



Food and Agriculture
Organization of the
United Nations

20th Working Session of the Intergovernmental Technical Panel on Soils (ITPS)

Soil Information and Data

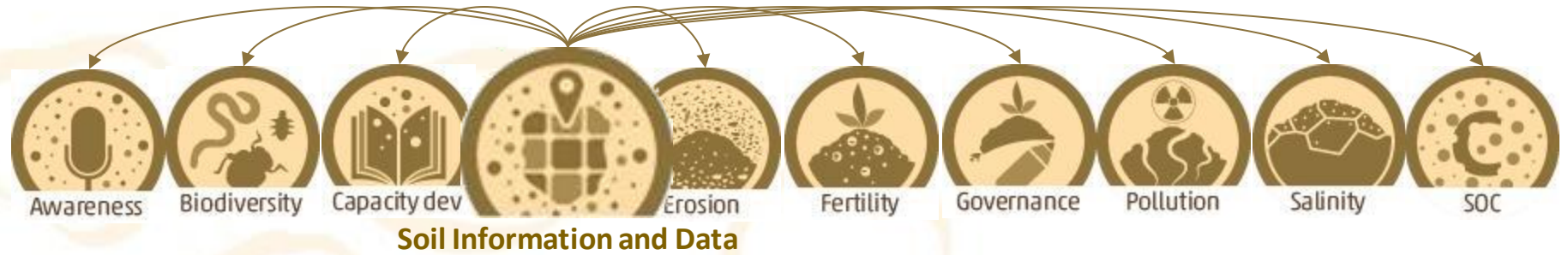
GSP – Soil Information and Data (SID)

19-21 March 2024

itps

INTERGOVERNMENTAL
TECHNICAL PANEL ON SOILS





International Network of Soil Information Institutions

- GSPs **first** technical network, established in 2016
- Implements the activities under the GSP Area of Work: **Soil Information and Data**
- **122** FAO Member Countries + European Union
- Chaired by Mr Luca Montanarella (EU)
- INSII develops GloSIS, National Soil Information Systems and Country-Driven Global Data Products
- Supported by GSP Secretariat, ITPS, Thematic Working Groups



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INSII in Numbers 7+ Years

122

FAO Member Countries & EU

122

Soil Information Institutions

Global Data Products



36 Map Layers

+2 ongoing

System Development



National Soil Information Systems

1 in 2023 (LibSIS)
22 ongoing*

Capacity Development



Training Workshops

127
countries

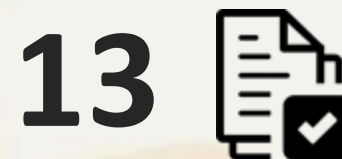
Capacity Development



National Experts

100
in 2024

Publications



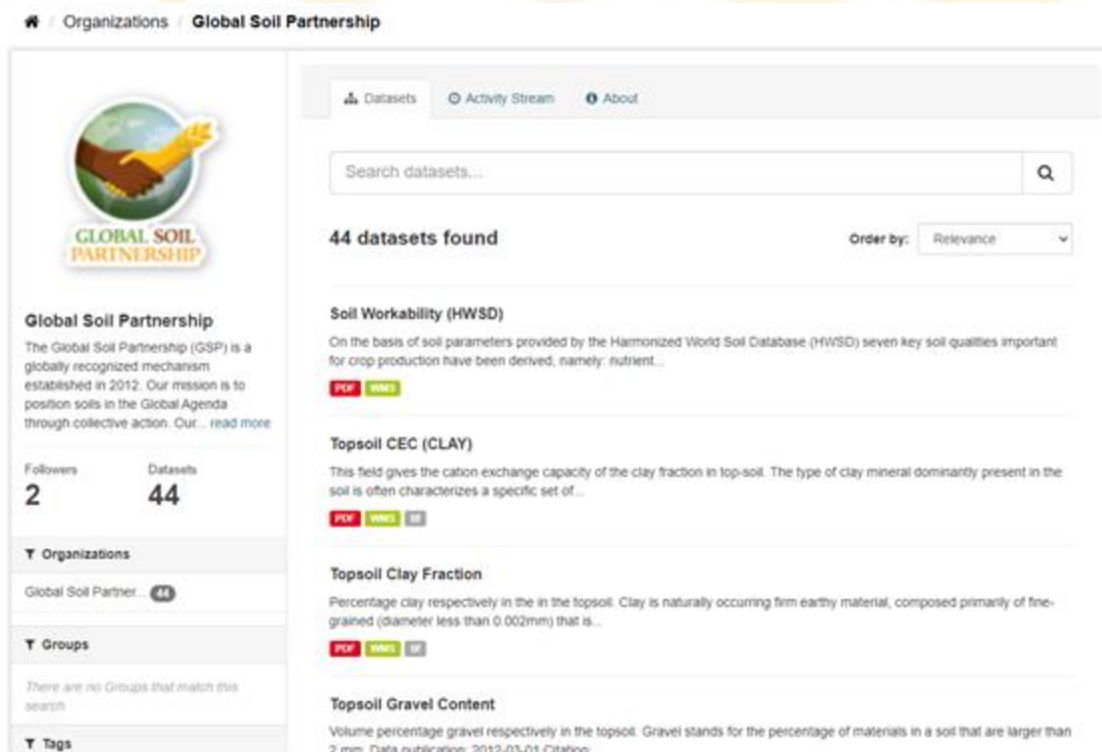
Key Publications

*Caribbean (SoilCARE), Asia (AFACI), Azerbaijan

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GloSIS Discovery Hub (online)



The screenshot shows the 'Global Soil Partnership' page on the GloSIS Discovery Hub. The page features a search bar at the top with the text 'Search datasets...' and a magnifying glass icon. Below the search bar, it indicates '44 datasets found' and an 'Order by: Relevance' dropdown menu. The main content area lists three datasets:

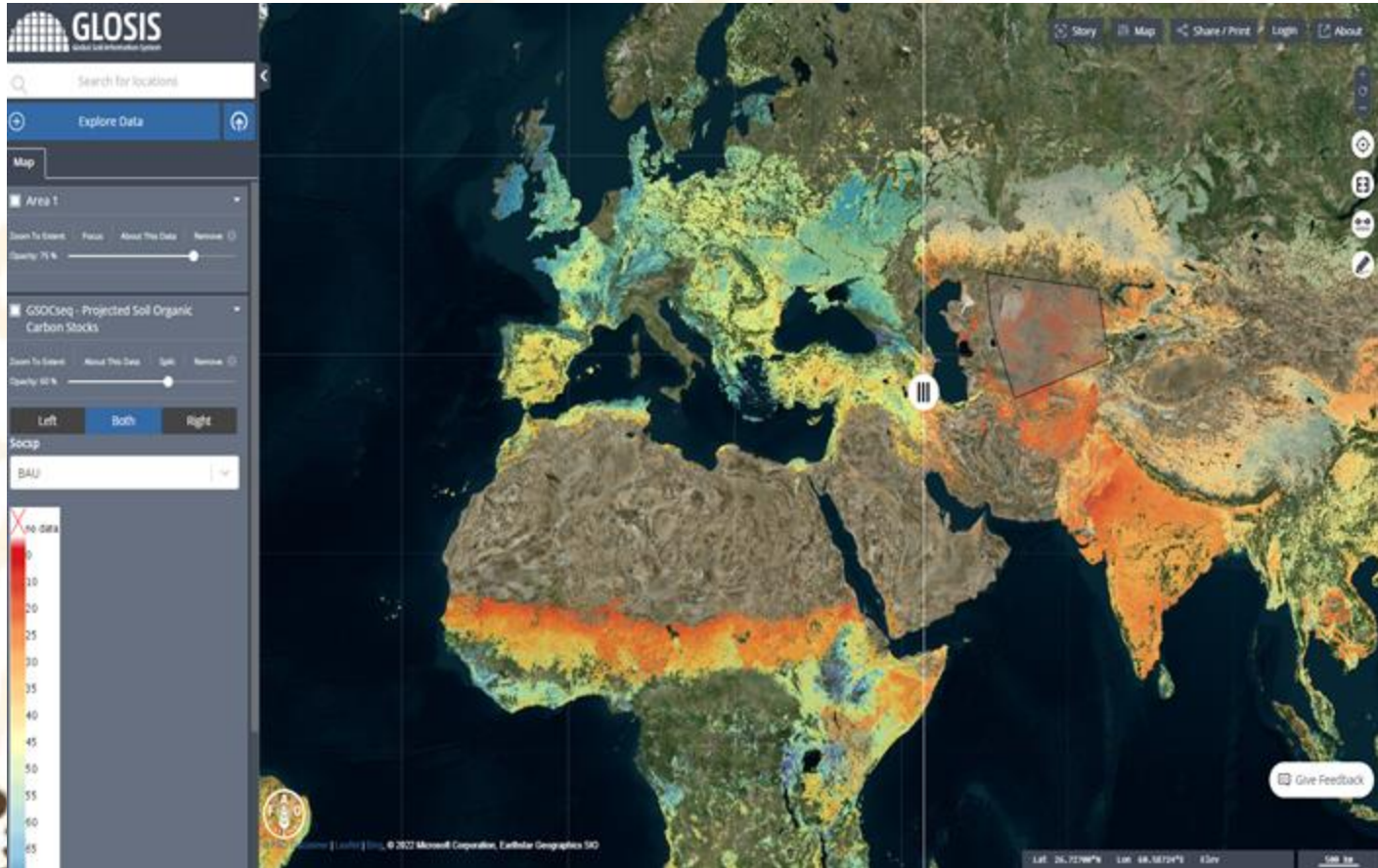
- Soil Workability (HWSD)**: On the basis of soil parameters provided by the Harmonized World Soil Database (HWSD) seven key soil qualities important for crop production have been derived, namely: nutrient... (Includes PDF, HWSD, and IS icons)
- Topsoil CEC (CLAY)**: This field gives the cation exchange capacity of the clay fraction in top-soil. The type of clay mineral dominantly present in the soil is often characterizes a specific set of... (Includes PDF, HWSD, and IS icons)
- Topsoil Clay Fraction**: Percentage clay respectively in the in the topsoil. Clay is naturally occurring firm earthy material, composed primarily of fine-grained (diameter less than 0.002mm) that is... (Includes PDF, HWSD, and IS icons)
- Topsoil Gravel Content**: Volume percentage gravel respectively in the topsoil. Gravel stands for the percentage of materials in a soil that are larger than 2 mm. Data publication: 2012.03.24 Catalogue

On the left sidebar, the 'Global Soil Partnership' logo is displayed above a description: 'The Global Soil Partnership (GSP) is a globally recognized mechanism established in 2012. Our mission is to position soils in the Global Agenda through collective action. Our... read more'. Below this, it shows 'Followers: 2' and 'Datasets: 44'. The 'Organizations' section lists 'Global Soil Partner...' with a count of 43. The 'Groups' section states 'There are no Groups that match this search'. The 'Tags' section is currently empty.

GloSIS Data Catalogue

- Global Data (Global Maps)
- We are working to connect NSIS (LibSIS connected)
- Soon fully federated

GloSIS Map Service (online)



- GloSIS Map Services
- Connected to GloSIS Discovery Hub
- Advance Features
 - Compare, Download, Export, Share, Map Stories
- Currently seeking solutions to develop a bundle of software to support interested INSII members in establishing SIS



<https://data.fao.org/GloSIS/>

GloSIS Federation



GloSIS

NSIS

Activities:

- Develop NSIS based on open standards
- Develop bundle of software
- Connect NSIS to Decision Support Systems
- NSIS Development – ongoing (20+ Countries)
- Connecting national systems to GloSIS Federation (ongoing)



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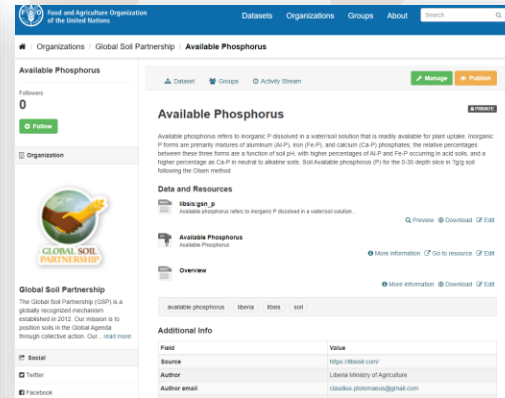
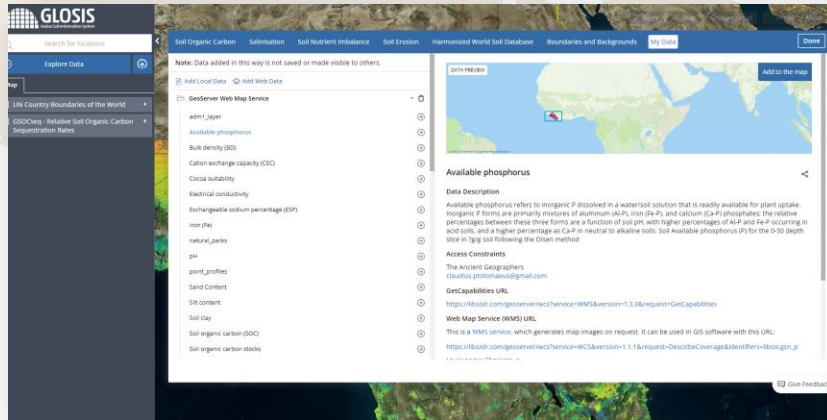
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GloSIS Federation - LibSIS

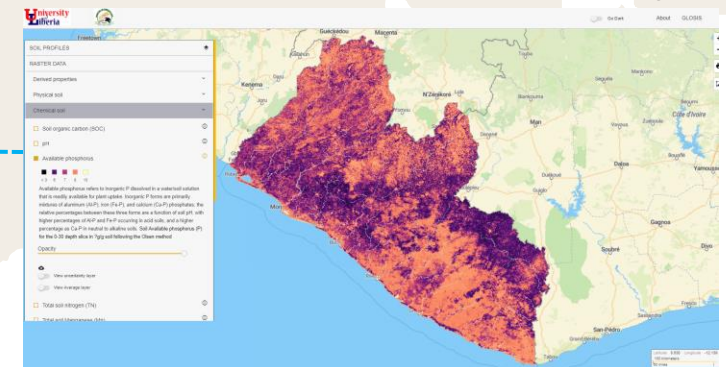


GloSIS Web Service & GloSIS Discovery Hub

LibSIS – Liberian Soil Information System



Open Geospatial Consortium Data Exchange (WMS-WFS-WCS)



of the countries, by the countries, for the countries

Kick-off

25%

50%

75%

100%



GSOCmap

v1.0 (2017) >> ...v1.6 (2022)

Global Soil Organic Carbon Map



GSOCseq

v1.0 – (2021) >> v1.1 (2022)

Global Soil Organic Carbon Sequestration Potential Map



GSASmap *v1.2 (on hold)*

Global Salt Affected Soils Map



GBSmap *v1.0 (2022)*

Global Black Soil Distribution Map



GSNmap

Global Soil Nutrient and Nutrient Budget Maps



GSERmap

Global Soil Erosion Map (resumed!)



CAPACITY DEVELOPMENT – SOIL INFORMATION and DATA

New Trainings on:

- designing soil sampling designs for digital soil mapping
- soil data management



Capacity Development

1800+



National Experts

80+



Training Workshops



127+ Countries
All GSP Regions



GSP Members request for GSNmap

Two-phase initiative
Phase I: Nutrient maps (current status)
Phase II: Nutrient budget maps



Methodology

Definition of a methodology through the support of the GSP's technical networks, International Network on Soil Information Institutions (INSII), Working groups and the ITPS



Technical specifications and country guidelines

Publication and divulgation to define a standardized approach



Capacity Building Program

Online Technical Manual
 Online regional training & follow-up one to one technical sessions with National Experts



National Submission

Quality assessment and quality check of the submitted maps
 30 Submission (March 2024)



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Global Soil Erosion Map (GSERmap)

- GSP is collaborating with the World Association of Soil and Water Conservation (WASWAC) to finalize the GSERmap Technical Specifications and Country Guidelines
- We're about to establish a steering committee (members of ITPS, INSII, WASWC and the GSERmap WG) the final documents will be presented and reviewed by the entire WG, INSII and ITPS
- Currently going through logistics to organize a hybrid workshop in Yangling, China, with lead experts (tentatively – end of April)
- Resources available to organize in-person workshops

Thank you!



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