



Why soil matters? *A European perspective*

1. European Parliament, Brussels, 18.11.2015

Andrea VETTORI

Acting Head of Unit B1 "Agriculture, Forests and Soils"
European Commission, DG Environment

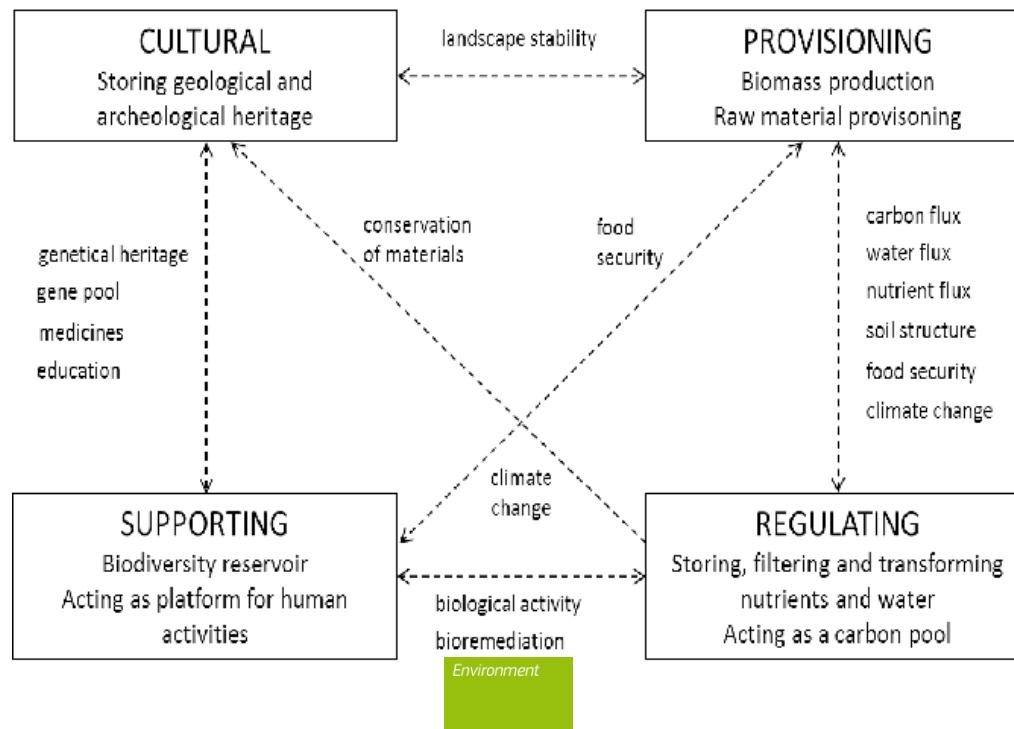


2015
International
Year of Soils



"Soils are a key enabling resource, central to the creation of a host of goods and services integral to ecosystems and human well-being. The maintenance or enhancement of global soil resources is essential if humanity's overarching need for food, water, and energy security is to be met."

World Soil Charter, FAO (2015)





THE EUROPEAN ENVIRONMENT
STATE AND OUTLOOK 2015

(EEA) European Environment State and Outlook 2015

- *The ability of soil to deliver ecosystem services — in terms of food production, as biodiversity pools and as a regulator of gasses, water and nutrients — is under increasing pressure.*
- *Observed rates of soil sealing, erosion, contamination and decline in organic matter all reduce soil capability. Organic carbon stocks in agricultural soil may have been overestimated by 25%.*
- *A coherent soil policy at EU level would provide the framework to coordinate efforts to survey soil status adequately.*

European Environment Agency





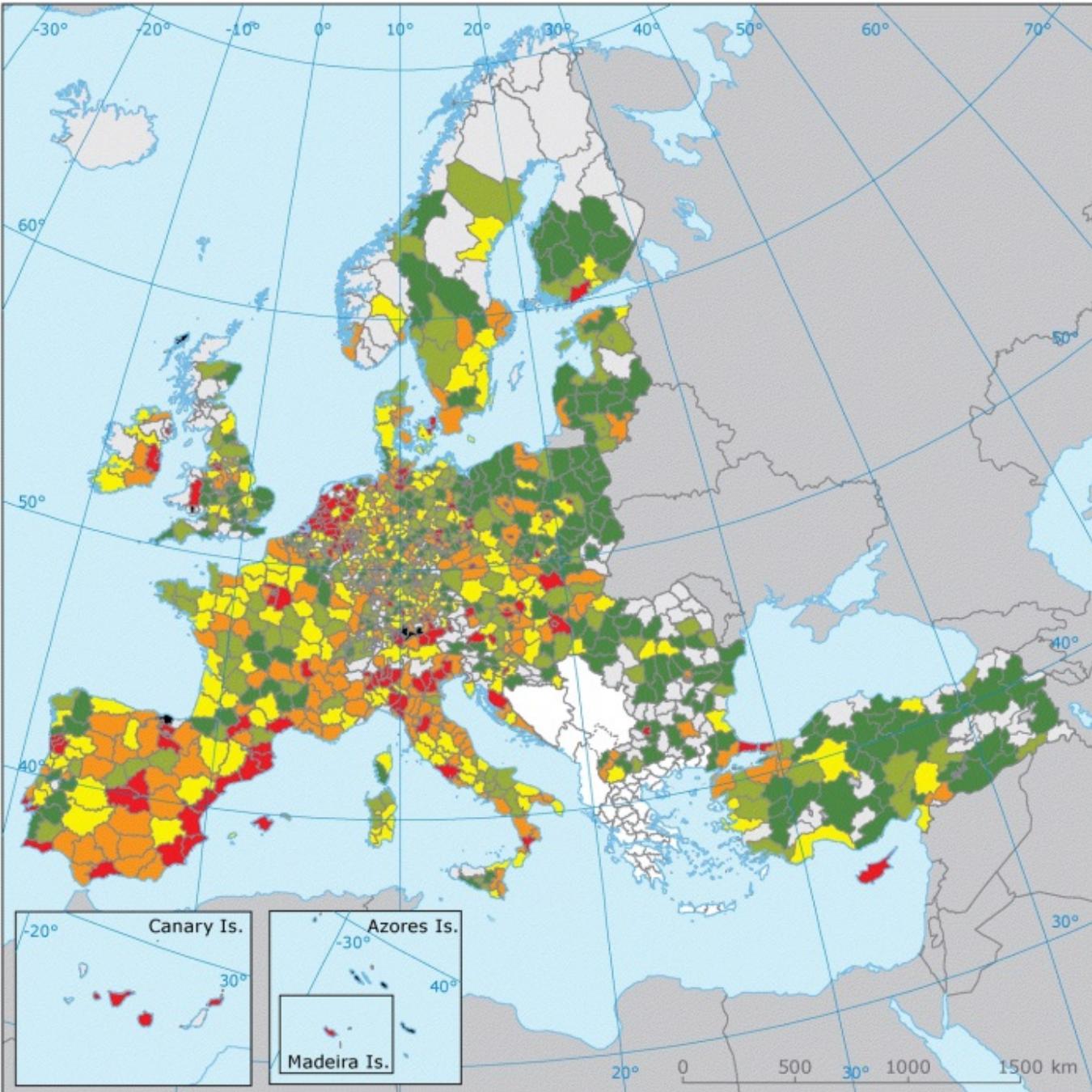
THE EUROPEAN ENVIRONMENT STATE AND OUTLOOK 2015

Protecting, conserving and enhancing natural capital

SYNTHESIS REPORT **GLOBAL MEGATRENDS** **EUROPEAN BRIEFINGS** **COUNTRY COMPARISONS** **COUNTRIES & REGIONS**

	5–10 year trends	20+ years outlook	Progress to policy targets
► Terrestrial and freshwater biodiversity			<input type="checkbox"/>
► Land use and soil functions			No target
► Ecological status of freshwater bodies			<input checked="" type="checkbox"/>
► Water quality and nutrient loading			<input type="checkbox"/>
► Air pollution and its ecosystem impacts			<input type="checkbox"/>
► Marine and coastal biodiversity			<input checked="" type="checkbox"/>
► Climate change impacts on ecosystems			No target





Percentage decline (per NUTS 3 area) of arable land area due to land take by economic site and infrastructure development between 2000 and 2006

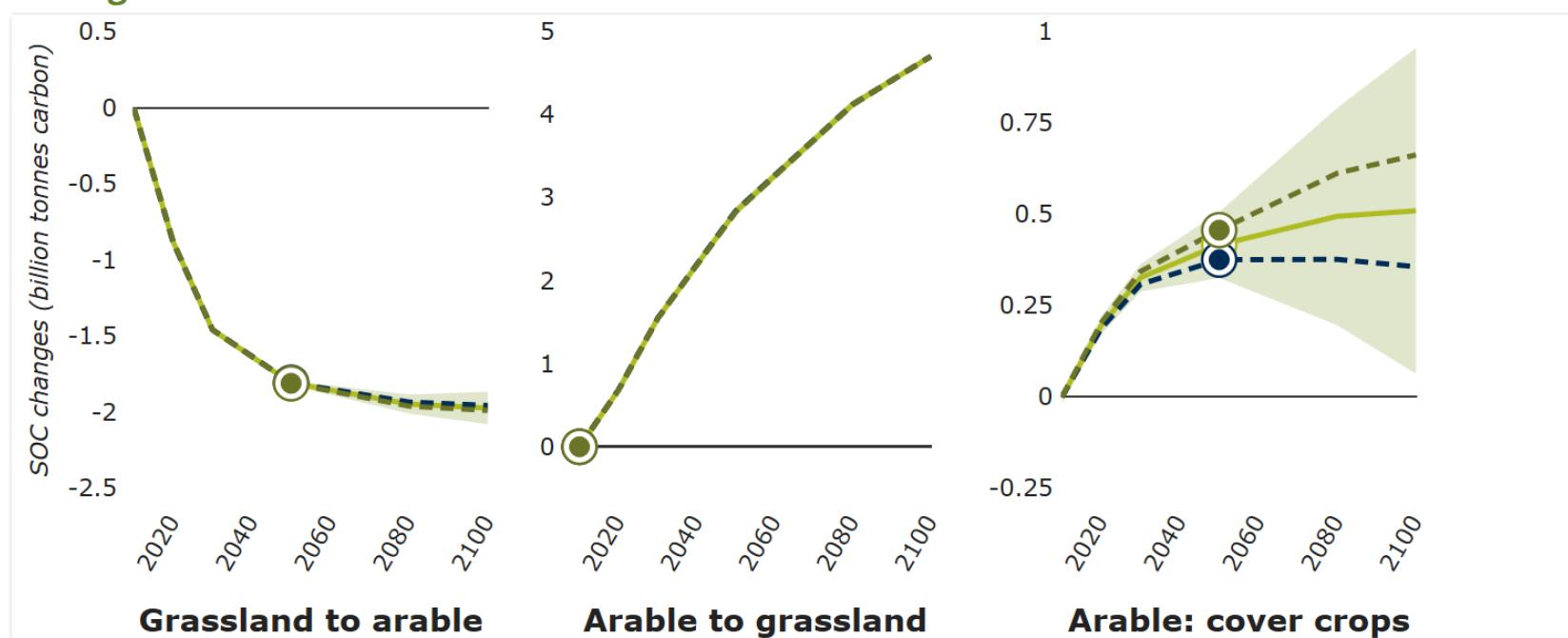
[%]

< 0.05
0.06–0.10
0.11–0.20
0.21–0.50
> 0.50

No data
No changes
No arable land
Outside coverage



Figure 1: Soil organic carbon (SOC) change at pan-European level under different land use change and soil management scenarios [31]



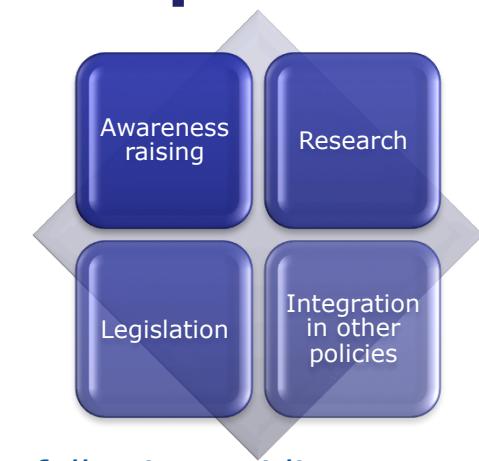
Note: Values are projected to 2100 using two climatic scenarios. The blue and dark green interrupted lines correspond to the HADCM3_A1FI (HAD) ('world markets-fossil fuel intensive') and PCM_B1 (PCM) ('global sustainability') scenarios respectively; the former is more extreme, the latter more conservative. The bright green line is the average, while the light green region delimits the 2 σ confidence interval/variability. Scenarios were calculated using the CENTURY agroecosystem model.



Soil Thematic Strategy: genesis, structure & objectives

4 pillars

- *2002*
 - Communication "Towards Thematic Strategy for Soil Protection, COM(2002)179
 - 6th EAP objective to protect natural resources and promote sustainable use of soil
- ***2006: Thematic Strategy for Soil Protection***



Overall objective: protection and sustainable use of soil, based on the following guiding principles:

1. Preventing further soil degradation and preserving its functions;
2. when soil is used and its functions are exploited, action has to be taken on soil use and management patterns, and
3. when soil acts as a sink/receptor of the effects of human activities or environmental phenomena, action has to be taken at source.
4. Restoring degraded soils to a level of functionality consistent at least with current and intended use, thus also considering the cost implications

Achievements under the Thematic strategy: awareness raising

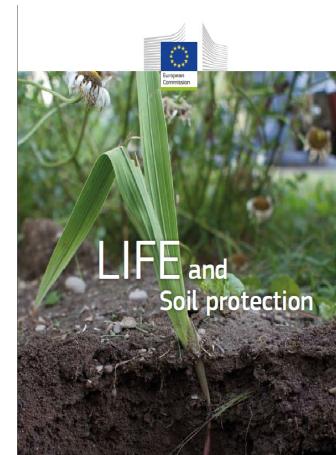


- *Public events*
 - **Conferences: at EU level**
 - Soil Remediation and Soil Sealing, May 2012
 - High Level Conference 'Soil, Climate Change and Biodiversity, September 2010
 - "Climate change: can soil make a difference?", June 2008
 - **IYS 2015 – EU and MS very active – ca 350 events registered**
http://ec.europa.eu/environment/soil/iys2015/events_en.htm
- *Leaflets and brochures, Atlas*
 - "Guidelines on best practice to limit, mitigate, compensate soil sealing" and brochure "Hard surfaces, hidden costs"
 - "Soil – the hidden part of Climate Change"
 - "Soil biodiversity: the factory of life"
 - Environment factsheets on soil
 - Soil atlas of Europe, Africa, Latin America, European Atlas of Soil Biodiversity (JRC)

Achievements under the Thematic strategy research and monitoring



- *EU-funded research projects*
 - FP6, FP7
 - Horizon 2020
- *LIFE/LIFE+ : 147 projects on Soil Protection*
<http://ec.europa.eu/environment/soil/pdf/LIFE%20and%20Soil%20protection.pdf>
- *Monitoring – soil data collection*
 - A lot of soil data at national level
 - JRC European Soil Data Centre
 - LUCAS database
 - >20,000 soil samples collected in 2009-2012 and analysed (physico-chemical properties, Heavy Metals)
 - New campaign in 2015
- **Land cover/land use monitoring: Corine, Copernicus**
-> However lack of systematic monitoring system accross EU



Achievements under the Thematic strategy Integration



Soil-relevant GAECs:

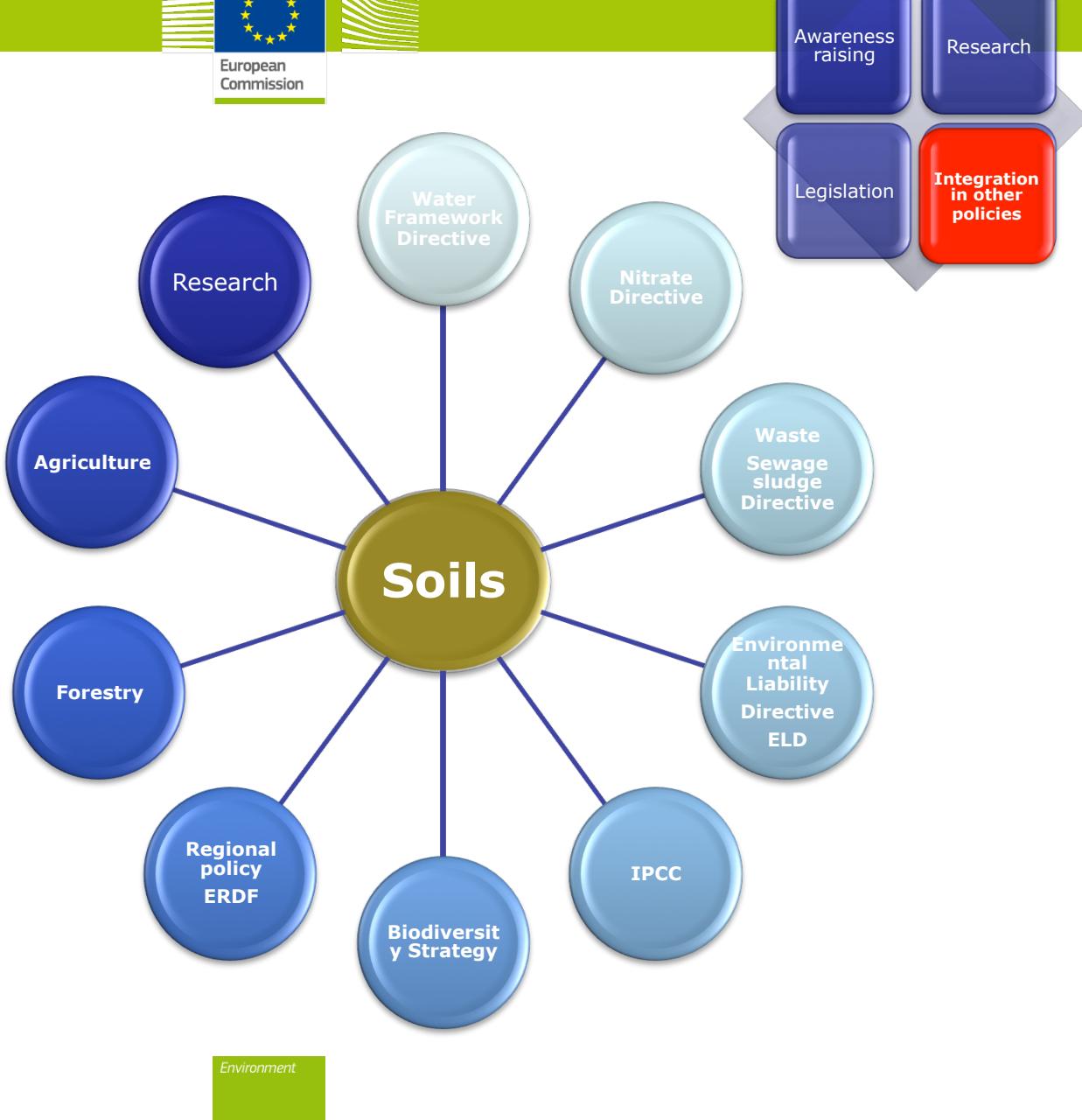
GAEC 4	Minimum soil cover
GAEC 5	Minimum land management reflecting site specific conditions to limit erosion
GAEC 6	Maintenance of soil organic matter level including ban on burning arable stubble

Rural Development Regulation:

- Art. 5(4)(c): prevent soil erosion and improving soil management
- Art. 5(5)(e): fostering carbon conservation and sequestration in agriculture and forestry

Regional policy – urban sustainable development

2007-2013: EUR 3.4 billion for the rehabilitation of industrial sites and contaminated land areas





Soil Framework Directive: lessons learned

- *SFD proposal withdrawn by the Commission in May 2014 after 8 years of negotiations and blocking minority of 5 MS in the Council (OJ C 153, 21.5.2014, p.3)*
 - **"The Commission remains fully committed to the objective of soil protection and would examine how to best achieve this. Any further initiative in this respect would however have to be considered by the next college". (in OJ C 163, 28.5.2014, p.15)**
- Key issues
 - **Sustainability principle**
 - **Soil not recognized as Common good – Private ownership**
 - **Ambitious - encompassing all soil threats in different contexts**
 - **Contamination – flexible but perceived as too prescriptive – issue of orphan sites and costs**
 - **Farmers' concerns – articulation with CAP**

International developments



2015
International
Year of Soils



- *Soils gained momentum at global level:*
 - **UN GA set up the Global Soil Partnership in 2012**
 - Voluntary Partnership >400 organisations private/public/NGOs/research...
 - GSP Secretary hosted by FAO
 - 5 Pillars of action: promote sustainable soil management, education & awareness, research, information and harmonisation
 - Rely on Regional Soil Partnership - European Soil Partnership incl. MS and European Commission
 - Countries nominated their National focal points
 - **2015 declared as the International Year of Soils**
 - **5 December declared as World Soil Day**
 - **Agenda to 2030 Sustainable Development – 4 SDGs mentioning soils**
 - **UNCCD activities on Land Degradation Neutrality**
 - **New report - Economics of Land Degradation**
 - **COP21: soil carbon & climate change adaptation**





7th EAP commitment on soil

- *Objective*
 - **By 2020: "land is managed sustainably in the Union, soil is adequately protected and the remediation of contaminated sites is well underway;"**
 - **This requires, in particular: "increasing efforts to reduce soil erosion and increase soil organic matter, to remediate contaminated sites and to enhance the integration of land use aspects into coordinated decision-making involving all relevant levels of government, supported by the adoption of targets on soil and on land as a resource, and land planning objectives;"**
- *Commitments*
 - **"The Union and its Member States should reflect as soon as possible on how soil quality issues could be addressed using a targeted and proportionate risk-based approach within a binding legal framework."**



Soil in the Sustainable Development Goals (2030 Agenda)

(United Nations Sustainable Development Summit 2015, 25 September)

- ***SDG Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture.***
 - Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land **and soil quality**.
- ***SDG Goal 3: Ensure healthy lives and promote well-being for all at all ages.***
 - Target 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water **and soil pollution and contamination**.
- ***SDG Goal 15: Sustainably manage forest, combat desertification, halt and reverse land degradation, halt biodiversity loss.***
 - Target 15.3 By 2020, combat desertification, **restore degraded land and soil**, including land affected by desertification, drought and floods, and strive to **achieve a land-degradation-neutral world**
- ***"All countries and all stakeholders, acting in collaborative partnership, will implement this plan."***



Key ongoing actions under the **EU Soil Thematic Strategy:**

- *Launch of an EU Expert Group on Soil Protection*
 - **With experts nominated by all EU Member States**
 - **Reflexion on how to address 7th EAP commitments on soil**
- *Inventory of soil protection measures in all EU MS*
 - **National legislation + implementation EU policies**
 - **Regulation, voluntary, support schemes: state of play, implementation, gap analysis**
- *Pilot Mapping and Assessment of Soil-related Ecosystem Services (MAES)*



2015
International
Year of Soils



International Year of Soils Closing event

4th December 2015, Brussels, Belgium

Organised by the European Commission, Brussels Capital, Flanders and Wallonia regions
10:00 – 17:00

Welcome & intro by **Mrs Céline Frémault**, Minister of Environment, Energy and Housing, Brussels Capital Region

Keynote speech – European commission – **M. Daniel Calleja Crespo**, Director General, DG Environment

Panel with the Minister of Brussels Capital, the Minister of Wallonia Carlo Di Antonio, the Director General of DG Environment, and a Representative of Minister Joke Schauvliege (Flemish Region)

Session 1 – International and EU context

Presentation of the global context (the Agenda to 2030 Sustainable Development and SDGs, COP21, UNCCD activities (United Nation Convention to Combat Desertification)

EU context: soils in the context of EU priorities, state of play and new developments of EU Soil policy, integration of soils in EU policies

Presentation of the publication "Success stories of contaminated sites" from the European Information and Observation Network's National (EIONET)

Ceremony World Soil Day closing the IYS - In Duplex with FAO in Rome

Session 2 – the Belgian context: the Belgian activities and policies regarding protection and sustainable management of soil.

Session 3 – Activities in other Member States

<http://www.environment.brussels/node/18245>



<http://ec.europa.eu/environment/soil>

**Thank you for
your attention!**

