



This project has received funding from  
**the European Union's Horizon 2020**  
research and innovation programme  
under grant agreement No **774378**

# CIRCASA

**Coordination of International Research Cooperation on soil CARbon Sequestration in Agriculture**

## Towards an International Research Consortium on Soil Carbon

[www.circasa-project.eu](http://www.circasa-project.eu)

Open Collaborative Platform: <https://www.ocp.circasa-project.eu/>



@CIRCASApject

# CIRCASA in context

Large interest on agricultural soil carbon both at global and EU scales

- At global scale, the **RECSOIL project** (Recarbonizing soils) by FAO and GSP with support of GEF and UNCCD
- The **UNFCCC Koronivia** workshop on soil carbon
- A number of **private sector initiatives** (linked to regenerative agriculture), e.g. Terraton challenge,
- The development of **certification schemes** for agricultural soil carbon, including national **low carbon labels** (e.g. in France)
- In the EU, the **Mission Board on Soil Health and Food** that recommends to increase arable soil organic carbon stocks, in line with EU commitment to land degradation neutrality
- Conserving and increasing soil carbon contributes to several **EU Green Deal strategies**
- Also in the EU, the launch of the **European Joint Program on soils**



RECSOIL:  
Recarbonización de  
los suelos mundiales

**indigo™**

**LABEL BAS  
CARBONE**



**EJP SOIL**  
European Joint Programme

# Strategic Research Agenda

# SRA supporting the alignment of research into an International Research Consortium

## Research Priorities

Pillar 1 – Frontiers research: unlocking the potential of soil carbon

=> International research calls with EJP Soil

Pillar 2 – Soil carbon stock change MRV: international standard

=> International innovation project

Pillar 3 – Agro-ecological and technological innovations

=> Private-Public innovation projects

Pillar 4 – Enabling environment and knowledge co-creation

=> Open online collaborative platforms

# Pillar 1 - Frontiers research: unlocking the potential of soil C

## International calls: Frontiers Research

Deep soil carbon dynamics

Soil biota diversity and SOC stock change

Overcoming N<sub>2</sub>O – SOC trade-offs

SOC stabilisation and saturation

Climate proofed SOC sequestration

### WHO?

National research agencies  
Research organizations and Universities

### HOW?

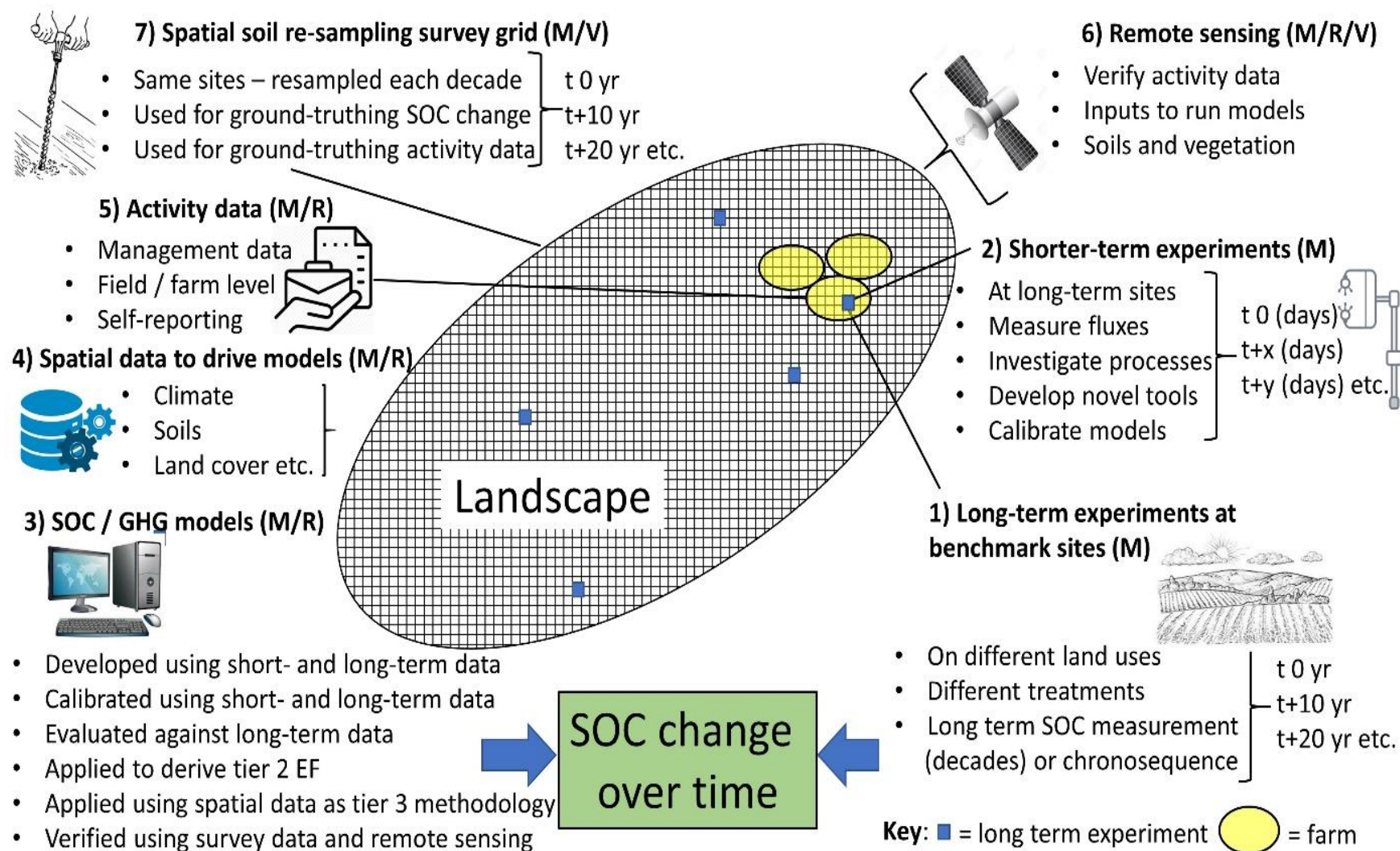
- Research calls based on shared research priorities
- Each agency pays for national research teams
- Project evaluation is delegated to an international review panel with observers from each agency
- Open to private sector research

### WHEN?

- International dimension for second external call of EJP Soil in 2022

**Other opportunities for international research calls to be explored**

## Pillar 2: Vision for a global framework for Monitoring, Reporting and Verification of SOC change (Smith, Soussana et al. 2019, Global Change Biology)



## Pillar 2 - Soil carbon stock change. Towards an international MRV standard

=> International projects with space and innovation agencies

### WHO?

GSP, EJP soil, EU Soil Observatory (JRC)  
COPERNICUS, GEOS, ESA, NASA Harvest...  
NIVA project (IAVS)  
ICOS, Fluxnet, Long-term field experiments.

### HOW?

- A design study (stage 1)
- Two implementation stages
- Private-Public consortium

### WHEN?

- Private funding in 2020 for a proxy (change in annual duration of vegetation cover in global croplands)
- Create consortium in 2021, funding and work plan, start with launch of IRC

### Soil C change monitoring system

Soil C pillar

Vegetation remote sensing pillar

Activity data pillar

Modelling SOC stock change

Verification pillar

## Pillar 3 - Agro-ecological and technological innovations

### Agro-ecological and technological innovations

Breeding deep-rooted and perennial crops

Precision and digital agriculture for soil C

Circular agriculture (e.g. organic fertilizers, digestates, biochar)

Biodiversity, agroecology for soil C

### WHO?

Public – Private partnerships by sub-topic  
e.g. plant breeding sector,  
digital agriculture,  
agri-food, organic wastes,  
bioenergy sector

### HOW?

- Portfolio of projects by topics
- Pre-competitive innovation

### WHEN?

- Seek engagement in 2021
- Design stage for each sub-topic
- Pipeline of innovation projects



## Pillar 4 - Enabling environment and knowledge co-creation

Enabling environment and knowledge co-creation knowledge co-creation

Sharing knowledge from local/regional experimentations

Co-creation with regional networks

Testing and assessing scaling out mechanisms

Assessing co-benefits and trade-offs for adaptation, food security..

Knowledge Platform

### WHO?

Knowledge platform: upgrade CIRCASA OCP together with EJP SOIL

### HOW?

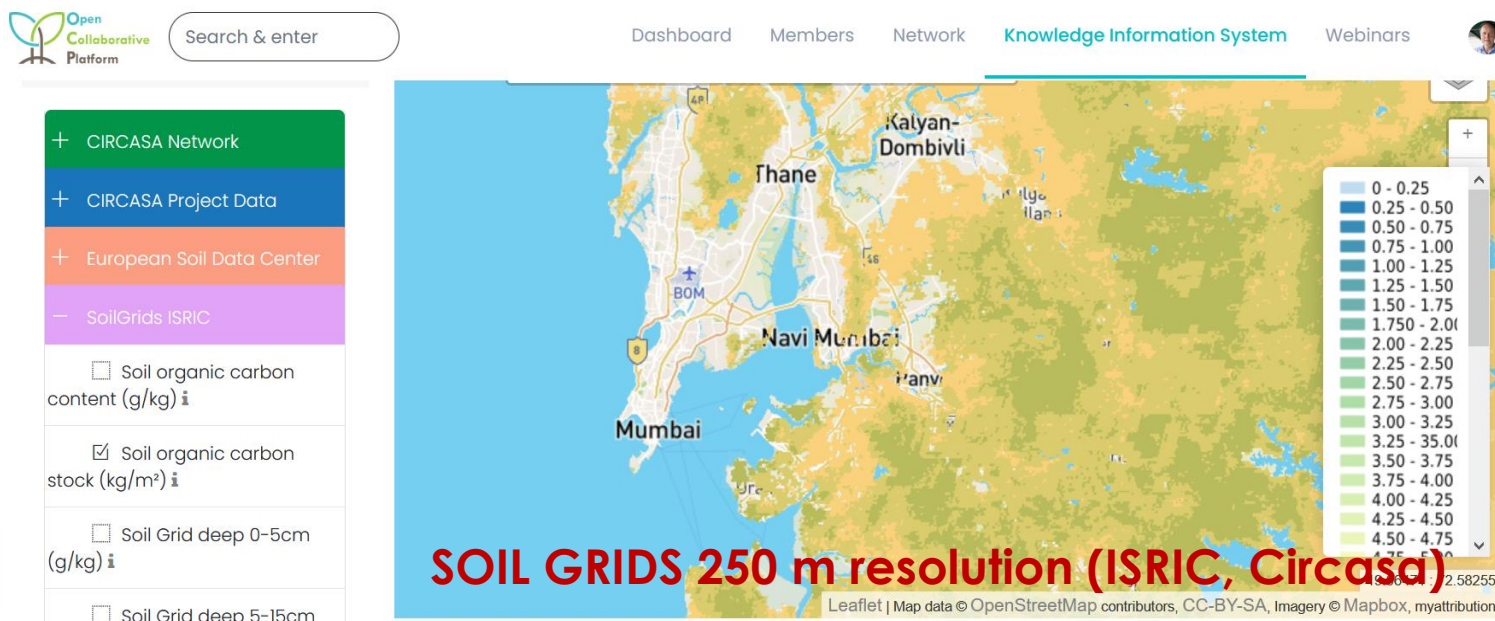
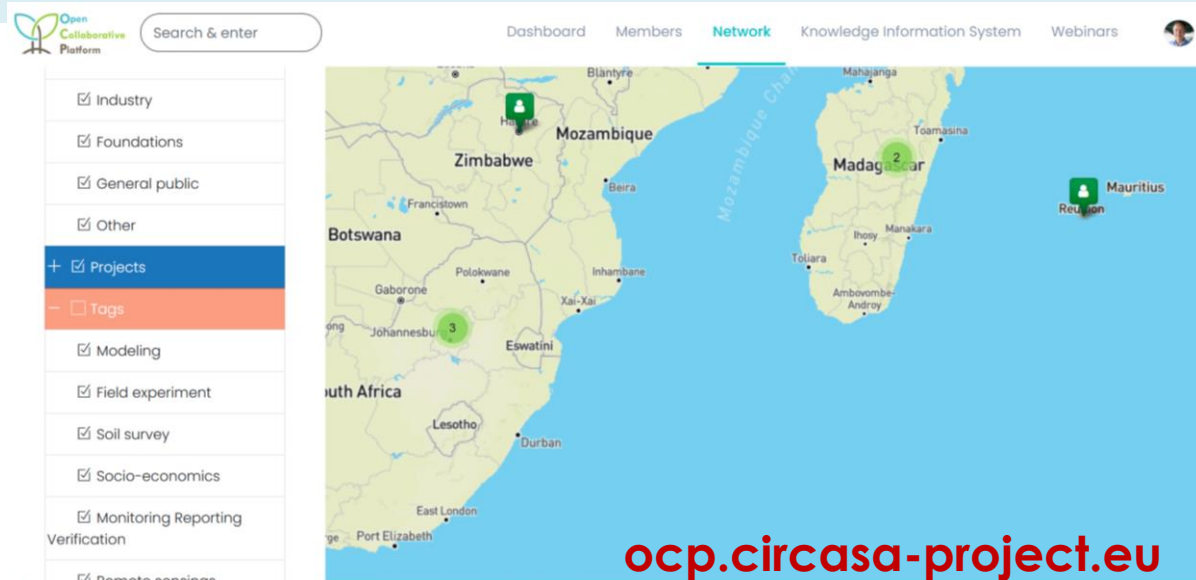
- Crowdsourcing with knowledge platforms,
- Regional networks
- Language and cultural diversity

### WHEN?

- Seek engagement in 2021
- Design stage for each sub-topic
- Pipeline of regional knowledge co-creation projects

# CIRCASA Open Collaborative Platform services: matchmaking, knowledge sharing, information system (data and maps)

An open data repository (Data Verse) with geospatial and modelling data



# Governance & funding of the IRC

# Agenda of final meeting

Online  
(240 participants)  
February 9, 2021

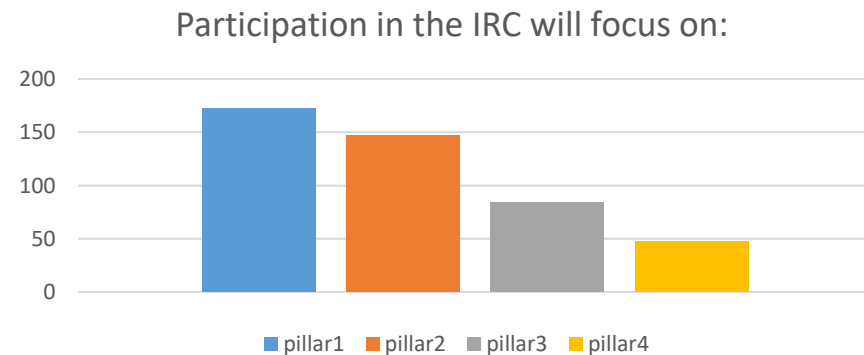
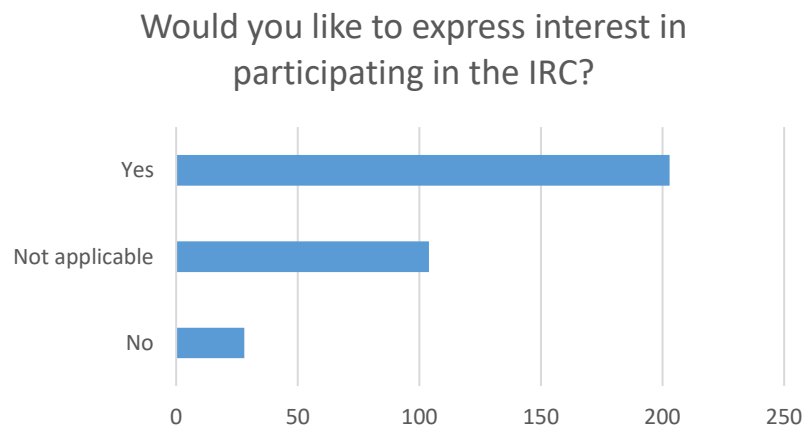
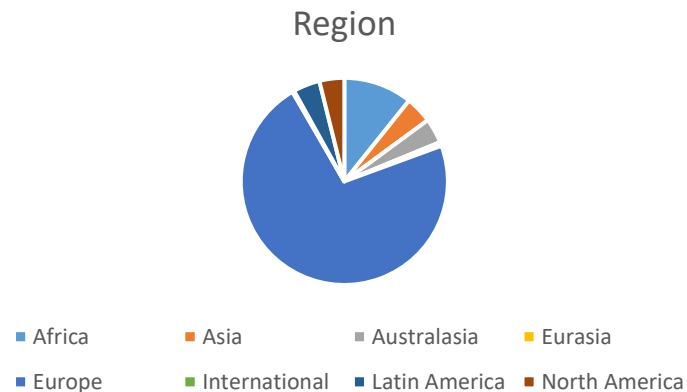
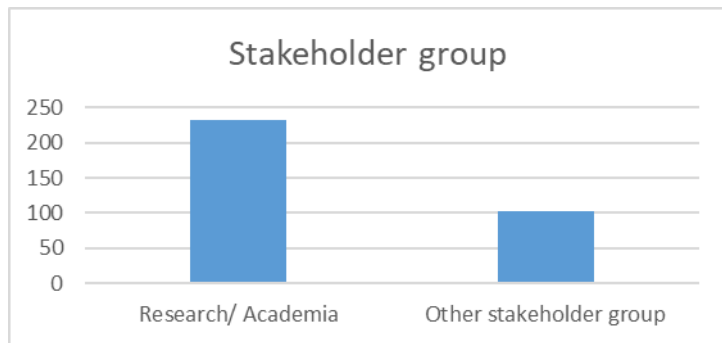
**Moderator:** Saskia Keestra, WUR

28/06/2021

13:00 – 13:05	<b>Welcome</b> <ul style="list-style-type: none"> <li>Dr. Jean-Francois Soussana, INRAE, France</li> </ul>
13:05 – 13:30	<b>Policy and Research Context</b> <ul style="list-style-type: none"> <li>DG Agriculture Introduction (Nathalie Sauze)</li> <li>DG Climate (Simon Kay)</li> <li>Soil Health &amp; Food Mission Board (Cees Veerman)</li> </ul>
13:30 – 14:00	<b>CIRCASA Project – General Overview</b> <ul style="list-style-type: none"> <li>Dr. Jean-Francois Soussana, INRAE, France</li> <li>Prof. Pete Smith, University of Aberdeen, UK</li> <li>Dr. Ana Frelih-Larsen, Ecologic Institute, Berlin</li> </ul> <b>Strategic Research Agenda and IRC</b> <ul style="list-style-type: none"> <li>Pillar 1 – Frontiers research: unlocking the potential of soil carbon</li> <li>Pillar 2 – Soil carbon monitoring, reporting and verification (MRV) system</li> <li>Pillar 3 – Agro-ecological and technological innovations</li> <li>Pillar 4 – Enabling environment and knowledge co-creation</li> </ul>
14:00 – 14:15	<b>Expressions of interest of global regions</b> <ul style="list-style-type: none"> <li>Prof. Tantely Razafimbelo, Tantaranivo U., Madagascar</li> <li>Prof. Hongmin Dong, CAAS, China</li> <li>Dr. Beata Eموke Madari, EMBRAPA, Brazil</li> <li>Prof. Pavel Krasilnikov, Lomonosov U., Russia</li> <li>Dr. Ben Macdonald, CSIRO, Australia</li> </ul>
14:15 – 14:25	<b>Polling</b>
14:25 – 14:35	<b>Governance and funding of the IRC</b> <ul style="list-style-type: none"> <li>Dr. Jean Francois-Soussana, INRAE, France</li> </ul>
14.35 – 15:10	<b>Commitments of stakeholders</b> <ul style="list-style-type: none"> <li>Laura Hoijer, Director, BSAG, Carbon Action, Finland</li> <li>Dionys Forster, Sourcing Lead, Nestlé, Switzerland</li> <li>Stefan Jirka, Program Manager, Verra, USA</li> <li>Lee Nelson, Program Manager, ACIAR, Australia</li> <li>Michaël Ehmann, CEO, Nataïs, France</li> <li>Deborah Bossio, Lead Soil Scientist, The Nature Conservancy, USA</li> </ul> <ul style="list-style-type: none"> <li>Ronald Vargas, Secretary, Global Soil Partnership, FAO</li> <li>Hayden Montgomery, Special Representative, Global Research Alliance</li> <li>Paul Luu, Secretary, "4 per 1000" Initiative</li> </ul>

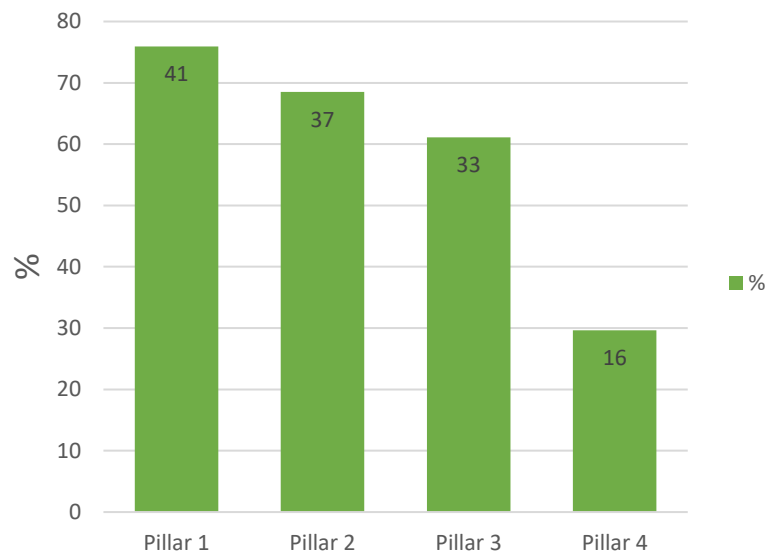
# Final online conference - over 230 participants from across the globe

## Registrations data:

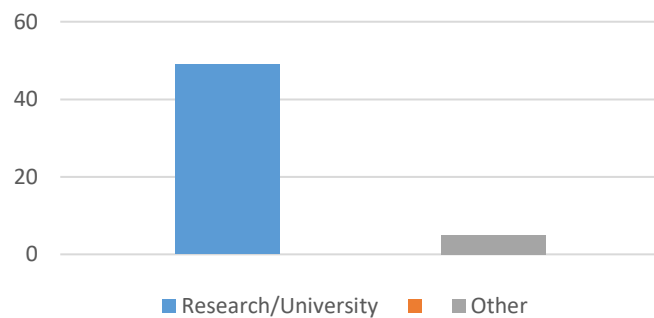


# Letters of support – 54

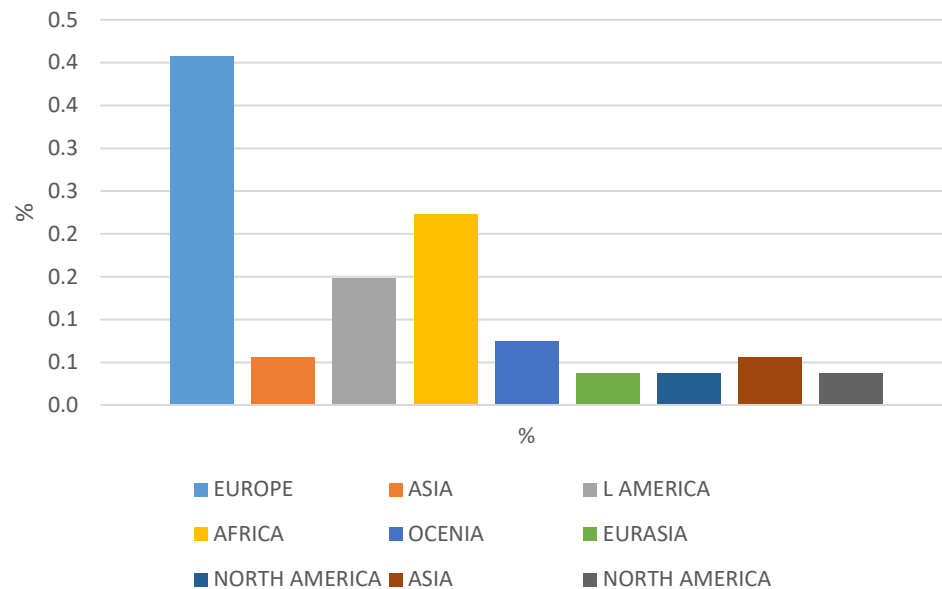
Letters support – interest by pillar



Interest by group



Interest by Region



## INTERNATIONAL RESEARCH CONSORTIUM ON Soil Organic Carbon

- **CIRCASA's preparatory work** underlines the need to develop an international research consortium (IRC) on soil organic carbon in agriculture and the **large benefits of international research cooperation in this field for stakeholders both in the EU and in other world regions.**
- **Goal:** align R&I activities in order to create breakthroughs, avoid duplication of activities and develop innovation on a large scale
- **No single country and no single corporate can develop alone R&I activities at scale.**
- Moreover, as shown by the SRA of CIRCASA and by the EC Mission Board on Soil Health and Food, R&I activities in this field need to be highly interdisciplinary and to be guided by stakeholder's demands. This **requires a dedicated tool to carry ambitious international R&I programs.**

# VISION OF THE INTERNATIONAL RESEARCH CONSORTIUM

## STRATEGIC RESEARCH AGENDA

PILLAR 4:  
Enabling environmental  
and knowledge co-  
creation

PILLAR 3:  
Agro-ecological  
& technological  
innovations

PILLAR 2:  
Monitoring Reporting  
and Verification (MRV)  
system

PILLAR 1:  
Frontier Science

## INTERNATIONAL RESEARCH CONSORTIUM

Collaborative Knowledge

Capacity Building

Coordination

Governance

Research

- Universities
- National and International Institutes

Private  
sector

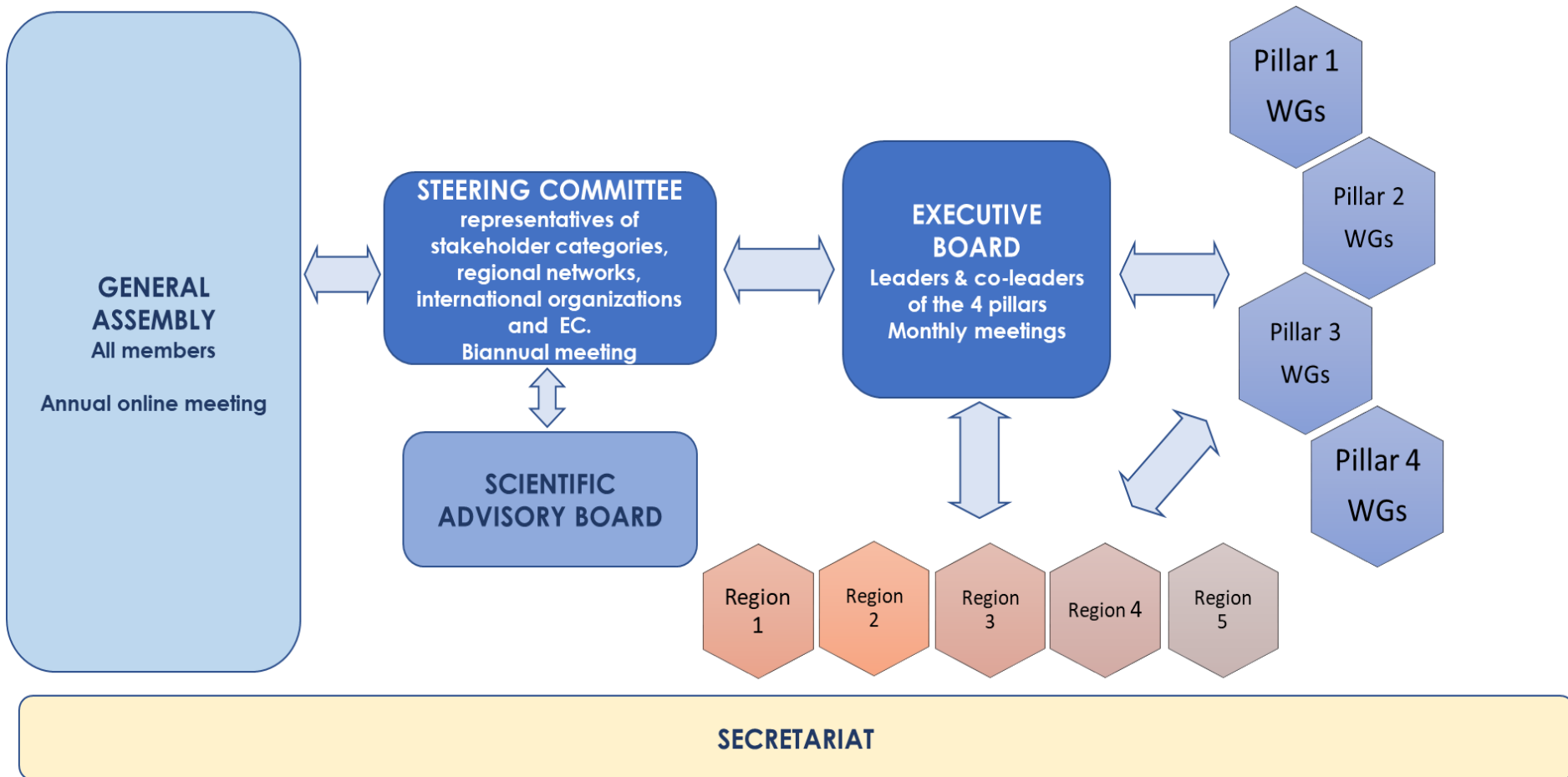
- Corporates, SME's, Startups
- Consultancies, extension services,
- Associations of farmers, foresters, land owners, etc.
- NGOs, Foundations
- Financial sector

Public

- Research agencies,
- Development and Environment agencies
- Space agencies
- International partnerships and initiatives



# Proposed International Research Consortium structure and governance



### D3.2 IRC Work Programme Report presenting recommendations for the set-up of an IRC on soil carbon sequestration in agriculture

- **Executive Board (EB)**, a decision-making board, with science and innovation leaders & co-leaders of the 4 pillars that will work part time for the IRC. A bureau (e.g. elected representatives of the Steering Committee) could support this board. The EB is chaired by an elected chair and vice-chair. It reports to the SC and to the GA. The EB meets monthly and takes all appropriate decisions to manage the IRC with support of the Secretariat.
- **Steering Committee (SC)**, a supervisory board (up to 20 members) composed of funders and of representatives of members (by category, e.g. research, public and private sectors), of regional networks, of the EC and of international organizations. The SC has two categories of members: members elected by the General Assembly representing regions and members by category; *ex-officio* members that commit cash and/or in-kind resources to the IRC above a certain agreed threshold (e.g. above 1 to 5 M€ annually) e.g. research and development agencies, foundations, private sector.
- **General Assembly (GA)**. The GA meets annually (preferably online) and includes all members of the IRC. The GA elects part (not the *ex-officio* members) of the SC members, discusses the strategy of the IRC and is fully informed of its work.
- The **Scientific Advisory Board (SAB)** provides scientific guidance and independent assessments of the activities developed by the IRC. It reports directly to the SC and is composed of 5-7 experts covering a large range of disciplines (including social sciences).
- The **Secretariat** supports all other bodies (EB, SC, SAB, and GA) and ensures the functioning of the International Research Consortium.

# Thank you for your attention!

 Follow us on Twitter! [@CIRCASApject](https://twitter.com/CIRCASApject)

Visit our website [www.circasa-project.eu](http://www.circasa-project.eu)

Open Collaborative platform: <https://www.ocp.circasa-project.eu>



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