Benchmark soils: Complementing soil maps?

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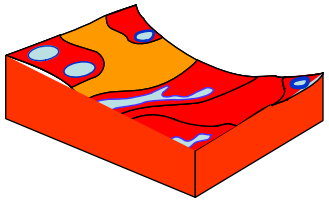
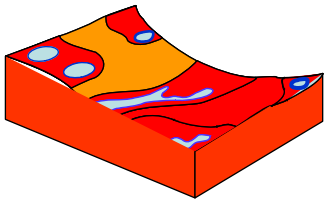


ESBN 2009 Plenary meeting
Budapest, 14-15/09/2009

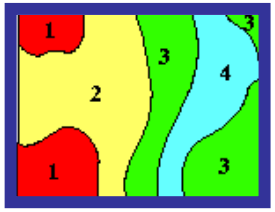
SOIL MAPS



Soil cover

Continuum in 3D
High spatial variability
Variability results from soil formation

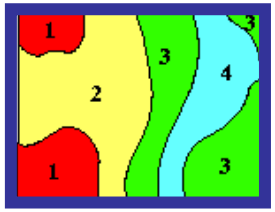
Soil survey

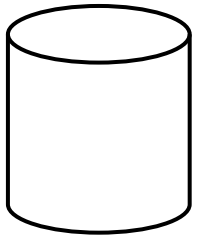


Soil map

2D representation
Based on soil forming processes
Costly in time and money
Scale constraints and poor information

FROM SOIL MAPS TO SOIL DATA BASES





Soil map

Soil
Data Base

Definition of a 3D space organization model
→SMU/STU/layers
Storage of basic data:
→profiles/horizons/analytical data
More information on variability in space

BUT STILL SOME LIMITS

- Lack of information on :
  - physical properties
  - Functioning of soils
  - Evolution of soil properties
- Regional development
  - Classification system
  - Some physical properties
  - Analytical methods

NEED OF AN IMPROVEMENT

- Many research studies are made to improve soil knowledge, particularly on:
  - physical properties
  - Functioning of soils
  - Evolution of soil properties
- But:
  - Only on small areas
  - Are they representatives ? How the results can be extrapolated?

  → Which link with soil mapping and associated DB?

NEED OF AN IMPROVEMENT

- Need of a global view:
  - climate change, diffuse contamination, water pollution, etc.
  - European policies and international conventions
- But:
  - Most data are regionally based in their concepts
  - Harmonisation is difficult and leads to less precise information

  → Need of correlation studies on classification, analytical methods