ON AGRICULTURAL GREENHOUSE GASES

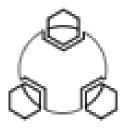
GRA Council meeting, Online

11 September 2024

Research Group Co-Chairs' Report

INTEGRATIVE RESEARCH GROUP

Research Group Aim



Co-Chairs

To foster collaboration across all Research Groups to reduce greenhouse gas emissions intensity while improving the overall production efficiency within agricultural systems

Jean-François Soussana

INRAE—National Research Institute for Agriculture, Food and Environment, France

Pamela Joosse

Agriculture and Agri-Food Canada Nadia Bouhafs

Department of Agriculture, Fisheries and Forestry, Australia

INTEGRATIVE RESEARCH GROUP RECENT ACTIVITIES



- Annual Co-chair meeting 31 May 2024
 - Strategic discussion on the activities for the Integrative Research Group (IRG) and future research direction
- Proposal for restructure of CRG, IRG and their associated networks
 - Opportunity to clarify and optimise the function of the Research profiles
 - The IRG is eager to hear from Council representatives on the proposed change

INTEGRATIVE RESEARCH GROUP **Research Networks**



Networks

Soil Carbon Sequestration Farm to Regional Scale Circular Food **Systems Inventories** and NDC Support Indigenous Research Network

Network Coordinators

- Dr Suzanne Reynders (INRAE France)
- Claus Deblitz, (Thünen-Institute)
- Yelto Zimmer (agri benchmark)
- Nina Grassnick (Thunen Institute of Farm Economics/ agri benchmark)
- Flavia Casu
- Mirjam Spoelstra (Wageningen University & Research)
- Andrea Pickering (AGGRC, New Zealand)
- Ngonidzasche Chirinda (Mohammed VI Polytechnic University)
- Natalie Doran-Browne (the Mullion Group, Australia)
- Mai Van Trinh (Institute for Agricultural Environment, Vietnam)
- Katerina Porou (NZ)
- Shiloh Babbington (NZ)
- Ruta-Rae Aickin (Samoa)

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Soil Carbon International Research Consortium

About ORCaSa







Operationalising the International Research Cooperation on Soil Carbon



A Horizon Europe project (CSA)

Budget: ~ 3 M euros



36 months (September 2022 until August 2025)



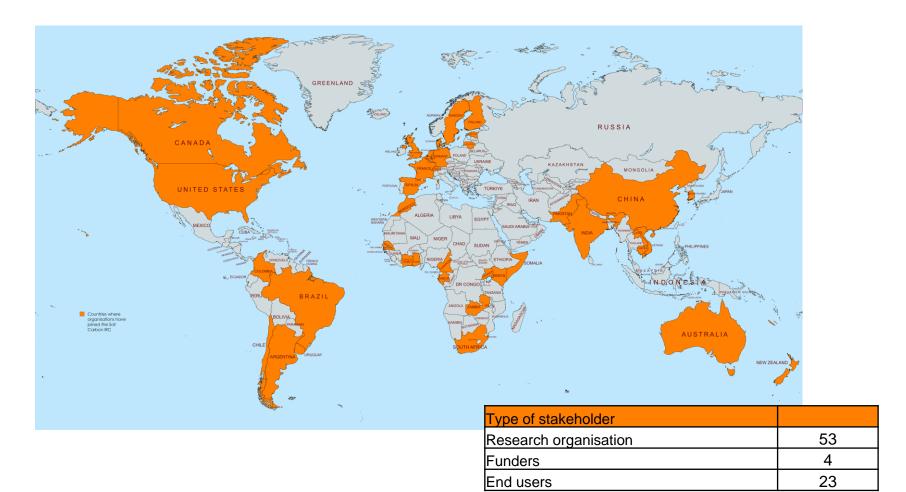
Main objective: establishing the first International Research Consortium (IRC) on soil carbon



39 countries where organisations have joined the Soil Carbon IRC

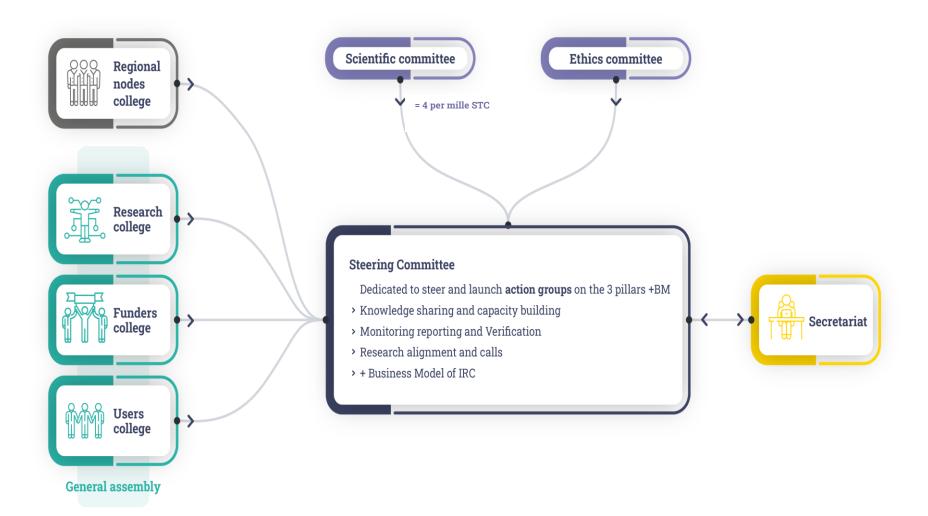


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GLOBAL RESEARCH ALLIANCE ON AGRICULTURAL GREENHOUSE GASES

Governance: Soil Carbon IRC



GLOBAL RESEARCH ALLIANCE ON AGRICULTURAL GREENHOUSE GASES

3 main services in preparation

An internationally harmonized MRV framework to raise awareness and develop scientific knowledge and methods on how to Measure, Report and Verify soil carbon stock changes in various contexts of application (Offsetting, Insetting, NDC's, CAP...)

The Impact4Soil platform to drive cooperation and knowledge sharing on soil carbon at international level.

5 modules: maps (visualization of carbon stock and evolution over time), scientific evidence (from metanalysis), practices (from verified sources), data (from scientific repositories), network of initiatives and stakeholders.

A Research alignment and calls program through an aligned Strategic Research and Innovation Agenda considering all types of land use in each region; and through Knowledge hub and Thematic Annual Programming activities to facilitate international collaboration between projects for the Soil Carbon IRC members.





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Farm to Regional Scale Network

INTEGRATIVE RESEARCH GROUP Farm to Regional Scale Network

- Organized Session "Opportunities and challenges of farm-level GHG accounting" at DAFA conference "Agriculture research and climate change", Germany, March 2024
- Finalizing paper on "Opportunities and challenges of farm-level GHG accounting" --> paper submission to "Science of the Total Environment" planned for September 2024
- Support of project proposal for MACSUR SciPolNet project --> project start expected end of 2024
- Support of organizing the <u>AgriGHG-2024 symposium</u> taking place in October 2024, Berlin (Germany)

Activities in collaboration with agri benchmark:

- GHG Baseline for selected countries in the agri benchmark Beef Network (Emifa-flagship Project)
- GHG balances for typical crop farms (will be finalized by the end of 2024)
- GHG policies in selected countries re. crop production

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Circular Food Systems Network

INTEGRATIVE RESEARCH GROUP Circular Food Systems Network

Key Updates:

- The CFS Network funded three research projects on measuring circularity in agri-food systems:
 - o AgResearch NZ: A holistic framework for circular food system assessment
 - Wageningen Environmental Research: Circularity in integrated systems: resource recovery for feed, fuel and (organic) fertiliser self-sufficiency in Ethiopia
 - Wageningen Plant Sciences: Circularity in integrated systems: resource recovery for feed, fuel and (organic) fertiliser self-sufficiency in Ethiopia
- May 2024 the CFS co-chairs participated in the Pacific Ocean Pacific Climate Change Conference in Samoa and attended the annual meeting of the Indigenous Research Network of the GRA.
- July 2024, the CFS hosted a summer school on circular food systems
 - o Hosted 20 Msc, PhD and Young Professionals at the campus of Wageningen University in The Netherlands.
 - o The program was to expand participants knowledge of circular agriculture and food systems.

Opportunities to connect with CFS:

• The Network has activated a LinkedIn account that interested parties can follow for updates: (25) Circular Food Systems Network: Overview | LinkedIn



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Inventories and NDC Network

Website live in May 2024 - www.graindc.org





Welcome to the Inventories and NDC Network.

What we do

THE NETWORK SHARES NEW SCIENTIFIC INFORMATION, KNOWLEDGE, DATA, AND INVENTORY METHODOLOGIES TO IDENTIFY PRIORITIES FOR COLLABORATION.

We achieve this through this website, newsletters, webinars, flagship proposals, development of case studies and other activities. These efforts are aimed at improving the accuracy, comparability, completeness,

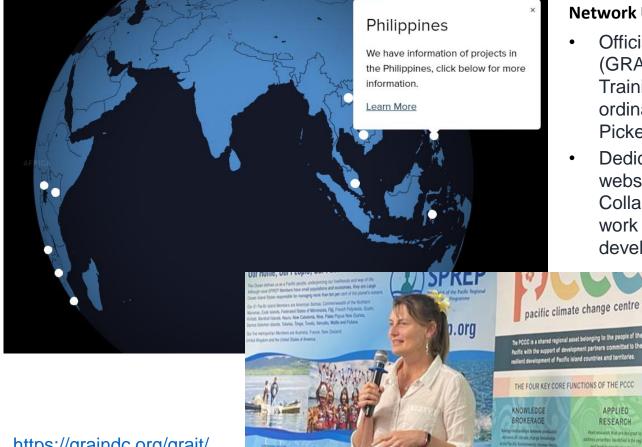
New website for the I&NDC Network

Published May 2024.

- A substantial update from the single page it previously had on the GRA website.
- Provides much more information as well as integrated member management.

GRAIT – Co-ordination Initiative





Network Update

- Officially launched the GRAIT (GRA Agriculture Inventory Training) Programme – coordinated by Dr. Andrea Pickering.
- Dedicated page on the Network website (International Collaboration page) to include work projects throughout developing countries.

https://graindc.org/grait/

Other activities

- Quarterly Who's Counting newsletters.
 - https://graindc.org/resources/newsletters/
- Research ideas:
 - Reducing enteric fermentation emissions through feeding papaya seeds and mango (skin and seeds) to cattle.
 - Incorporating Animal Health metrics into national agriculture inventories (Harry Clark leading).
 - Guidance on incorporating mitigation technologies into National inventories.
- Inventory compilers coordination meeting from Australia, Ireland, the UK and US.
- Two agricultural inventory capability building workshops in Fiji.

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Indigenous Research Network

Update

- Launched in 2022, Co-led by New Zealand and Samoa
- Aims to strengthen indigenous voices in agricultural issues and empower traditional knowledge and practices in the fight against climate change
- <u>The Indigenous Research Network Newsletter</u> was published in March 2024 and includes network updates and opportunities

20 May 2024 - Annual Meeting

- Second Annual meeting and Field trip in Samoa alongside the Pacific Oceans and Climate Conference.
- 68 participants in person and 10 participants virtually, representing 21 different countries.
- The meeting was followed by a field trip and workshop to discuss the development of a flagship project for the Network.

14 August 2024 - Indigenous Research Network: The Power of Inclusivity

- Workshop held alongside Asia-Pacific Economic Cooperation (APEC) in Peru
- The workshop was led by New Zealand and co-sponsored by Australia, Canada, Peru, and The United States.
- Aligned with the APEC Policy Partnership on Food Security Roadmap Towards 2030. Empowering young indigenous voices in climate decisions and actions.



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INTEGRATIVE RESEARCH GROUP 2023-24 PLANS





Next steps

- Research Group Restructuring:
- Discussions are ongoing about potential reorganisation of the CRG and IRG, considering the role of existing networks within these groups.
- The next steps of the group dependant on outcome and proceeding discussions of this council session
- Engaging with IRG members on the outcome of restructure to ensure community of researchers remain connected
- Continue progressing the work underway in the networks, including linking research to knowledge transfer and policy connections
- Continuing to work with the other Research Groups, particularly the CRG on the opportunities presented by a restructure