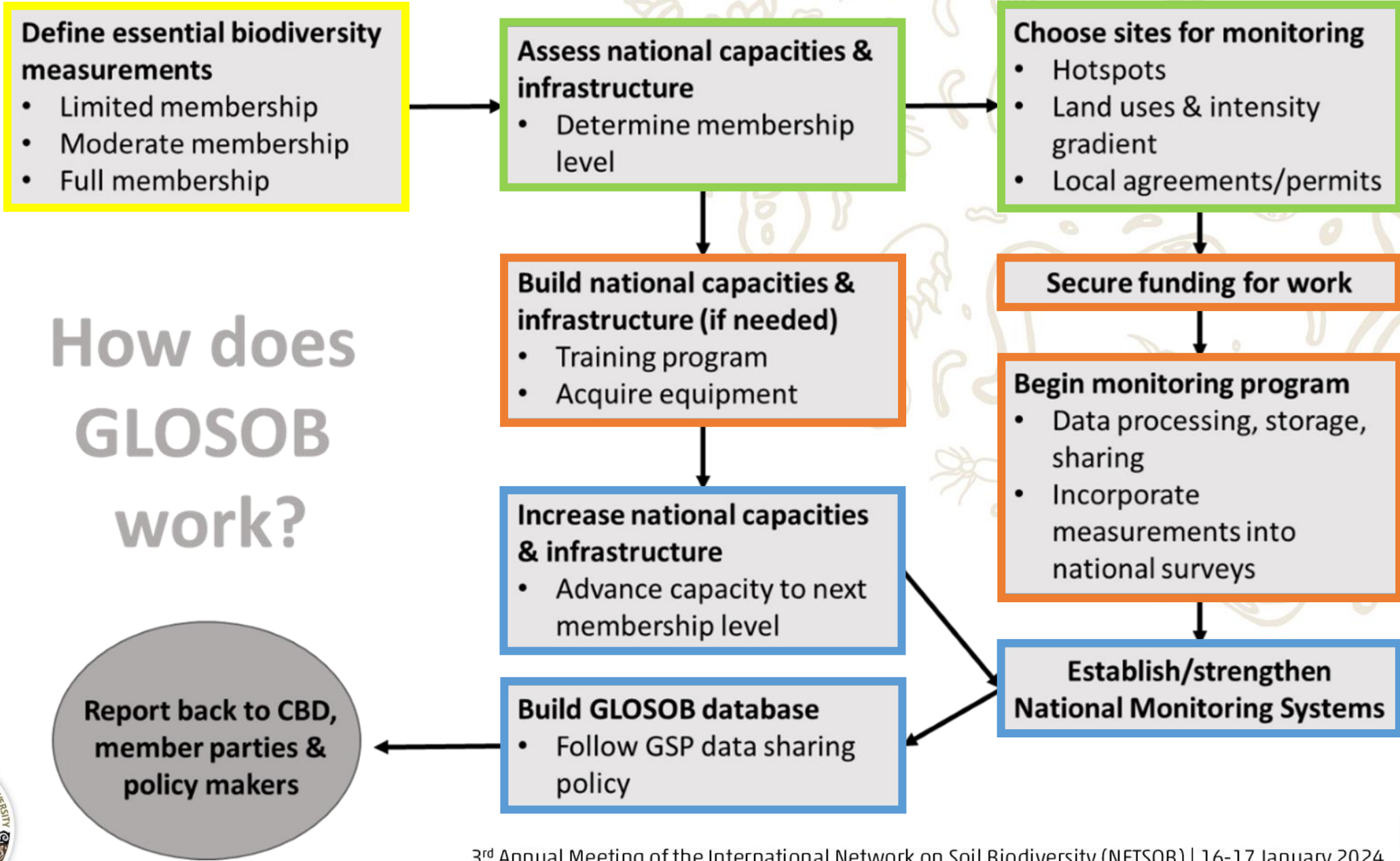
GLOBAL SOIL BIODIVERSITY OBSERVATORY

## MISSION

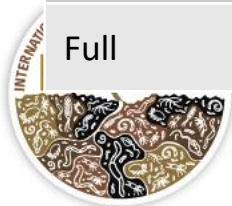
Serve as the Observatory providing with global soil biodiversity data and information for guiding evidence-based decision-making.



# How does GLOSOP work?



Membership Tier	Bioindicators <sup>#</sup>	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	<b>N mineralization (available &amp; total), Total C, Organic C, Available P</b>
Limited	Soil physical properties	<b>Bulk density, pH, soil structure, CEC</b>
Limited	Soil Biomass	<b>SIR, Nematode</b>
Limited	Soil Respiration	<b>Soil respiration</b>
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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# Thank you



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