

OUR DEMAND FOR LIMITED SOIL-SEDIMENT-WATER ECOSYSTEM SERVICES IS GROWING... UNTIL WHEN?

The long-term effects of our growing demand for Soil-Sediment-Water ecosystem services will be to threaten their supply and to compromise our quality of life.

Why we need to act?

Europeans demand ecosystem services from soil-sediment-water, not only for basic needs related to safe food, clean water, energy, raw and building materials, and support function, but also for higher level satisfaction of human needs like urban green spaces for recreation and the intrinsic aesthetic value of nature. This demand is growing while ecosystem services remain at best constant but potentially shrinking due to urban sprawl and pollution. Research and innovative solutions is needed to equilibrate supply of and demand for ecosystem services from soil-sediment-water.

What we will gain?

The demand for natural resources is driven by the overall consumption of goods and services of our societies. Research on a systemic quantification and mapping in time and space of the use of soil-sediment-water nexus as a resource will benefit to all of us. It will allow us to adapt our consumption and life style to resource availability. For example, circular economy principles could be promoted such as the use of bio-sourced goods in building materials to avoid consumption of raw resources. One of the challenges is to match long-term supply of and demand for ecosystem services to maintain and improve our well-being. Research will help prioritize innovation needs, consumption monitoring, education programs and objectives setting in resources policies.

Key research areas

INSPIRATION's bottom up approach (see INSPIRATION's SRA for details) identified pressing needs for research to understand the demand for ecosystem services from soil-sediment-water in the following areas:

- Understand, assess and optimize soil-sediment-water ecosystem functions and services,
- Develop specific methodology to evaluate demand for and supply of soil functions and services associated with urban, industrial, natural and production (agricultural, forest) ecosystems,
- Manage local and regional supply and demand of soil and aggregates through appropriate (re)use of excavated soils and temporary, pending reuse, storage of characterised materials,
- Evaluate potential for wood-based products to meet the demand,
- Enable efficient, socially acceptable and safe city centre development, brownfield regeneration, multiple function and temporary uses, densification and replacement of older buildings.

How to become active?

Contact your INSPIRATION national contact at www.inspiration-agenda.eu for further information for a systemic approach on natural resources demand for goods and services supply.

