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AgriGHG symposium, Berlin

October, 24, 2024



**Integrative Research Group
side-event**

Meeting agenda

14:00 Roundtable with participants

**14:10 Update on the Integrative Research Group – J-F Soussana (co-chair),
Nadia Bouhafs (co-chair, tbc)**

14:20 Soil carbon sequestration network update

14:30 Farm to Regional scale network update

14:40 Circular Food Systems network update

14:50 Inventories and NDC network update

[Indigenous research network update]

15:00 Discussion (part 1): Do you see synergies across these networks? If so, which steps could be taken to develop such synergies?

15:30 Discussion (part 2): There are networks in other GRA Research Groups which deal with soils, with nutrients cycling, with farm scale. How to collaborate with these networks?

15:50 Short conclusions and next steps

INTEGRATIVE RESEARCH GROUP

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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 Joose

Agriculture and Agri-Food Canada

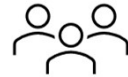
Nadia Bouhafs

Department of Agriculture, Fisheries and Forestry, Australia

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RECENT ACTIVITIES

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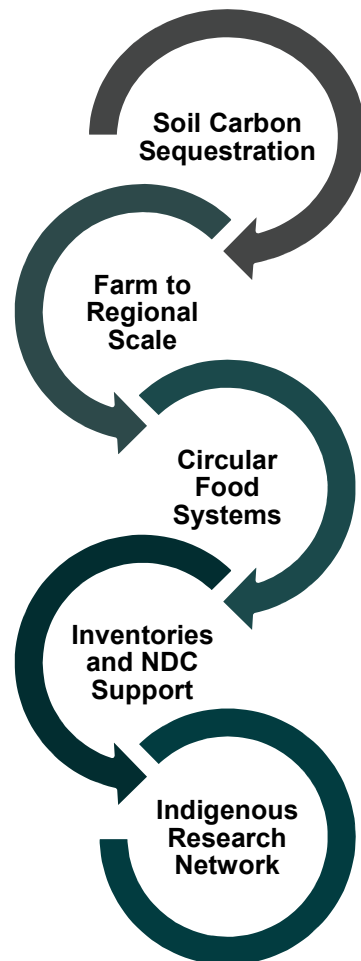
- **Annual Co-chair meeting 31 May 2024**
 - Strategic discussion on the activities for the Integrative Research Group (IRG) and future research direction
- **Proposal for restructure of CRG, IRG and their associated networks**
 - Opportunity to clarify and optimise the function of the Research profiles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

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Research Networks

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Networks



Network Coordinators

- 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)

The top half of the slide features a dark blue background with a pattern of lighter blue circles of varying sizes. A faint, semi-transparent image of a globe is visible in the background, centered behind the text.

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11 September 2024

The bottom half of the slide shows a close-up photograph of a field of tall, golden-brown grasses or reeds, likely in a wetland or marsh area, with a soft, warm light.

Soil Carbon sequestration network

About ORCaSa

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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)



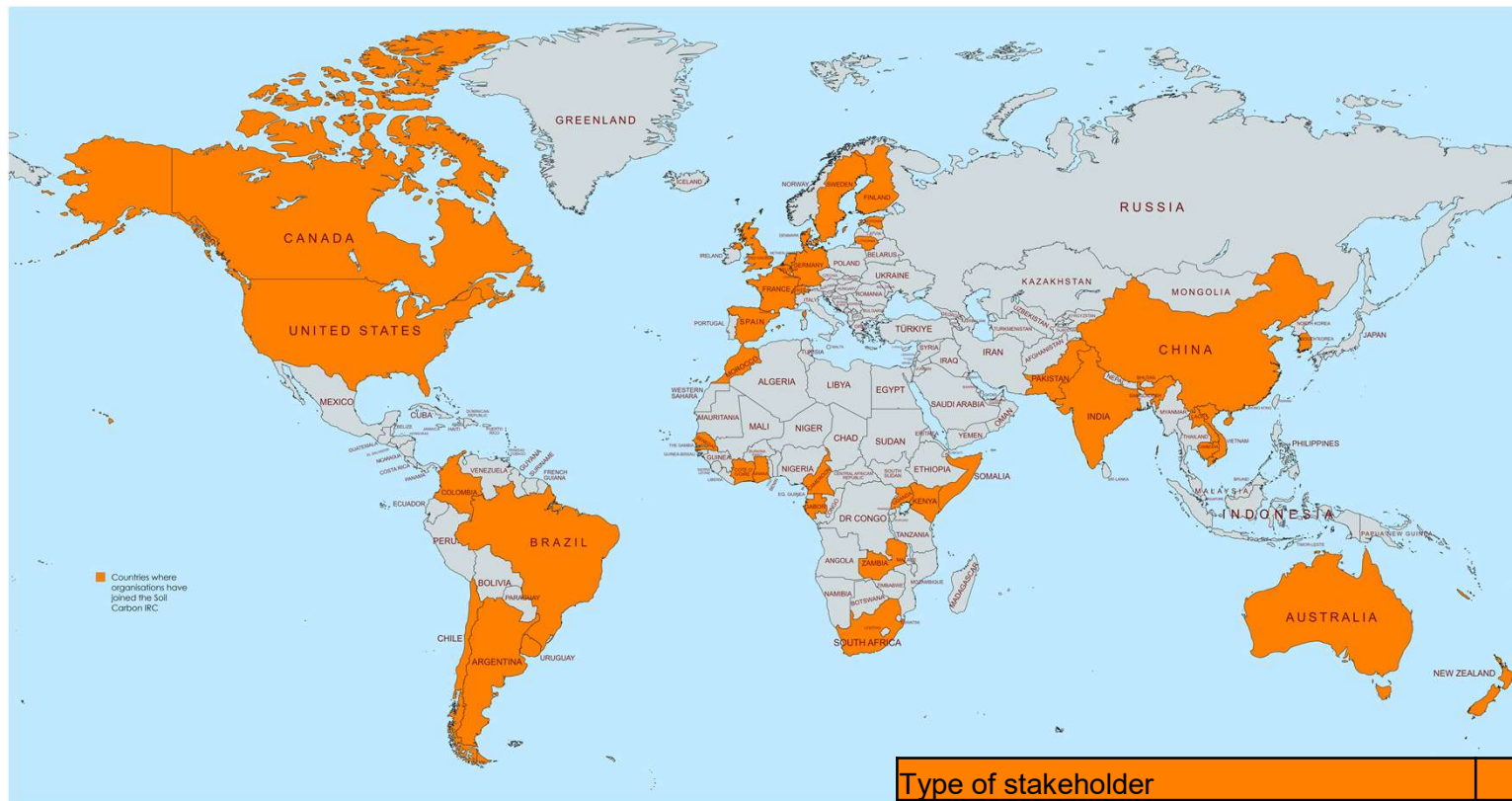
Main objective: establishing the first
International Research Consortium (IRC)
on soil carbon



39 countries where organisations have joined the Soil Carbon IRC

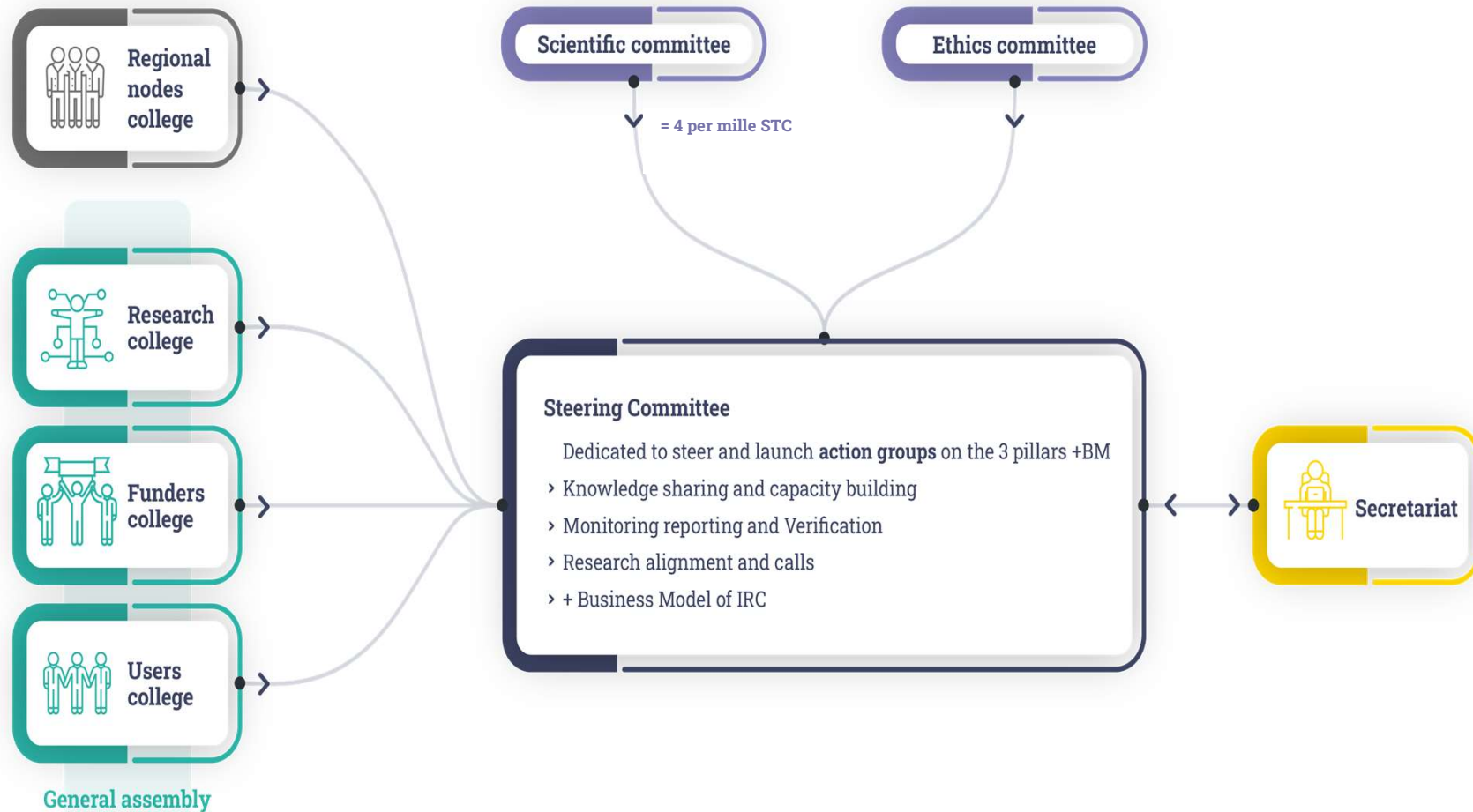
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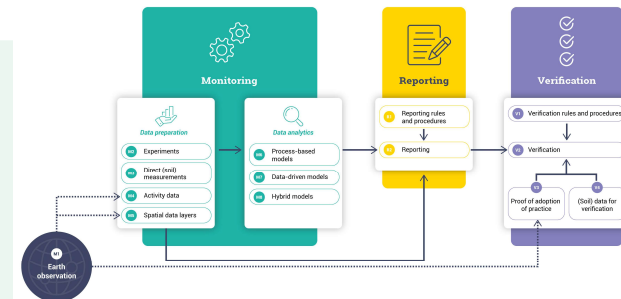
Type of stakeholder	
Research organisation	53
Funders	4
End users	23

Governance: Soil Carbon IRC



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

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Farm to Regional Scale Network

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- 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 SciPoNet project --> project start expected end of 2024
- Support of organizing the [AgriGHG-2024 symposium](#) 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

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Circular Food Systems Network

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Key Updates:

- The CFS Network funded three research projects on measuring circularity in agri-food systems:
 - 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
 - Hosted 20 Msc, PhD and Young Professionals at the campus of Wageningen University in The Netherlands.
 - 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

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New website for the I&NDC Network

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.**

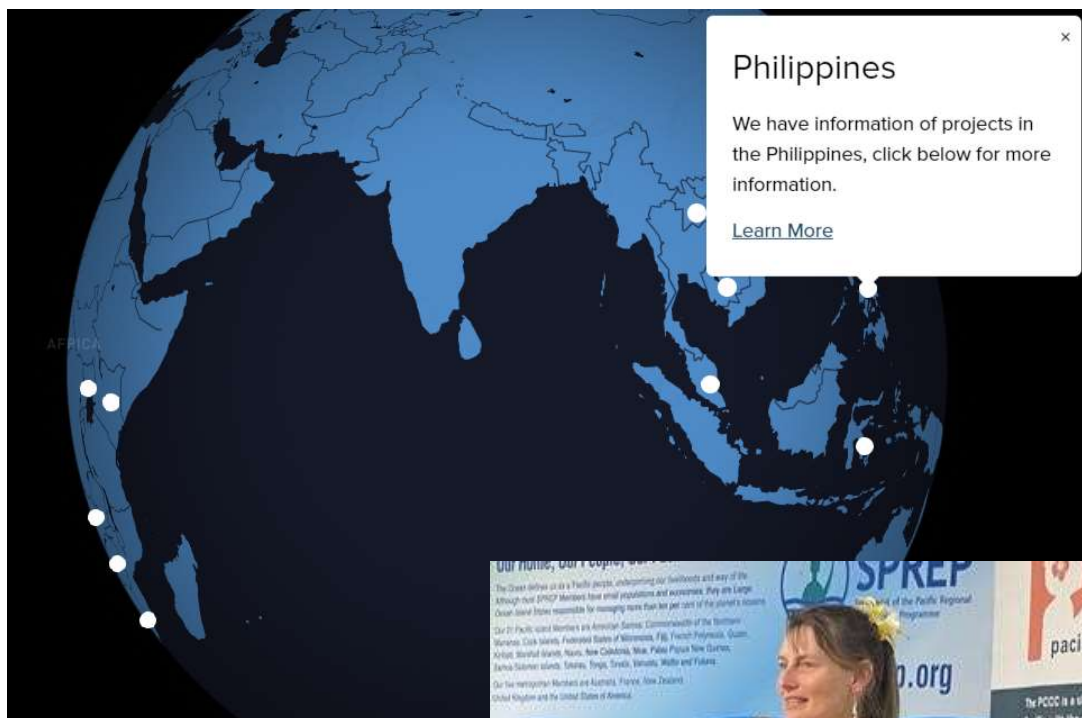
We achieve this through this website, newsletters, webinars, flagship proposals, development of case studies and other activities. These efforts are aimed at improving the accuracy, comparability, completeness,

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

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Network Update

- Officially launched the GRAIT (GRA Agriculture Inventory Training) Programme – co-ordinated 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

Indigenous Research Network

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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
- [The Indigenous Research Network Newsletter](#) 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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IRG next steps

INTEGRATIVE RESEARCH GROUP 2023-24 PLANS

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▶▶ | 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



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Recommendations from Research Group Co-Chairs

Integrative Research Group

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- The co-chairs of the Integrative Research Group **support the establishment of a Review Group** to assess the current GRA structure, consult with Research Groups/Network Leads and propose a new structure that best aligns with GRA principles and research outcomes.
- We propose that organizing research groups according to existing scientific communities would be more effective in delivering research projects and maintaining engagement as they are already functioning and meeting regularly . For example, existing soil societies that meet regularly. Please note, due to timing we were unable to consult with the other research groups.

Discussion

Discussion (part 1)

**Do you see synergies
across the IRG
networks?**

**If so, which steps
could be taken to
develop such
synergies?**

Discussion

Discussion (part 1)

Connect capacities within countries, be facilitators across experts in those countries.

Each funder for projects with low-income countries has different goals. How would we help? Could GRA help to coordinate these activities from member countries? How to group questions and be more efficient for capacity building?

There is a lot of duplication of efforts. In Switzerland, they have different tools for different parts of the country (French, German speaking, etc.). How do we interpret the results? Invest in the people who use the tools

Connect the dots

There are developments in farm/product based carbon calculators need to connect those with national GHG inventories and make them compatible
Farm to regional to national accounting; to better reflect mitigation. Integrates all people

EU CRCF is asking already to connect across scales, the scope 3 is also asking the same thing. Countries try to harmonize farm calculators, Work on farm scale. Are farm calculators consistent across countries? This will create a strong demand to bridge scales.

Overall keyword in the IRG is systems. Framing is essential, animal emissions may be low with highly intensive systems per unit product, but high in the full cycle including feed. Also has to do with food wastes. National inventories is only one part, you also have LULUCF, energy consumption in farms, footprint of the food consumption

Need to create consistency, see Koen Deconinck OECD. There is a need to create consistency because there may be trade wars. There are possibly 45 standards. We should talk about this.

The needs are not the same across scales (farm, or countries)

Is progress in innovation needed before we can standardize? By selecting tools we create winners and losers.

Mutual learning is needed. Source sectors at national scale. Exchange methodologies, so much knowledge available.

Discussion

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Discussion (part 1)

It is also political if emissions are per area or per food product. There are also measurement gaps, on how do you manage it.

Could we have a workshop with the tools of each network and what are the gaps. Or work on an opinion piece to reflect on the gaps. Is a new document needed, NL did a lot on feed-food. Raise awareness and highlight the materials already available. Would be very fruitful, could highlight

Discussion

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Discussion (part 1)

Some degree of duplication of efforts e.g. inventories and farm scale work in the same direction like including mitigation. Soil carbon not included in inventories. Have an online meeting, this would involve the EU CRCF network

Reflect on critical issues, what are the guiding principles. Do we push some farms out of the game if we recommend one method or another? Equity issues, need socio-economics, policy dimensions

Discussion

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Discussion (part 1)

Most of the tools are black boxes, we need to have more transparency. UNFCCC reviewers have access to all country data and can compare emission factors. Transparency and standardization of reporting is essential. Use AI to compare things

Circular food has not been involved in these analyses. Focused on financing research projects. Chances to be involved, but no direct link so far.

Circularity is associated with mitigation, this is addressed at WUR. Circularity is both a cause and a consequence of mitigation. It can be addressed at different scales. However, difficult to express circularity with only one indicator, government selected three indicators. Circular food systems look for other co-leads also

Farm to regional scale would be quite interested to join our online meetings and possibly webinars with the approaches by different countries. They search co-leads to address this.

Von Thuenen institute is developing APIs to convert the data so that they can be used by different tools, still internal work. Sound promising. Merge the field scale, with farm scale and inventories. Have the inputs to national inventories fully compatible with CAPRI economic model and come with also a footprint estimate.

In NZ working on a standardized process with APIs to increase efficiency of the data reported by farmers, similar in Australia.

LPIs in the EU there are a number of APIs also to report

AI will presumably be used also to deliver values in an interactive way

This symposium has been on finance more than before, how will be the next one?

We need tools relating observers and actors. National level is already reviewed. All this sounds very technocratic, but could provide the wrong policy framing. Farmers need to be involved in the design of the tools.

Discussion

Discussion (part 2)

There are networks in other GRA Research Groups which deal with soils, with nutrients cycling, with farm scale.

How to collaborate with these networks?

Cropland RG has networks on organic soils, agroforestry, etc..

LRG has interest in manure management (also a soil issue)

Paddy rice G also with soil carbon in this system

LRG has activities related to farm scale

Discussion

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Discussion (part 2)

Have more incentives by the secretariat, or by others to be more active. We lack support of the GRA and we lack demand from the GRA? This is also a problem for croplands research group, when the topic is large we need more support and more occasions to work together. CFS network has also this problem.

See how to be better involved, how to connect and have more awareness across research groups and networks. This would stir new perspectives.

Discussions are at the political level (GRA council), discussions would be needed at a more scientific level

Periodically research groups should work together and create a table of interactions.

Current structure not so bad with some adjustments. Newsletters and resources in the GRA website. GRA annual highlights are very useful. Get informed of what is going on.

Scientific legitimacy

Discussion

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Discussion (part 2)

Discussion

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Discussion (part 2)

Discussion

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Discussion (part 2)