

# WHY WE NEED TO TALK ABOUT LAND AND SOIL RESEARCH TODAY!

■ Lilian Busse (German Environment Agency)



Health  
Societal Demands  
Cities  
Jobs  
Natural Capital  
Soil  
Ecosystem Services  
Spatial Planning  
Farming  
Resources  
Land-Use  
Water

World Soil Day  
European Commission

Why we need to talk about land and soil research today!

Lilian Busse, German Environment Agency  
Head of Division Environmental Health and Protection of Ecosystems



**“Why we need to talk about  
land and soil research today!”**

**– – – Notes – – –**

**Lilian Busse,  
Head of Division  
Environmental Health and Protection of Ecosystems  
at  
World Soil Day 2017 celebration and  
Final Conference “Land, Soils and Science”  
of EU project INSPIRATION  
(INtegrated Spatial PlannIng, land use and soil  
management Research AcTION)**

**05<sup>th</sup> December 2017  
IBGE - Bruxelles Environnement  
Avenue du Port 86c/ 3000, 1000 Brussels, Belgium**

**– These notes may not reflect the actually spoken words. –**

- Welcome
  - World Soil Day (= 5 December), celebrated by the international Union of Soil Science since 2002, UN-Day since 2015
  - “Land, Soils and Science” = Conference title → We need to talk about soils today, of course! – Need to think how to manage soils and use land more sustainably. Idea of science & research is to create knowledge → so let’s talk about today about the links of land, soils and science
- European Commission annually celebrates World Soil Day with a conference in Brussels – bringing together stakeholders from across Europe
  - Today, >> 200 participants, 40 countries
- This year: This event organized by EC Horizon 2020 funded coordination and support action INSPIRATION
  - INSPIRATION! – “nice acronym” – perfectly fits into the nature of our Agency.
- German Environment Agency
  - Notably about protecting the environment, incl. soils, and providing the public and ministries with knowledge / understanding of potentially harmful consequences of (in-)actions
  - UBA = Germany’s central scientific environment authority. Overarching mission: Early detection of environmental risks and threats in order to assess them and find viable solutions.
  - Impossible without inspirations, e.g. for scoping underlying research that is conducted in our own labs or outsourced to scientific institutions.
  - Independent in identifying and assessing environmental issues and deriving conclusions and recommendations. → Addressing societal challenges as related to the environment.
  - Yet, UBA belongs to Germany’s Federal Ministry of the Environment, Nature Conservation, Building and Nuclear Safety. The Ministry is expecting our scientific advice, our policy advice and our support.
  - In a certain way, we are located right at the interface of science, public and policy.

- Like everywhere, also the German Ministry highly appreciates recommendations that are on one hand scientifically verified and environmentally effective.
  - solutions are more appreciated if they are politically compliant and easily agreeable upon the private and public stakeholders.
  - inspirations how to design and communicate our activities among the relevant stakeholders to get them on board.
- Like in any other agencies, our resources are finite. We have to prioritize our activities and select topics.
- Thus, I was delighted to learn about the INSPIRATION project.
  - INSPIRATION – = acronym of this project – stands for “Integrated spatial planning, land use and soil management research Action”.
  - 23 partners from 17 countries since March 2015 strive for structuring and prioritizing research for soil and land in Europe
- A difficult task given the disparity within the topic itself:
  - Spatial planning and land use on one hand and soil protection issues on the other hand!
  - We know that both fields haven’t really been working in harmony in the past.
  - Spatial planning and land use authorities are often still working in the conventional planning tradition of economic growth – based on an apparently unlimited availability of land for urban expansion.
  - The fact that land use always has an effect on the quality of the underlying soil is widely underestimated or simply unknown.
    - Germany: day by day some 70 ha valuable – mostly agricultural – greenfield land converted into land for traffic, settlement.
    - Across European Union almost 100,000 ha of agriculture or natural land disappears every year (= the size of Berlin)

- What do we know about the consequences:
  - Urban sprawl, land and soil sealing, more traffic, land segregation, diffuse and local contamination, and the loss of natural land are obvious consequences.
  - However, effects are even more manifold: Soil is the largest pool of organic carbon which is essential for mitigating and adapting to climate change. Soils are also fundamental for the storage and distribution of water.
- Therefore, we also lose important ecosystem services of the soil – also transboundary by impacts to groundwater, rivers, lakes, and oceans – if we continue business as usual – as the workshops of DG Environment addressed already yesterday.
- Dear colleagues, soil and land are finite and shrinking resources. They are subject to competing pressures – not only in Europe but worldwide.
  - Across the globe, an increasing demand for land. Urbanization, intensification of global farming and the installation of new infrastructures are globally progressing.
  - At the same time, social conflicts related to land use are also increasing. Arable land is worldwide in great demand. Mainly due to soil erosion the amount of usable land is decreasing by 10 million hectare per year worldwide. About 33 per cent of our global soil resources are under degradation and human pressures on soils are reaching critical limits, reducing and sometimes eliminating essential soil functions.
- A significant challenge: Although awareness for the consequences increases, in several areas we are lacking in-depth knowledge and scientific evidence or clear/convincing advice on how to act.
  - The knowledge about the processes of how land management pressures the soil system and how this in return impacts the state of soil functions which humans recognize as ecosystem services is incomplete
  - We know little about the complexities of soil processes
  - We have no agreed indicators for soil degradation of soil health
  - We don't have silver bullet to trade off competing demands for land ...
- Research and science is expected to deliver enlightenment

- Dear colleagues, the INSPIRATION project – which is celebrating its official final event today – had the ambition to support structuring and prioritising research on soil, land-use and land management in Europe.
  - An ambitious goal!
  - Creation of synergies and networks among the different – sometimes opposing – groups who are working and researching in this complex and fragmented field of soil and land issues.
  - I really appreciate that the European Commission had taken initiative on such an important task and am more than happy that the German Environment Agency has had the opportunity to coordinate this activity.
- During this final conference, you learn about the results.
  - At registration you received a folder
    - Agenda for talks and workshops that present the Strategic Research Agenda and state-of-the-art research in Europe
    - Background on the INSPIRATION research agenda and its impressive bottom-up approach – having engaged >500 European stakeholders
    - Information on contact points in 17 countries and the coordination level.
    - Website [inspiration-agenda.eu](http://inspiration-agenda.eu) → database of the complete Strategic Research Agenda and background info
    - Also: Website → expressions of co-funding interests → establishing network of funders
- It is important: This final conference is a kick-off into a phase of new collaboration.
  - Funders from across Europe come together – we saw an intense workshop yesterday evening and already this morning – to exchange on research needs and identify collaboration opportunities.
  - Discussions continue today more informal and tomorrow again in a dedicated match-making session
  - Your folder includes briefing notes on example areas that deserve further collaboration.
- I wish you all an inspiring conference.
- Thanks for attention