

Joint Research Centre (JRC)

Soil degradation risks and International Commitment for the Protection of Soil

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1. Policy areas relevant to Soil

2. European Soil Partnership

- I. A Roadmap Introduction of the five pillars of action**
- II. Soil Management in Europe: Challenges & Opportunities**
- III. Towards European Policies on the Sustainable Management of Soil Resources**

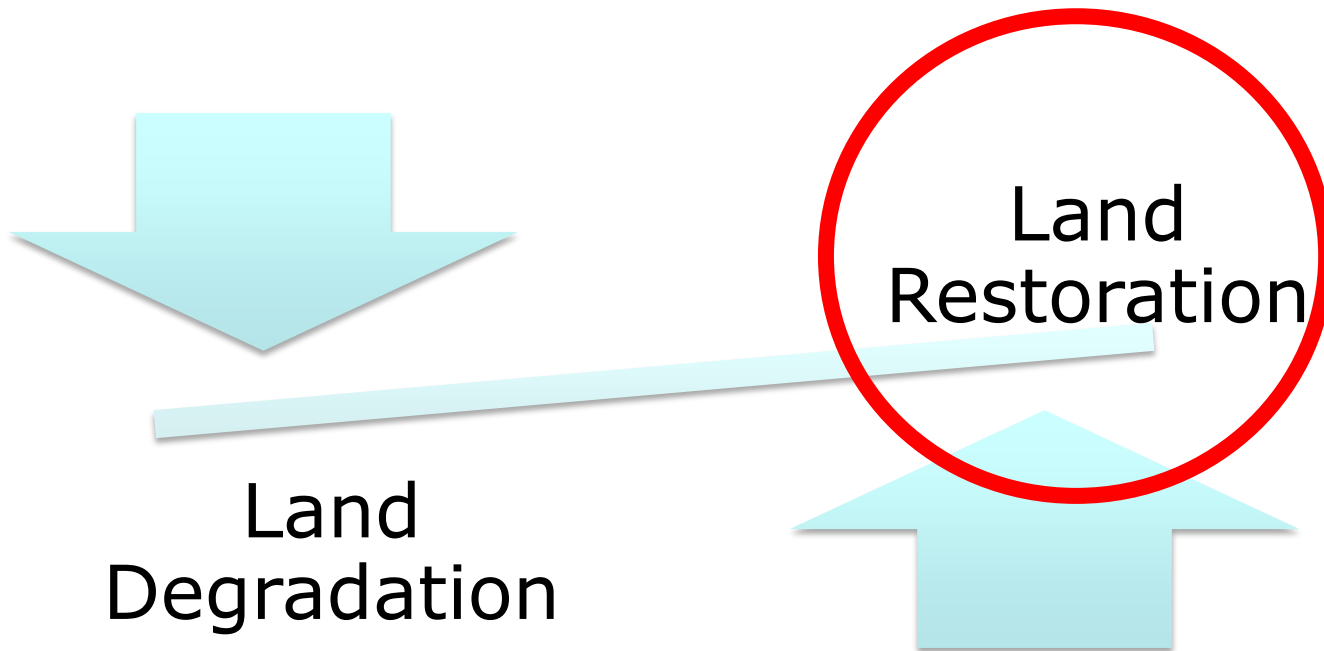
<http://eusoils.jrc.ec.europa.eu/InternationalCooperation/ESP/LaunchESP.html>

EU Policy areas relevant to soils

Main Soil Related EU Policy Areas:

- **EU Soil Thematic Strategy**
- **Common Agricultural Policy (CAP)**
- **Climate Change Policy (Post-Kyoto debate, LULUCF)**
- **Energy Policy (Renewable Energies Directive)**
- **Industrial policy (Fertilizers Regulation)**
- **Biodiversity (Nature) Protection Policy (EU Biodiversity Strategy)**
- **Water Protection Policy (WFD, Groundwater Directive)**
- **Forest Protection Policy (Forest FOCUS, ICP Forest)**
- **Regional Policies (INTERREG)**
- **Food Safety (PPR Registration, EFSA)**
- **Food Security (FAO)**
- **Development Policy (ACP-Observatory)**
- **Waste Policy (Biowaste Directive, Sewage Sludge Directive)**
-etc.

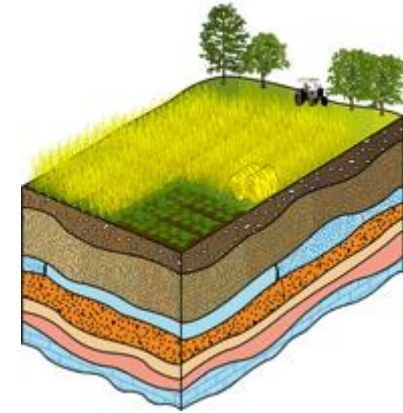




Soils deliver multiple services relevant to all of us:

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.

Basis for biomass production



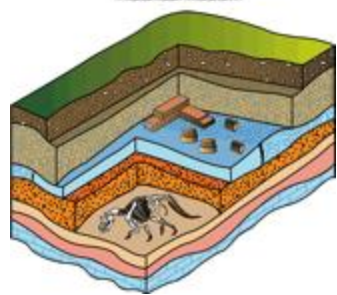
Habitat and gene reservoir



Filtering, buffering and transformation



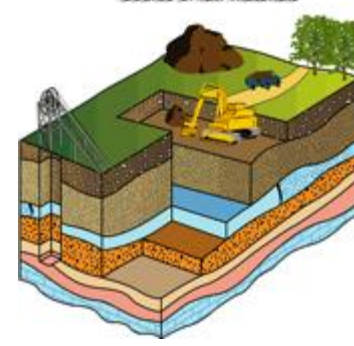
Historical medium



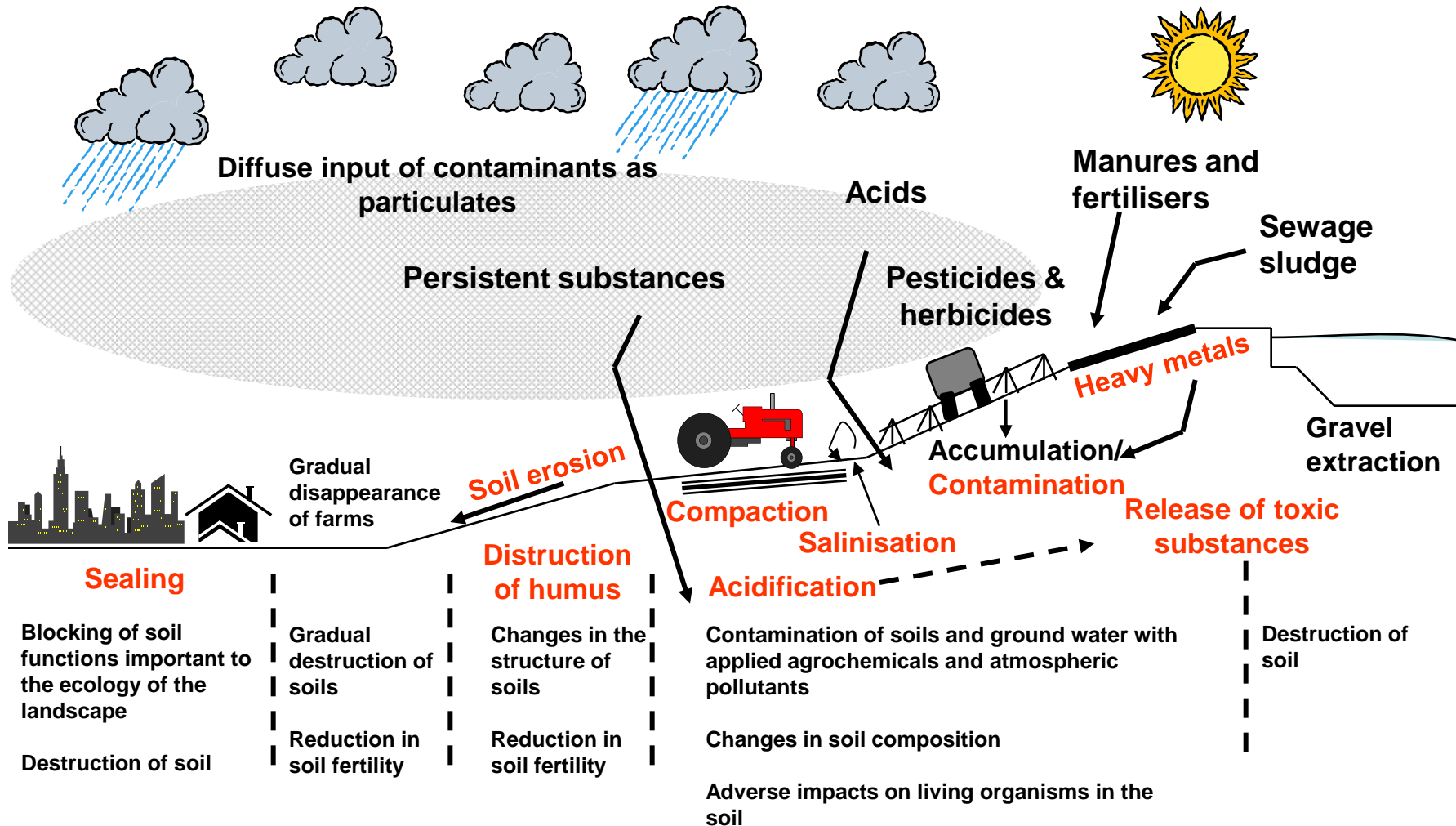
Foundation for Buildings



Source of raw materials

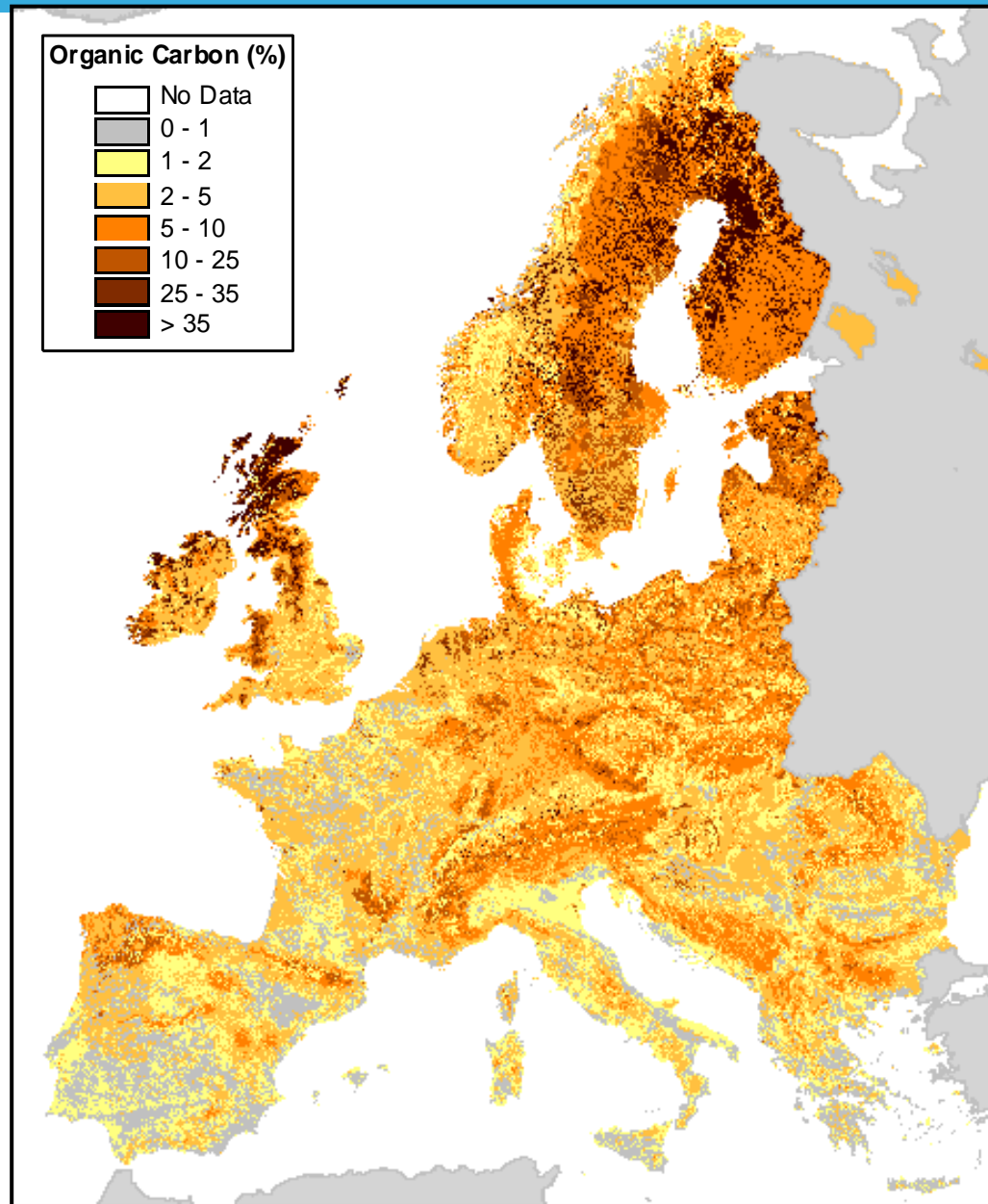


Soil degradation processes limit the soil functions



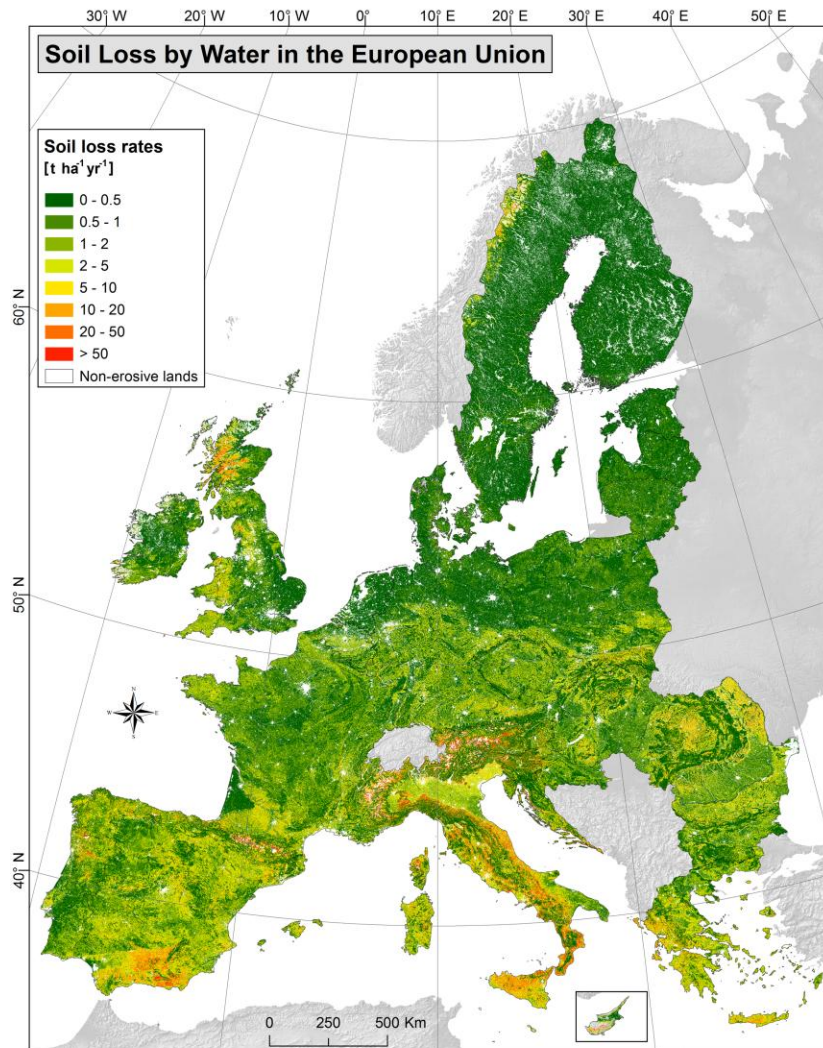
Soil organic matter

Organic carbon content (%) in the surface horizon (0-30 cm) of European soils.

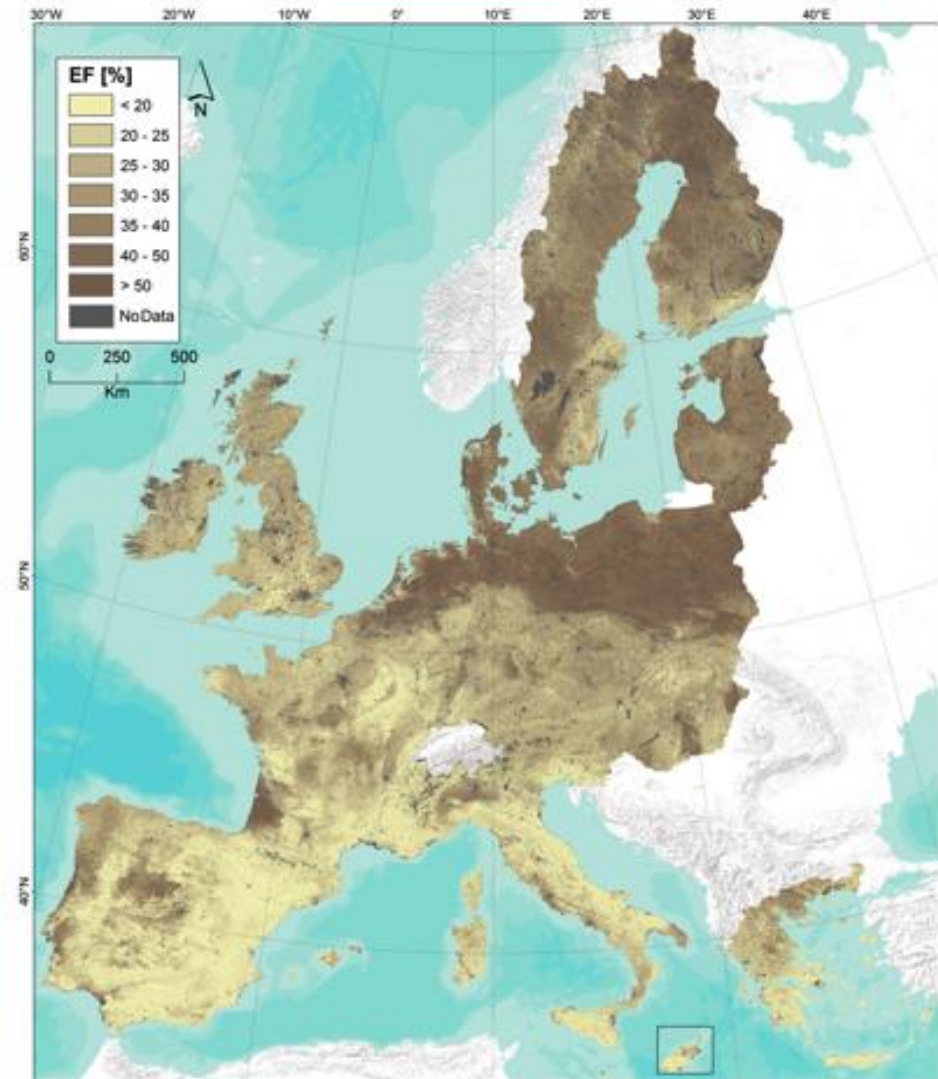


Soil erosion by water in the EU 28 (t/ha/y) based on the RUSLE

Wind erosion susceptibility of the European soil based on the estimation of the wind-erodible fraction of soil (EF)



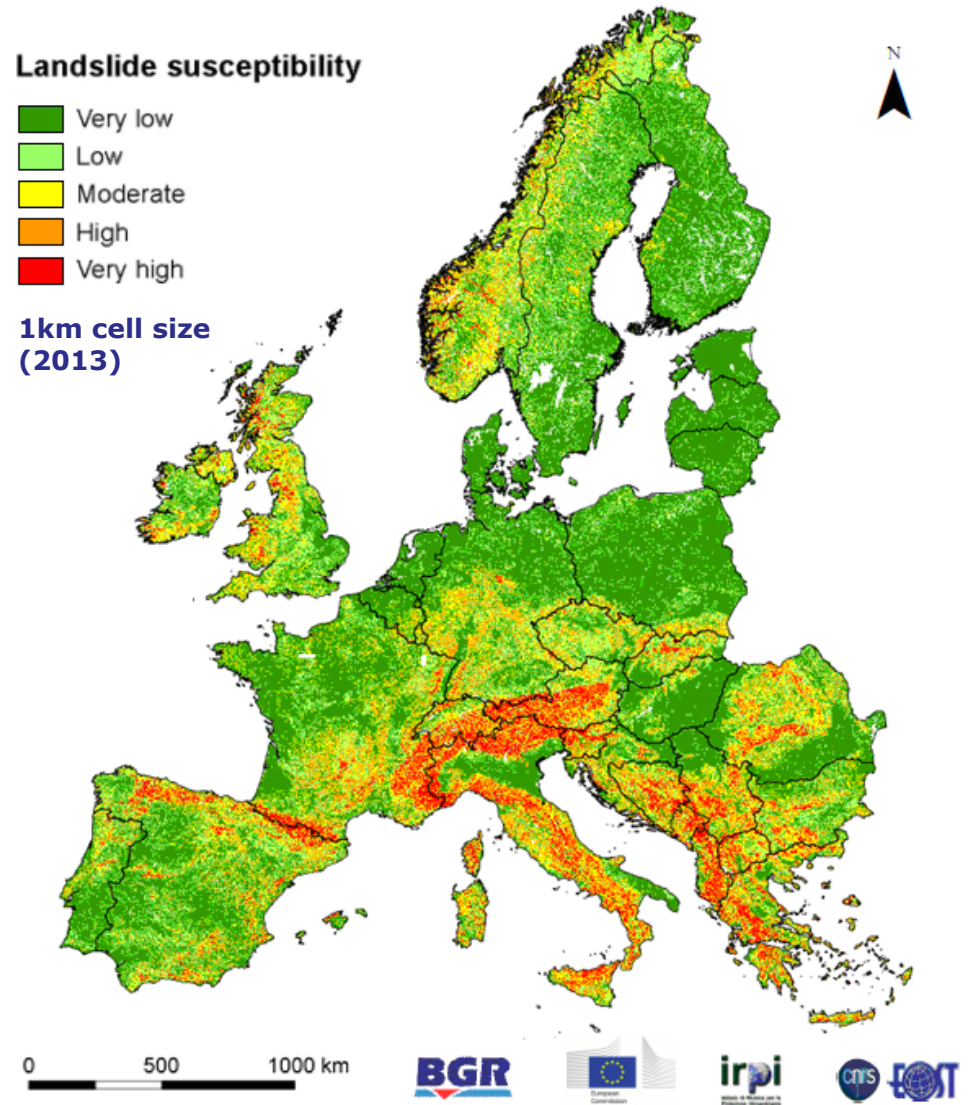
Database: LUCAS soil, REDES, Copernicus, Eurostat, GAEC (CAP), LUCAS 2012



Landslides

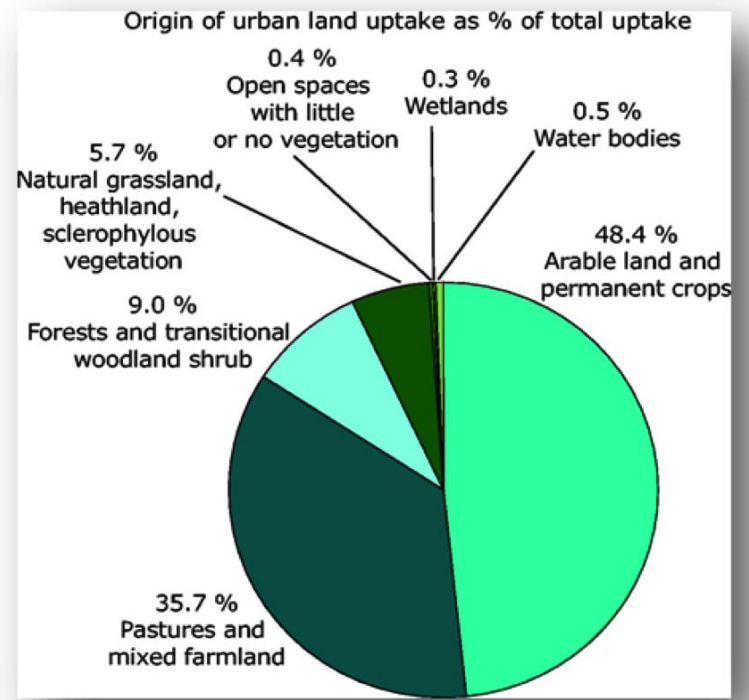
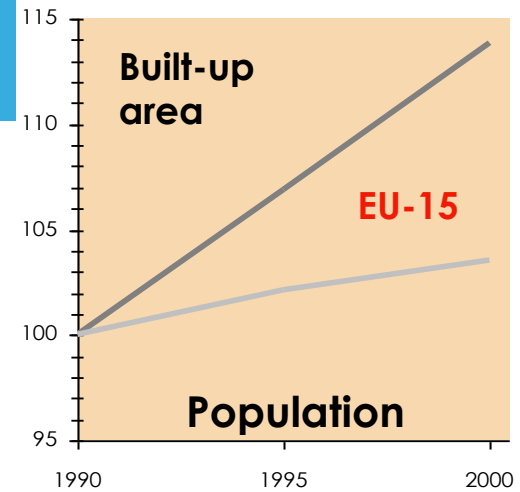
Landslides are a major threat in mountainous and hilly areas across Europe, often producing serious impacts on population, property and infrastructure. Over 630,000 landslides are currently registered in national databases.

<http://eusoils.jrc.ec.europa.eu/library/themes/Landslides/#ELSUS>



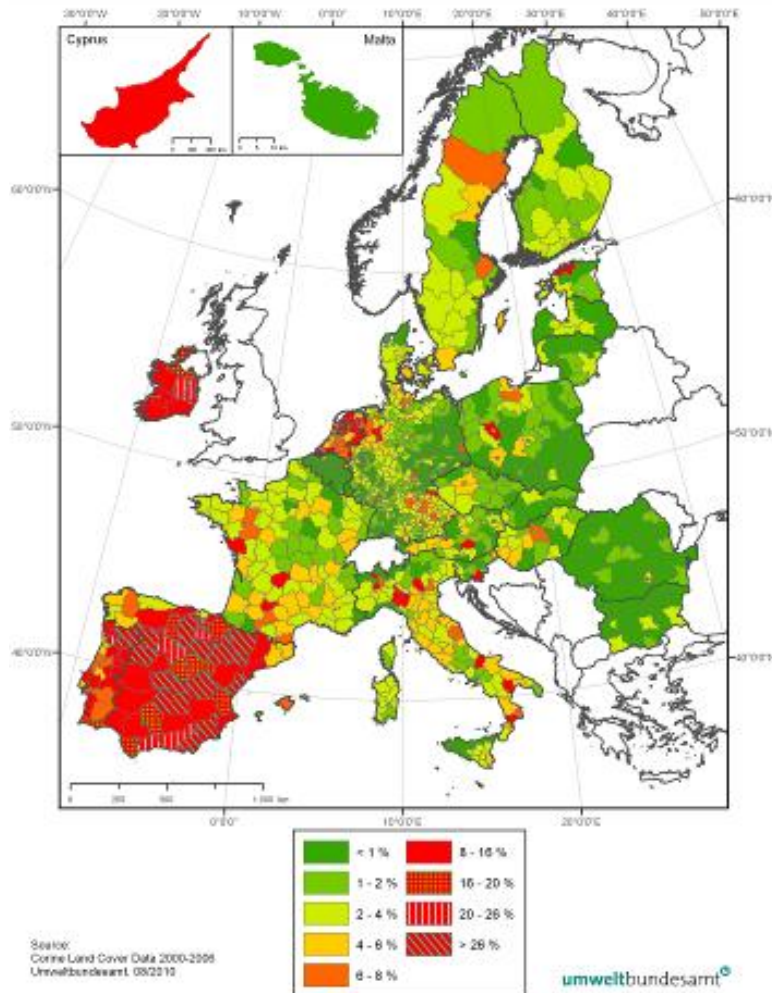
New version under preparation

Human Impact in Europe: Urbanization

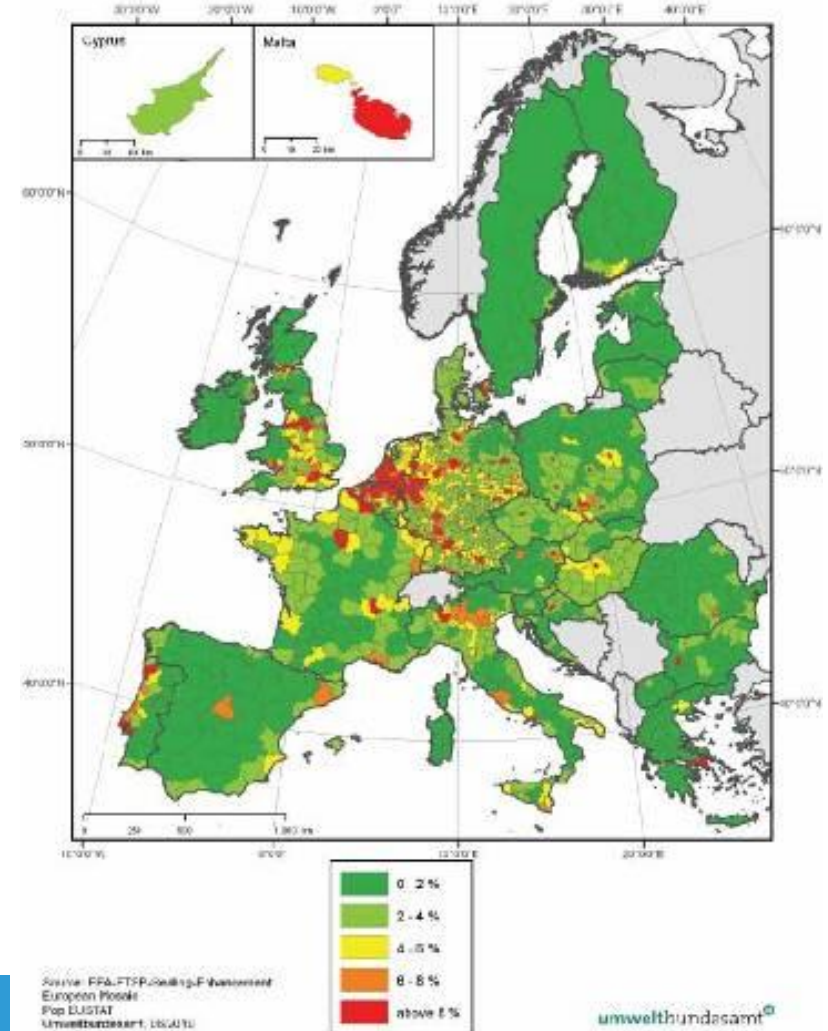


Soil sealing

Land take per administrative unit in the period 2000-2006



Soil sealed surface in 2006



Soil sealing

General trends of annual land take in Europe (28) showed an $\sim 1\,000\text{ km}^2/\text{year}$, which corresponds to 10 times the area of the city of Barcelona.



Photo: Oliver-Bonjoch "Panoramic view of Barcelona from the Sacred Heart Church at Tibidabo"

Limiting 'land take' is already an important policy target at national or sub-national level. Balancing land-recycling, compact urban development, place-based management and green infrastructure will provide positive effects.

Guidelines on best practice to limit, mitigate or compensate soil sealing

SWD(2012) 101 final/2, 15 May 2012

http://ec.europa.eu/environment/soil/sealing_guidelines.htm



Available
in all EU
official
languages



Available
in selected
EU official
languages



Joint
Research
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The Soil Framework Directive was withdrawn but...
Commission is still committed to achieve soil protection:

- **The Soil Thematic Strategy is still alive**
- **Resource Efficiency Roadmap** « by 2020 EU policies take into account their direct and indirect impact on land use in the EU and globally... »
- The Commission is further developing the scientific knowledge-base (...) leading to a **Communication on land use** (in 2016).
- **7th EAP provisions on land and soil protection (2014-2020)**
- **Rio+20 Outcome Document 'The Future We Want' (2013)**
EU will strive to achieve a land degradation neutral world in the context of sustainable development.

Outcome Rio+20:

A Zero Net Land Degradation World

- What does it mean?
- At what scale (local, National, Regional, Global)?
- Who should implement it?
- How can it be measured?
- When should it be achieved?

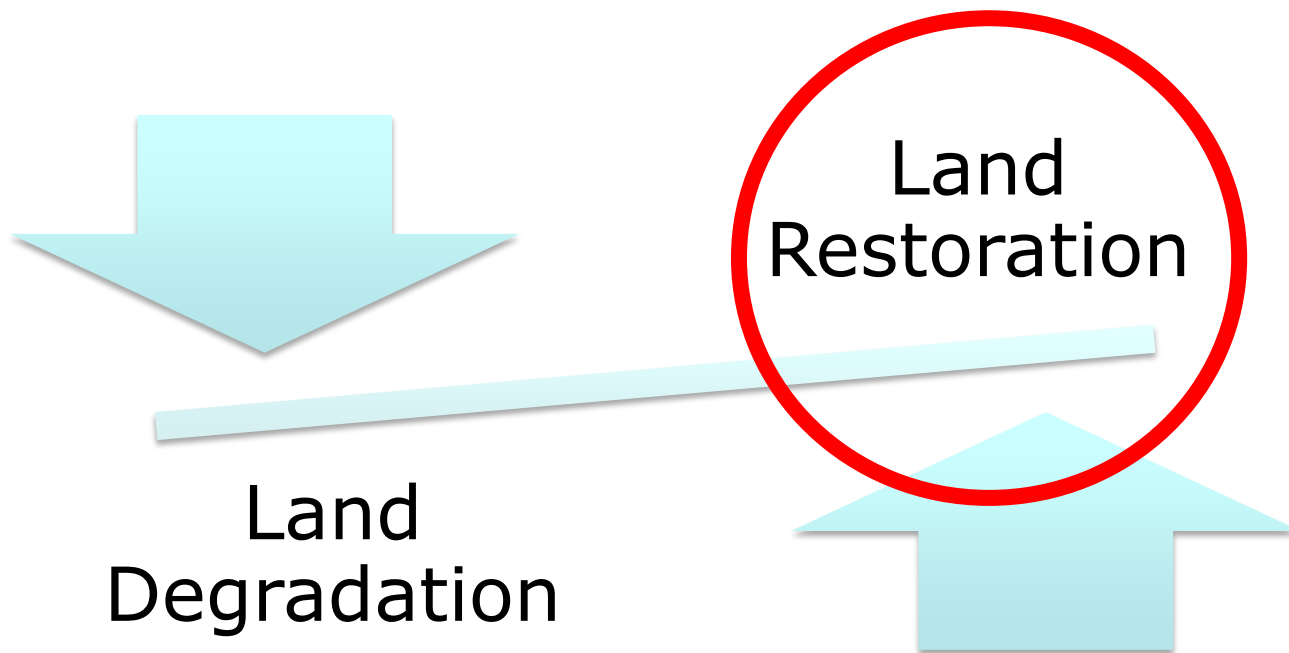


RIO 2012

United Nations
Conference on
Sustainable Development

The Future we want!

Towards Zero Net Land Degradation



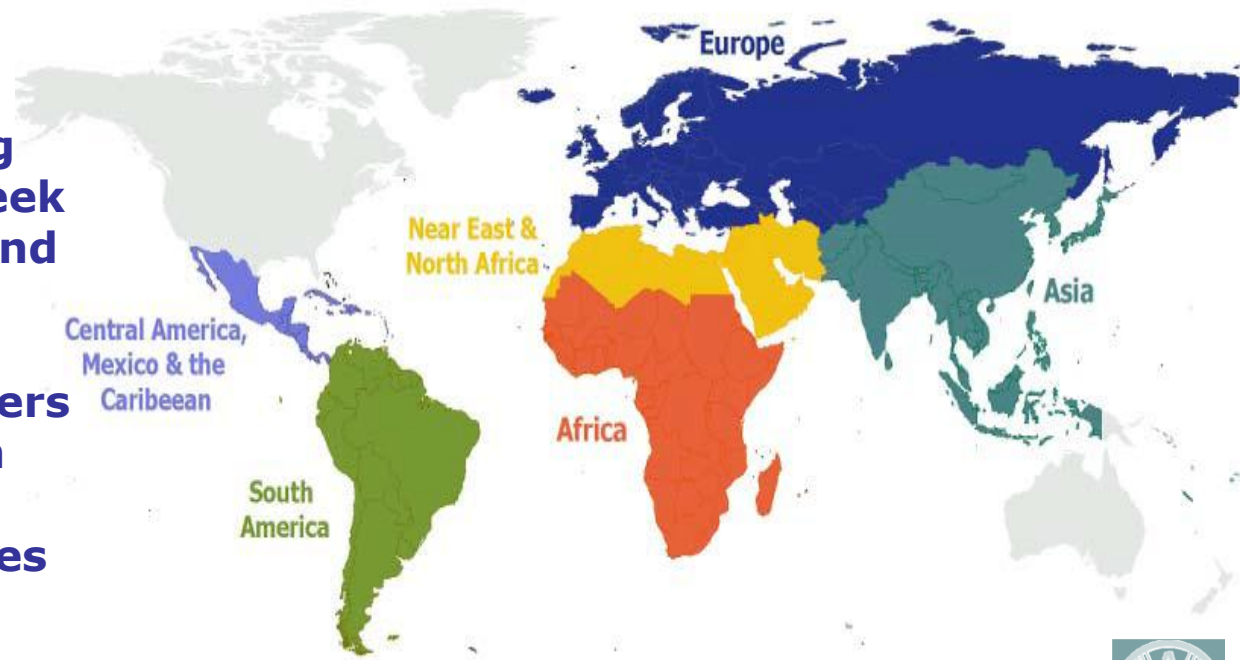
RIO 2012

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The Future we want!

European Soil Partnership

The European Soil Partnership (ESP) was formally established during the Global Soil Week in October 2013 and is aiming towards federating all various stakeholders and institutions in Europe willing to adopt the principles of the World Soil Charter.



<http://www.fao.org/globalsoilpartnership/en/>



Food Security



ITPS

Climate Change

UNFCCC

IPCC

IPBES



CBD

GLOBAL SOIL
PARTNERSHIP

SPI



UNCCD

Biodiversity

Desertification



GLOBAL
SOIL BIODIVERSITY
INITIATIVE

Three key messages



1. Raising Awareness

At all levels: National, Regional and Local
International Year of Soils Plan of Action (2015)

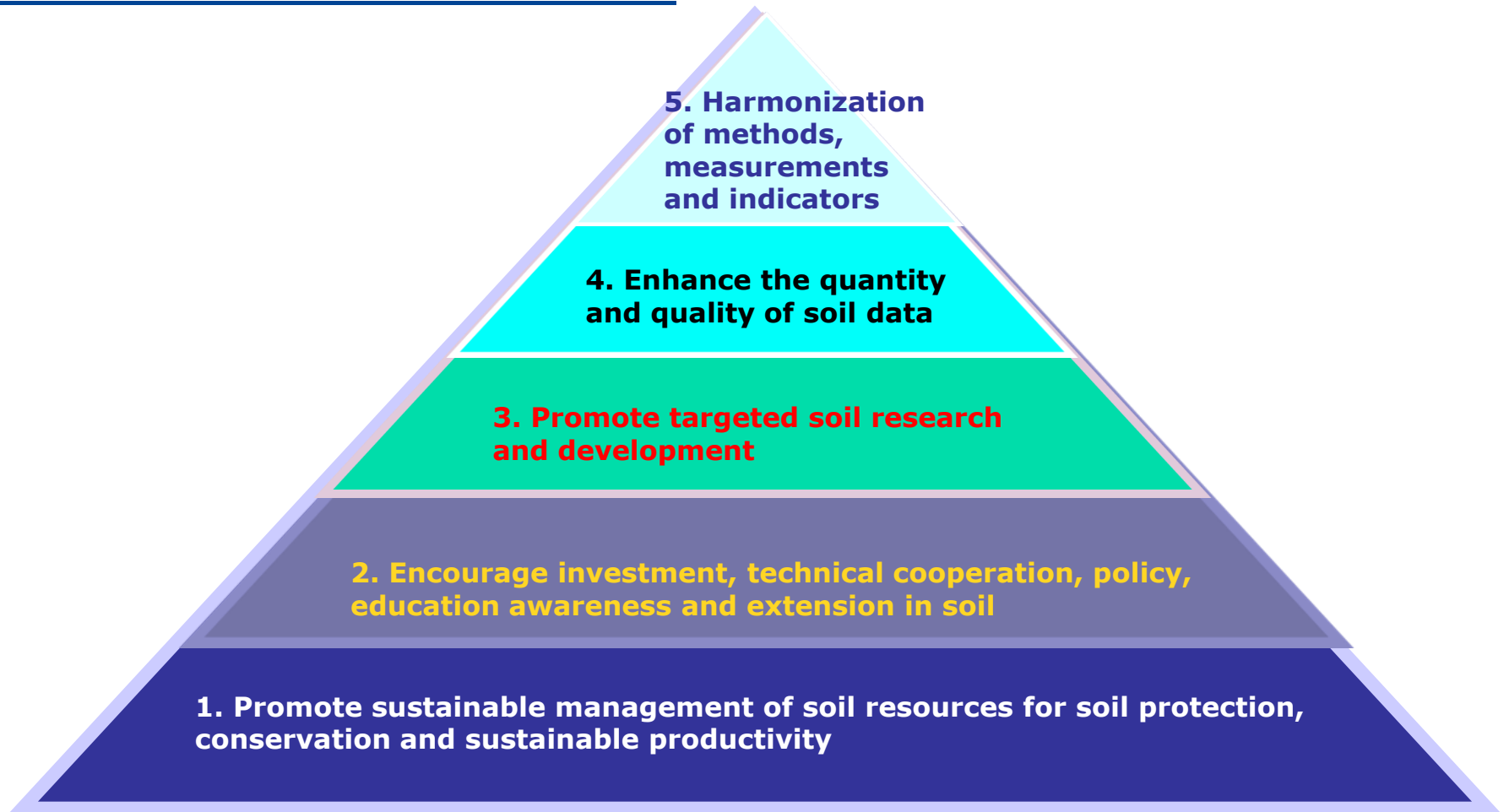
2. Agree on concrete actions

Development of detailed implementation plans
Guidelines for the establishment and consolidation of Regional Soil Partnerships

3. Sustainable Development Goals

UN discussion on a framework for sustainable development on 2015

The Five Pillars of Action



Post 2015 negotiations

- Process launched in Rio+20: from MDGs to SDGs
- Open Working Group (OWG) meetings in New York in 2013-14
- Current version of the OWG "Zero Draft Rev 1" (30 June 2014):

Proposal for Sustainable Development Goals

- *Proposed goal 15: **Protect and promote sustainable use of terrestrial ecosystems, halt desertification, land degradation and biodiversity loss***
- *Proposed target 15.3: **By 2030, achieve a land degradation neutral world, and restore degraded land including land affected by desertification and drought***
- *Proposed target 2.4: **By 2030 implement sustainable and resilient agricultural practices including for adaptation to climate change, extreme weather, drought and disasters, and progressively enhance soil quality***
- *Proposed target 3.7: **By 2030 substantially reduce the number of deaths and illnesses from air (indoor and outdoor), water and soil pollution***
- *Proposed target 11.3: **Enhance capacities for integrated and sustainable human settlement planning and management for all, and reduce urban sprawl***

Intergovernmental Technical Panel on Soil

Future activities:

- Develop Voluntary Guidelines for Sustainable Soil Management
- Support the implementation plans for the GSP 5 pillars of action
- Develop synergies with UNCCD, CBD and UNFCCC and related scientific panels
 - Develop a joint work programme with the Science Policy Interface (SPI) of UNCCD
 - Contribute to the IPBES fast track assessment on land degradation
 - Support the soil related activities of UNFCCC
- Support the post-2015 Sustainable Development Goals

Sustainable Development Goals

The Road to 2015

March – Aug 2014:
OWG shifts to
recommending
new goals, goals,
indicators

Sept 2014:
OWG submits
report to UN
GA

End of 2014:
UNSG synthesis
report of all
inputs to Post-
2015 process

September
2014-2015:
Negotiations
of Post-2015
Agenda.
Nov: ICN2

Sept 2015 Summit:
Adoption of Post-
2015 Development
Agenda

Thank you for your interest!



GOAL 15

PROTECT, RESTORE AND PROMOTE SUSTAINABLE USE OF TERRESTRIAL ECOSYSTEMS, SUSTAINABLY MANAGE FORESTS, COMBAT DESERTIFICATION, AND HALT AND REVERSE LAND DEGRADATION AND HALT BIODIVERSITY LOSS

SUSTAINABLE DEVELOPMENT GOALS
More at sustainabledevelopment.un.org/sdgsproposal

2015
International
Year of Soils



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