



Food and Agriculture  
Organization of the  
United Nations

# 15<sup>th</sup> Working Session of the Intergovernmental Technical Panel on Soils (ITPS)

## SOC manual SSM practices database

### GSP SECRETARIAT

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INTERGOVERNMENTAL  
TECHNICAL PANEL ON SOILS

15 - 17 November 2021 | Virtual meeting



# SOC Manual – SSM Practices database

53 columns

All the SOC manual information included... Minimization of threats / potential barriers....

LAN	Lead author name					
LUS	Land use system					
GP	General practice					
SP	Specific practice					
PN	Practice number					
Link	Link					
ROA	Range of applicability					
Loc	Location (region and country)					
Clima	Climate zone	Zone				
MAP	Climate zone	MAP (mm)				
MAT	Climate zone	MAT (°C)				
Soil	Soil type	Soil type				
Tex	Soil type	Texture				
pH	Soil type	pH				
BCS	Baseline C stock (tC/ha) (If the value have an * the unit is percentage - %)					
ACS	Additional C storage (tC/ha/yr) (tnC/ha) (If the value have an * the unit is percentage - %)					
Dur	Duration					
Treat	More information	Treatments				
Depth	More information	Depth (cm)				
Ref	Reference					
MEro	Minimization of threats to soil functions		Soil erosion			
MNIC	Minimization of threats to soil functions		Nutrient imbalance and cycles			
MSSA	Minimization of threats to soil functions		Soil salinization and alkalinization			
MSeal	Minimization of threats to soil functions		Sealing			

MSBL	Minimization of threats to soil functions	Soil biodiversity loss	
MSCP	Minimization of threats to soil functions	Soil contamination / pollution	
MAci	Minimization of threats to soil functions	Soil acidification	
MCom	Minimization of threats to soil functions	Soil compaction	
MWat	Minimization of threats to soil functions	Waterlogging	
IP	Others benefits of the practice	Increases in production	
MACC	Others benefits of the practice	Mitigation of and adaptation to climate change	
SEB	Others benefits of the practice	Socio-economic benefits	
Bio	Potential barriers to adoption	Biophysical	
CultSoc	Potential barriers to adoption	Cultural/Social	
Econ	Potential barriers to adoption	Economic	
Inst	Potential barriers to adoption	Institutional	
Legal	Potential barriers to adoption	Legal (Right to soil)	
Know	Potential barriers to adoption	Knowledge	
DEro	Potential drawbacks to the practice	Soil erosion	
DNIC	Potential drawbacks to the practice	Nutrient imbalance and cycles	
DSCP	Potential drawbacks to the practice	Soil contamination / pollution	
DSBL	Potential drawbacks to the practice	Soil biodiversity loss	
Dwat	Potential drawbacks to the practice	Waterlogging	
DAci	Potential drawbacks to the practice	Soil acidification	
Dcom	Potential drawbacks to the practice	Soil compaction	
Dseal	Potential drawbacks to the practice	Sealing	
DSSA	Potential drawbacks to the practice	Soil salinization and alkalinization	
DSWM	Potential drawbacks to the practice	Soil water management	
DGHG	Potential drawbacks to the practice	Increases GHG emissions	
DCOP	Potential drawbacks to the practice	Conflict with other practice(S)	
DDP	Potential drawbacks to the practice	Decreases in production	



# SOC Manual – SSM Practices database

## Select the SOC practices:

- In a specific climate
- For a land use system
- For a specific soil threat
- For a specific barrier
- For a potential drawback



## Example:

- Practices used to minimize biodiversity loss

## VOLUME 4



V	LAN	LUS	GP	SP
4	Thérèse Atallah et al.	Drylands	Cover crops	No-till
4	Eric Blanchart et al.		Integrated soil fertility	Organic matter additions (Manure, composts)
4	Stefani Daryanto et al.		Intercropping	No-till, N Fertilization
4	Gunasekhar Nachimuthu et al.	NA	Reduced tillage	Crop rotations, Fertilization
4	Aizhen Liang et al.	Black soils	No-till	Mulching
4	Naruo Matsumoto et al.	NA	No-till	Mulching, Organic matter additions
4	Stefano Brenna	NA	Conservation agriculture	Adapted irrigation
4	Adriano Sofo	NA	Soil cover	No-till, Adapted irrigation
4	Mohammad I. Khalil et al.	Grassland	Grassland diversification	Agrosilvo-pastoralism
4	María José Marqués et al.	NA	Cover crops	Strip cropping
4	Iñigo Virto et al.	Drylands	Organic farming	Crop rotation, Irrigation
4	Layla M. San-Emeterio	Drylands	No-till	Mulching, Terracing
4	María Sánchez-García et al.	Drylands	Biochar	Compost, Organic farming
4	Erhan Akça et al.	Drylands	Manure	Mixed-farming
4	Mehmet Ali Çullu et al.	Drylands	Crop rotation	Adapted irrigation
4	Yevhen Skrylnyk et al.	Black Soils	Integrated soil fertility	Mulching
4	Edoardo A.C. et al.	NA	Composting	Cover crops, Intercropping
4	José Luis Vicente-Vicente et al.	NA	Organic amendments	Cover crops
4	Alberto C. de Campos Bernardes	NA	Liming	No-till
4	Mohammad I. Khalil et al.	Grassland	Sylvo-pastoralism	Agrosilvo-pastoralism, Degraded pasture
4	Aurelio Báez Pérez et al.	NA	Crop rotations	Manure, Intercropping
4	Fernando García Préchac et al.	Black soils	Crop Rotations	Mixed-farming
4	Maren Oelbermann	NA	Biochar	Manure, Chemical fertilization
4	Waqas Ahmad et al.		No-till	Irrigation, Deficit irrigation

## Example:

- Practices used to minimize biodiversity loss

## VOLUME 5

V	LAN	LUS	GP	SP
5	Mathias Mayer et al.	Managed forests and silviculture	Harvest systems that limit soil disturbance and reduced	Harvest systems that limit soil disturbance and reduced impact logging
5	David Paré, Laurent Augusto	Managed forests and silviculture	Soil cover	Continuous cover forestry and extended rotations
5	Gabriel W.D. Ferreira, Cindy E. Prescott	Managed forests and silviculture	Soil cover	Residue retention
5	Cindy E. Prescott, Yann Nouvellon	Managed forests and silviculture	Forest restoration	Forest Afforestation, reforestation and natural regeneration
5	Montserrat Díaz-Raviña et al.	Managed forests and silviculture	Forest restoration	Rehabilitation of forest soils affected by wildfires
5	Blanca Bernal	Managed forests and silviculture	Forest restoration	Forest Landscape Restoration
5	Valerie Hagger, Catherine E. Lovelock	Wetlands	Wetland management	Avoiding conversion and conservation of wetlands
5	Shangqi Xu et al.	Wetlands	Wetland management	Wetland restoration (water supplementation and promoting plant
5	Laura Villegas et al.	Wetlands	Critical wetland ecosystems / Peatland	Conservation of peatlands (Avoiding drainage)
5	Felix Beer et al.	Wetlands	Critical wetland ecosystems / Peatland	Restoration of peatlands
5	Beth A. Middleton et al.	Wetlands	Critical wetland ecosystems / Mangroves and organic forest	Restoration of organic coastal and inland freshwater forests
5	Sara Ibáñez-Asensio	Wetlands	Critical wetland ecosystems / Rice paddies	Straw residue management (burning, incorporation or removal)
5	Prafulla K. Nayak et al.	Wetlands	Critical wetland ecosystems / Rice paddies	Integrated rice-based farming systems
5	John M. Galbraith	Urban soils and infrastructures	Urban infrastructures	Management of gardens, parks, and lawns
5	John M. Galbraith	Urban soils and infrastructures	Urban Agriculture	Urban Agriculture
5	Jennifer Mason et al.	Urban soils and infrastructures	Urban Forestry	Urban Forestry

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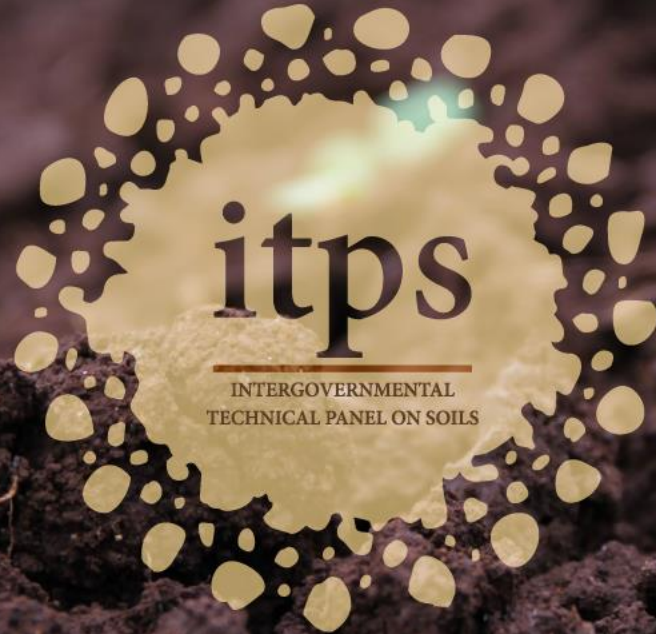
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THANK YOU FOR YOUR ATTENTION!



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