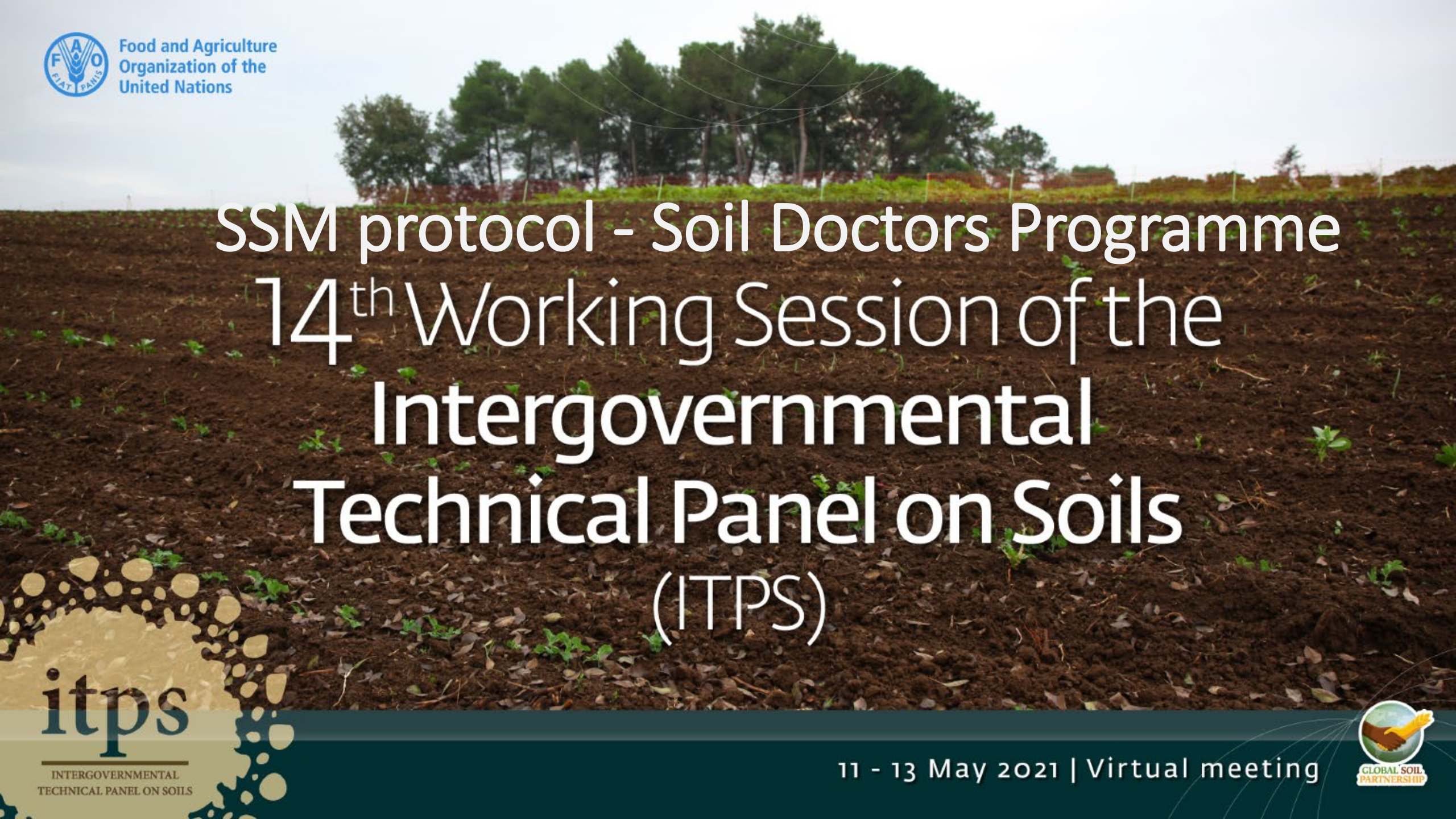
Food and Agriculture Organization of the United Nations
SSM protocol - Soil Doctors Programme
14th Working Session of the
Intergovernmental Technical Panel on Soils
(ITPS)
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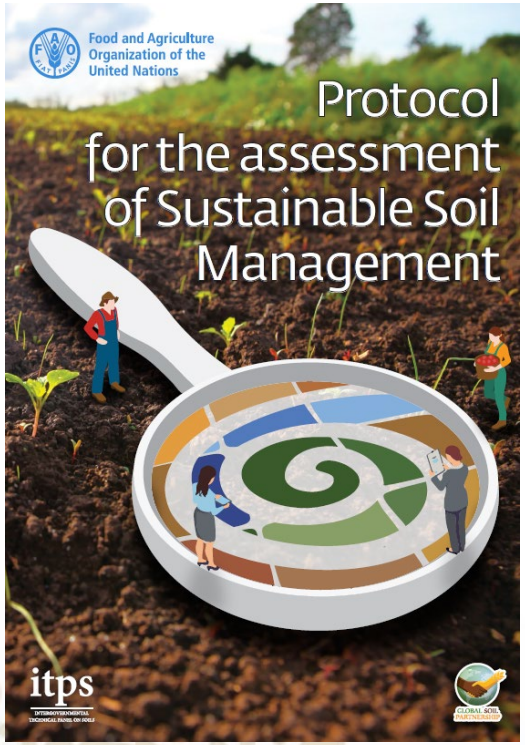
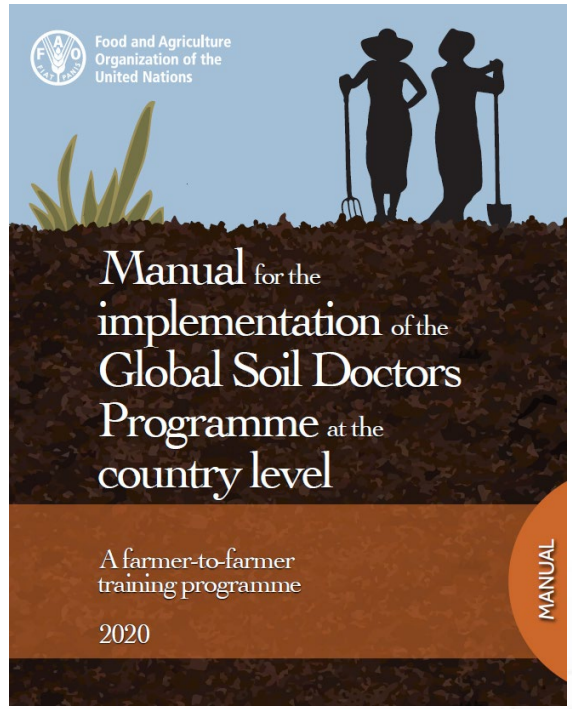
INTERGOVERNMENTAL TECHNICAL PANEL ON SOILS
11 - 13 May 2021 | Virtual meeting
GLOBAL SOIL PARTNERSHIP

Food and Agriculture Organization of the United Nations

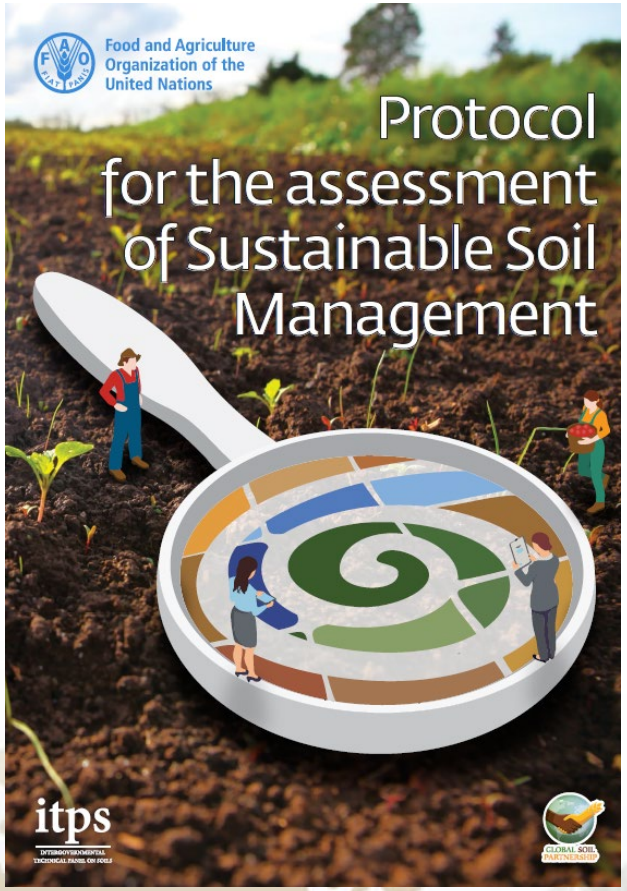


- Protocol for the assessment of Sustainable Soil Management: training manual and annexes
- Implementation of the Global Soil Doctors Programme

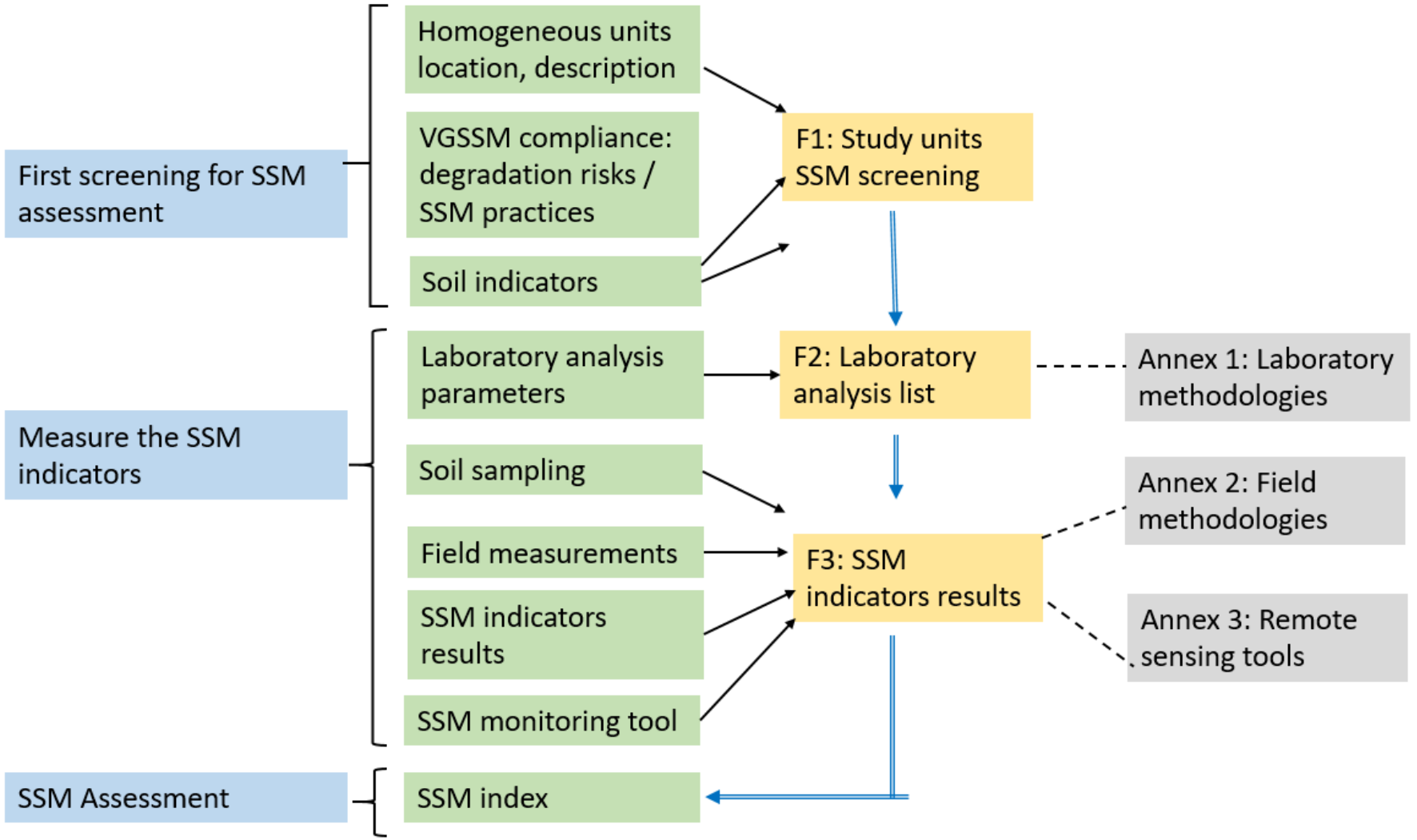


Food and Agriculture Organization of the United Nations

Protocol for the assessment of Sustainable Soil Management



Structure of the **training manual** and associated tools



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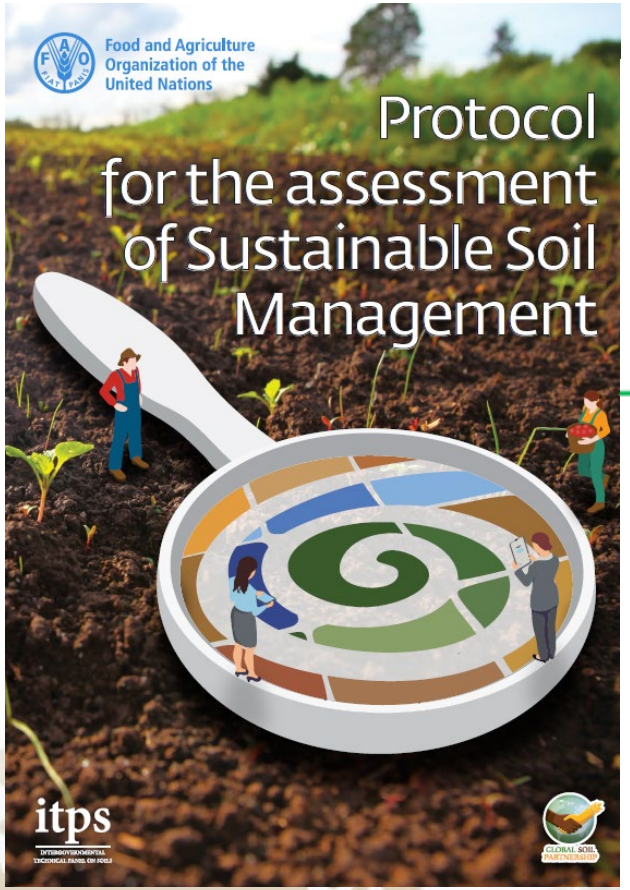
Protocol for the assessment of Sustainable Soil Management



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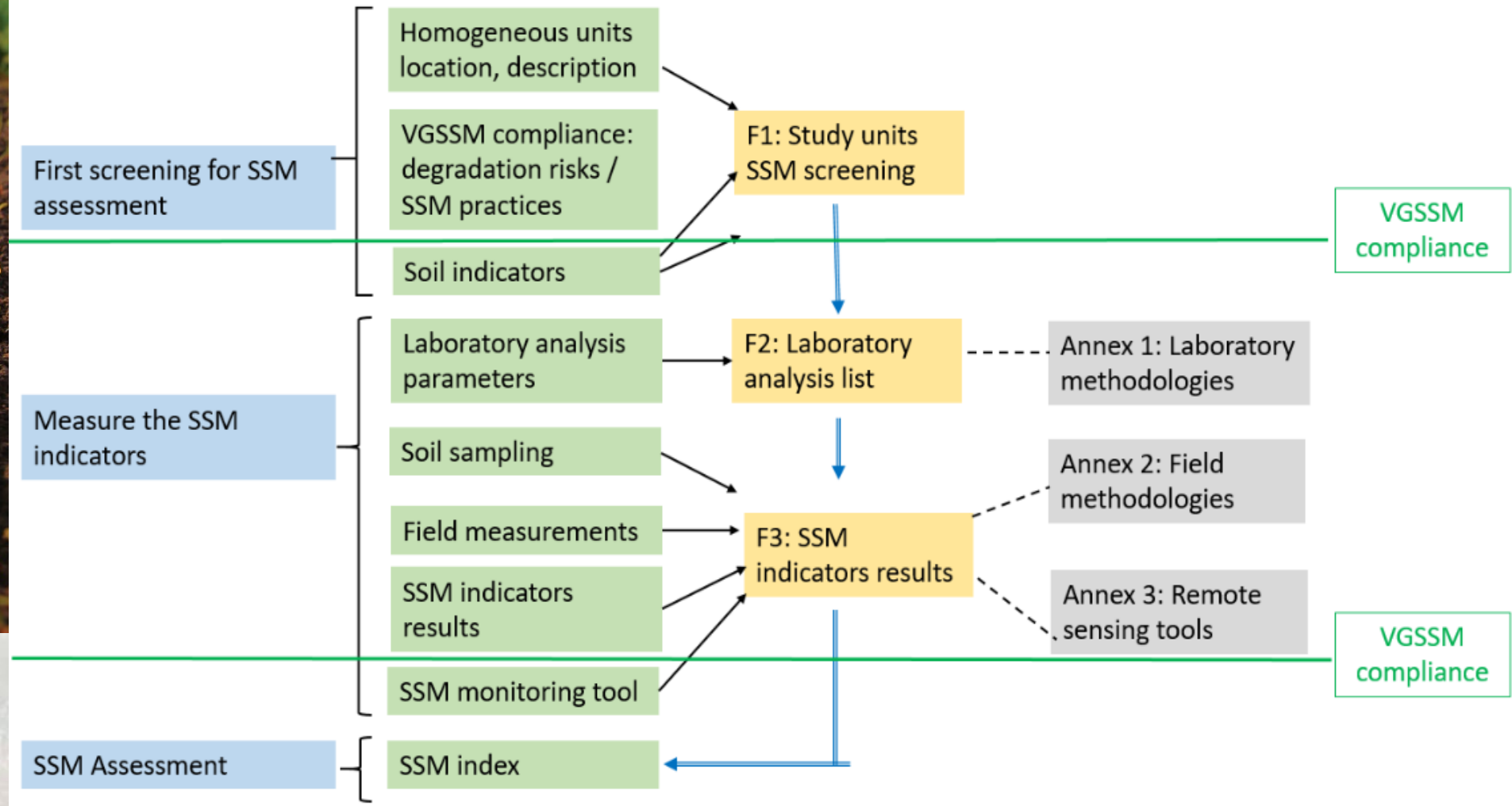

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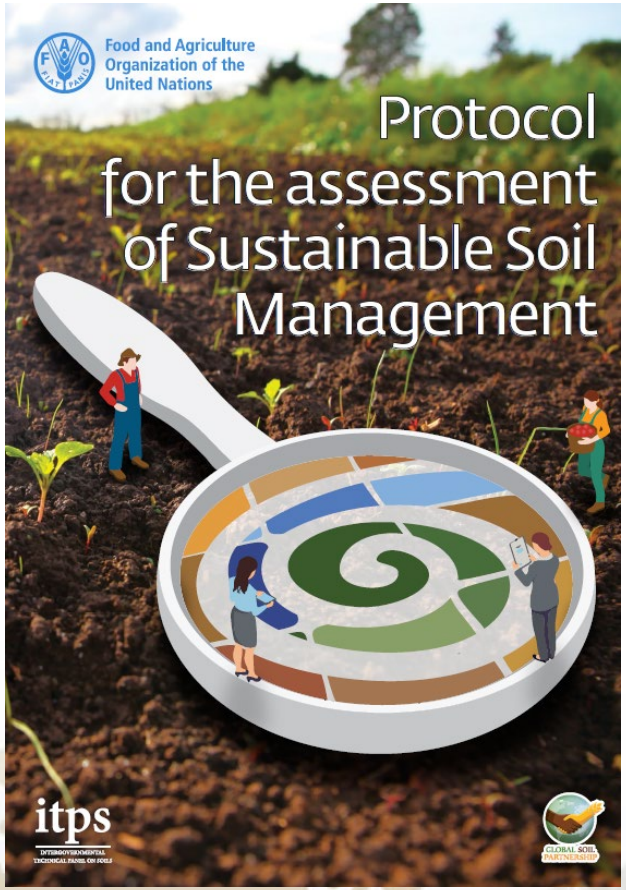
PARTNERSHIP

Protocol for the assessment of Sustainable Soil Management



F1 – STUDY AREA SSM SCREENING

1. Study area and homogeneous units to assess

The study area correspond to the total area of the assessment to implement, and it can include several homogeneous units.

1. Name of the farmer: _____
2. Location of the study area (Country, department, Name of the site) : _____

2. Evaluation of the soil degradation risks

E: erosion, C: organic carbon loss, N: Nutrients imbalance, S: salinization, P: pollution, pH, B: biodiversity loss, F: physical degradation

Dt * this parameter is determinant for the soil degradation risk.

	Y/N	Dt	Type
Field and soils characteristics, based in observations or previous analysis			
1. There is an unexplained reduction in yield			N, P, S, E, F, B
2. There are bare patches of soil that cannot be explained			E, S, N, C, P
3. The field characteristics can lead to the loss of nutrients and organic matter via leaching or runoff if excessive watering or rain is present			*E, C, N*
4. Presence of clear signs of soil erosion (gullies, rills etc.)		*	*E, C, N, B*

3. SSM practice(s) to assess

Implementation starting date: _____

Purpose of the practice: (multiple answers possible)

- ○ Improve production (crop, fodder, wood/ fibre, water, energy)
- ○ Reduce soil degradation
- ○ Conserve ecosystem
- ○ Reduce risk of disasters (e.g. droughts, floods, landslides)
- ○ Other

Each homogeneous unit has the same characteristics of: i) land use type, ii) Crop system and iii) Topography

First screening of the **VGSSM compliance**, if soil degradation risks are addressed by the SSM practice

Description of the SSM practices to assess according to the SOC manual criteria

Identification of the soil indicators to analyze

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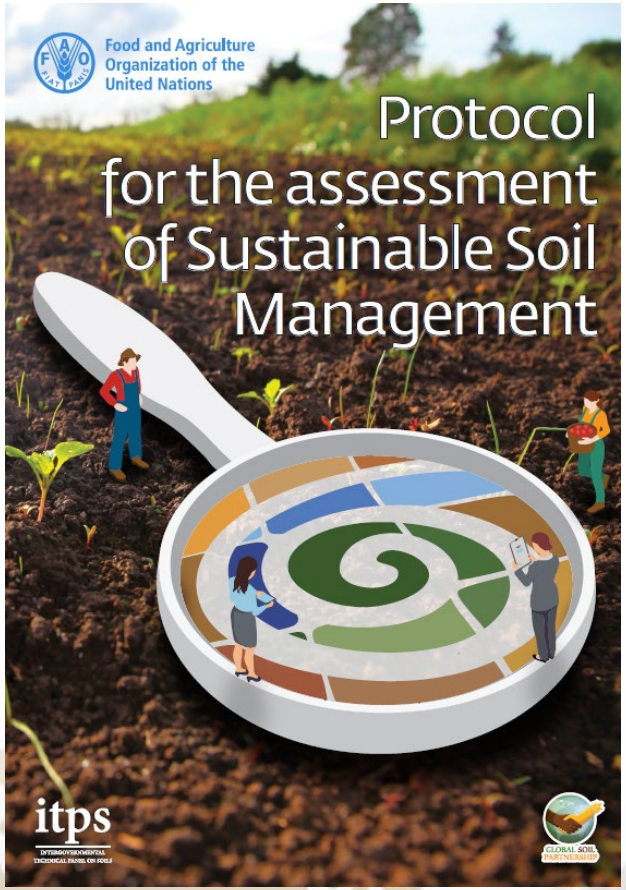
Protocol for the assessment of Sustainable Soil Management



F2 – SSM INDICATORS - LABORATORY ANALYSIS

Once filled, this table can be used for the soil laboratory quotation and the soil sampling preparation.

All the methodologies references and descriptions are reported in the Recommended Laboratory Methodologies Annex

Parameter	Measurement method	Environmental risk	Technology level	Sample characteristics	(X)
Soil organic carbon:				recommended indicator	
*Organic carbon %	Walkley- Black method Titration and colorimetric method GLOSOLAN-SOP-02	High	Low	Representative soil sample	
*Organic carbon %	Tyurin colorimetric method GLOSOLAN	High	Low		
Total carbon	Dumas method Dry combustion method GLOSOLAN-SOP-03				
Soil physical properties :				recommended indicator	
*Bulk density	Core method			Undisturbed	

Format for the soil laboratory quotation including GLOSOLAN reference methodologies, environmental and technic criteria and sample characteristics

F3 – HOMOGENEOUS UNIT SAMPLING RESULTS

1. Soil Observations

Parameters	1	2	3	4	5
GPS[1] east/west					
GPS north/south					
Roots depth (cm)					
Roots quality (P, M or G)					
Macroinvertebrates (P, M or G)					

Include the soil observations for each subsample to validate the data and homogeneity

2. Soil analysis results

	Indicator	Result	Reference table
1	Soil production		
2	SOC		
3	Bulk density		

VGSSM compliance, according to reference values adjusted at the local level

3. Comparison unit: Baseline reference or adjacent control

Each comparison unit has the same characteristics of land use type, crop system and topography than the study unit.

The assessment can also be implemented through a baseline comparison, when local data are not available

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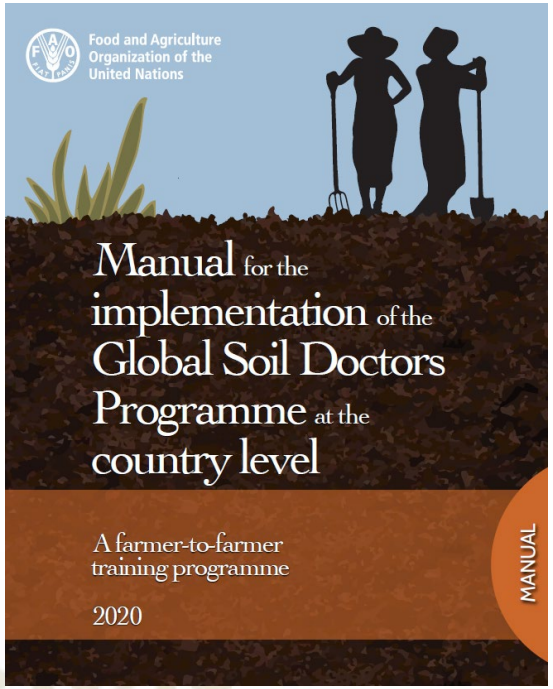
GLOBAL SOIL PARTNERSHIP

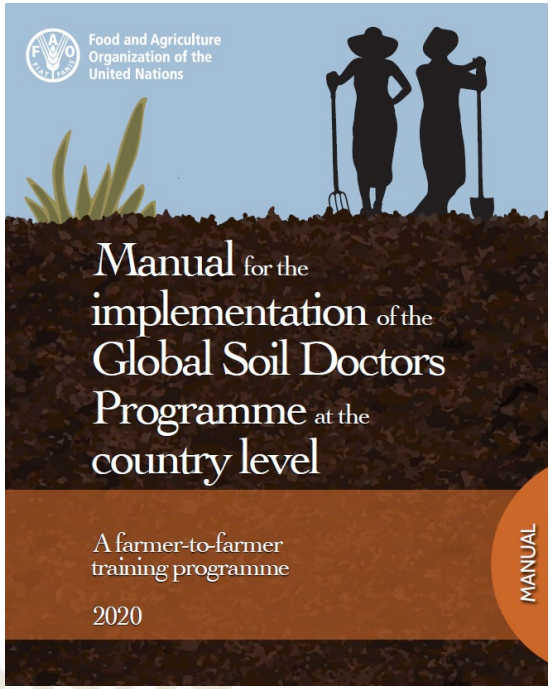
Implementation of the Global Soil Doctors Programme



1. Online questionnaire disseminated through the newsletter and the webinar participants.
2. Pilot implementations
   - La Motte kits sent to Botswana, South Africa and India
   - FAO projects interested: Kazakhstan, Uzbekistan
   - Soils4nutrition project (Bangladesh, Malawi, Burkina Faso)
   - Better Cotton Initiative (Mali, Mozambique)
   - Regional soil partnership from Latin America, Asia
3. Posters translation (Spanish, Russian, French - Kazak, Bangla, Chichewa)
4. Roadmap for the GSDP implementation
5. Rotary Club proposal in Turkey
6. PHOSAGRO project

500 to 700 Soil Doctors

Implementation of the Global Soil Doctors Programme



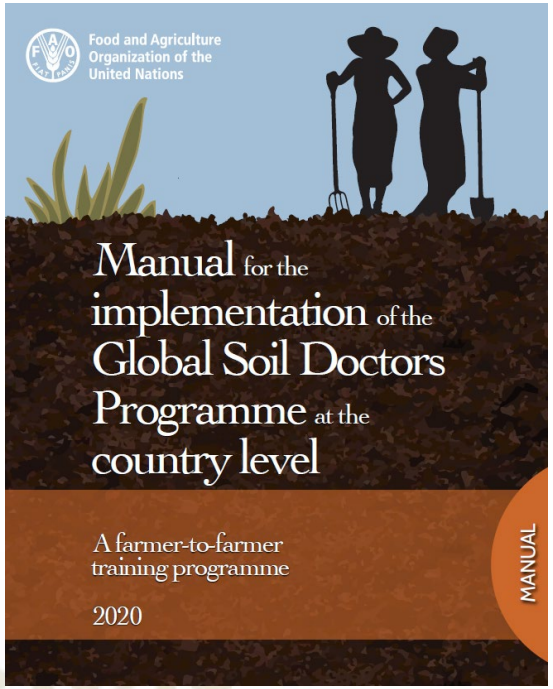
Roadmap for the GSDP implementation

Some additional data, complementary to the Implementation Manual:

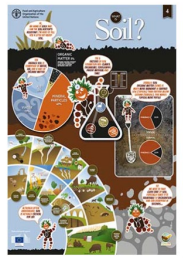
- GSDP promoters detailed selection criteria (financial resources, ability to implement the programme)
- Training certificates for master trainers provided by the GSP
- Master trainers detailed selection criteria
- Soil Doctors selection process: different local contexts and language barrier
- Detailed description of the whole process and associated costs

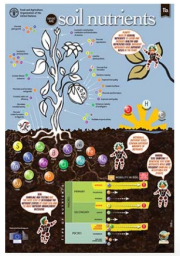
Implementation of the Global Soil Doctors Programme

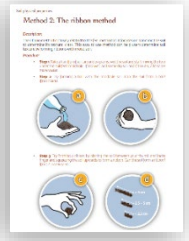
Guidelines for Soil Doctors training: farmer field schools structure

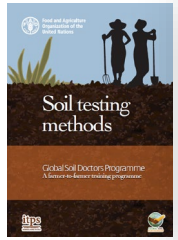


Domain of learning
Technical
Practical
Empowerment/emancipation



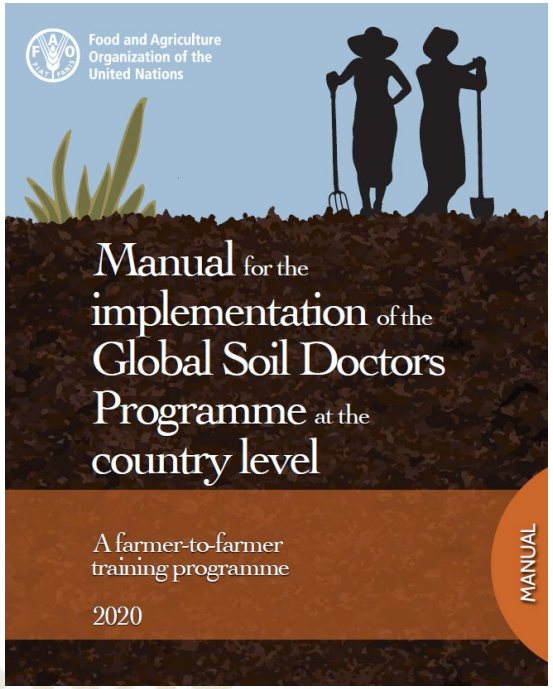






Training support: Power point documents and videos

Implementation of the Global Soil Doctors Programme



Additional materials development

- Posters on soil pollution
- Collaboration with LATSOLAN for laboratory analysis posters
- Guidelines for training
- Soil kits standard list, to adapt to each country
- Soil testing methods: to adjust and complete
- Educational videos

Food and Agriculture Organization of the United Nations

Expected collaboration with the ITPS:

Protocol for the assessment of Sustainable Soil Management: training manual and annexes

- Training manual validation
- Local reference tables development

- **Implementation of the Global Soil Doctors Programme**
  - Additional posters, videos and field methods to develop and validate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