



Food and Agriculture
Organization of the
United Nations

7th Asian Soil Partnership MEETING

9-10 March 2022

Item 1. GSP developments of regional interest

Ms. Lucrezia Caon
GSP Secretariat



1 SoiLEX



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SoiLEX - Soil related legal instruments and soil governance

SoiLEX is a global database that aims to facilitate access to information on existing legal instruments on soil protection and prevention of soil degradation. The platform was created in coordination with FAOLEX, which is to date one of the largest databases of legal frameworks and instruments related to natural resource management, food and agriculture.

The legal and policy instruments can be searched by country profiles or by soil-related keywords. The information provided by the database allows users to have the complete document as well as a detailed summary of its content, focusing mainly on the purpose and specific objectives of the instrument.

The platform is managed by the Global Soil Partnership within the FAO Land and Water Division. If you are interested in learning more about SoiLEX and would like to contribute to its development and maintenance, please [send us an e-mail](#) or respond to the SoiLEX questionnaire for your country [here](#).

Country/Territory

More search options



Countries with a Soil Act



SoiLEX: the GSP tool on soil governance

- To facilitate access to information on the existing legal instruments in force
- It is an online global database on soil protection and soil degradation prevention legal instruments

Global activities of regional interest: SoiLEX

- **Respond to the questionnaire** for your country by:
 - Including missing/new legislation;
 - Indicate which legal instruments are not longer valid;
 - Classify them by SoiLEX keywords;
- **Contribute to regional legal analysis;**
- **Support the update** and growth of SoiLEX;
- **Promote** this tool at the country-level.
- Questionnaire available here:

<http://www.fao.org/global-soil-partnership/resources/highlights/detail/en/c/1274929/>

2

Global Soil Doctors



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Soil Doctor Programme

What is it?

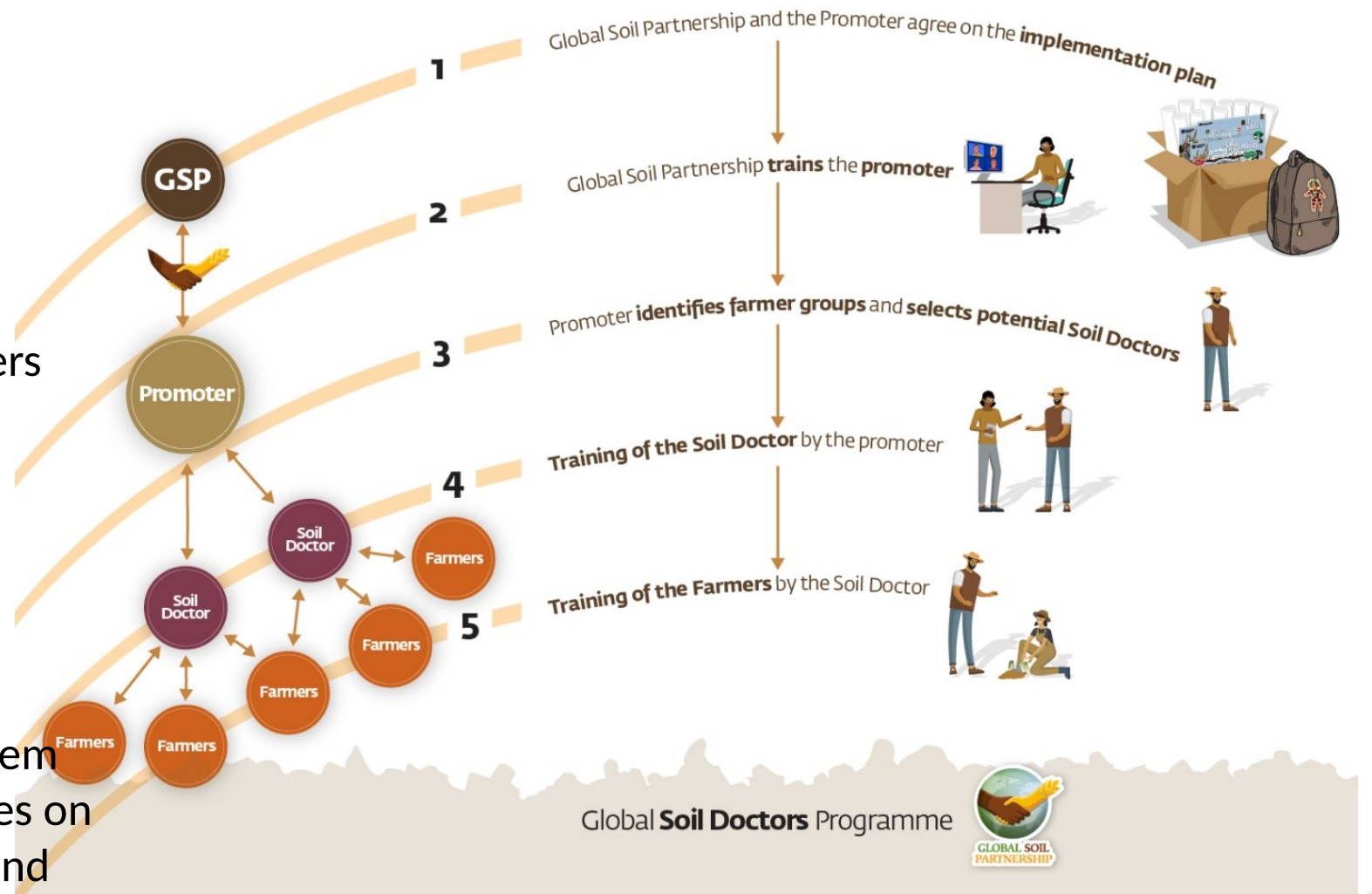
- Farmer-to-farmer training programme

Aim

- Building the capacity of farmers on soils and sustainable soil management;

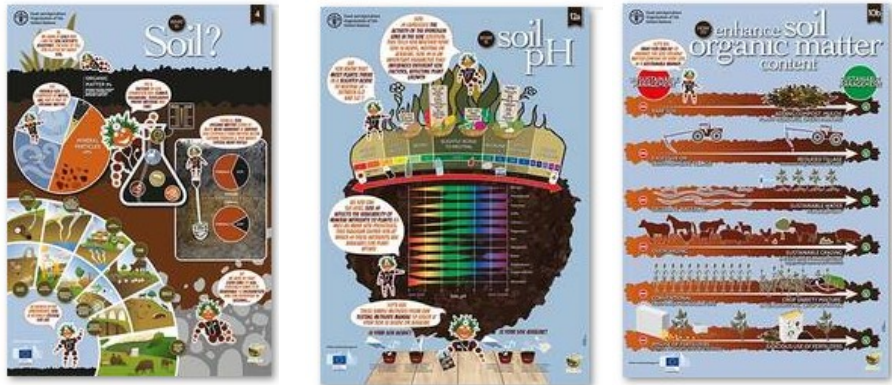
Perspectives

- To support a self-sufficient system that will promote good practices on sustainable soil management and optimize available national resources



Educational material

Posters











Visual identity



Soil educational kit



Field exercises and recommended practices

Physical soil properties – Exercise n xxx	
SOIL AGGREGATE STABILITY: SLAKE TEST	
RELEVANCE	Soil stability is a key property that is related to soil chemical, physical and biological dynamics. The slake test is a simple method to evaluate soil structure in the field. It is based on the observation that clumps of soil with poor structure fall apart when placed into water. If soil structure is stable, water can move into the soil pores and displace the air without causing the aggregate to break. It is advisable to compare different soils for a more reliable evaluation.
MATERIALS*	    *Water is needed
PROCEDURE	<ol style="list-style-type: none"> Place the wire mesh into the beaker filled with water  Collect a clump of soil with the trowel  Place the soil aggregate sample onto the mesh so that the whole sample is submerged  Use the stopwatch to time how quickly the sample breaks down 



Contacts:

soil-doctor@fao.org silvia.pioli@fao.org carolina.olivera@fao.org

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First step: find the promoting institution

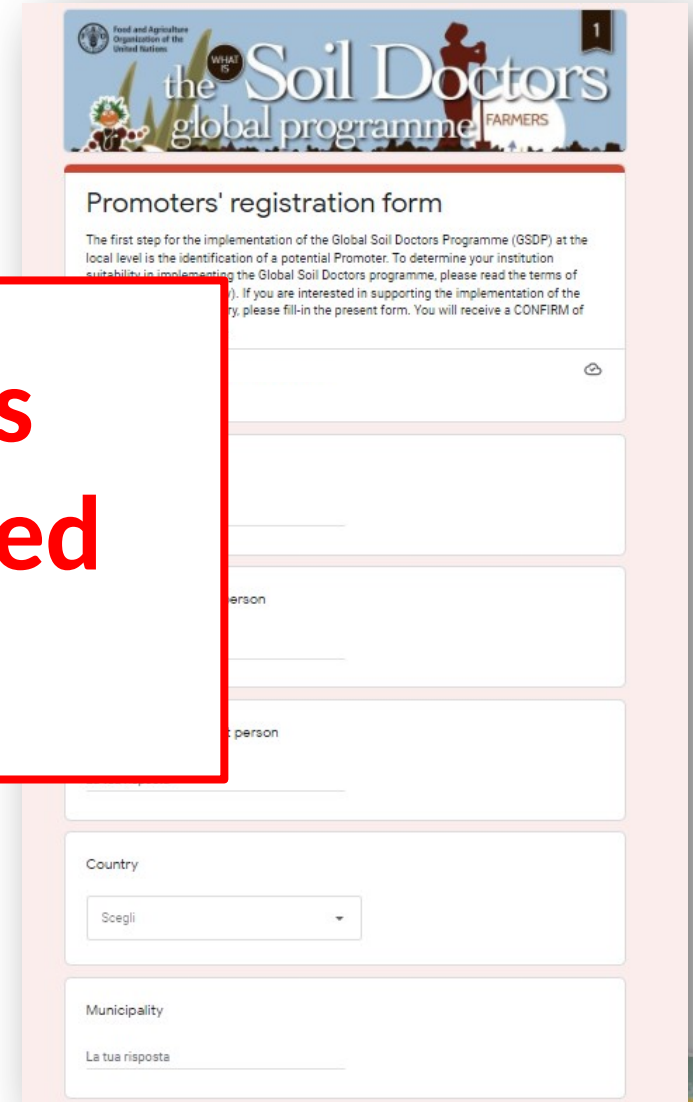
- Terms of reference

List of criteria
promoter selection
and benefits

- Registration form

Formalization of
voluntary collaboration
between GSP and the
promoter

**More information on this
programme will be provided
tomorrow**



3

International Network on Black Soils



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International Network on Black Soils – INBS

In 2019, the definition of Black Soils was approved in 11th ITPS Working Session.

Definition of Black Soil

1st category Black Soils (the most vulnerable and endangered, needing the highest rate of protection at a global level)

2nd category Black soils (mostly endangered at the national level)



The presence of black or very dark surface horizons typically with a chroma of ≤ 3 moist, a value of ≤ 3 moist and ≤ 5 dry (by Munsell colours);

The total thickness of black surface horizons ≥ 25 cm;

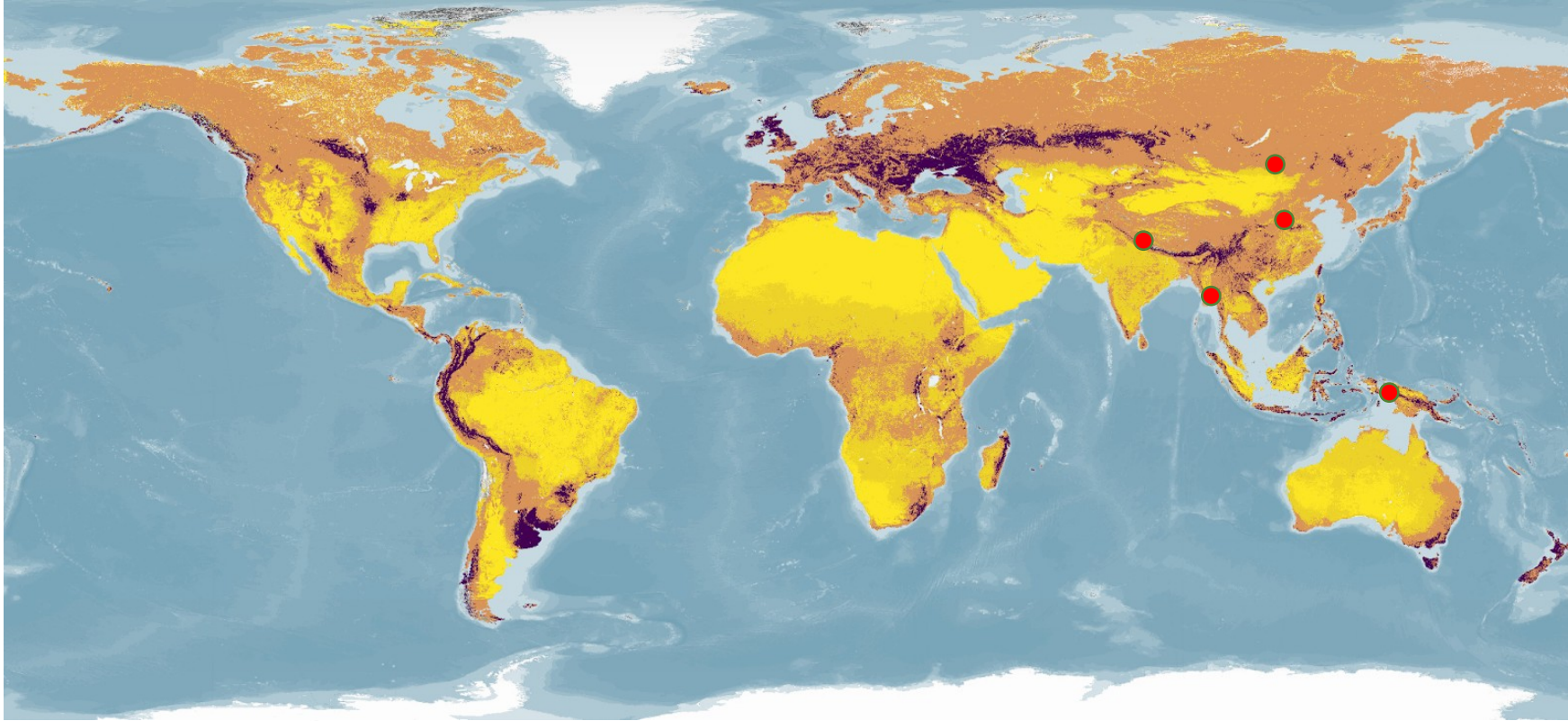
Organic carbon content in the upper 25-cm of the black horizons of $\geq 1.2\%$ (or $\geq 0.6\%$ for tropical regions) and $\leq 20\%$;

CEC in the black surface horizons ≥ 25 cmol/kg;

A base saturation in the black surface horizons $\geq 50\%$

Members of INBS

31 Countries and 1 Union



Mongolia

Nepal

China

Indonesia

Thailand



Request

- **Join the International Network of Black Soils** according to the definition of black soils and the Global Black Soil Distribution Map (GBSmap);
- **Adoption/use of the Black soil definition and the GBSmap** to identify their black soil area and assess their status of black soils.
- Agree and support the development and endorsement of an International Agreement towards Black Soils Conservation.
- **Support the development of the International Guidelines on Sustainable Black Soil Management** and International Platform of Open Courses on Best Available Practices in Black Soil Management.
- **Improve technical and technological capacities in countries for sustainable management of black soils**, invite resource partners to invest on capacity development on soil information.

@Yuxin.tong@fao.org



4

Salt-affected soils





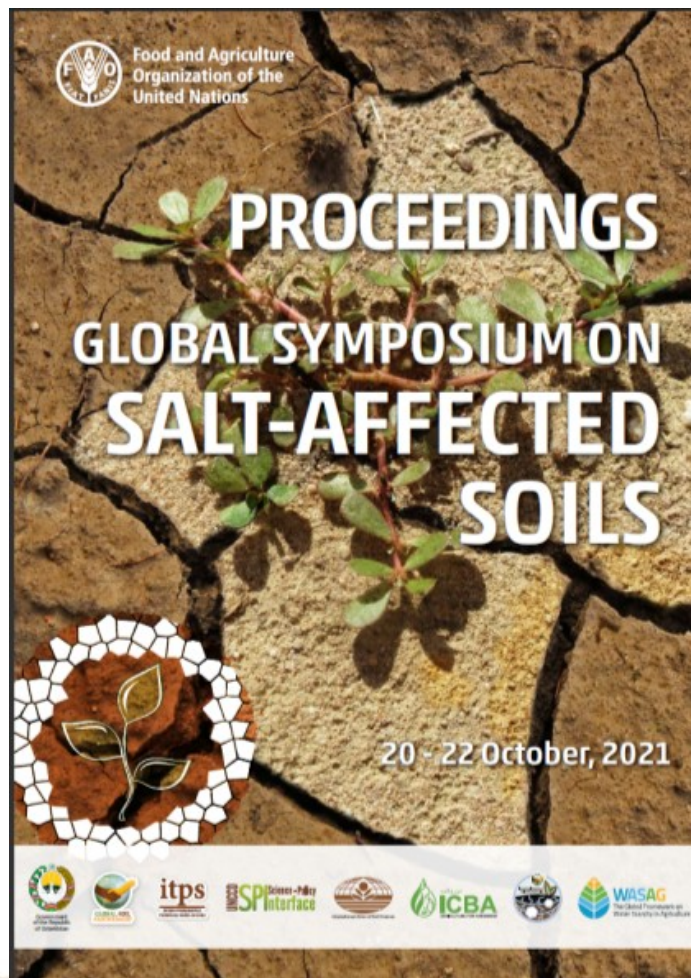
International Network on Salt-affected Soils (INSAS)

Working group	Activity
ASSESSMENT	Mapping, assessing and monitoring of salt-affected soils
SSM	Sustainable management of salt-affected soils (practices, policy)
CROPS	Halophyte agriculture and salt-tolerant crops
WATER	Integrated soil and water management under saline/sodic conditions

Welcome to join: <https://www.fao.org/global-soil-partnership/insas/en/>



GSAS Outcome document



GSAS recommendations:

1. Support the harmonization of the procedures of soil salinity, sodicity and alkalinity **assessment**.
2. Refine and update the protocols for **mapping** of salt-affected soils using modern approaches
3. Promote national and regional programs designed at **monitoring** of salt-affected soils
4. Promote the formulation of **indicators** of soil salinity and sodicity
5. Promote the adoption of **good practices**
6. Support the development of **water quality to avert soil salinization and sodification**.
7. Design **strategies** aimed at adopting good practices/options
8. Conduct an **economic assessment** of implementing good practices in the field
9. Support the development of **policy frameworks**
10. Facilitate the **development of market** for crops grown on salt-affected soils

FAO Questionnaire on salt-affected soils



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The questionnaire on the status of monitoring and management of salt-affected soils

Contact Maria Konyushkova maria.konyushkova@fao.org for details



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5

Digital soil mapping

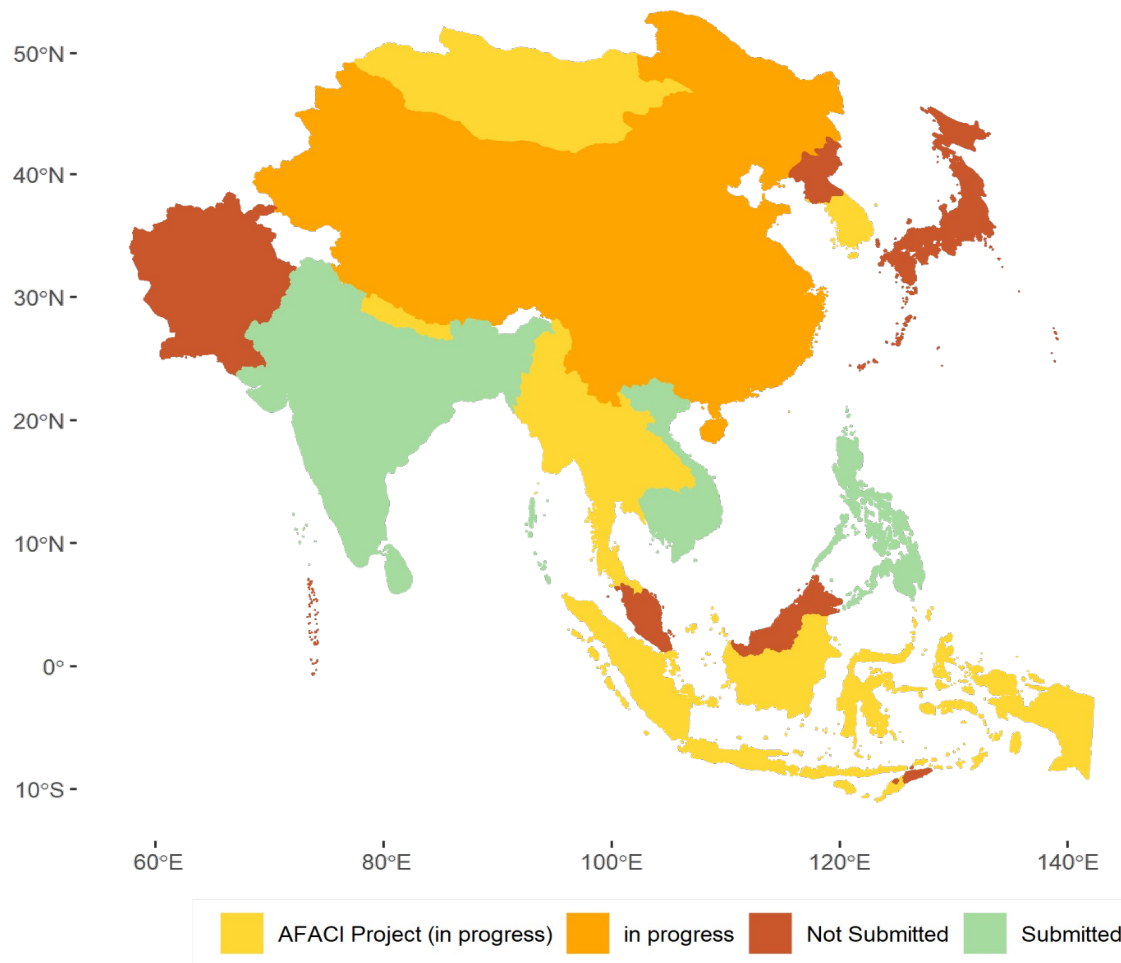


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Global Soil Organic Carbon Sequestration Potential Map - GSOCseq v1.1 - Submissions

- **7 ASP countries have submitted** a national GSOCseq product (Bangladesh; Bhutan; Cambodia; India; Philippines; Sri Lanka; Viet Nam)
- **7 AFACI countries are currently generating** a GSOCseq product (Indonesia; Lao; Mongolia; Myanmar; Nepal; Republic of Korea; Thailand)



Source: UN, 2020. Map of the World, United Nations.

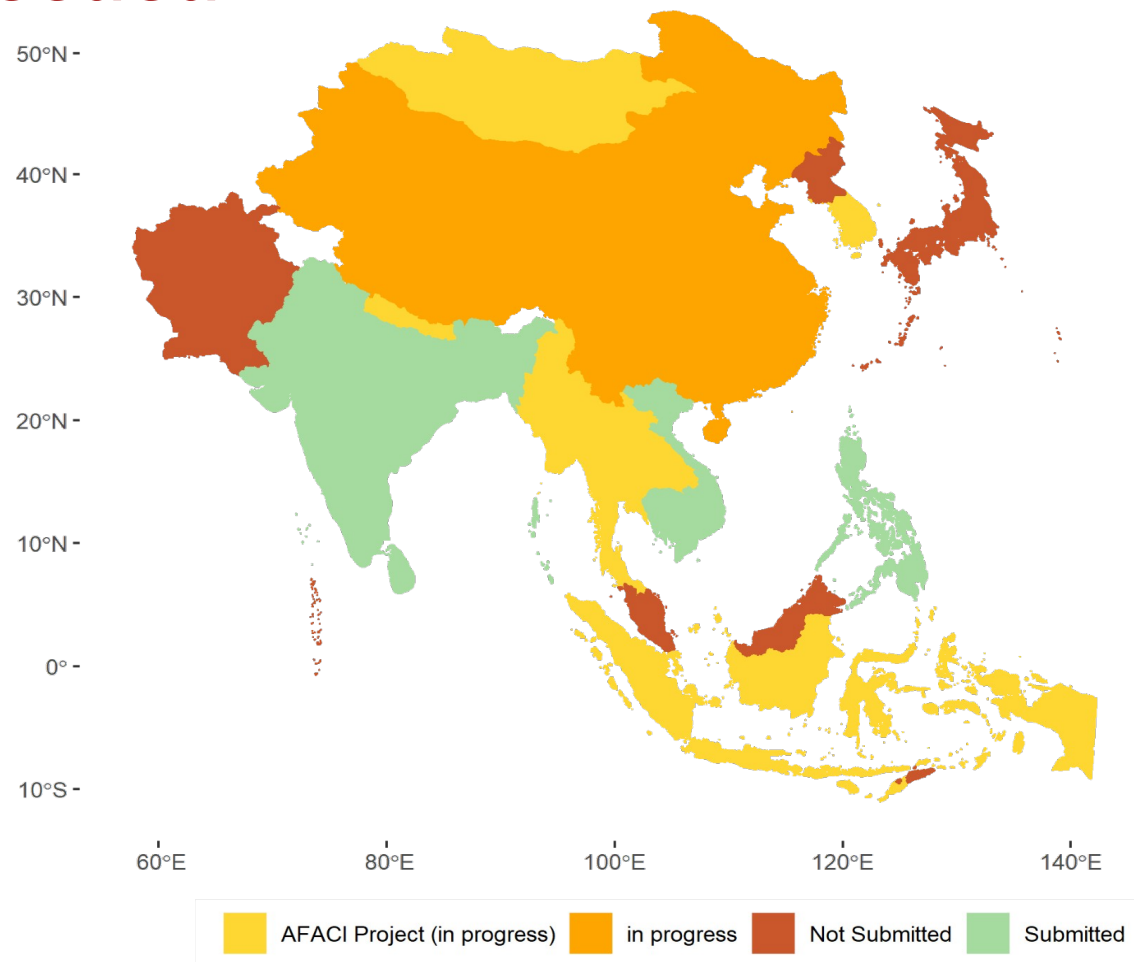
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Global Soil Organic Carbon Sequestration Potential Map - GSOCseq v1.1 - **Actions Needed**

National Experts who are working or haven't yet started **should reach out to** (Isabel.Luotto@fao.org)

- **report on progress**
- **seek technical support** (i.e. troubleshooting scripts, running the model)



Source: UN, 2020. Map of the World, United Nations.

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Global Salt-Affected Soils Map (GSASmap v1.0)

- Submissions

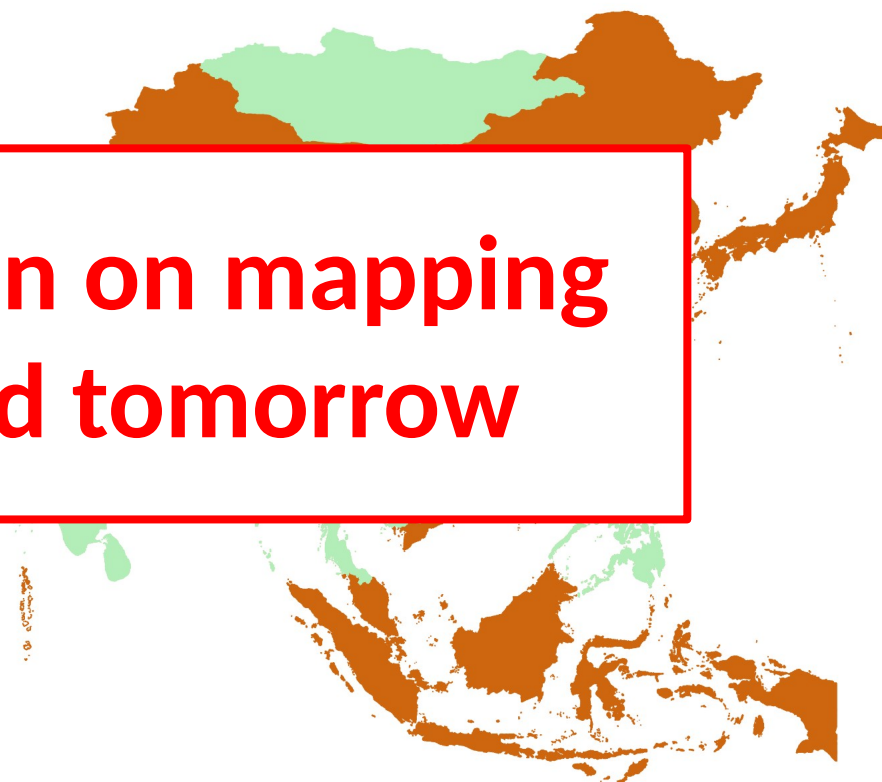
By March 2022, **13 countries** have submitted their data for GSASmap

GSASmap missing
Vietnam, Malaysia, South Korea, and

More information on mapping will be provided tomorrow

National Experts who are working or haven't yet started **should reach out to** (Christian.Omuto@fao.org)

- **report on progress**
- **seek technical support** (i.e. troubleshooting scripts, running the model)



Submitted
Not submitted

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Kind request for the ASP

National Focal points are kindly invited to confirm that the current contact Network for INSII is up to date and complete:

<https://docs.google.com/spreadsheets/d/1WLFy34ucMNXpSF-8IbldheGD0RKYKz5Djv6lw5xC-mc/edit?usp=sharing>



6

Global Soil Laboratory Network (GLOSOLAN)



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Global Soil Laboratory Network - GLOSOLAN

Established in 2017 to **harmonize soil laboratory methods and data, and to build the capacity of laboratories in soil analysis.** Three plus one major areas of work:



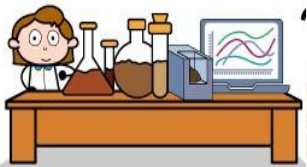
QA/QC

- Execution of external quality control (proficiency testing)
- Training on the execution of internal quality control



SOPs

- Harmonization of Standard Operation Procedures (SOPs)
- Training on the implementation of GLOSOLAN SOPs
- Training on safety and health



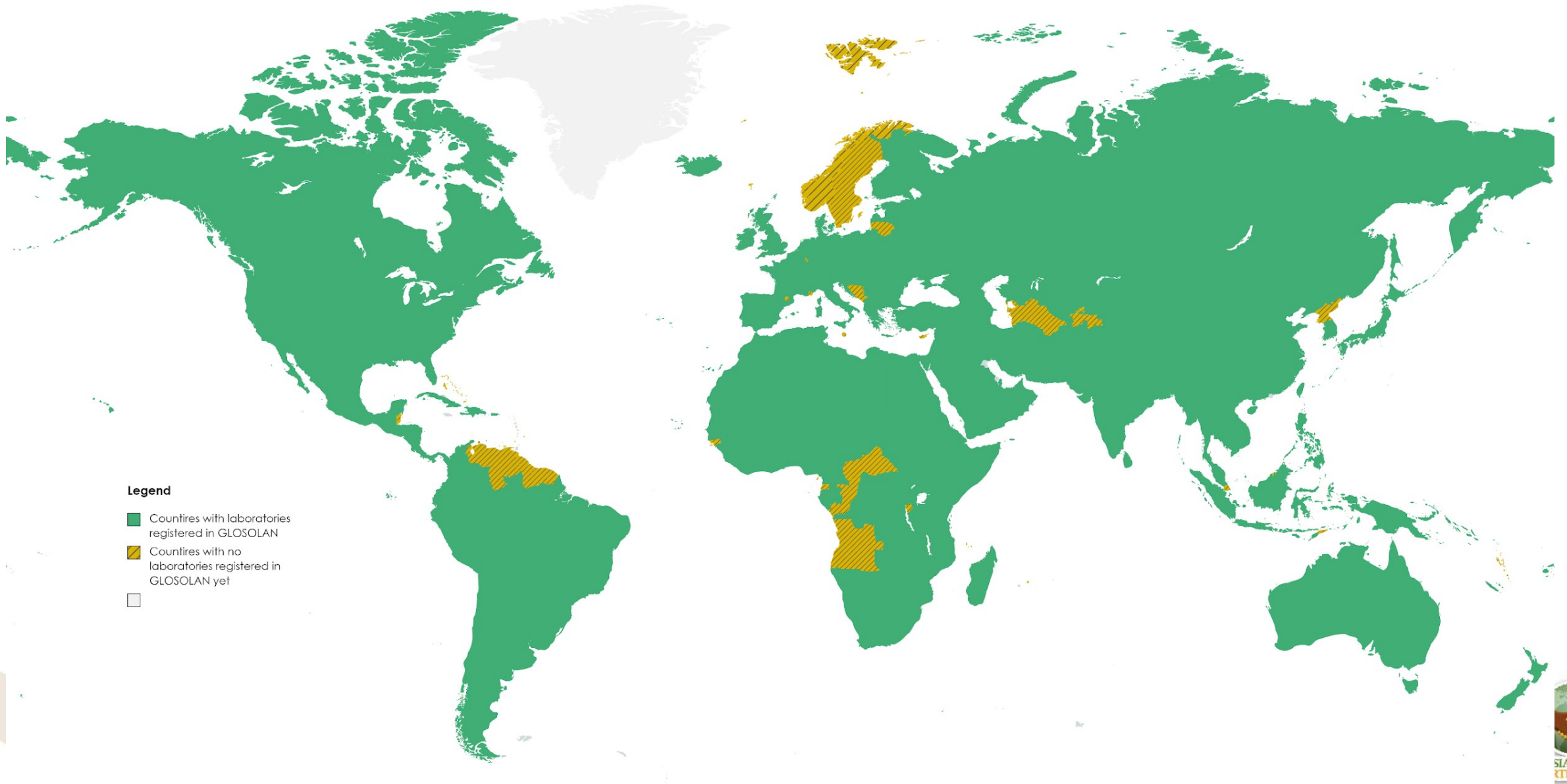
Equipment

- Training on equipment use, maintenance and purchasing
- Establishment of a donation/bartering system
- Spectroscopy

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827 laboratories registered from 151 countries





Operates through
Regional Soil Laboratory Networks (RESOLANs)



Operates at the national level through **registered laboratories**
and **National Reference Laboratories** especially, which are
tasked to establish
National Soil Laboratory Networks

Global (GLOSOLAN)



Regional (RESOLAN)



National (NASOLAN)

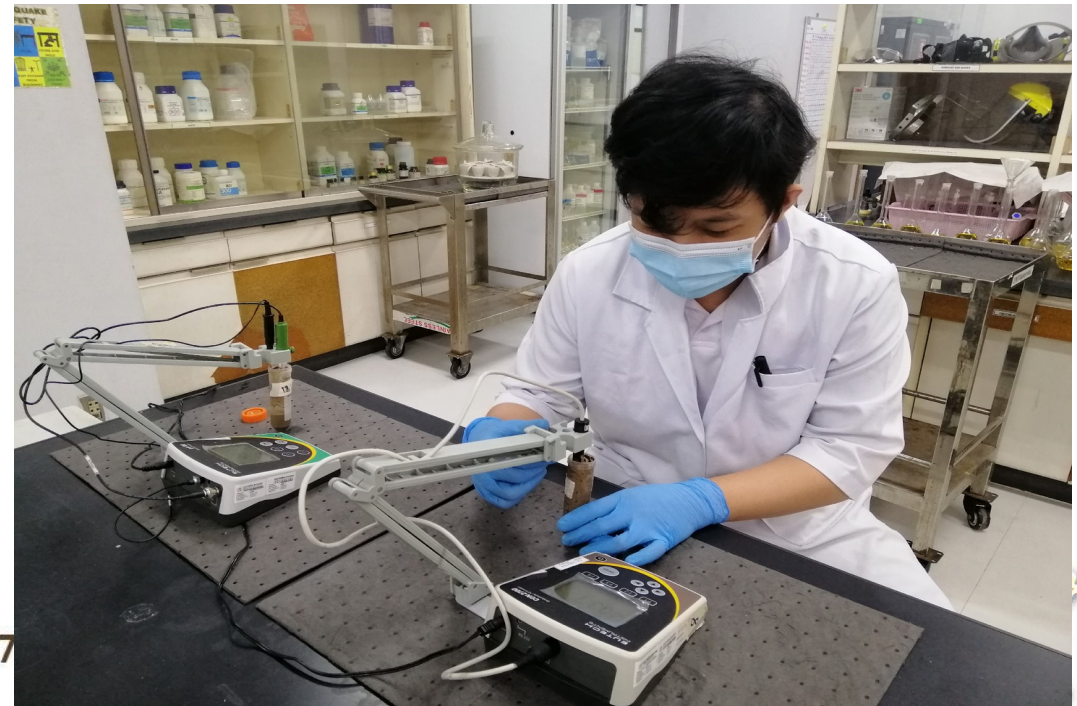
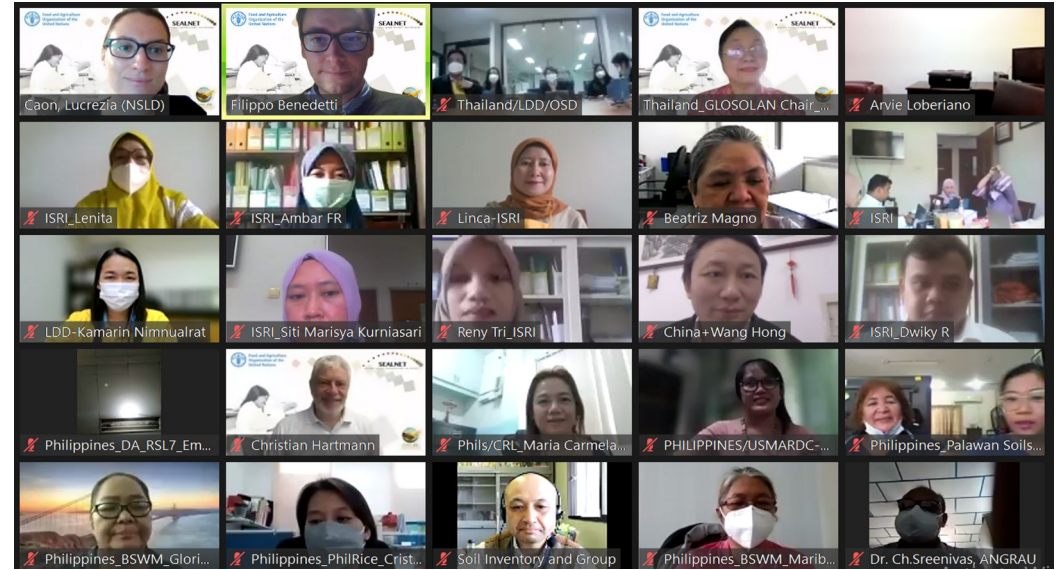


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Activities to support

- Motivate laboratories in your country to join GLOSOLAN and the Asian Soil Laboratory Network (SEALNET)
- Encourage national laboratories to participate to GLOSOLAN and SEALNET meetings and trainings, and global and regional proficiency tests (PTs)
- Support the establishment of your National Soil Laboratory Network (NASOLAN) and the organization of national PTs
- Facilitate the translation of GLOSOLAN material (publications, video subtitles, etc.) in your local language



7

International Network on Fertilizer Analysis (INFA)



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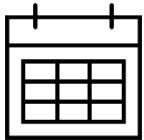


International Network on Fertilizer Analysis



INFA

International Network
on Fertilizers Analysis



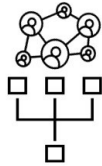
Launched in December 2020.

Second Meeting June 2021

Working groups workshops March 2022

Third Meeting October 2022

1



Harmonization of Methodologies for Fertilizers Analysis

- Standardization of fertilizer analysis methods
- Harmonization of fertilizer classification and definitions

2



Capacity Building/Strengthening

- Strengthen performance of fertilizer laboratories using standardized methods
- Provide training guidelines (literature + media)

3



Governance, Policy and Regulation

- Regulatory framework regarding fertilizer use and imports at the national, regional and global levels (database)
- Development of policy guidelines for fertilizer quality requirements

<https://www.fao.org/global-soil-partnership/glosolan/fertilizers-analysis-international-network-on-fertilizer-analysis/en/>

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INFA in Asia

28

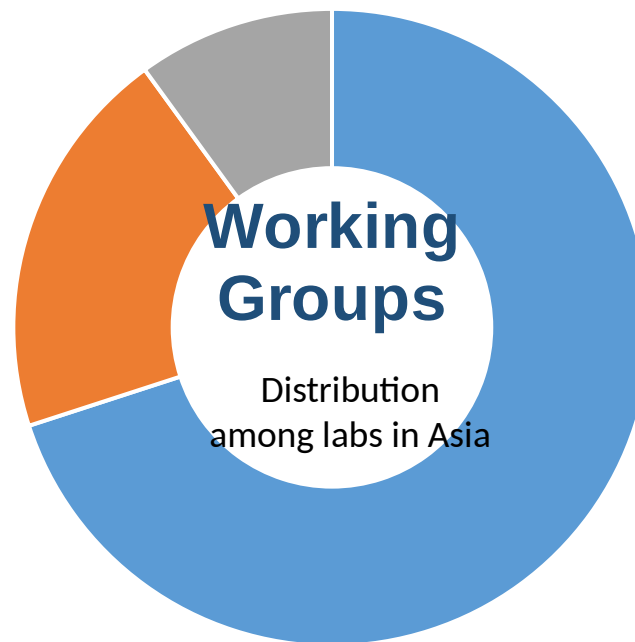


Laboratories have joined INFA

18
%



INFA counts on 154 members operating in more than 80 countries



- Working Group 1
Harmonization
14 laboratories.
- Working Group 2
Capacity building
4 laboratories.
- Working Group 3
Regulation and governance
2 laboratories

Kind request for the ASP



Encourage (via support from GSP Focal Points) **soil laboratories and other key stakeholders to join INFA** and implement agreed activities including harmonization, policy and regulations;



Join INFA!

Facilitate the activities related to the intercomparison tests to be **performed** (i.e., shipping and receiving of fertilizer samples).



Facilitate future work on PT

Facilitate the search and access to **information related with regulatory frameworks** regarding fertilizer use, and imports at the national, regional, and global levels.



Facilitate search for data & info

8

Soil Biodiversity



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International Network of Soil Biodiversity



- The NETSOB aims to **bring soil biodiversity experts and existing initiatives together** in order to become the human talent that contributes to the implementation of the GLOSOB.

Global Soil Biodiversity Observatory (GLOSOB)

- The GLOSOB will aim to **monitor and forecast the condition of soil biodiversity and soil health** and will serve as the framework for developing policies, promoting good practices, and developing **national capacities** on the state-of-the-art tools and methods on soil biodiversity and soil health assessment and maintenance.

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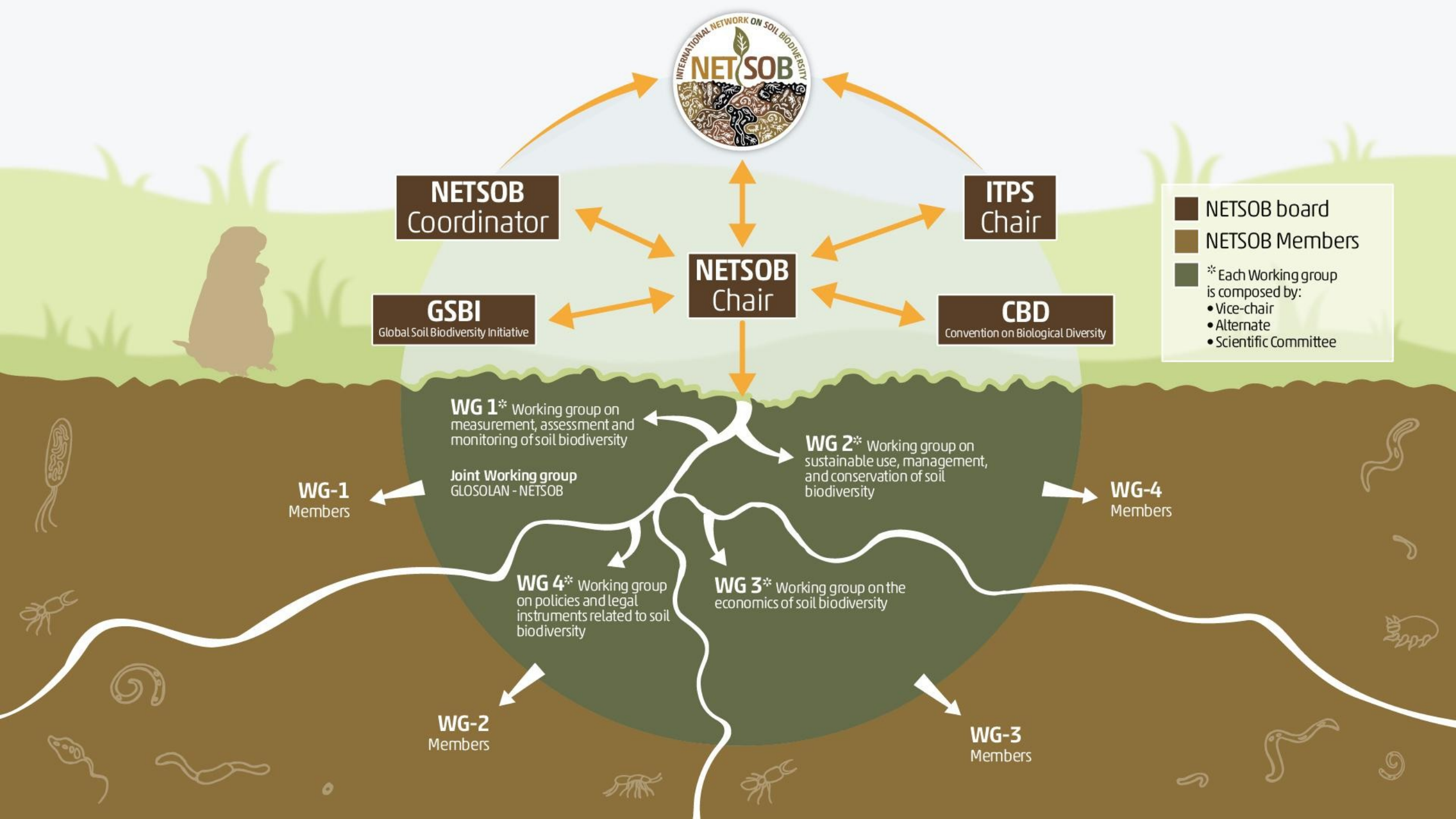
The overall goal of NETSOB was to promote the sustainable use and conservation of soil biodiversity

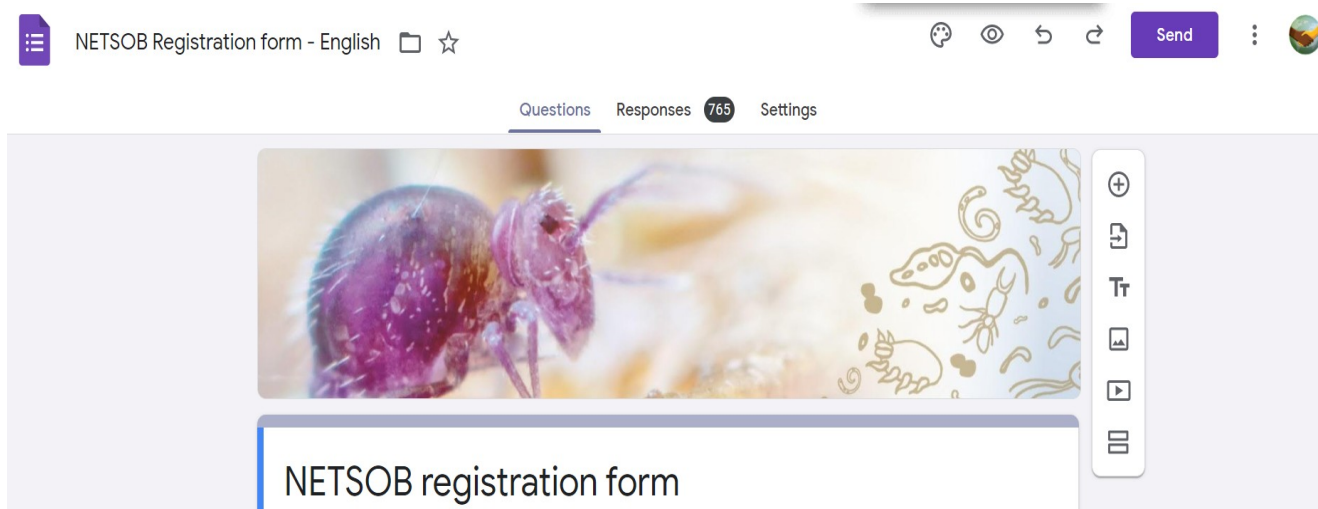
- providing the **human talent** for the implementation/coordination of **GLOSOB**;
- providing **reliable evidence to support better decision-making**, both in the field and at the policy level in the sustainable use and conservation of soil biodiversity;
- **strengthening the knowledge** about soil biodiversity;
- contributing to the development of **internationally-accepted biological indicators**;
- contributing to the **monitoring of soil biodiversity status and loss**;
- contributing to promoting actions to **increase the sustainable use of soil biodiversity and overall soil health**;
- contributing to the **adoption of good practices that would enhance availability and safety of food**; and
- identifying knowledge gaps and foster **investment and cooperation in soil biodiversity research**.



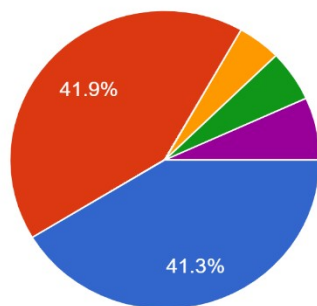
Launch of the **International Network on Soil Biodiversity** in the framework of the Global Soil Biodiversity Observatory | 3rd December 2021







Primary Preference
886 responses



- GW-1 on measurement, assessment and monitoring of soil biodiversity
- GW-2 on sustainable use, management, and conservation of soil biodiversity
- GW-3 on the economics of soil biodiversity
- GW-4 on policies and legal instruments related to soil biodiversity
- I only wish to receive the news and updates from NETSOB

Online survey

Personal information

Primary Preference

- Define priorities on WGs
- Define priorities in each WG (1-4)
- Suggest complementary activities

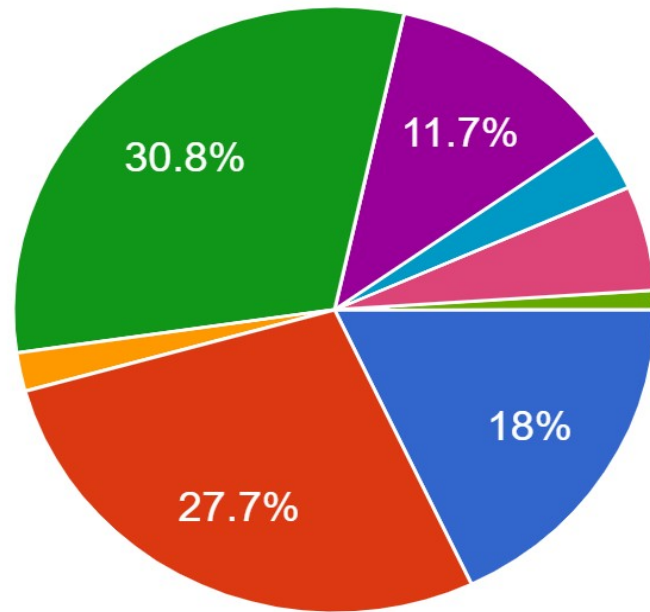
Secondary Preference

886 NETSOB members from around the world

<https://forms.gle/LhSsvwdqjoxcmacVA>

What region are you located in/or which region do you currently operate?

878 responses



- Africa
- Asia
- Eurasia
- Europe
- Latin America and the Caribbean
- North Africa and Near East
- North America
- Pacific



Advertisement to the ASP

First meeting of the joint working group GLOSOLAN/NETSOB

15 March 2022, at 12:00 pm CET (Rome Time)

Welcome Soil biodiversity experts in:

- Standard Operating Procedures (SOPs)
 - micro, meso and macrofauna
- and all interested in soil biodiversity

Contact

- Filippo.Benedetti@fao.org
- Rosa.CuevasCorona@fao.org

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9

Soil Pollution



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Global activities of regional interest: Soil pollution

There are 3 ongoing activities that can be of interest:

1. Technical guidelines for assessing, mapping, monitoring and reporting soil pollution ☐ authors can contribute to the different chapters. Contact Sergejus.Ustinov@fao.org
2. Launch of the International Network on Soil Pollution (INSOP)
3. Pilot site studies to assess and manage/remediate contaminated agricultural soils ☐ contact Natalia.rodriquezeugenio@fao.org

International Network on Soil Pollution (INSOP)

The INSOP has the overall aim of stopping soil pollution and achieve the global goal of zero pollution.

- INSOP will work to **improve knowledge** on the full cycle of soil pollution, **strengthen technical capacities** and **legislative frameworks** for the prevention of soil pollution, and will promote the exchange of experiences and technologies for the **sustainable management and remediation** of polluted soils.
- Launch of the network planned on 22 April (tbc)
- Institutions and individuals can join the network and contribute to its workplan



Advertisement to the ASP: Pilot site projects to manage/remediate contaminated agricultural soils

- **We are looking for agricultural areas contaminated or that may be contaminated by heavy metals** due to agricultural practices (e.g. use of cadmium-rich fertilizers)
- The project will support national/local governments **to develop a methodology to perform risk assessment and define which practices can be adopted to reduce the availability of heavy metals in soils** and hence reduce the uptake by plants and the contamination of food chain.
- Candidate countries should have basic information (hydrogeology, agricultural practices) and lab capacity to analyse heavy metals



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9-10 March 2022

