A short story about InfoSol

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Groupement d'intérêt scientifique

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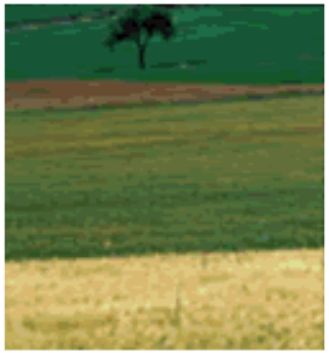
Groupement d'intérêt scientifique

2001. CONSTITUTION OF THE GROUP OF SCIENTIFIC INTEREST SOL (MEDD, MAP, INRA, ADEME, IRD, IFN)





pour une gestion patrimoniale et durable des sols



The Gis Sol

- **When ?**
  - Created in 2001
  - Renewed for five years in 2006
- **Why ?**
  - Strong need for disseminate information on soil
  - Need for mutualisation of the observation means and the competences on soil
- **Who ?**
  - **Financial function**: *Ministries in charge of Agriculture and Environment and the French Environment and Energy management Agency (ADEME)*
  - **Research function**: *The French National Institute for Agricultural Research (INRA) and the Research Institute for Development (IRD)*
  - **Diffusion and valorisation function**: *Ministry in charge of Environment (SOeS), INRA, IRD*

Groupement d'intérêt scientifique

The GIS Sol and InfoSol

The French Information System on soils: a decision support system for soil inventory, monitoring and management

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InfoSol's objectives

Simulation and development of a national network for soil monitoring (RMQS)

National soil survey harmonisation, completion of mapping programs

Data and programs administration

Data valorisation and information diffusion

Collection and management of data on pressure parameters on soils

Answer to national and international inquiries

Education et awareness on soils and soil degradation

Soil samples archiving

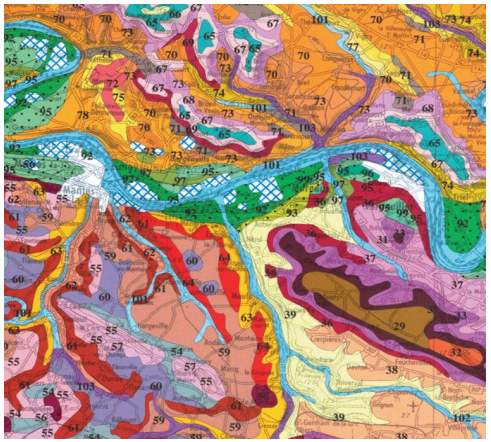
Main programs leaded by InfoSol

Soil Inventory

Soils maps from 1:5,000 to 1:250,000 scale

+

French geographic database at 1/1M



Soil Databases

Donesol, RMQS, Carbon, TE, BDAT

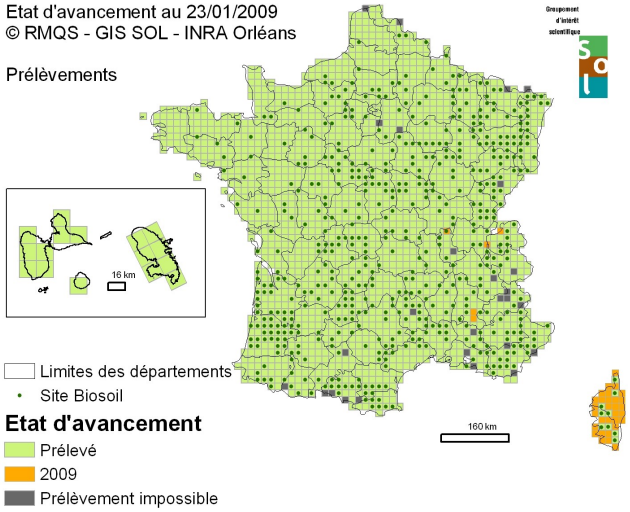
External data

X

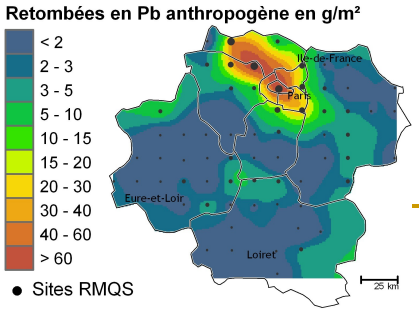
modelisation

Soil monitoring

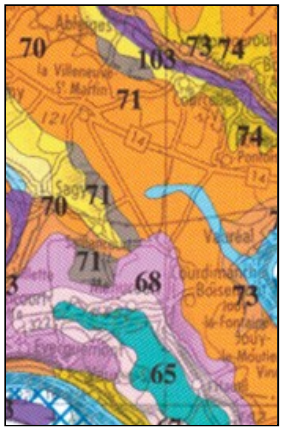
RMQS, BDAT



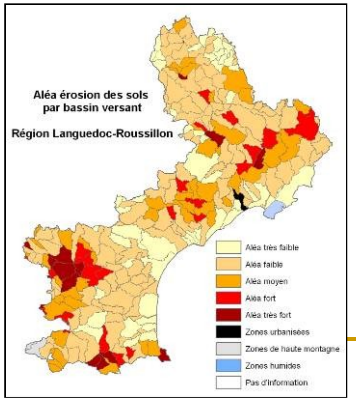
Informations



Inventaire Gestion et Conservation des Sols : objectives



Source : INRA Orléans



«Inventory for a better soil management »

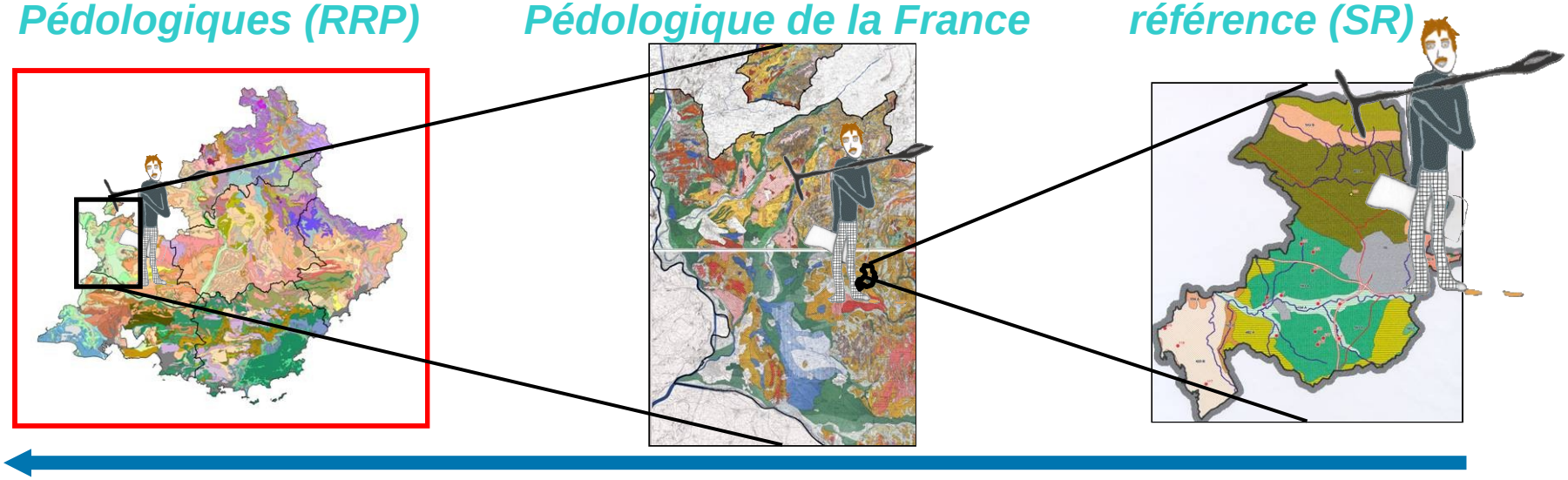
- Identification, definition and localisation of **main soil types at different scales** and characterisation of their properties
- Constitution of **quality databases** dedicated to soil users
- Evaluation of soil suitability for land uses (agriculture, environment, urbanisation,…) and risk evaluation

IGCS : a multi-scale program

Référentiels Régionaux Pédologiques (RRP)

Connaissance Pédologique de la France

Secteurs de référence (SR)



1/250 000

Large regions

1/50 000 à 1/100 000

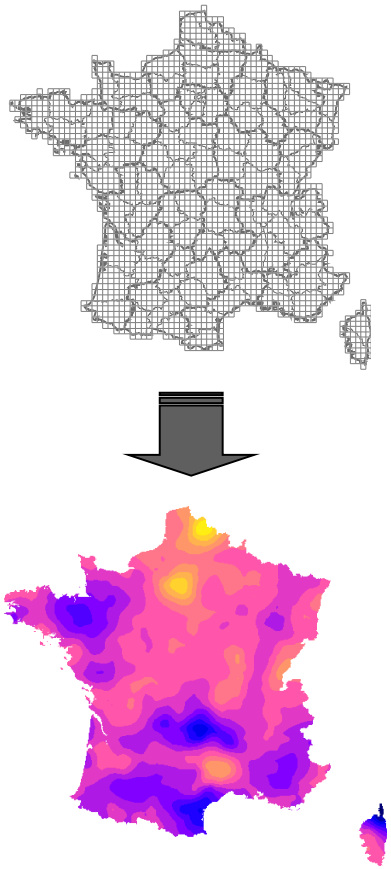
Small regions

1/10 000

plots

Réseau
de mesures
de la qualité des sols

Réseau de Mesures de la Qualité des Sols : objectives

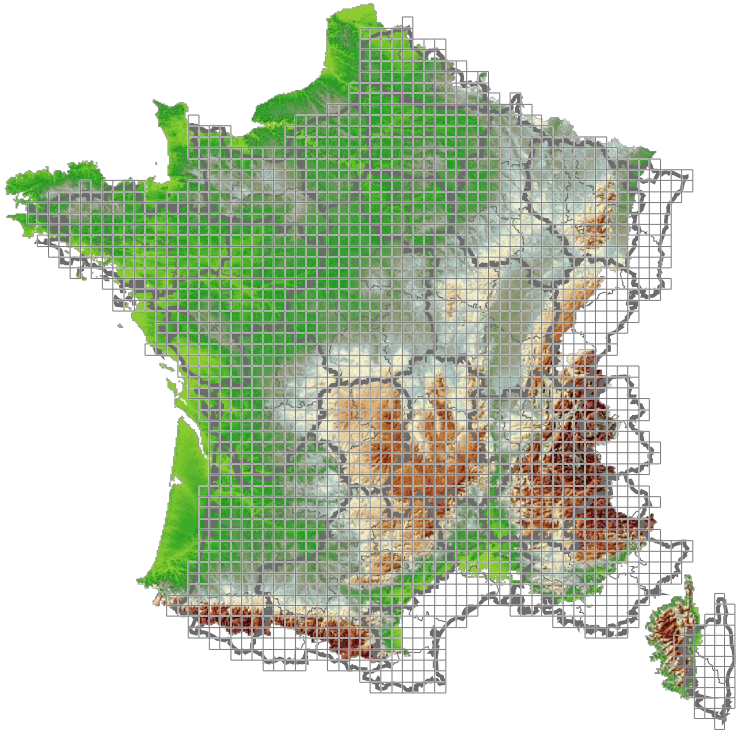


« To monitor the quality and evolution of french soils »

- **National statement** of soil quality
- **Mapping soil properties** (e.g gradients of diffuse contamination)
- **Detection of evolutions** (warning objective)
- **Validation** of spatial predictions issued from external modelling procedures
- Constitution of a **soil archive** (soil memory)

Réseau
de mesures
de la qualité des sols

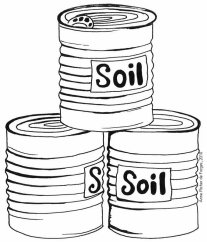
Le RMQS : a systematic network



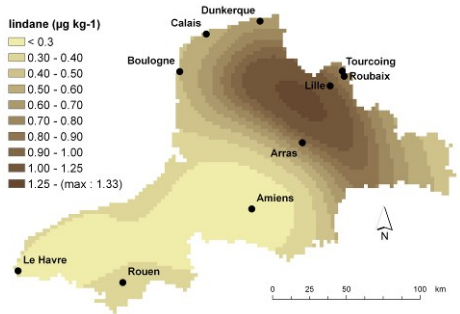
A multi land use network (16x16 km)

of 2200 sites

sampled each 10 yrs

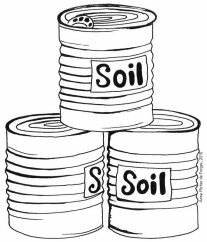


The national soil archive : objectives



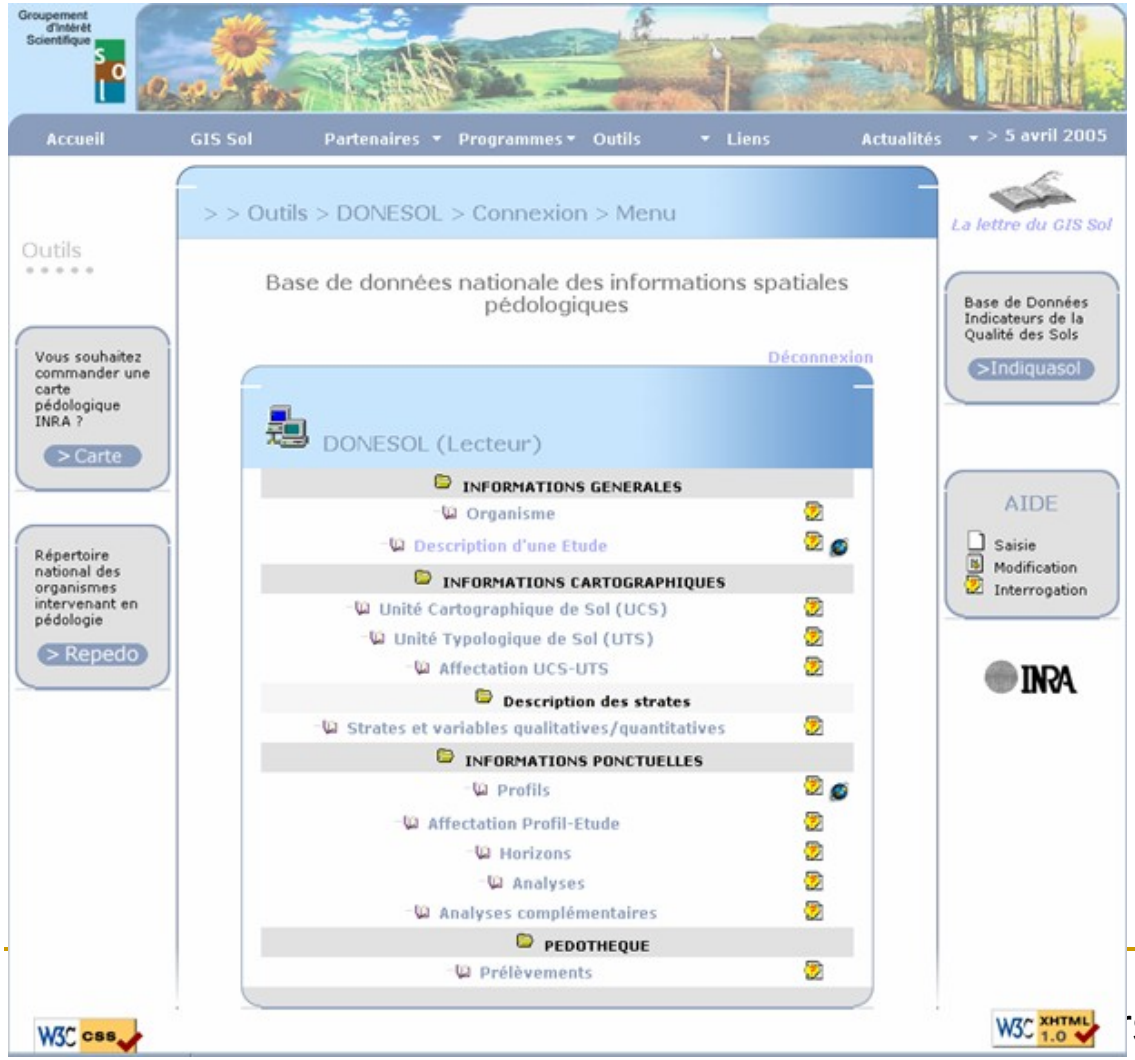
« The memory of our soils »

- To prevent any **analytical drift** with time
- To « **go back** » in time
- To constitute a **bank of soils**



The national soil archive : laboratory and facility

DONESOL : the national database of our soil information system

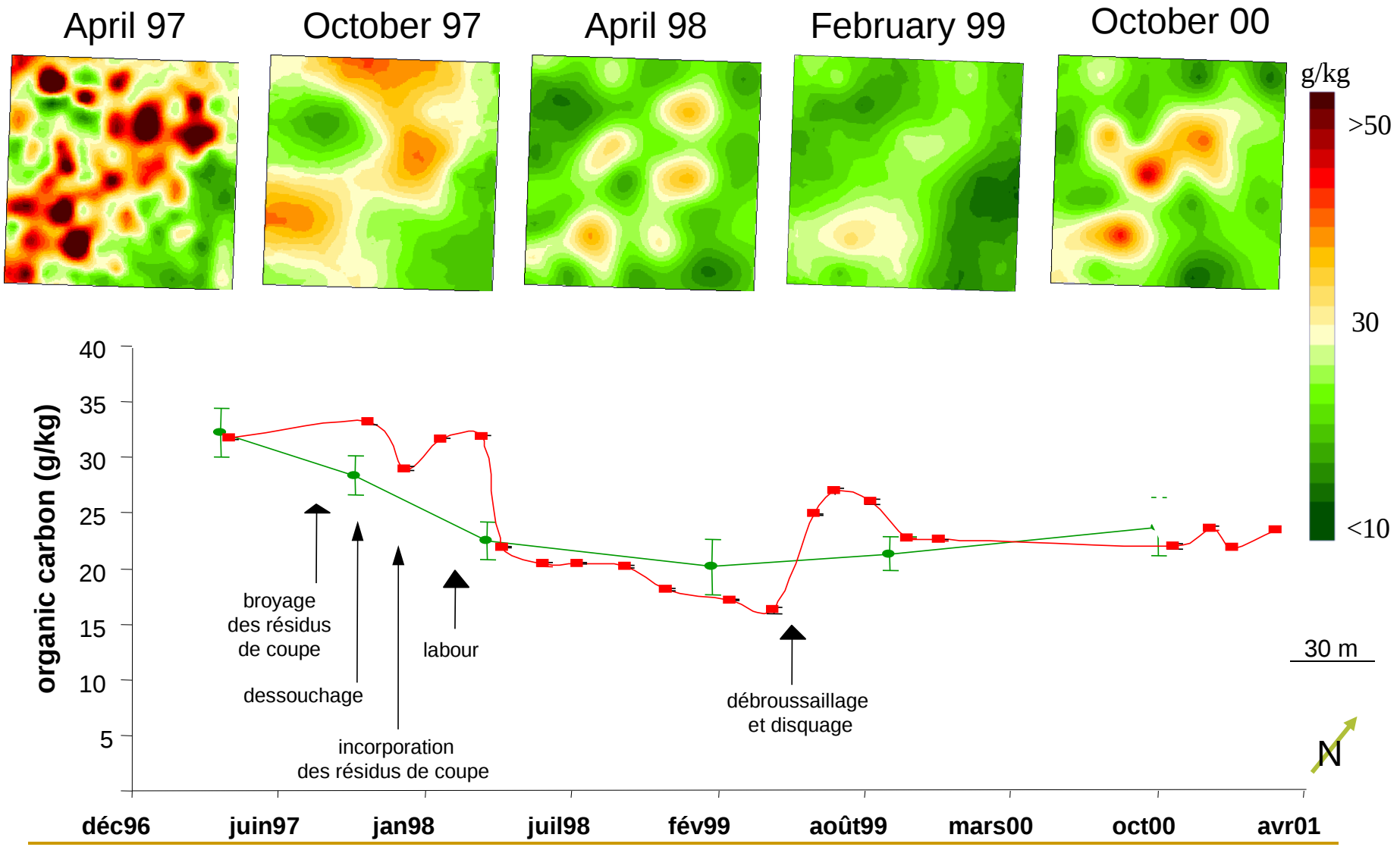


4460 studies
88033 soil profiles
12 300 000 data

Multi-scale
Harmonised
Quality insured
Evolutive

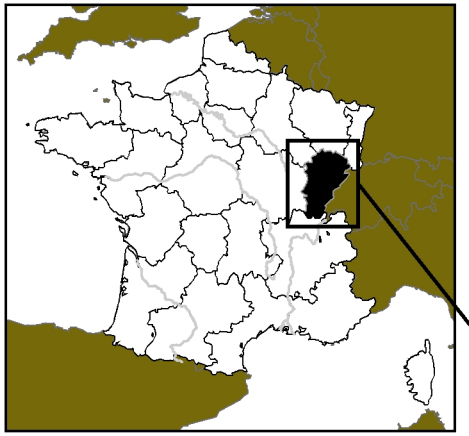
rsaw

Monitoring soil organic carbon at plot scale



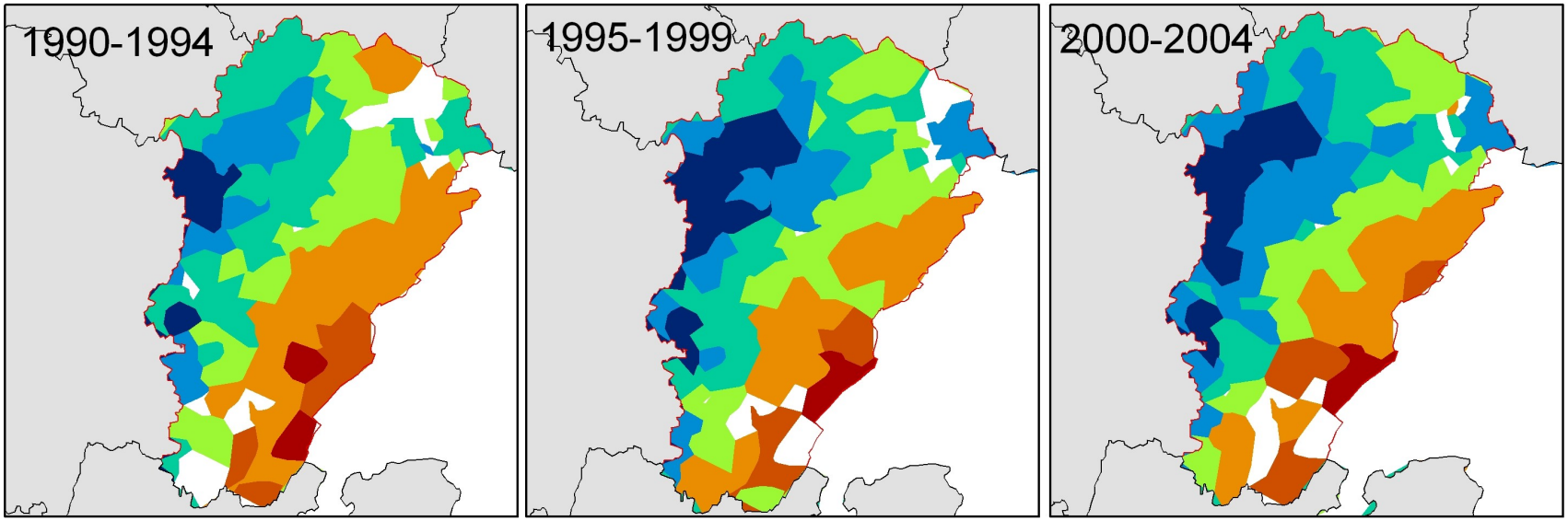
Source : Jolivet, 2000.

Mapping and monitoring soil carbon at regional scale



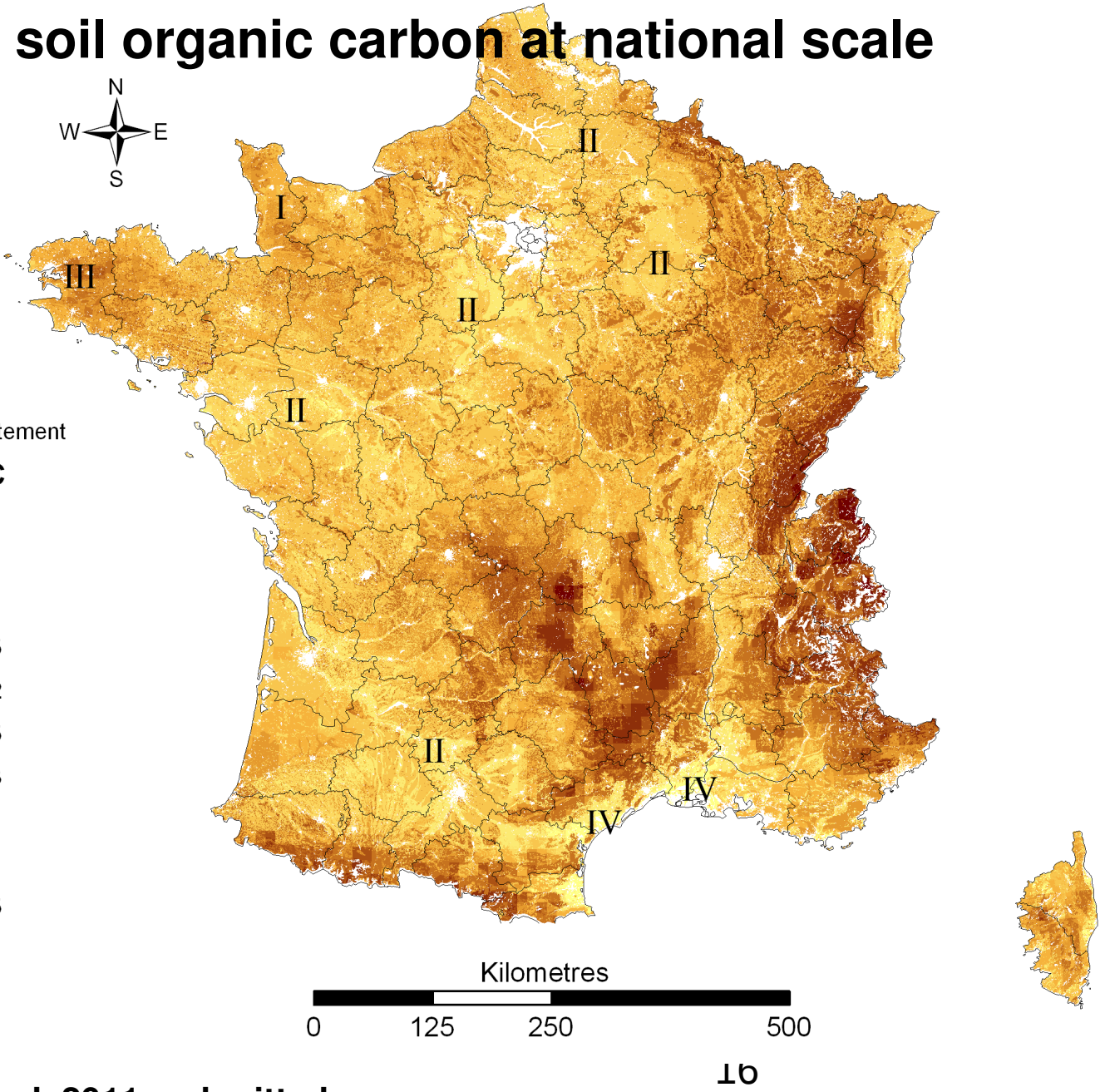
Soil organic carbon content (g kg $^{-1}$)

< 12	15 - 20	30 - 40	50 - 60
12 - 15	20 - 30	40 - 50	> 60



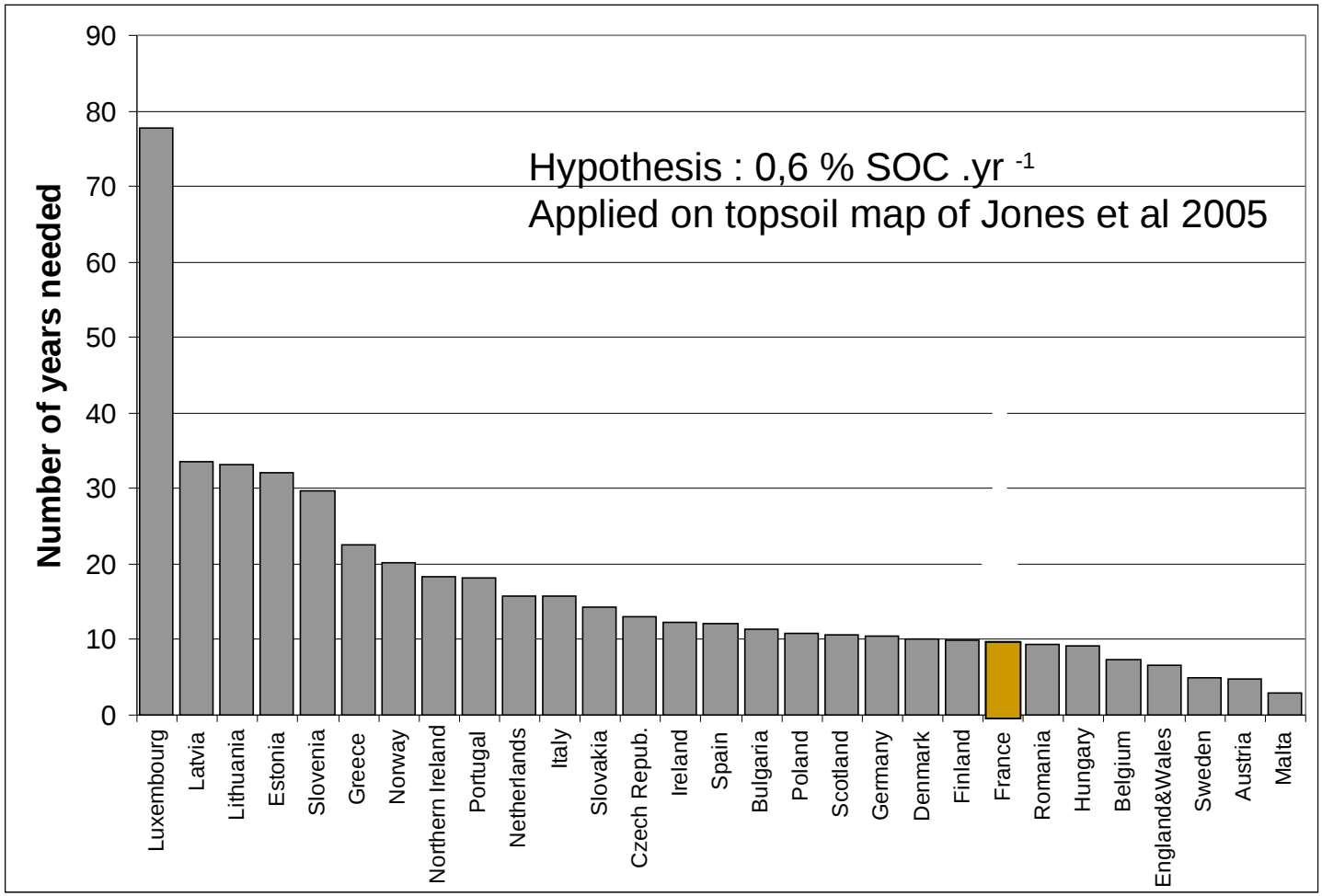
Saby et al. 2008. Soil Use Manag.

Modelisation of soil organic carbon at national scale



Source : Meersmann et al, 2011, submitted .

Carbon change detectability on european monitoring networks (ENVASSO)



Saby et al. 2008. Glob. Ch. Biol.