Developing the use of French soil databases: actions of the RMT Sols et Territoires

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Context

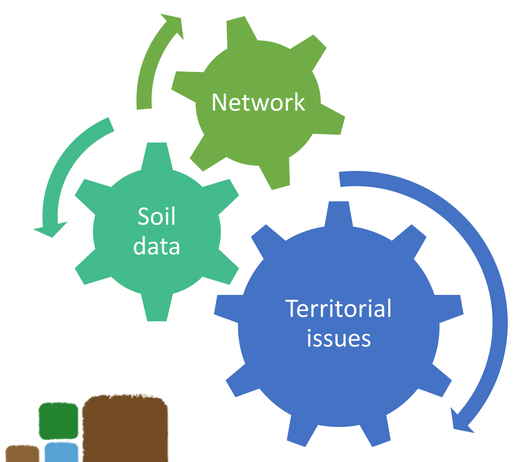
Available soil data with associated expertise

Soil data are collected in the frame of the Soil Scientific Interest Groupment, according to both inventory and monitoring strategies.

Data collection according to national harmonized protocoles is implemented by a network of partners with a regional pedological expertise, and coordinated by Inra.
Data are stored in a national soil information system according to harmonized formats including DoneSol, and are available for use by a wide range of end-users.

Territorial issues that require soil data

There is an increased awareness on the role of soils and the importance to take them into account in decision-making at local or regional scales. It thus increases the needs for knowledge on soils available for various actors.



A networking mechanism

In the late 2000's, the French Ministry for Agriculture encouraged the creation of national "combined technology networks" (RMT) based on 3 types of organisms:

- organisms involved in agricultural and rural development
- agricultural education institutions
- research teams or institutes

in order to support applied research on key topics.
Twenty-two RMTs are currently labelled.

Avec la contribution financière du compte d'affectation spéciale «développement agricole et rural»

— A combined technology network on Soils and Territories

The Réseau Mixte Technologique "Sols et Territoires" thus emerged in 2010 around a core group of organisms with a regional pedological expertise, with two main objectives:

- **Improve soil knowledge at the territorial level**
- **Promote the use of soil data in various soil-related decision-making**

2010
25 members

In a 1st step, the network developed internal dynamics through workshops, set-up knowledge-sharing tools and performed state-of-the-art analyses on key issues like:

- Soil data in decision support tools
- Soil database harmonisation
- Territorial diagnosis of soil organic carbon
- Soil data and spatial planning

2014
35 members

In a 2nd step, the network welcomed new members and developed collaborations with other networks in order to develop regional "proofs on concept" intended to be extended at the national level :

- Soil agronomic typologies based on national soil databases
- Territorial assessment of soil organic carbon balance
- Soil data and spatial planning

Much more is yet to come. In particular, the network intends to enhance its activities as project incubator and the dissemination of its products.

Major achievements

Websol

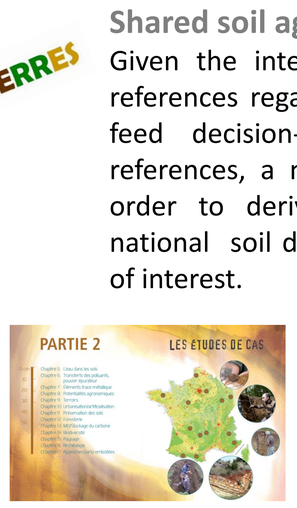
French soil databases are disseminated on a regional basis. A common web platform, called Websol, was developed in order to share soil data.

Metadata

Shared metadata templates were set up as well as a guide to support the publication of soil metadata compatible with the Inspire European Directive

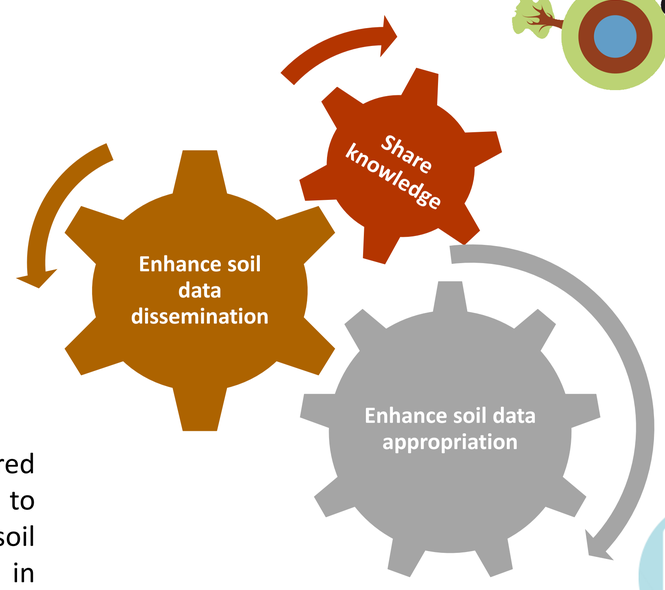
Shared soil agronomic typologies

Given the interest of territorial actors for shared references regarding soil data, as well as a need to feed decision-support tools with national soil references, a methodology has been developed in order to derive agronomic soil typologies from national soil databases, associated with parameters of interest.



Textbook on soil data

A textbook is in press. It highlights available spatial soil data and their usefulness in various contexts, through the development of case studies and exercises for teachers and students.



Applicasol

The Applicasol database gathers metadata on the regional thematic uses of soil data, wich are made available on the web
http://www.gissol.fr/outils/applicasol-342

Workshops

Seven workshops were organized in order to share knowledge and experience relating to:

- Digital soil mapping
- Soil maps harmonisation
- Teaching regarding soil databases
- Soil and spatial planning
- Webtools for soil database dissemination
- …

ABC'Terre

The ABC'Terre method has been developed in order to assess soil organic carbon storage and estimate GHG balance according to various agricultural scenarios at the territorial level

Guidelines for using soil databases

In order to favour the use of French soil data, a guide is about to be released to help GIS users to manipulate soil data stored under the national DoneSol format.

Conclusion

The RMT Sols et Territoires is a well-identified national network, complementary to the national Soil Scientific Interest Groupment which coordinates soil data acquisition. The RMT Sols et Territoires now appears as a key resource for soil data end-users as well as researchers willing to build projects benefiting from national and regional expertise on French soils, like the H2020 Landmark project.

➔ **Find our latest news on http://www.sols-et-territoires.org/**

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