







# Ecological Function and Biodiversity Indicators in European Soils

Anne Winding<sup>1</sup> and Philippe Lemanceau<sup>2</sup>

<sup>1</sup>Department of Environmental Science,

AU, Roskilde, Denmark

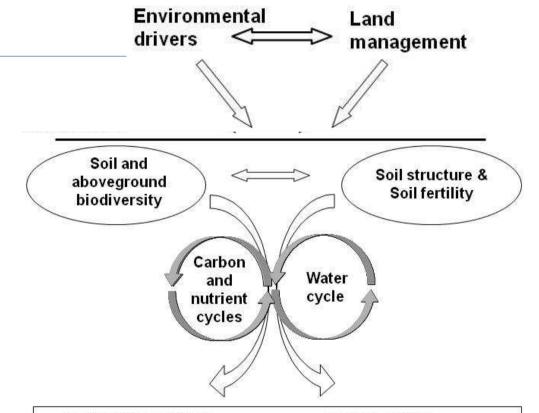
<sup>2</sup>INRA-Dijon, France







### Ecological functions in soil



Ecosystem structure

Ecosystem processes and functioning

Biomass production Nutrient regulation Pest and disease control Greenhouse gas regulation Erosion control
Soil compaction control
Water regulation
Water purification

Ecosystem services

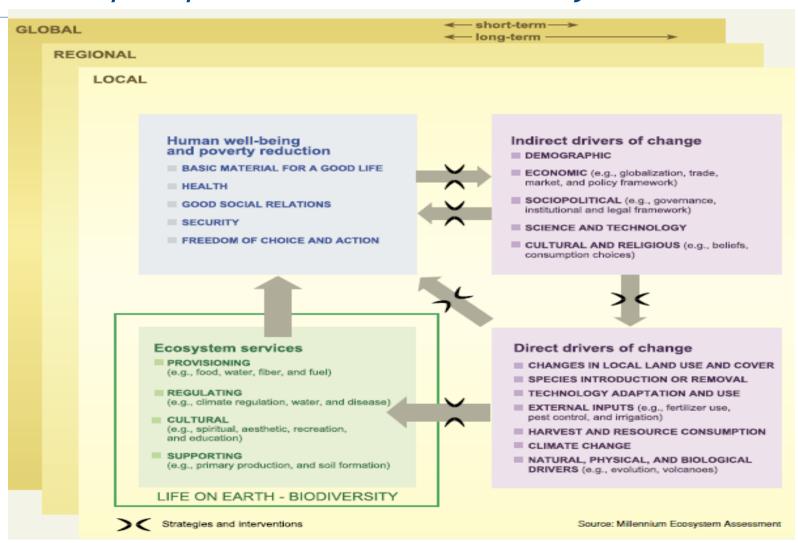


(after Brussaard et al., 2007)





# Ecosystem Services the benefits people obtain from ecosystems







### **Biodiversity**

- > Biodiversity is the variability among living organisms from all sources: terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part
- > includes diversity within species, between species, and of ecosystems





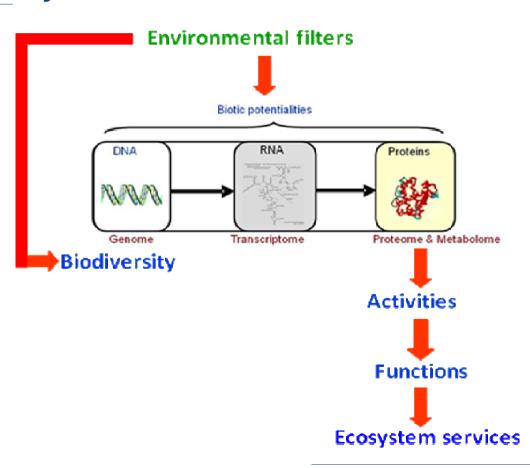
#### Soil Threats

- > Erosion
- > Loss of soil organic matter
- > Salinisation
- > Compaction
- > Landslides
- > Sealing
- > Contamination
- > Biodiversity decline





## Links between biodiversity and soil ecosystem services







#### **EcoFINDERS**

- > Provide knowledge of relevance for the Soil Thematic Strategy and Soil Framework Directive
- > soil biodiversity and its role in ecosystem services
- > standardization of methods for soil biodiversity and functioning
- > development of **bioindicators**
- > assessment of the added value brought by costeffective bioindicators
- > assessment of cost effectiveness of alternative ecosystem service maintenance policies





### **EcoFINDERS**

- > metadata analyses to raise a biodiversity database at the European level
- > decipher relations between soil biodiversity and functions
- > putting a value on ecosystem services
- > communication with stakeholders in EU
- > make suggestions to the EU Commission and provide input to the Soil Directive

www.ecofinders.eu





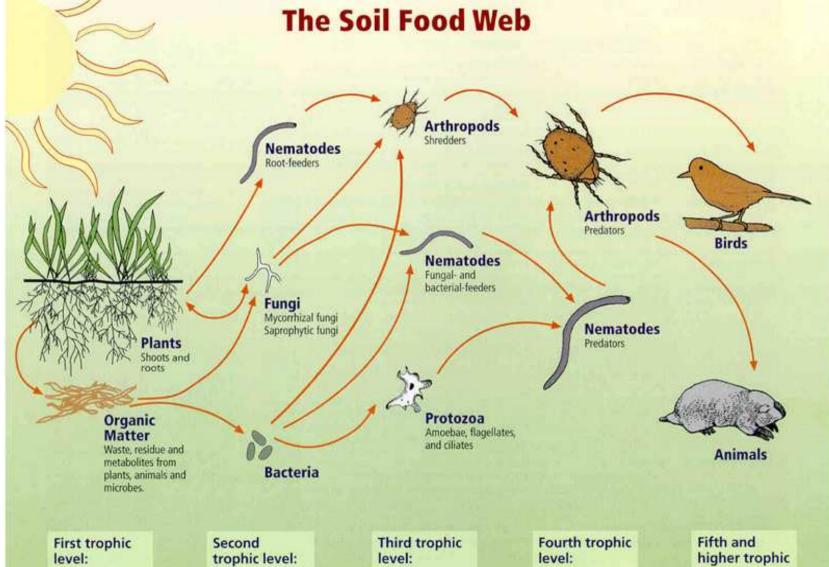
## Thank you



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Photosynthesizers

Decomposers Mutualists Pathogens, parasites Root-feeders

Shredders Predators Grazers

Higher level predators

levels:

Higher level predators