

# LE PARTENARIAT MONDIAL SUR LES SOLS ET LES SOLS MEDITERRANEENS

*Luca Montanarella (ITPS Chair)*

*European Commission*



# Soil, the skin of the earth, the basis for food production

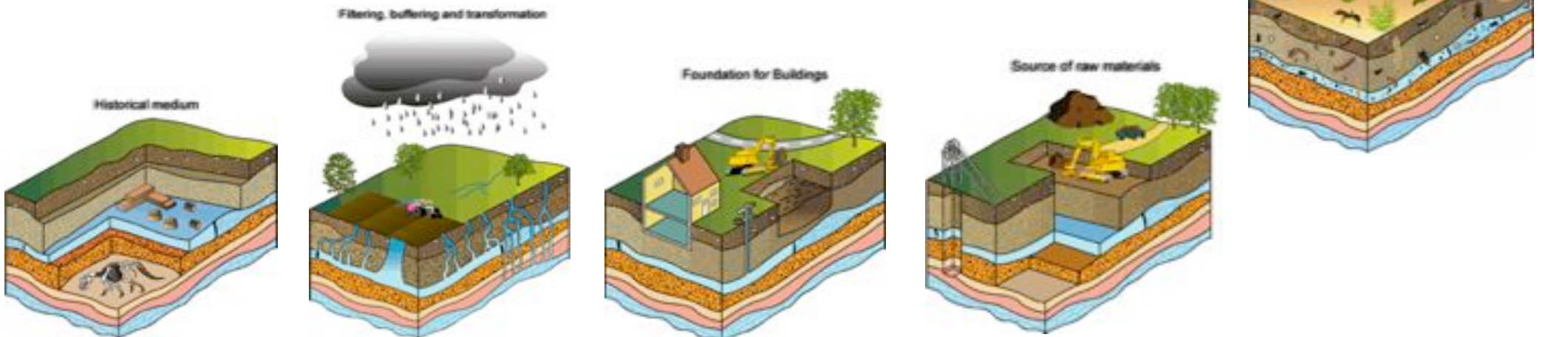


## We and the soil.....



## ***Soils deliver multiple services relevant to all of us:***

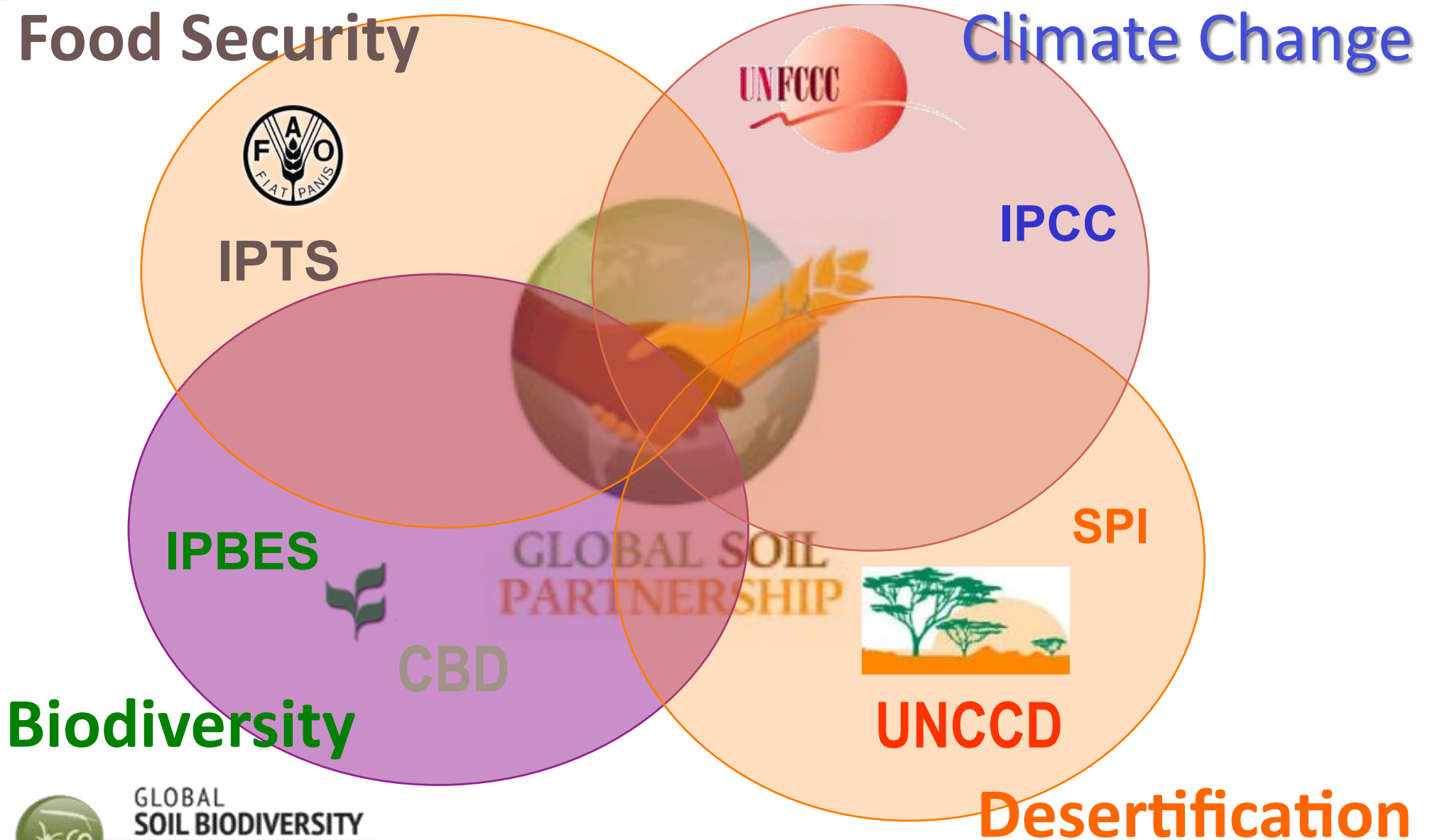
- 1. Biomass production, including in agriculture and forestry;*
- 2. Storing, filtering and transforming nutrients, substances and water;*
- 3. Biodiversity pool, such as habitats, species and genes;*
- 4. Physical and cultural environment for humans and human activities;*
- 5. Source of raw materials;*
- 6. Acting as carbon pool;*
- 7. Archive of geological and archeological heritage.*



The GSP: An open voluntary partnership federating all stakeholders concerned with Sustainable Soil Management

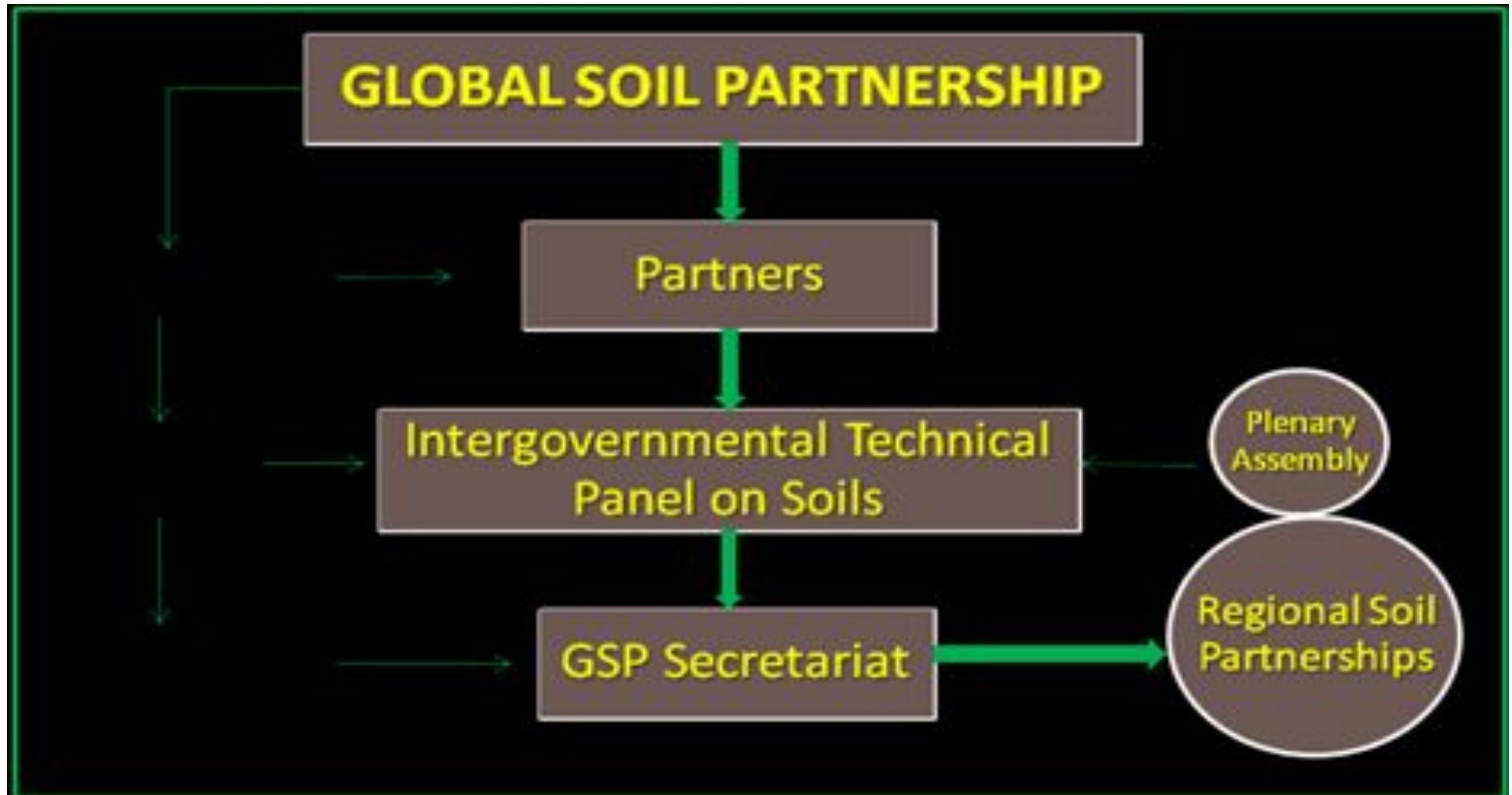


# Soils as a cross-cutting theme between food security, climate change, desertification and biodiversity



GLOBAL  
SOIL BIODIVERSITY  
INITIATIVE

# The Global Soil Partnership



## Development of Regional Soil Partnerships







# To do what?

Promote the Sustainable Management of Global Soil Resources

## Pillar 1

Promote sustainable management of soil resources

## Pillar 2

Encourage investment, technical cooperation, policy, education awareness

## Pillar 3

Promote targeted soil research and development focusing on indentified gaps and priorities

## Pillar 4

Enhance the quantity and quality of soil data and information

## Pillar 5

Support harmonization of methods, measurements and indicators



**GLOBAL SOIL  
PARTNERSHIP**

# Bridging the gap between soil science and policy

itps

INTERGOVERNMENTAL TECHNICAL  
PANEL ON SOILS

Food Security



Climate Change

UNFCCC

IPCC

itps

INTERGOVERNMENTAL TECHNICAL  
PANEL ON SOILS

IPBES



CBD

SPI



UNCCD

Biodiversity

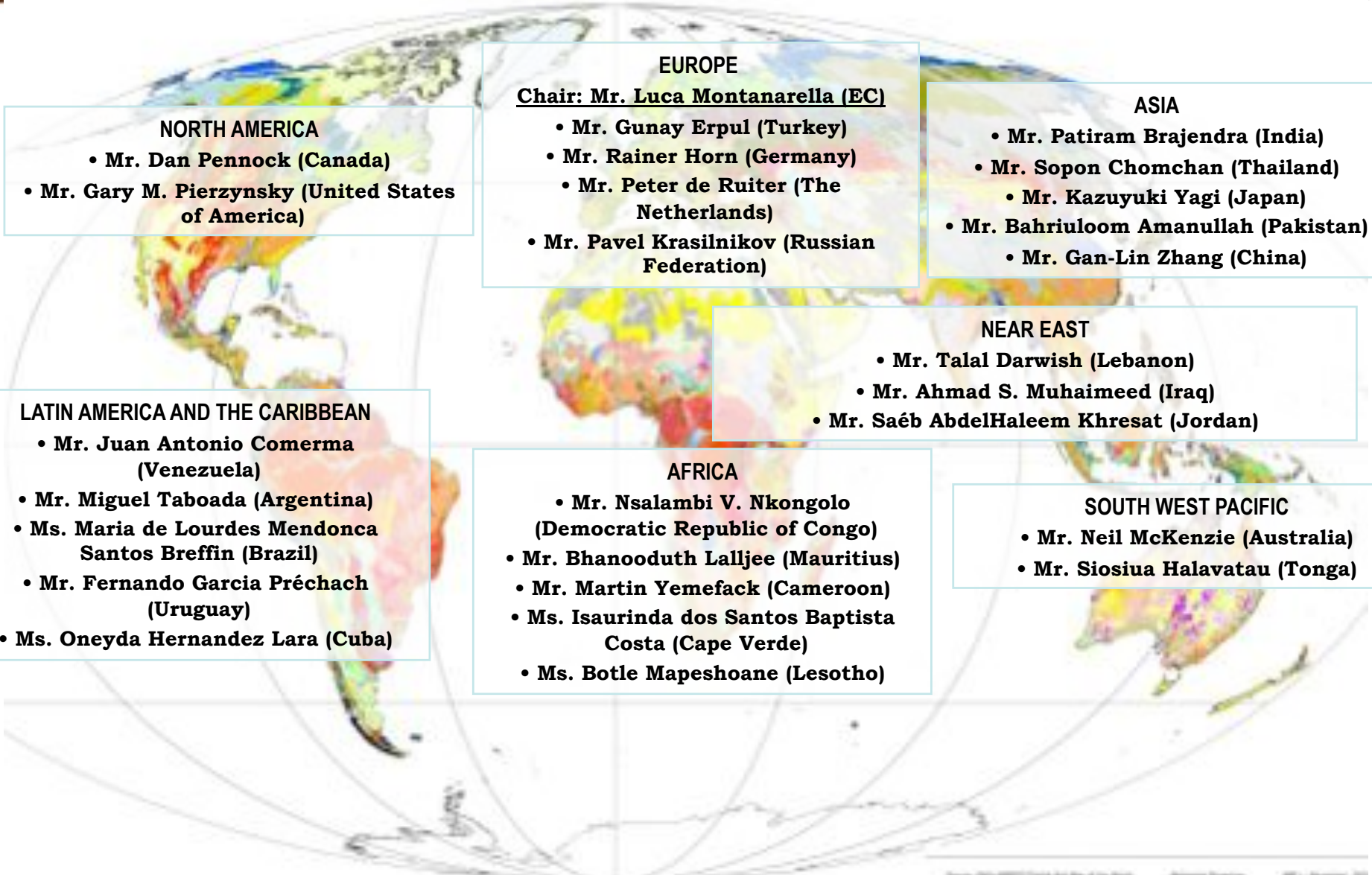
Desertification



GLOBAL  
SOIL BIODIVERSITY  
INITIATIVE

# THE 27 SCIENTISTS MEMBERS OF THE ITPS 2015-2017

Proposed by GSP Partners and nominated by FAO Members



**NORTH AMERICA**

- Mr. Dan Pennock (Canada)
- Mr. Gary M. Pierzynsky (United States of America)

**EUROPE**

**Chair: Mr. Luca Montanarella (EC)**

- Mr. Gunay Erpul (Turkey)
- Mr. Rainer Horn (Germany)
- Mr. Peter de Ruiter (The Netherlands)
- Mr. Pavel Krasilnikov (Russian Federation)

**ASIA**

- Mr. Patiram Brajendra (India)
- Mr. Sapon Chomchan (Thailand)
- Mr. Kazuyuki Yagi (Japan)
- Mr. Bahriuloom Amanullah (Pakistan)
- Mr. Gan-Lin Zhang (China)

**LATIN AMERICA AND THE CARIBBEAN**

- Mr. Juan Antonio Comerma (Venezuela)
- Mr. Miguel Taboada (Argentina)
- Ms. Maria de Lourdes Mendonca Santos Breffin (Brazil)
- Mr. Fernando Garcia Préchach (Uruguay)
- Ms. Oneyda Hernandez Lara (Cuba)

**AFRICA**

- Mr. Nsalambi V. Nkongolo (Democratic Republic of Congo)
- Mr. Bhanooduth Lalljee (Mauritius)
- Mr. Martin Yemefack (Cameroon)
- Ms. Isaurinda dos Santos Baptista Costa (Cape Verde)
- Ms. Botle Mapeshoane (Lesotho)

**NEAR EAST**

- Mr. Talal Darwish (Lebanon)
- Mr. Ahmad S. Muhaimed (Iraq)
- Mr. SaéB AbdelHaleem Khresat (Jordan)

**SOUTH WEST PACIFIC**

- Mr. Neil McKenzie (Australia)
- Mr. Siosiua Halavatau (Tonga)



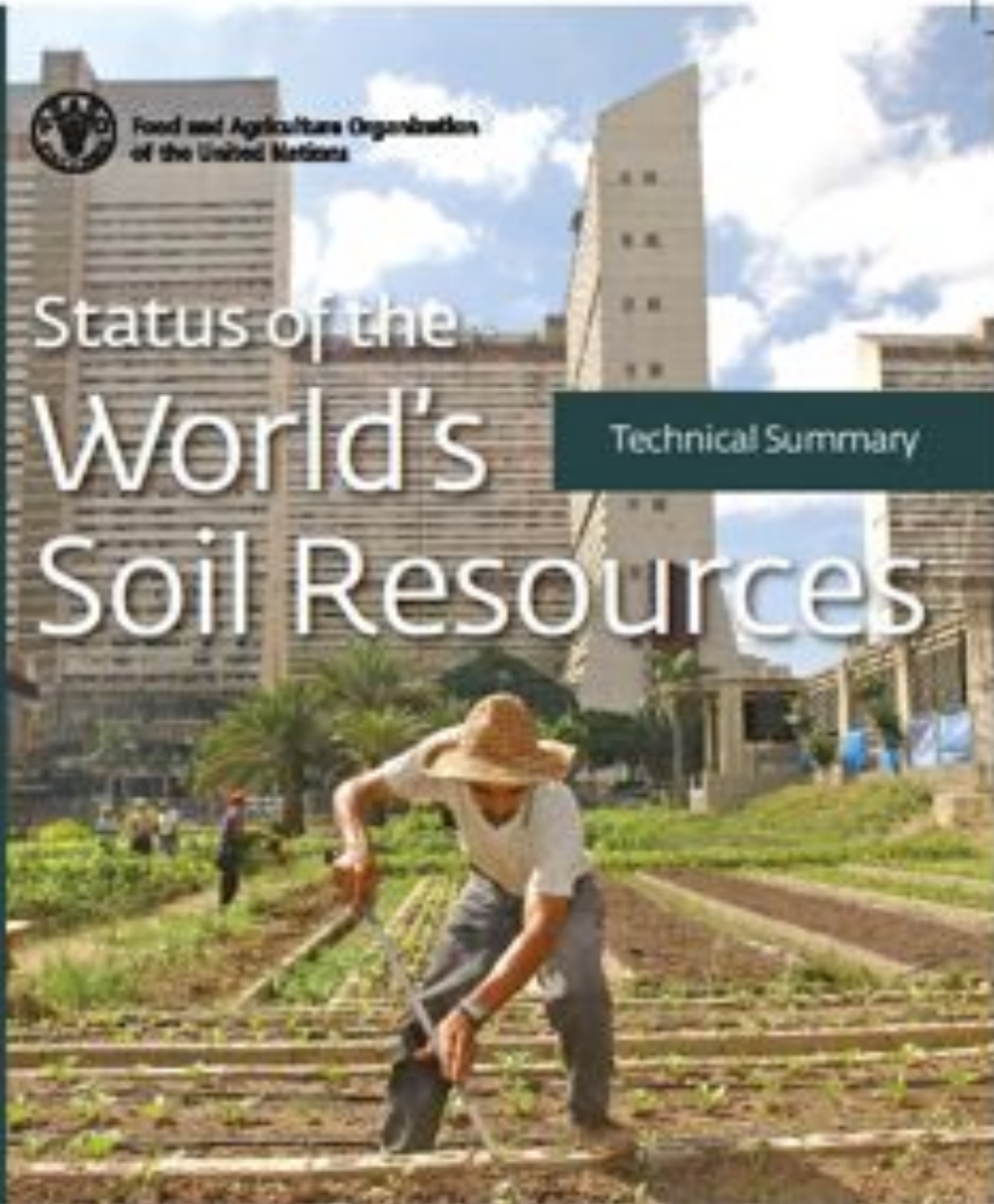
United Nations | Food and Agriculture Organization



Food and Agriculture Organization  
of the United Nations

# Status of the World's Soil Resources

Technical Summary



**itps**  
International Technical Group of Soil Scientists



**2015**  
International  
Year of Soils



# Evidence of soil degradation in Europe

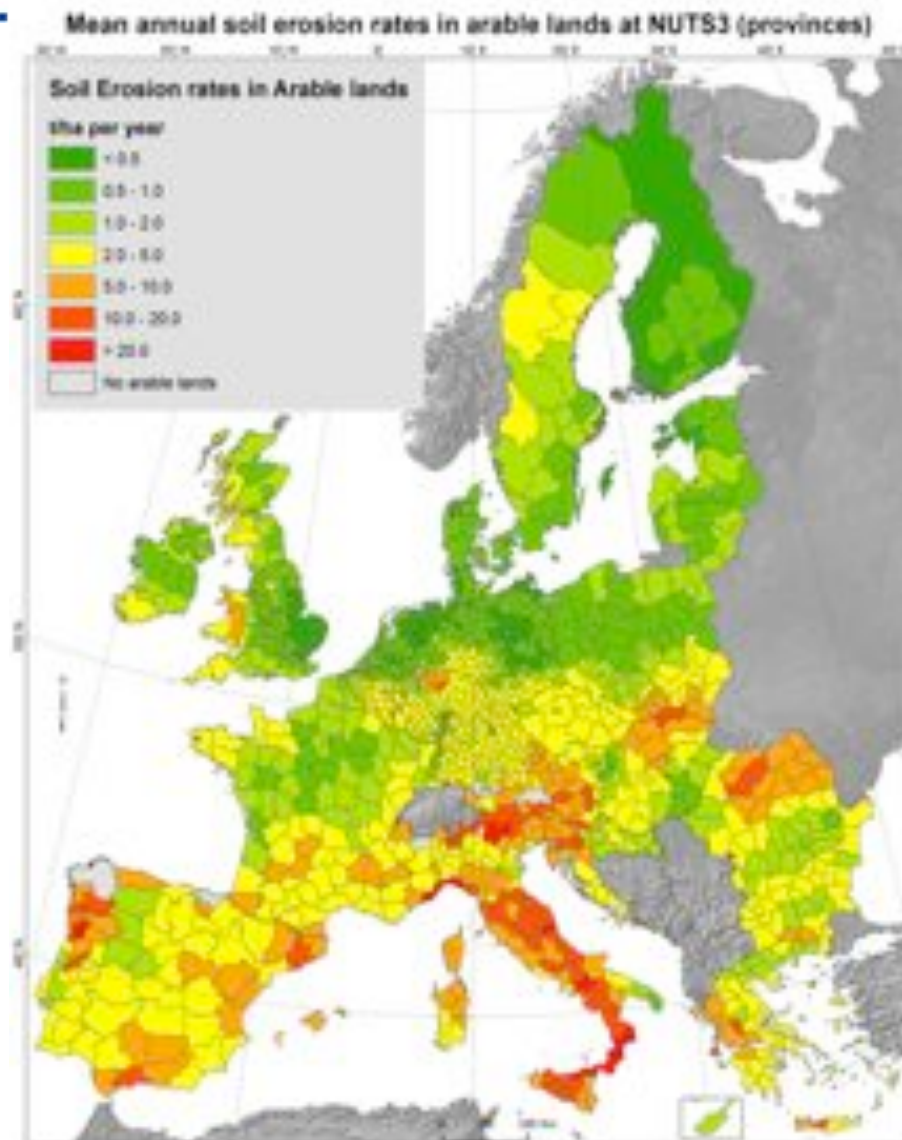


# Soil erosion assessment in Europe





European  
Commission

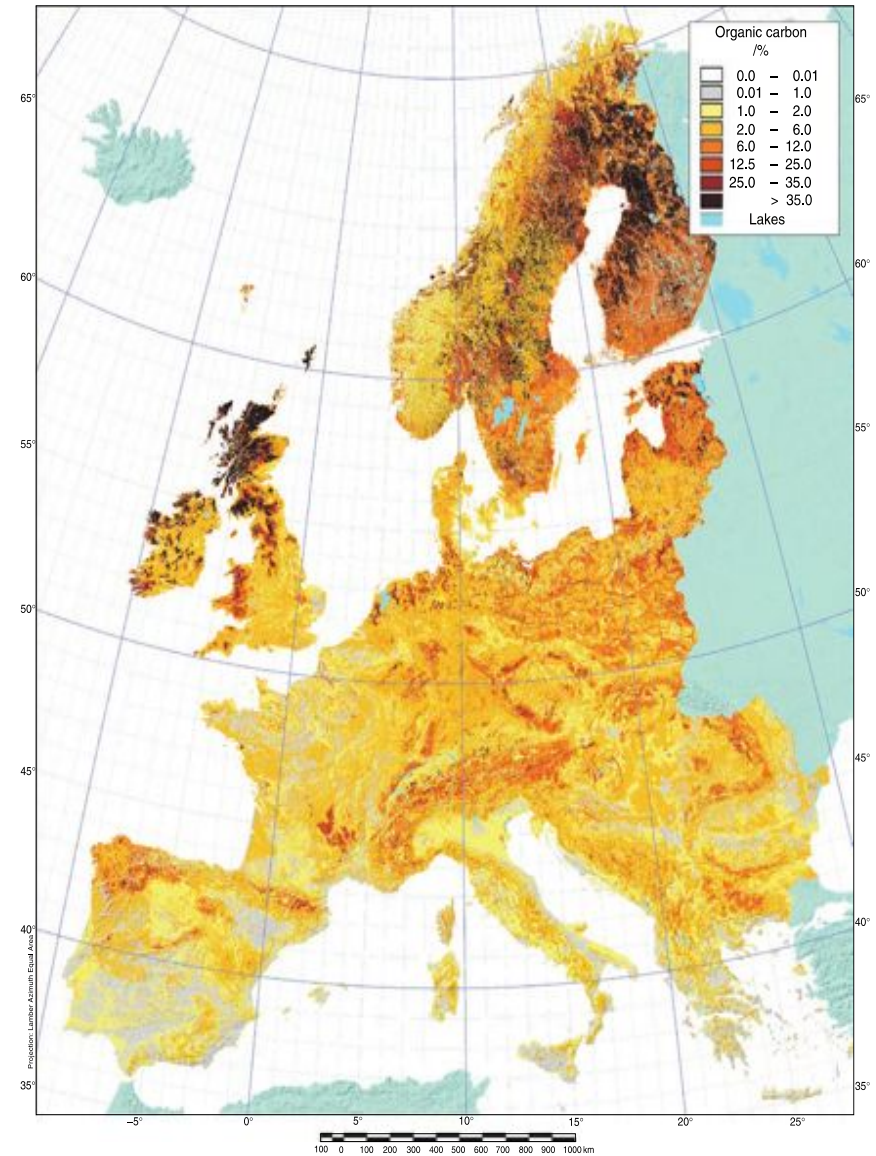




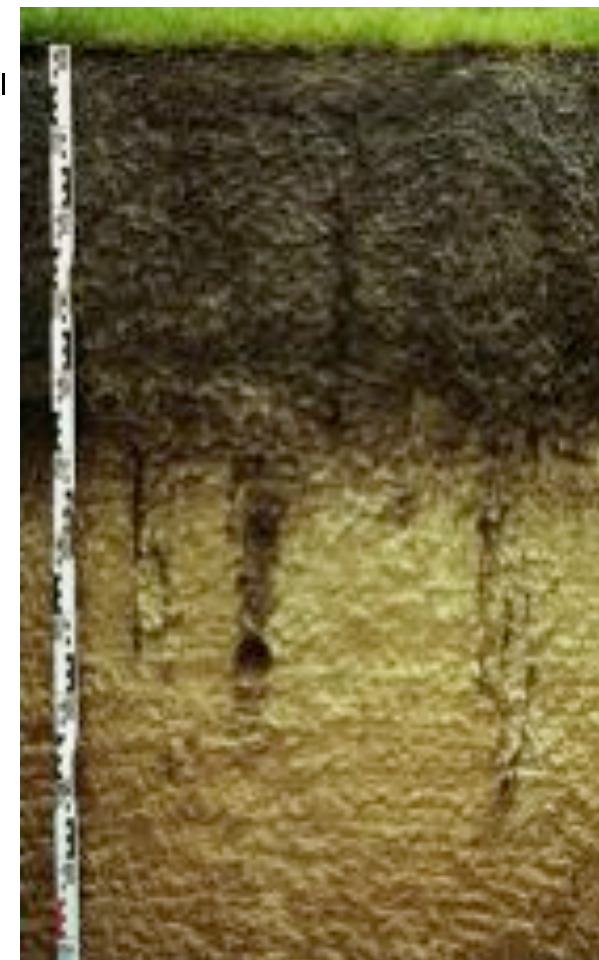
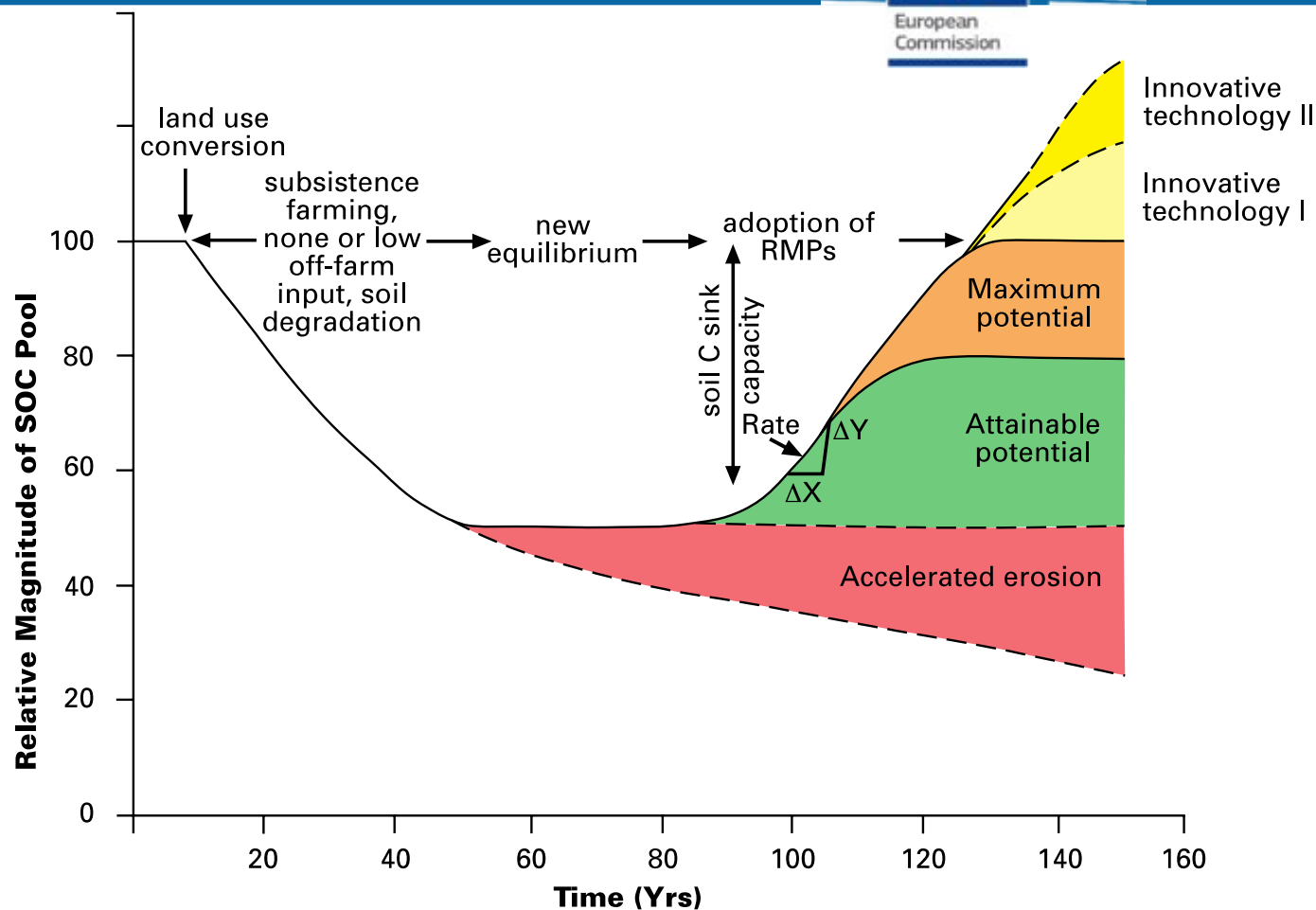
# Soil erosion by water



# Topsoil Organic Carbon content



# Soil C Dynamics



A schematic of the soil C dynamics upon conversion from a natural to agricultural ecosystem, and subsequent adoption of recommended management practices (RMP's). In most cases, the maximum potential equals the magnitude of historic C loss. Only using some practices, like addition of stable Biochar, or similar technologies, the adoption of RMP's can increase the SOC pool above that of the natural system.

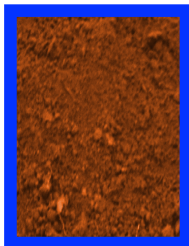
Source: R. Lal, 2008



## The relevance of global soil organic carbon



When policy makers use scientific findings



~800 -2.9 (4‰)  
~800 +4.3 (5‰)  
In top 0-30 cm

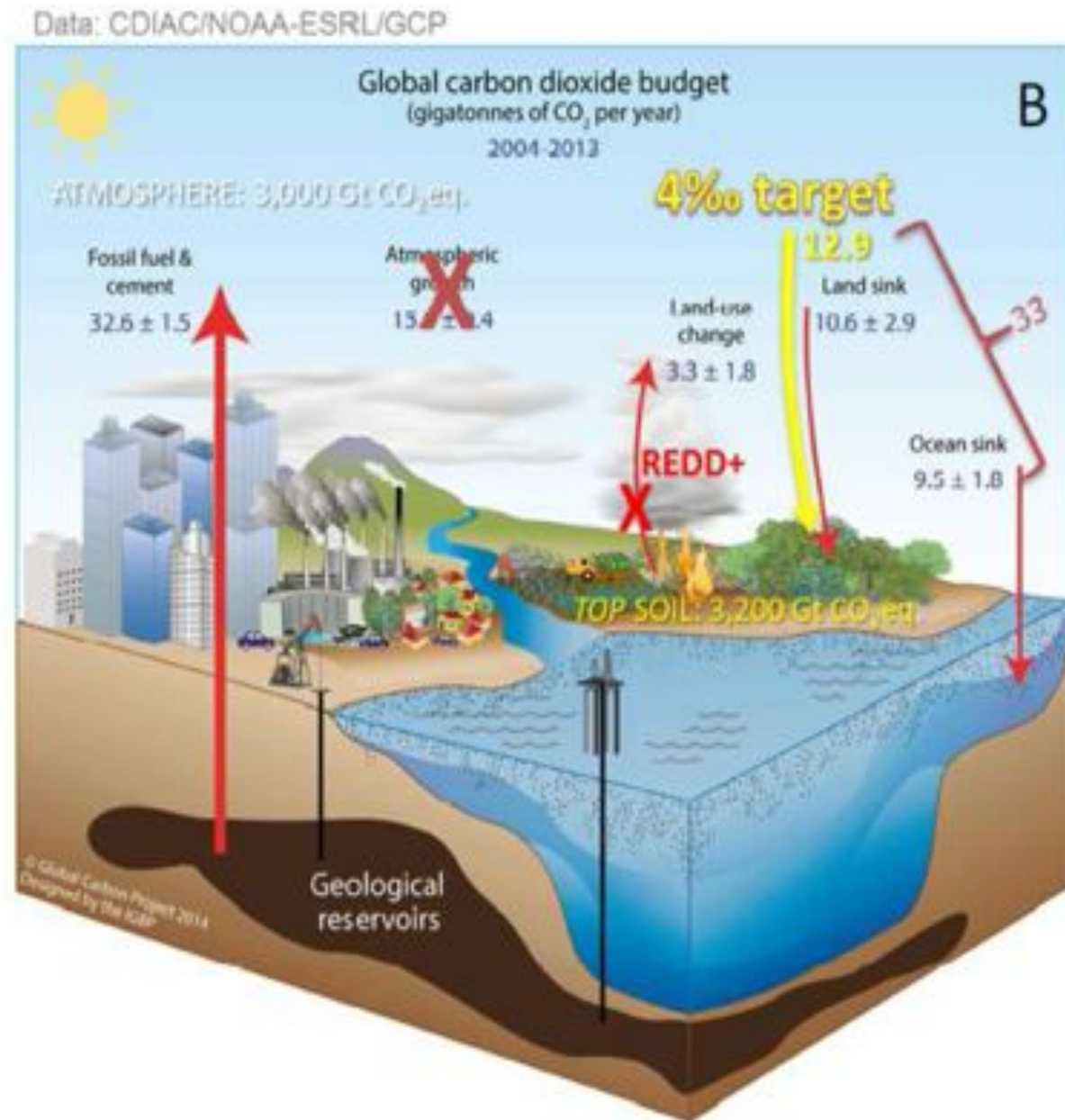
A variation of - 4‰ to + 5‰ of this stock corresponds to  
- 110 to + 130 kg C /ha  
or - 400 à + 475 kg CO<sub>2</sub> /ha

During the CSA conference in March, the French Minister of Agriculture, Food and Forestry, Stéphane Le Foll announced public subsidies will be available for an international research project on the restoration of degraded soils and soil carbon sequestration



He announced the establishment of an international research programme, the "4 per 1000", which aims to develop agricultural research to improve organic matter stocks in soil by four parts per 1000 per year.

# The 4 per mil target for soil carbon sequestration

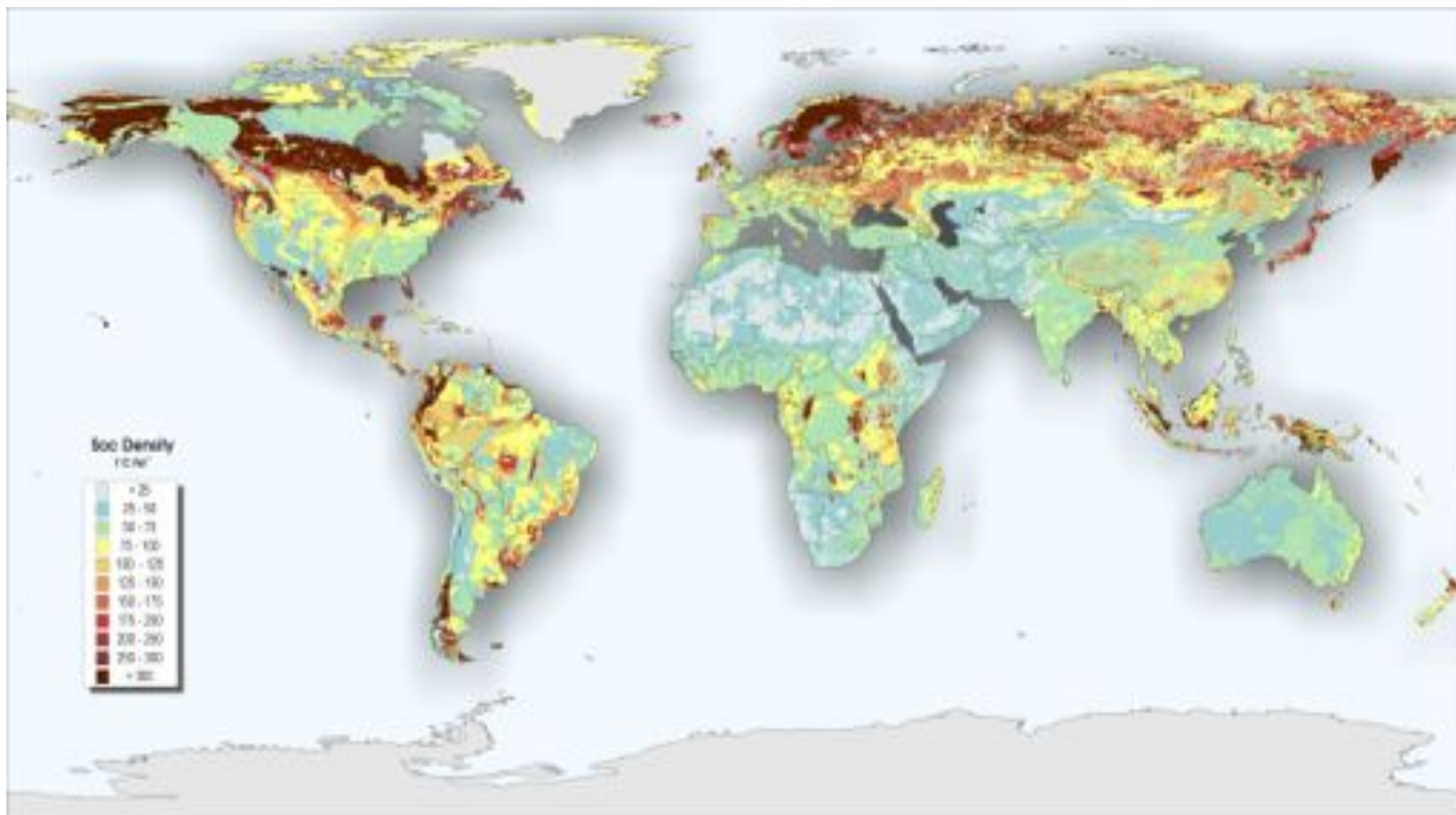


(revisiting Balesdent & Arrouays, 1995 for France)



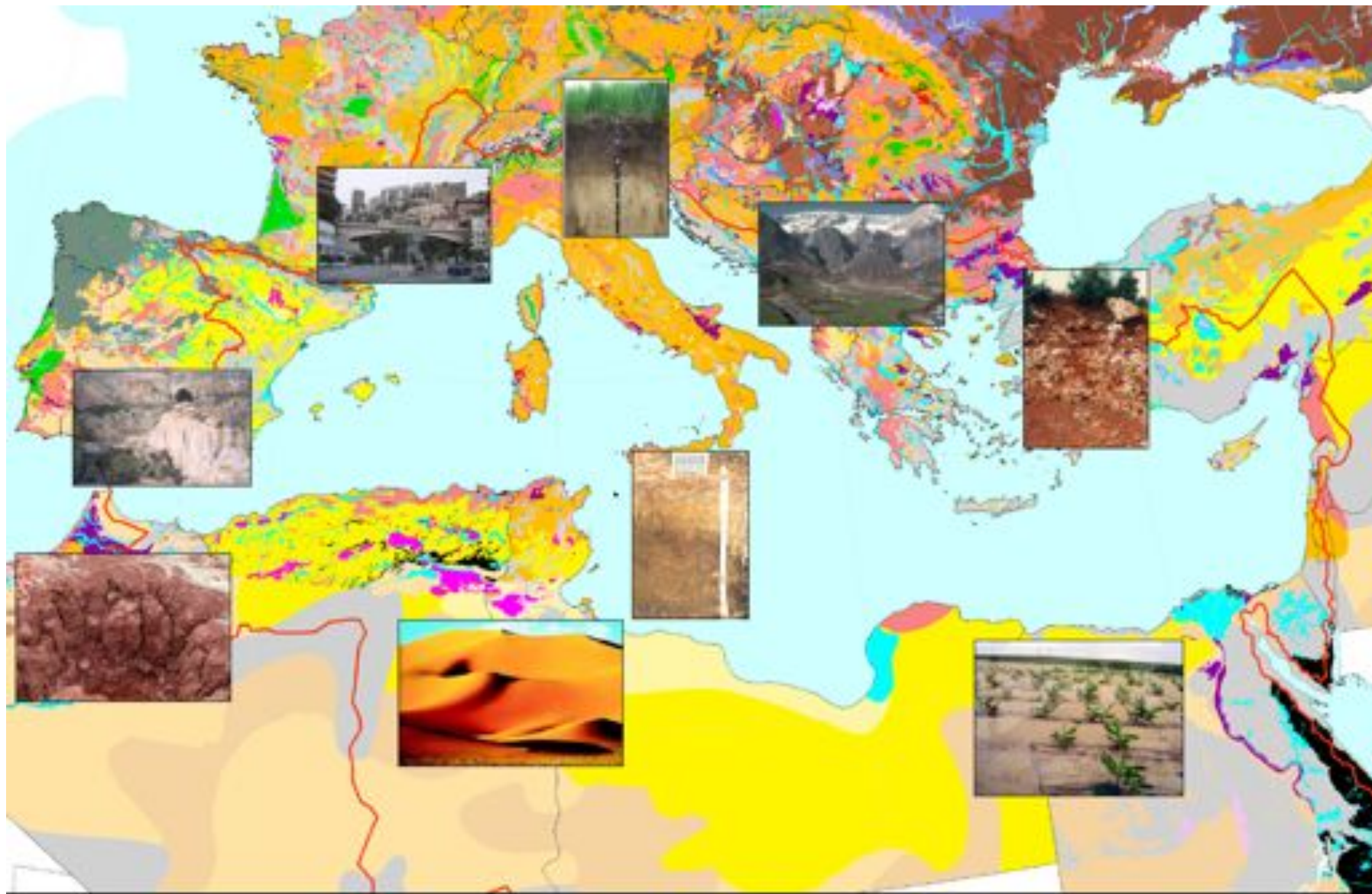
European  
Commission

# Global Soil Organic Carbon



Contact Details:  
Roland Hiederer European Commission Joint Research Centre  
Institute for Environment and Sustainability TP 261 21027  
Ispra (VA) - Italy e-mail: roland.hiederer(at)jrc.ec.europa.eu





Thank you for your interest!



2015  
International  
Year of Soils



**itps**  
INTERGOVERNMENTAL TECHNICAL  
PANEL ON SOILS

<http://esdac.jrc.ec.europa.eu/>