PO304

Knowledge sharing on soil health: 5 key steps to build collaborative projects with experts & local stakeholders

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A rising awareness of the importance of soils and their functioning



Soil Functions selected by the Food and Agriculture Organisation (left) and United Nations Sustainable Development Goals related to soil (right)

Global and European scales: several **United Nations Sustainable Development Goals** (SDGs) are related to soil (e.g. goal 15 - Life on land, goal 2 - Zero hunger, etc.), as well as European initiatives, both in the R&I area (e.g. European Joint Programme SOIL) and in the political area (e.g. update of the EU Soil Thematic Strategy).

In France, several initiatives towards a more sustainable management of soil resources at local scale: scientific experimentations, communications to stakeholders and regulations.

Those initiatives and notably SDGs achievement requires:
- ✓ better knowledge on soils and their functioning,
- ✓ better transfer of research results to local stakeholders,
- ✓ **to emphasise collaborative projects, involving scientists AND stakeholders.**

Aim & Outputs

French soil experts from academic research, agriculture and forestry institutes, stakeholders, and learned society worked together to **produce a common framework** in order to **encourage scientists and civil society to work together** for a **more sustainable management of soil resources**.

Facilitate the **appropriation** of **research results** by **soil management stakeholders.**

The **common framework**: a **5-step approach** to support the implementation of collaborative projects between soil (i) researchers, (ii) users and (iii) public or private stakeholders in the territories.
The framework, developed for France, is **generalizable to other countries**.

A common framework at the territory scale



5 key steps and a key idea: co-construction

Approach & Example

Territory issue: improve management of carbon sequestration at the territory scale.

1 Define the needs together, in relation to a common issue.

Identify a scientific question that meet the needs of the stakeholders.

1 Organise exchanges between research teams, local authorities, farmers, national parks, etc. to identify their specific needs in relation to the territory issue and define the scientific question that meet these needs.

Selected question: How to better characterise labile and stable fractions of soil carbon within the territory to better take carbone storage into account in urban planning documents?

2 Analyse the context, realise a "Soil diagnosis".

- Take stock of what already exists
- Strengthen the partners' network, from lead partner to service provider.
- Define training and awareness-raising needs.

2 Take stock of what already exists in the territory: scientific knowledge, available data and tools, local initiatives, regulations and local actors.

Identify local actors to be involved: elected officials, technicians, farmers, associations, etc.

For these actors:
- *Identify their challenges in relation to the problematic.*
- *Identify potential awareness-raising needs.*
- *Ensure collective assimilation of existing knowledge on the issue and identify potential training needs.*

3 Define a common view and understanding of the project.

Define a common view integrating each partner respective concerns.

3 Ensure that everyone shares a common vocabulary in order to define a common objective integrating each partner concerns.

Shared objective: to develop a tool for measuring C stocks in soils and for adapting the practices of territorial actors to increase this stock by 20% by 2030.

4 Define the role of each partner to achieve the common view.

Explain individual responsibilities and how they fit into the overall project.

4 Define a specific role for each partner which collectively lead to the shared objective.

For instance:
- *Researchers develop a method to easily calculate carbon storage in the local soils.*
- *Farmers open their field for trials and are ready to adapt their practices.*
- *Local stakeholders make publicity on the subject in local journals.*

5 Formalise the project action plan.

- Formalise each step of the project
- Define expected deliverables.

5 Formalise the steps that each partner needs to take, from the initial bibliography to the integration of the tested method into urban planning documents.

Define expected deliverables, e.g. a new tool to estimate carbon storage, a user guide, the update of urban planning documents, etc.

Assets to succeed

Being pro-active in having the project evaluated: defining concrete and tangible criteria anchored in the territory!

It is recommended to propose verifiable indicators demonstrating:
- ✓ the improvement of the stakeholder/researcher dialogue,
- ✓ the efficiency of the project in the evolution of the decisions of the stakeholders, and
- ✓ the potential of transferability of the project to other territories.

Building together an integrated vision at the territorial level

Strengths of the approach

TERRITORY POLICY
- Increasingly integrate soil into the decision-making process in the territories
- Help to make public policies coherent in a dynamic specific to each territory

SOIL PRESERVATION
- Reconcile soil quality and territorial issues

RESEARCH VALORISATION
- Promote a faster appropriation of recent research results

Further information

This work was realised by the scientific, technical and innovation committee of the French network of scientific and technical expertise on soil (RNEST).

All deliverables (in French) are available online on the RNEST website: https://rnest.fr.

The productions:
- **guidelines for soil users and stakeholders** with recommendations, key organizations, resources and potential funding opportunities;
- **communication flyer.**



Views of the communication flyer (left) and the report (right) produced during this work

RNEST Réseau National d'Expertise Scientifique et Technique sur les sols

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Credits:
Column 1 - Illustration FAO (left): Alpine Soil Platform; Illustration SDGs (right): UN SDGs website (https://sdgs.un.org)
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