

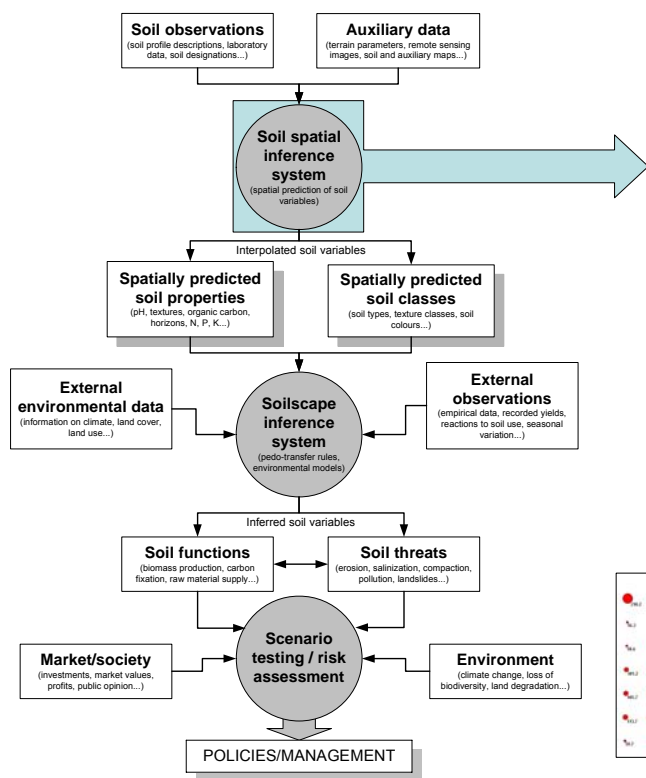


## Digital Soil Mapping

### Developing methodology to monitor and manage soils

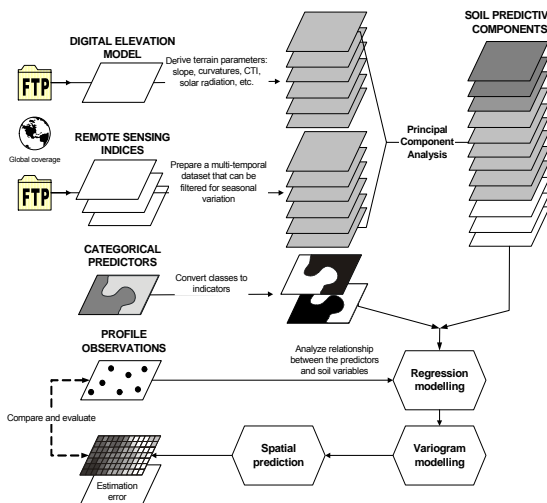
#### DIGITAL SOIL MAPPING

Digital Soil Mapping – is the **computer-assisted production of digital maps of soil type and soil properties**. It implies use of mathematical and statistical models that combine information from soil observations with auxiliary information contained in correlated environmental variables and remote sensing images.



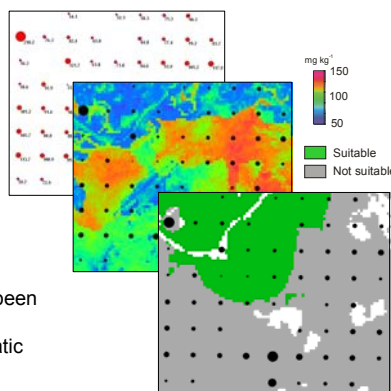
#### SOIL INFERENCE SYSTEMS

The key idea behind DSM is to provide relevant and reliable information on soils and based on various input data. DSM focuses on producing three main groups of soil information: (1) **Maps of soil properties and classes** (Soil spatial inference system); (2) **Maps of soil functions and threats** (Soilscape inference system) and (3) **Predicted outcomes for various scenarios** (Scenario testing / risk assessment system).



Data sources for pan-European DSM:

- National soil profile databases; Forest FOCUS BioSoil profile database and similar;
- (SRTM-based) Digital elevation model of Europe at resolution of 90 m;
- MARS meteorological database of Europe;
- MODIS multi-temporal 15 days composites (250 m resolution) and similar multispectral and radar-based imagery;



The DSM Working Group is an advisory board made from researchers and soil mapping experts from EU countries. It has been founded at the last 2004 Plenary meeting of the European Soil Bureau Network (Ispra, Nov 2004) as a support to the Soil thematic strategy. Its task are:

- to review data, techniques and applications of digital soil mapping and to propose common methodologies to map and manage European soils at different scales;
- to assist the EC in policies related to sustainability of soils (inventory and monitor soil functions and threats);
- to assist production of soil geoinformation at pan-european scales for various data agencies



FOR MORE INFO SEE:

Dobos, E., Carré, F., Hengl, T., Reuter, H.I., Tóth, G., 2006. Digital Soil Mapping as a support to production of functional maps. EUR 22123 EN, 68 pp. Office for Official Publications of the European Communities, Luxembourg.

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