



Food and Agriculture
Organization of the
United Nations

Global Soil Partnership

Global Soil Partnership, promoting sustainable soil management beyond 2015

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FAO



GLOBAL SOIL
PARTNERSHIP

Soil functions

Soils deliver ecosystem services that enable life on Earth



2015
International
Year of Soils
fao.org/soils-2015

Soil foundation of nutrition

Role of 18 nutrients necessary to plant growth and to human health

Soil degradation leads to the loss of soil micro and macronutrients

Nutrient-poor soils are unable to produce healthy food with all the necessary nutrients for a healthy person

Over 2 billion people suffer from micronutrient deficiencies

Sustainable soil management is required for boosting healthy soils for healthy food and healthy people

ensure crop rotation

reduce erosion

keep soil surface covered

minimize tillage

increase soil organic matter content

- Promote plant growth
- Helps to survive in winter
- Involved in photosynthesis
- Increases diseases resistance
- Reduces plant respiration
- Promotes root formation and growth
- Interferes with P uptake
- Increases water-use efficiency
- Stimulates microbial activity
- Promote formation of legume nodules
- Involved in carbohydrate metabolism and translocation of starches
- Promotes reproduction
- Aids translocation of photosynthesis from leaves to fruiting organs
- Acts as an O₂ carrier
- Fruit formation
- Provoke maturity
- Fruit quality
- Fruit flavour
- Seed formation
- Seed quality
- Enhances maturity of small grains
- Involved in enzymes functionality and Fe and P utilization
- Responsible for enzymes activity
- Helps enzymes activity and increases the availability of P and Ca

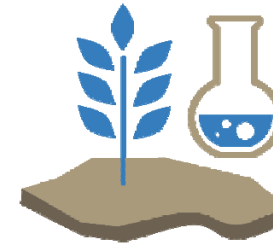
- Helps in muscles and brain functioning
- Perception of taste
- Immune system health
- Part of proteins
- Critical to muscles function and nerves transmission
- Important in immune system health, blood clotting and pressure regulation
- Part of proteins, DNA, RNA and blood
- Promotes digestive process
- Maintains acid-base balance
- Needed for proper fluid balance
- Necessary to fetal development, and part of reproduction system
- Part of enzymes
- Helps carrying oxygen to the tissues
- Important for healthy bones
- Part of enzymes, DNA, RNA, proteins and immune system health
- Part of enzymes and involved in Fe metabolism



Saving our soils and promoting its sustainable management



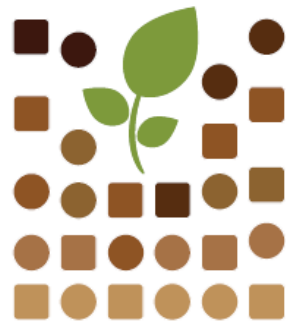
effective
education &
extension
programmes



effective
research



effective
financial support
**sustainable soil
management**



Soil
Information
Systems



effective
policies and
governance



Response from FAO and its members



**GLOBAL SOIL
PARTNERSHIP**

- 194 Member countries
> 350 non-state partners



An Agenda for Action



**To promote Sustainable Soil
Management**



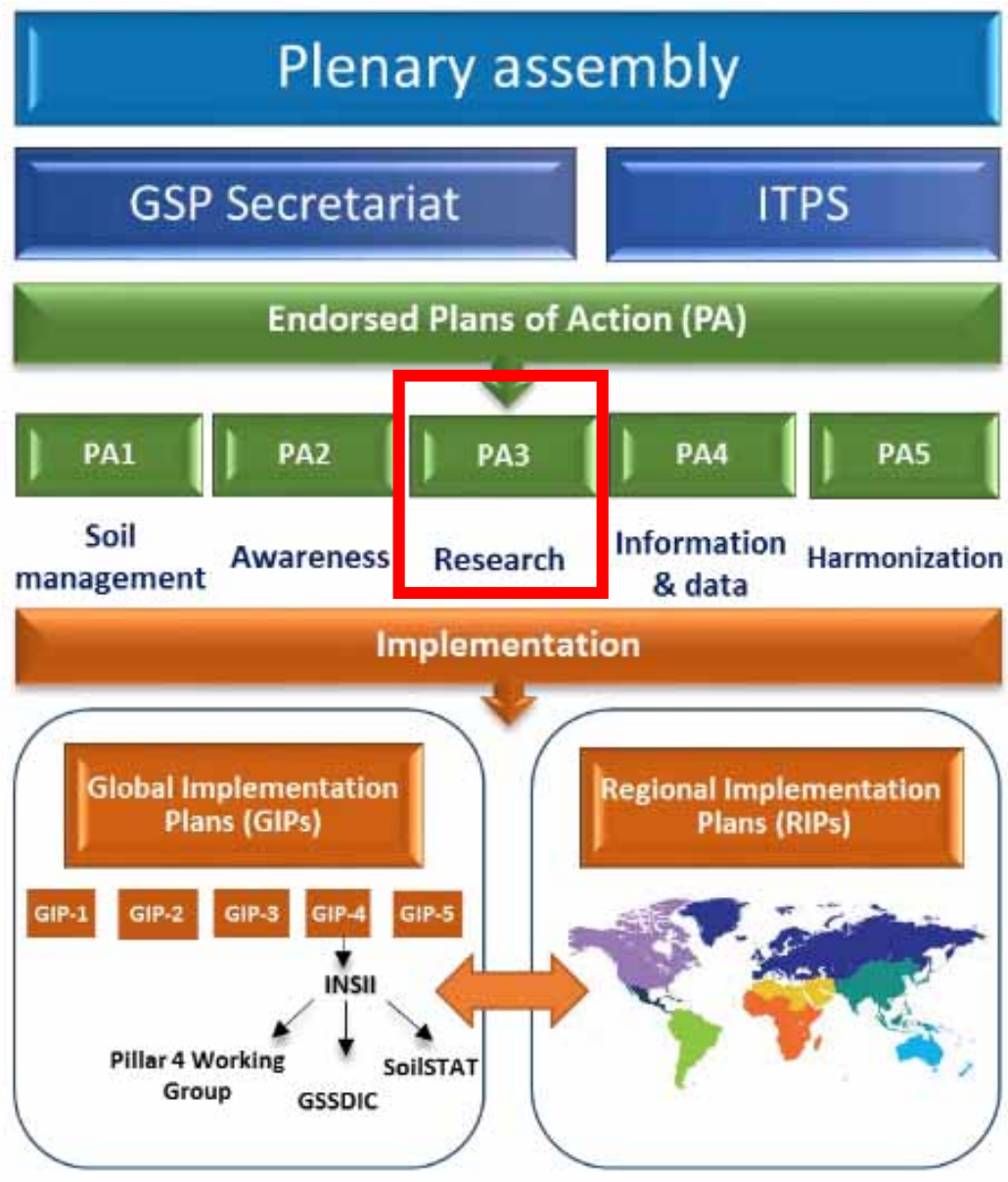
- Pillar 1: Sustainable soil management
- Pillar 2: Awareness raising/education/technical cooperation
- Pillar 3: Targeted soil research
- Pillar 4: Soil data and information
- Pillar 5: Harmonization



Global Soil Partnership



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Pillar 3:

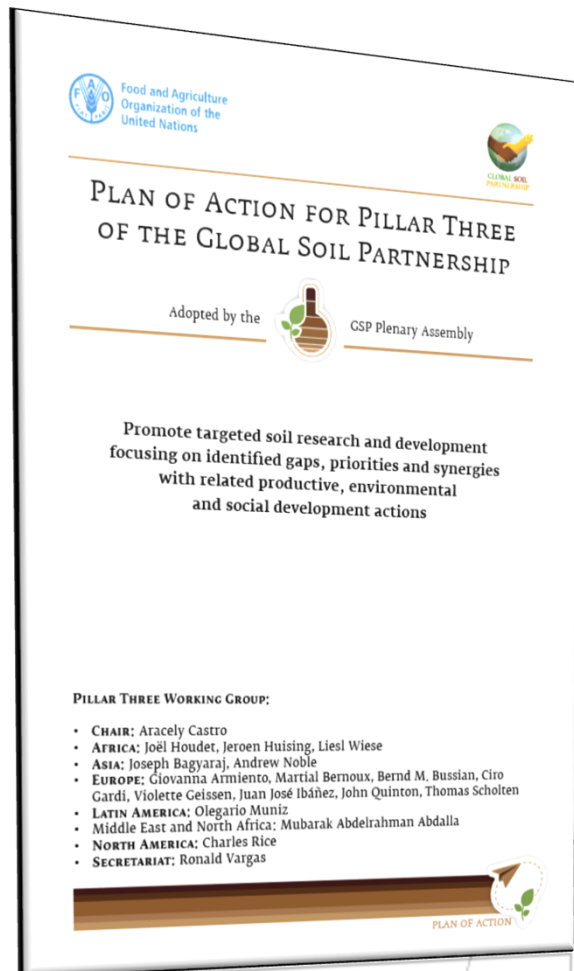
Promote targeted soil research and development focusing on identified gaps, priorities and synergies with related productive, environmental and social development actions

Global Plan of Action developed to:

- Increase understanding of soil processes and functions
- Determine how to efficiently manage soils
- Understand the geographic distribution of soil functioning



Pillar 3 Action Plan



4 Recommendations:

1. Evidence of return on investment in soil research
2. Encourage inter- and transdisciplinary R&D
3. Capitalize on existing R&D to ID global, regional and local emerging priorities
4. Foster synergy between research, end-user communities and donor agencies

Research Activities



- Conducted in collaboration with other initiatives/organizations
- Regional implementation through Regional Soil Partnerships
- Strong targeted research focus on sustainable soil management
 - For food security and nutrition, climate change adaptation and mitigation, ESS, and disaster risk management



Research implementation



- Focused on addressing the 10 major soil threats
 - Soil erosion, loss of SOC, nutrient imbalance, loss of soil biodiversity, soil acidification, salinization, waterlogging, compaction, sealing and capping, soil contamination
- Eurasia:
 - Five countries implementing soil salinity research
- Implementation relies strongly on country-level support



New research soil topics in the agenda

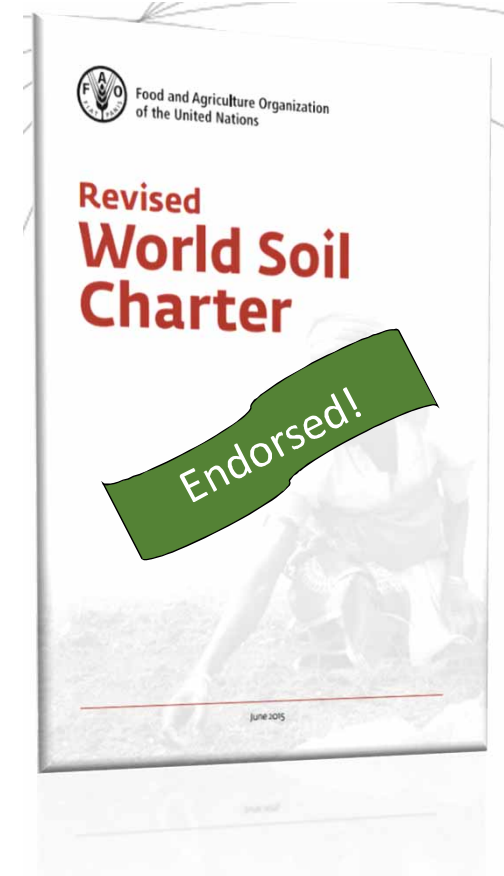
- Soils and Antimicrobial resistance
- Soil borne plant diseases
- Soil contamination and human health
- Monitoring of soil condition for decision making
-



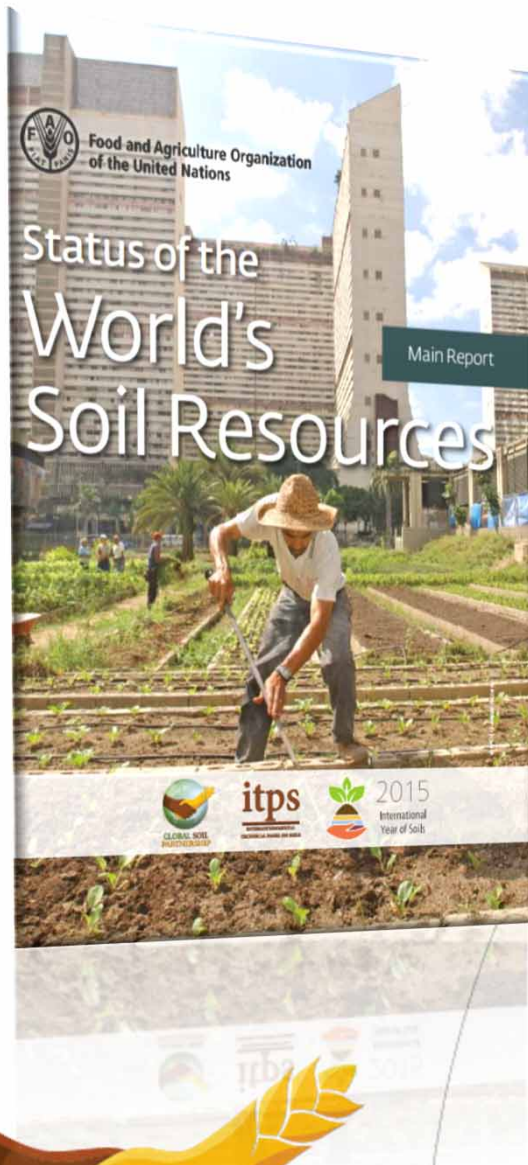
Revised World Soil Charter

Overarching goal: Ensure that soils are managed sustainably and degraded soils are rehabilitated or restored

- SSM Definition
- Multi-level, interdisciplinary initiatives by many stakeholders
- Calls on governments to support research programmes that will provide sound scientific backing for development and implementation of SSM relevant to end-users



Status of the World's Soil Resources Report

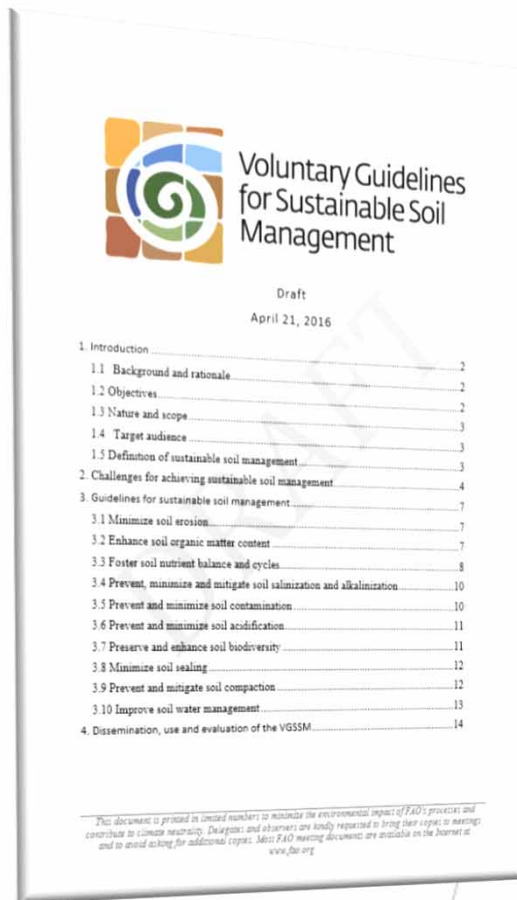


- “Baseline” to track the status of the world’s soils
- Revised version envisaged for 2020
 - **Global Soil Information System**

Minimize further degradation of soils, restore productivity and ESS of degraded soils

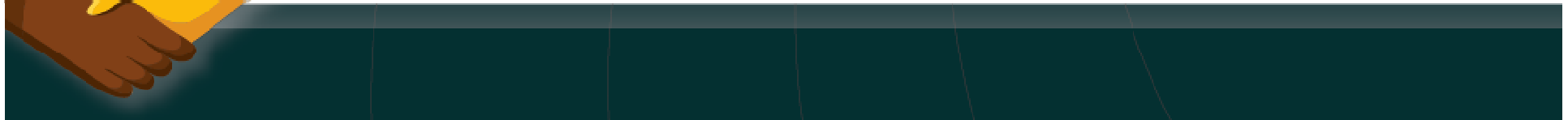


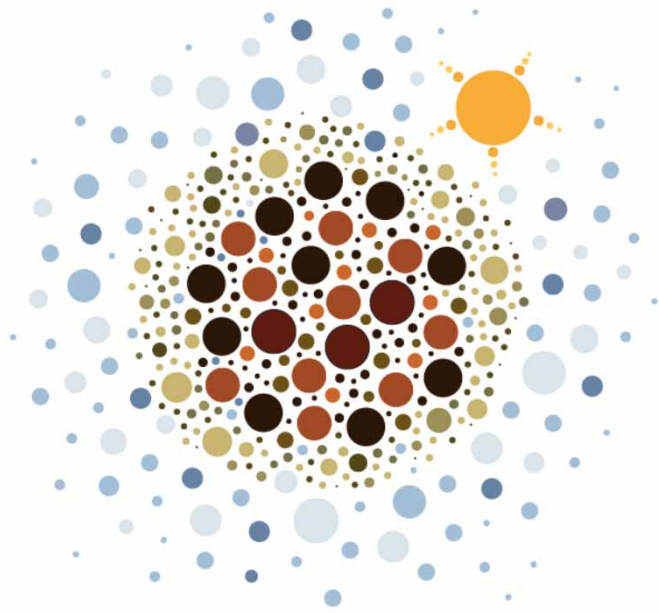
Voluntary Guidelines for Sustainable Soil Management



- Accepted by recent COAG
- Submitted for endorsement by FAO Council
- Objectives:
 - Present generally accepted principles to promote SSM
 - Calls for fostering and strengthening targeted soil research
- Implementation tool







Develop a global SOC map by
Dec 2017 as baseline



In support of **SDG Indicator
15.3.1**

Through support and involvement of
FAO member countries



Thank you!

