

# TAP Soil

## *Thematic Annual Programming on organic matter sequestration in Soils*

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# Introduction to FACCE-JPI

## Joint Programming Initiative on **Agriculture, Food Security and Climate Change**

- ❖ Launched in 2010
- ❖ 24 countries involved
  
- ✓ Research to support sustainable agricultural production and economic growth
- ✓ Contribute to a European bio-based economy
- ✓ Maintaining and restoring ecosystem services under current and future CC

Strong **trans-disciplinary research base**, encompassing economic and social aspects in addition to scientific ones, and with a creative approach towards the **alignment of national programmes** and the input of multiple actors and stakeholders

### **Strategic Research Agenda (SRA)** – 5 interdisciplinary core themes:

1. Sustainable food security under climate change
2. Environmentally sustainable intensification of agricultural systems
3. Developing synergies and reducing trade-offs between food supply, biodiversity and ecosystem s.
4. Adaptation to climate change
5. Mitigation of climate change

Policy-relevant **research priorities** and set out **strategic actions** to achieve these goals and align current and future research programmes

# Core theme 2:

## Environmentally sustainable intensification of agricultural systems

**Sustainably increasing productivity, resilience and resource use efficiencies (including soil and water) at the agricultural system scale, across regions in Europe, based on improved use of genetic resources and advanced management technologies ('management by measurement') in the context of climate change**

Instrument: Knowledge Network: Development of options for sustainable intensification of European crop and livestock systems  
– Lead: The Netherlands and United Kingdom

### **Agricultural Soil Functionality with a focus on carbon sequestration**

To be considered : Increasing economically viable input use efficiency by improving water quality and soil function, and better use of fertilisers

Alternative land use systems (agroforestry, hedges, mixed farming systems) and land and soil management systems (soil conservation, legumes and soil biology) for building above and below ground carbon stocks and increasing biomass production for food and non-food uses

Technical and economic potential of GHG abatement, including enhanced soil carbon storage, in livestock and crop systems and in integrated systems

Instrument: Thematic Annual Programming Network (TAP)  
– Lead: France



Agriculture,  
Food Security  
and Climate Change

FACCEJPI

# FACCE FACTS

FACCE-JPI, launched in **2010**,  
brings together **24** countries of  
which **20** EU Member States, **3**  
Associated Countries and **1** non-EU  
country.

FACCE-JPI has launched **10** joint  
research actions that have generated  
**95** collaborative research projects.

These actions have mobilised approx.  
**104 million** euro in cash,  
of which **74%** originated from  
participating countries' **national**  
**research budgets** (2012-2017).

FACCE-JPI joint actions have relied on  
**various instruments**: **1** Knowledge  
Hub, **1** Knowledge Network, **3**  
International Calls, **5** ERA-NET  
Actions and **1** Thematic Annual  
Programming Network.

The integrated **FACCE-JPI strategic**  
**research agenda** defines **5** core  
research themes.

**50%** of joint actions have been  
developed in **cooperation with other**  
**international/EU initiatives** (2012-  
2017).

Out of the **11** running  
FACCE-JPI joint actions, **5** are  
**co-funded ERA-NET Actions**  
and **3** focus on the **alignment of**  
**already funded national research**  
**projects** (MACSUR Knowledge Hub,  
Knowledge Network on Sustainable  
Intensification, and Thematic Annual  
Programming (TAP) Soil).

## Why Soil?

- ✓ 2015: the world year on soils (UN) UNSDG
- ✓ COP 21 + Declaration on 4/1000
- ✓ Wageningen Soil Conference
  
- ❖ FACCE-JPI SRA CT 2: *Environmentally Sustainable Intensification of Agriculture*
- ❖ FACCE-JPI IP Topic *“Improving agricultural soil quality”*
  
- Aimed at **improving understanding** of, and ability to assess, the nutrient budget, water holding capacity and **carbon storage** potential of different soils under different conditions and practices. **3 targets**:
  - ✓ Preserve, restore and increase soil fertility and reduce land degradation to FS
  - ✓ Climate Change Adaptation
  - ✓ Climate Change Mitigation

## Why Soil?

- ❖ Soil research is very diverse , disperse and jeopardized
- ❖ Create national and EU research community
- ❖ Further EU coordination would be warranted
- ❖ A global concern to facilitate carbon sequestration and water retention to contribute to climate change mitigation and adaptation



## Why TAP?

TAP: instrument conceived by FACCE-JPI to align nationally-funded research projects on a given theme

Here: Agricultural Soil Quality

The objective of a TAP is to **coordinate** the objectives, methodologies, outputs and outcomes of **national research projects** (financed by national funding agencies) on one specific research topic, to **avoid duplication** and allow for greater **collective efficiency**, mutual learning and impact. The main means to achieve this is via **networking** (e.g., regular meetings and sharing of information) amongst all project coordinators

## TAP (Soil) Concept

FACCE JPI's Thematic Annual Programming (TAP) is a “light alignment” tool aimed to foster the alignment of National research programs, promoting the international cooperation and coordination of national research projects.



## TAP (Soil) Concept

### Steps:

1. Promoting that national research agencies will publish in their national calls the same call text on:

***organic matter sequestration in soils***

2. National funders will select projects on this area according to their national criteria
3. The national funded projects will be requested to join an international cluster (TAP Soil Cluster) organized by FACCE JPI

## TAP (Soil) Concept

4. Coordinators of these projects will have to participate in annual working meetings to exchange on approaches, methods, data (exchange) and results. This will allow coordination between the individual projects and should lead to a greater impact at the European level as well as to create critical mass, addressing research gaps and avoiding duplication.

Projects should foresee a percentage of the total budget to be allocated to these networking activities

### **2 ways to participate:**

1. New common call at national level
2. Identification of targeted recent research projects

## TAP Soil Scope

Need to **develop synergies** on research in organic matter sequestration in the soil at the EU level

It calls for **international cooperation and coordination** of research projects on the mechanisms and the assessment of the mitigation and adaptation potential related to organic matter storage in soils across regions, ecosystems and farming systems, taking regional variations into account



## TAP Soil Scope

Mechanisms and the assessment of the mitigation and adaptation potential related to organic matter storage in soils across regions, ecosystems and farming systems, taking regional variations into account

**6 types of drivers merit** to be underlined as they are controlling geochemical cycles and organic matter dynamics:

- ✓ Physical properties: texture, structure, porosity, bulk density, soil depth
- ✓ Nature of the organic matter: origins, chemical characteristics
- ✓ Nature of mineral components: clay mineralogy, parent material characteristics, etc
- ✓ Interactions between organic and mineral soil matrix
- ✓ Characterization and activities of soil fauna and flora
- ✓ Human activities: farming practices, organic matter amendments, forests and wetlands management

## Involvement

**9 FACCE Countries:** ES, FR, FI, NL, NO, IE, IT, DE, UK



**Cluster size:** 13 (+ 3 new identified) Projects currently. To be extended

### **TAP Soil WG:**

FACCE-JPI **GB** (interested members)

+ FACCE-JPI **Secretariat**

+ **SAB & StAB** Contribution

**Coordination:** FACCE Secretariat – INIA

**Funding:** funders agree that an order of magnitude of 10.000€ per year, included in the national fund can be used for networking in the cluster

## Call text

Call text on ***Organic matter sequestration in soils*** published in the national calls:

### **Ex:**

SPAIN: TAP Soil reference is included in the [RTA Call 2017](#) (Resolution Art. 7.3) published in July 2017 in the INIA website. For more information: [www.inia.es](http://www.inia.es)

IRELAND: The Tap Soil topic is included in the Research Area A.6.1 in DAFM's 2017 Competitive Research Funding Call. For more information: <http://www.agriculture.gov.ie/research/>

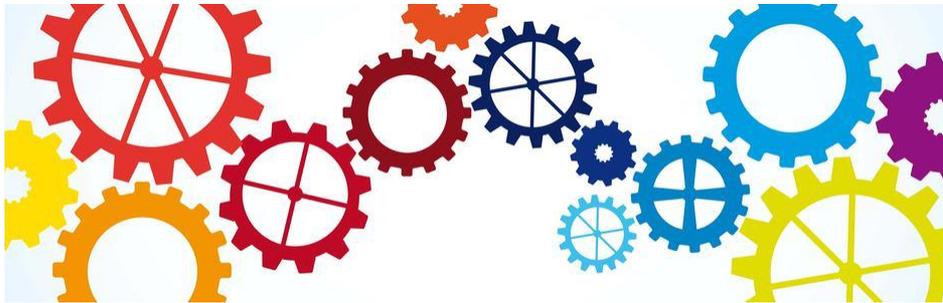
FRANCE: Tap Soil topic are included in the ANR action plan 2017 challenge 1 and challenge 5 . For more information: <http://www.agence-nationale-recherche.fr/PA2017>

FINLAND: The funding instrument/program for TAP Soil is The Development Fund for Agriculture and Forestry (Makera). For more information: <http://mmm.fi/en/research-and-development/funding-for-projects>

ITALY: TAP Soil topics are included in the Plan for Innovation and Research in agriculture, food and forestry sectors (PSIR) Area 2 - Climate change, biodiversity, soil functions and other ecosystem and social services from agriculture. For more information: [https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/78](https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/7801)

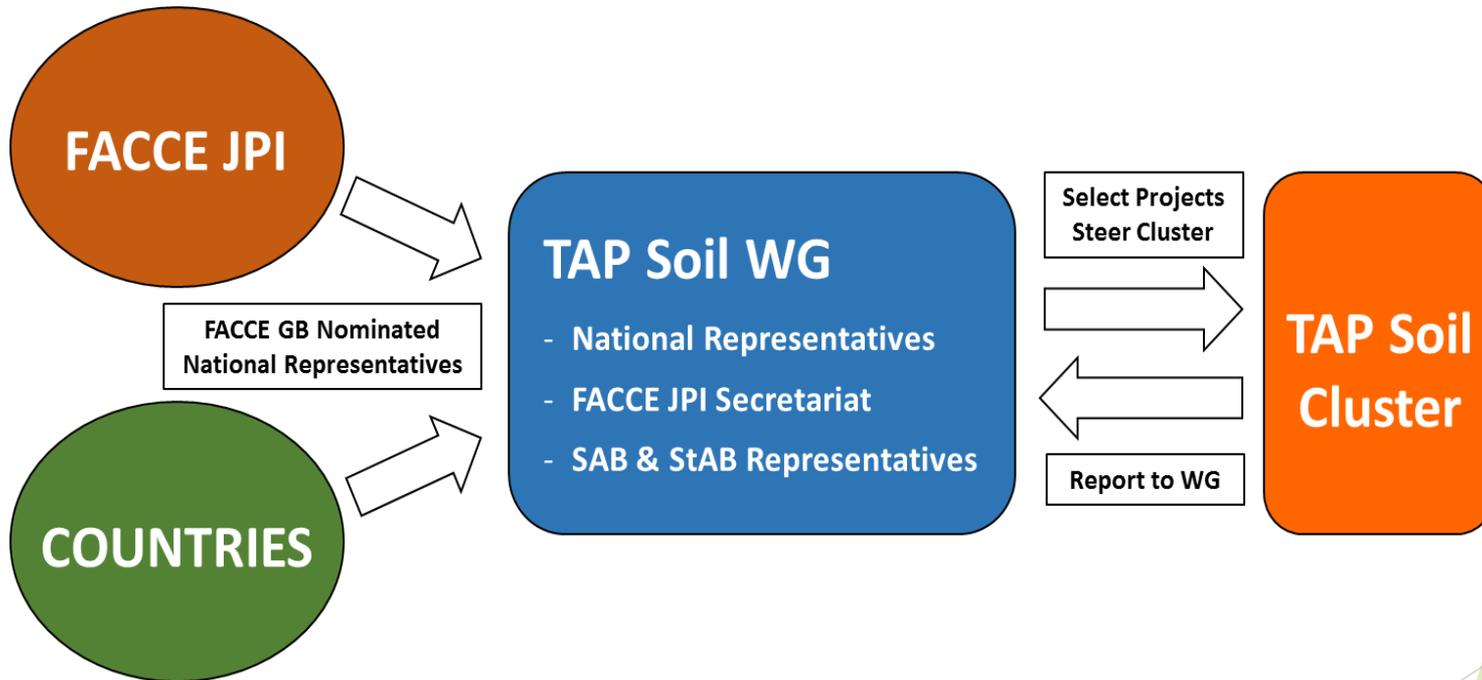
## Coordination

- FACCE Secretariat works with TAP Steering Committee (funding representatives) along with SAB and StAB to support cluster coordination
- There will be a coordinator to lead the cluster
- Organise common kick off meeting of the national projects
- Annual meetings with cluster reporting
- Funding agencies can provide logistical support (meeting room, catering...)
- Funds for travel will be inside the grants of the selected projects



# Management Structure

## TAP Soil WG interactions



# TAP Soil Cluster

## Members

Initially expected 20-30 national projects on organic matter sequestration in soils:

- ✓ Selected national projects from new national calls (if a country aiming to only include projects from new calls doesn't find any appropriate one in a new call, it could pick projects from previous ones)
- ✓ Selected national projects from already started calls

Each country can select up to 4 projects (tentative)

TAP soil WG has to approve the composition and final size of the cluster before its approval

Balance between the countries and topics.

## TAP Soil Cluster

### Meetings

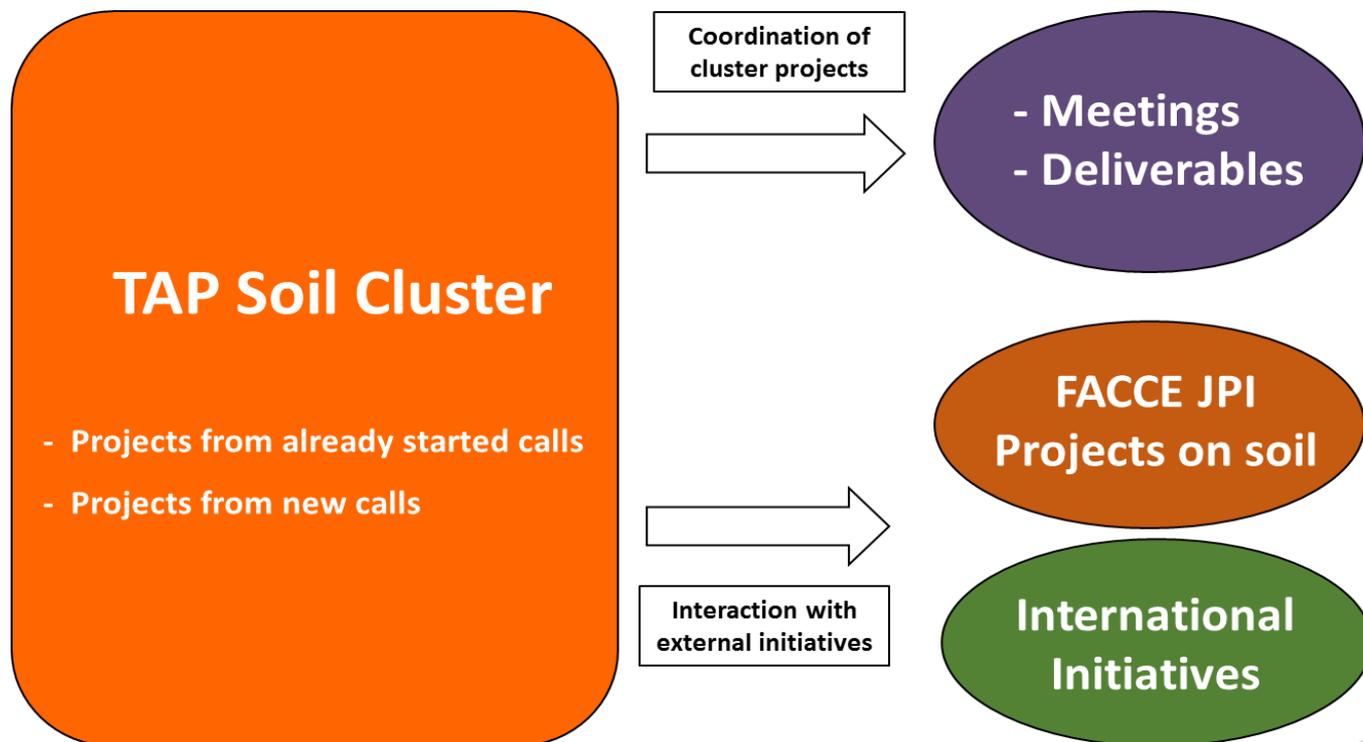
- ✓ Kick off meeting (June 2018)
- ✓ TAP cluster meetings: physical (at least once a year) + teleconferences (when needed)
- ✓ TAP cluster + TAP WG meetings (when needed)
- ✓ Meeting with external initiatives to be considered
- ✓ Final meeting (Mid 2020)

### Financing

Projects participating in the TAP Soil cluster will receive, from their national funders, money for coordination activities (i.e. travel costs and organising of meetings). Each country will decide how this funding will be provided.

# TAP Soil Cluster

## TAP Soil Cluster composition and interactions



# TAP Soil Cluster

## Projects Identification

Stand-by period waiting for the results of the national calls

**Beginning 2018: significant number of identified projects reached**

### Identified projects:

- ✓ UK (DEFRA): 2 projects identified from ERA-GAS
- ✓ IE (DAFM): 1 project identified from previous call
- ✓ FI (MMM): 2 project identified from previous call
- ✓ NL (MINEZ): 1 project identified from new call
- ✓ FR (ANR): 1 project identified from new call
- ✓ DE (JUELICH): 3 project identified from previous call
- ✓ ES (INIA): 2 project identified from new call
- ✓ NO (RCN): 1 project identified from new call
  
- ✓ IT (MIPAAF): 3 project identified from previous call

**13 (16) projects identified**

# TAP Soil Cluster

## Current Projects

	PROJECT
UK	<i>Mitigating Agricultural Greenhouse Gas Emissions by improved pH management of soils</i>
UK	<i>Improved estimation and mitigation of nitrous oxide emissions and soil carbon storage from crop...</i>
IE	<i>Agriculture GHG Research Initiative</i>
FI	<i>Modelling the impact of soil improving substances to carbon emission/sinks</i>
FI	<i>Organic matter as the cornerstone of soil productivity</i>
NL	<i>Effects of organic matter inputs on soil quality and ecosystem services</i>
FR	<i>Potential and durability of carbon storage in agricultural soils</i>
DE	<i>BonaRes Centre for Soil Research</i>
DE	<i>Sustainable Subsoil Management</i>
DE	<i>Sustainable use of alpine and pre-alpine grassland soils in a changing climate</i>
ES	<i>Fertilization and weed control strategies regarding optimization of production and quality of...</i>
ES	<i>Risk Mitigation Measures for the application of herbicides classifies as candidate for substitution...</i>
NO	<i>Implementing biochar-fertilizer solution in Norway for climate and food production benefits</i>

TAP Soil Cluster Projects “Booklet” ([link](#))

# TAP Soil Cluster

## Kick-off Meeting

11<sup>th</sup> June 2018, Brussels

### Objectives of the meeting:

- Icebreaking, know each other and exchange projects information
- Propose chair nomination (with the support of the FACCE Secretariat)
- Discuss and compare research projects outcomes
- Pool together relevant research outputs

### Contents:

- Welcome. Introducción. TAP Soil Aim, Objectives and scope
- TAP Soil Cluster projects presentation
- Organic matter sequestration in soils (The StAB approach)
- Agricultural Soil / Organic carbon research in EU
- Networking

**...Next Meeting October 2019 tbc...**

## TAP Soil Cluster

### Expected Objectives

#### Internal coordination

By fostering the coordination, alignment and interchange of experiences of the projects' members of the cluster. In this respect, to assure the consistency of data.

#### External coordination

With selected soil projects from other FACCE JPI related initiatives (Surplus, ERA-GAS, International Mitigation Call, others, focus groups, national scientific and technical network initiatives improving cooperation and coordination of actions) and external international initiatives on soil like 4/1000, GRA or other relevant initiatives.

# TAP Soil Cluster

## Potential Outcomes

### Identify projects needs to share within the cluster

- Collaboration sub-groups in similar areas
- Reports of the TAP cluster coordination meetings
- Foster access to national databases
- Policy briefs, recommendations, practical advice to farmers, etc.

### Wider communication especially at European level

- Possible International workshop on carbon sequestration
- Practice abstracts or demonstration trials
- Impact: relation with stakeholders
- EU level: wider communication. Bring scientist to the policy “bubble” (EC)

## Feasible Outputs

- Standardisation, protocols, monitoring
- Policy briefs on farming practices recommendations
- Build international research networks to answer to a series of targeted calls

## Recap:

## TAP tool

- ❖ **Light alignment tool** aimed to foster the alignment of national research programs, promoting the international **cooperation and coordination of national research projects**

### Working Way:

1. Promotion and Publication of text on *soil organic matter sequestration* in national calls
2. **Identification** of suitable projects according to their national criteria
3. **Selection** of appropriate funded national projects
4. Invitation to join the **TAP Soil Cluster**
5. Participation in **meetings and networking activities** to share knowledge, approaches, data, methodologies ...



Funded by additional national budget

## Recap:

## TAP Soil

### *Thematic Annual Programming on **Organic Matter Sequestration in Soils***

FACCE-JPI SRA CT 2: *Environmentally Sustainable Intensification of Agriculture*  
IP Topic “*Improving agricultural soil quality*”

❖ Aimed at **improving understanding** of, and ability to assess, the nutrient budget, water holding capacity and **carbon storage** potential of different soils

➤ **TAP Soil WG**: FACCE-JPI **GB** (interested members) + FACCE-JPI **Secretariat** + **SAB & StAB**

Coordination: **FACCE Secretariat – INIA**

Involved Countries: 

### **TAP Soil Cluster**

#### Objectives:

- Internal coordination: alignment and interchange
- (Potential) External coordination: with other soil projects or related initiatives

#### Expected Outputs:

Standardisation, protocols, recommendations, build international networks...



Agriculture,  
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**MAIN CHALLENGES FACED?**

**LESSONS LEARNED?**

*THANKS FOR YOUR ATTENTION!*

Visit our new website <https://faccejpi.net> !



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