# Country Soil Information Survey

This survey is conducted by the Global Soil Partnership as a step towards establishing the Global Soil Information System (GLOSIS). The survey aims to assess soil databases and information systems currently existing on the national level, in order to plan global activities according to the capacities and needs of the countries.

In case of several soil property databases or information systems existing in your country, please submit a separate form for each database / information system.

Any issues with this form can be reported to the GSP Secretariat via GSP-Pillar4@fao.org

*Required

## Contact Details

Please provide contact details of the person submitting this form.

1. **Country** *

2. **Name** *

3. **Surname** *

4. **E-mail** *

5. **Institution / affiliation** *

## Databases of Soil Properties

Databases containing measured values of soil properties in a digital format, e.g. Oracle, MySQL, PostgreSQL, Microsoft Access, Excel, csv, txt, dbf, shp, tab, etc. (for derived maps of soil properties please see section Soil Information Systems)

6. **Does your country have digital databases of soil properties?** *

   *Mark only one oval.*

   - ◯ Yes
   - ◯ No *Skip to question 27.*
   - ◯ In process of establishing

## General Questions (database)

7. **Name of the database (affiliation)** *

8. **Reference (website/paper)**

9. **Who are the users of the database? For what purposes the data is used in your country?**

10. **Is the data publicly available?** *
*Mark only one oval.*
- ◯ Yes
- ◯ No
- ◯ Other: _____

## Database content

11. **What is the main spatial unit of the database?** *
*Mark only one oval.*
- ◯ Point-based
- ◯ Polygon-based
- ◯ Other: _____

12. **How many soil profiles are there in the database?** *

13. **How many topsoil samples are there in the database?** *

14. **How many locations with fixed-depth sampling are there in the database?** *

15. **What are the depths for fixed-depth sampling?** *

16. **Is all data georeferenced?** *
*Mark only one oval.*

- ◯ Yes
- ◯ No
- ◯ Other: _____

17. **What is the age of the data? (e.g. 1980-1990** *

## Which soil properties are considered in the database?

18. **Part 1: General Properties** *
*Tick all that apply.*

- ☐ Soil type
- ☐ Soil depth
- ☐ Organic carbon / organic matter
- ☐ Texture class
- ☐ Sand content
- ☐ Silt content
- ☐ Clay content
- ☐ Bulk density (measured)
- ☐ Coarse fragments (stoniness)
- ☐ pH
- ☐ CEC (cation exchange capacity)
- ☐ Water storage capacity
- ☐ Soil biodiversity paramaters
- ☐ None
- ☐ Other: _____

19. **Part 2: Plant Nutrients** *

*Tick all that apply.*

- [ ] Nitrogen (N)
- [ ] Phosphorus (P)
- [ ] Potassium (K)
- [ ] Calcium (Ca)
- [ ] Magnesium (Mg)
- [ ] Sulfur (S)
- [ ] Boron (B)
- [ ] Chlorine (Cl)
- [ ] Copper (Cu)
- [ ] Iron (Fe)
- [ ] Manganese (Mn)
- [ ] Molybdenum (Mo)
- [ ] Zink (Zn)
- [ ] None
- [ ] Other: _____

20. **Part 3: Soil Salinity** *

*Tick all that apply.*

- [ ] Electric conductivity (EC)
- [ ] Sodium Adsorption Ratio (SAR)
- [ ] Total Soluble Salts (TSS)
- [ ] Sodium (Na+)
- [ ] Magnesium (Mg++)
- [ ] Calcium (Ca++)
- [ ] Chloride (Cl-)
- [ ] Sulfate (SO4--)
- [ ] Carbonate (CO3--)
- [ ] Hydrogencarbonate (HCO3-)
- [ ] None
- [ ] Other: _____

21. **Part 4: Soil Pollution / Contamination** *
*Tick all that apply.*

- [ ] Heavy metals (Pb, Cr, Zn, As, Cu, Hg, Ni, Cd, Co)
- [ ] PAHs (e.g. oil pollution etc.)
- [ ] POPs (e.g. pesticide residues, pharmaceuticals, etc)
- [ ] None
- [ ] Other: _____

## Database structure & format

Please provide information about the database structure.

22. **What is the format of the database?** *
e.g. Oracle, MySQL, PostgreSQL, Microsoft Access, Excel, csv, txt, dbf, shp, tab, etc.

_____

23. **What kind of metadata is included in the database?** *
*Tick all that apply.*

- [ ] Measurement units
- [ ] Soil analysis methods
- [ ] Time (date) of soil survey / soil analysis
- [ ] Data source
- [ ] Data authorship/ownership
- [ ] None
- [ ] Other: _____

24. **Please describe the database structure (optional)**

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_____

_____

_____

_____

25. **Do you have a quality control for the data in the database?** *
*Mark only one oval.*

- ◯ Yes
- ◯ No *Skip to question 27.*

## Quality control / quality assessment

26. **Please describe the quality control/assessment procedure** *

## Soil Information Systems (SIS)

An electronic system which allows the users to access (browse, query, download) soil and related information via an interactive interface (online or through a corporate network)

27. **Does your country have a Soil Information System (SIS)?** *

*Mark only one oval.*

- Yes
- No *Skip to question 40.*
- In process of establishing

## General Questions (SIS)

28. **Name of the SIS (affiliation)** *

29. **Does the SIS derive information from the database, described above in "Databases of Soil Properties" section?** *

*Mark only one oval.*

- Yes
- No
- Other:

30. **Reference (website/paper)**

31. **Who are the users of the SIS? For what purposes SIS is used in your country?**

32. **Is the data publicly available?** *

*Mark only one oval.*

- ◯ Yes
- ◯ No
- ◯ Other: _____

## SIS Structure and Content

33. **What components does the SIS have?** *

*Tick all that apply.*

- ☐ Soil data
- ☐ Land use / land management data
- ☐ Supplementary environmental data (land cover, topography, climate, geology, water, etc),
- ☐ Environment protection data (soil threats, degradation processes, etc.)
- ☐ Administrative boundaries
- ☐ Other: _____

34. **Please specify soil data format** *

*Tick all that apply.*

- ☐ Point data - soil profiles
- ☐ Soil horizons (layers) data associated with profile location
- ☐ Point data - topsoil samples
- ☐ Polygon data - soil mapping units
- ☐ Raster data - derived soil properties
- ☐ None
- ☐ Other: _____

35. **Please specify land use / land management data format (if applicable)** *

*Tick all that apply.*

- ☐ Polygon/raster data - land use types
- ☐ Polygon/raster data - major crops
- ☐ Polygon/raster data - agricultural systems
- ☐ Polygon/raster data - crop productivity
- ☐ Polygon/raster data - irrigation
- ☐ Polygon data - land owners
- ☐ None
- ☐ Other: _____

36. **Please specify supplementary environmental data format (if applicable)** *

*Tick all that apply.*

- [ ] Polygon/raster data - land cover types (e.g. cropland, grassland, forest, urban, etc.)
- [ ] Polygon/raster data - topography (e.g. elevation, slope, etc.)
- [ ] Polygon/raster data - climate (e.g. mean temperature, rainfall, etc.)
- [ ] Polygon/raster data - geology (e.g. geology map, map of Quaternary sediments, etc.)
- [ ] Polygon/raster data - water (e.g. watersheds, water quality for irrigation, ground water level, etc.)
- [ ] None
- [ ] Other: _____

37. **Please specify environment protection data format (if applicable)** *

*Tick all that apply.*

- [ ] Point data - soil monitoring sites
- [ ] Point data - contaminated sites
- [ ] Polygon/raster data - contaminated areas
- [ ] Raster data - greenhouse gas emissions
- [ ] Raster data - carbon sequestration potential
- [ ] Polygon/raster data - eroded soils
- [ ] Polygon/raster data - soil erosion risk
- [ ] Polygon/raster data - salt-affected areas
- [ ] Polygon/raster data - salinization risk
- [ ] Polygon/raster data - soil compaction
- [ ] Polygon/raster data - soil acidification
- [ ] Polygon/raster data - soil sealing
- [ ] Polygon/raster data - environment protection/conservation areas
- [ ] None
- [ ] Other: _____

38. **What are the data sharing protocols? (e.g. WMS, WFS, geonetwork, data downloading, etc…)** *

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39. **Please, describe the principles of organization of the SIS (optional)**

## Soil Monitoring

40. **Does your country have a soil monitoring system?** *
*Mark only one oval.*

- ◯ Yes
- ◯ No *Skip to question 45.*
- ◯ Other: _____

## Which soil properties are being monitored?

41. **Part 1: General Properties** *
*Tick all that apply.*

- ☐ Soil type
- ☐ Soil depth
- ☐ Organic carbon / organic matter
- ☐ Texture class
- ☐ Sand content
- ☐ Silt content
- ☐ Clay content
- ☐ Bulk density (measured)
- ☐ Coarse fragments (stoniness)
- ☐ pH
- ☐ CEC (cation exchange capacity)
- ☐ Water storage capacity
- ☐ Soil biodiversity paramaters
- ☐ None
- ☐ Other: _____

42. **Part 2: Plant Nutrients** *

*Tick all that apply.*

- [ ] Nitrogen (N)
- [ ] Phosphorus (P)
- [ ] Potassium (K)
- [ ] Calcium (Ca)
- [ ] Magnesium (Mg)
- [ ] Sulfur (S)
- [ ] Boron (B)
- [ ] Chlorine (Cl)
- [ ] Copper (Cu)
- [ ] Iron (Fe)
- [ ] Manganese (Mn)
- [ ] Molybdenum (Mo)
- [ ] Zink (Zn)
- [ ] None
- [ ] Other: _____

43. **Part 3: Soil Salinity / Alkalinity** *

*Tick all that apply.*

- [ ] Electric conductivity (EC)
- [ ] Sodium Adsorption Ratio (SAR)
- [ ] Total Soluble Salts (TSS)
- [ ] Sodium (Na+)
- [ ] Magnesium (Mg++)
- [ ] Calcium (Ca++)
- [ ] Chloride (Cl-)
- [ ] Sulfate (SO4--)
- [ ] Carbonate (CO3--)
- [ ] Hydrogencarbonate (HCO3-)
- [ ] None
- [ ] Other: _____

44. **Part 4: Soil Pollution / Contamination** *

*Tick all that apply.*

- [ ] Heavy metals (Pb, Cr, Zn, As, Cu, Hg, Ni, Cd, Co)
- [ ] PAHs (e.g. oil pollution etc.)
- [ ] POPs (e.g. pesticide residues, pharmaceuticals, etc)
- [ ] None
- [ ] Other: _____

## Final questions and remarks

45. **Do you think it is necessary for your country to develop a Soil Information System (or to improve the existing ones)?** *

*Mark only one oval.*

- ◯ Yes
- ◯ No

46. **Comments / remarks**

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