

# GLOBAL RESEARCH ALLIANCE

## ON AGRICULTURAL GREENHOUSE GASES

4 February 2019

SECRETARIAT UPDATE



# AT A GLANCE

**55**  
member  
countries



**17** partner  
organisations



Over **3000** scientists  
involved in activities of the GRA

**66** international  
collaborative projects  
supporting the GRA



**87** fellowships awarded to  
recipients from **33** countries



**4** Research  
Groups



Paddy Rice  
Research  
Group



Livestock  
Research  
Group



Croplands  
Research  
Group



Integrative  
Research  
Group



**18** Science  
Networks



**32** technical training  
workshops held



**21**  
technical guidelines,  
resource materials and  
databases produced





# PARTNER ORGANISATIONS

GLOBAL  
RESEARCH  
ALLIANCE

ON AGRICULTURAL GREENHOUSE GASES



Inter-American  
Development Bank

worldAgriculturalforum



# 2018 COUNCIL MEETING OUTCOMES

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ON AGRICULTURAL GREENHOUSE GASES

- Germany took on role of Chair.
- Indonesia confirmed as vice-Chair.
- Senegal confirmed as third co-Chair of the PRRG.
- Request for 2 new countries to be LRG Co-Chairs.
- Research Group /Networks/Flagships interrelationship to be reviewed.
- GRA Communications Plan to be developed and Special Representative ToR to be reviewed – working groups identified for both.
- New Flagship on Circular Food Systems.
- New Flagship on Nitrogen.
- GRA to support Koronivia Joint Work on Agriculture within UNFCCC.



# INTERNATIONAL CONFERENCE

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RESEARCH PROGRAM ON  
Climate Change,  
Agriculture and  
Food Security



- International Conference on Agricultural GHG emissions and Food Security: Connecting research to policy and practice.
- Jointly organised by GRA and FACCE-JPI, in partnership with CCAFS, and hosted by the Thünen Institute.
- Science Conference (10-11 September)
- Stakeholder Conference (11-12 September)
  - Communicating research outcomes of the GRA, FACCE-JPI and CCAFS to policy makers, research coordinators, NGOs, industry and farmer organisations.
- <https://www.agrighg-2018.org/program/output-of-the-conference/>



# 2019 COUNCIL MEETING

- The 9th GRA Council meeting will be held in Bali, Indonesia - October 10-12 (tbc), 2019.
- The meeting will be alongside the 5th Global Science Conference on Climate Smart Agriculture: Transforming agriculture under climate change. 8-10 October 2019.



# 2018 RG Co-Chairs with Chair

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# LIVESTOCK RESEARCH GROUP

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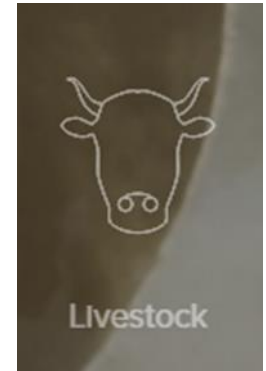
ON AGRICULTURAL GREENHOUSE GASES

## Co-Chairs

- Harry Clark, NZAGRC, New Zealand
- Sinead Waters, Teagasc, Ireland (outgoing) Martin Scholten, Wageningen UR, the Netherlands
- Seeking 3<sup>rd</sup> co-chair

## Group Activities

- Major LRG work on rumen microbial genomics (Hungate 1000) published in Nature
- Feed & Nutrition Network project published three review papers
- Regional networks in Latin America/Caribbean (sustainable intensification) and South/South East Asia (inventories)
- Successful East Africa engagement workshop on low emissions livestock development (GRA, FAO, WB, CCAFS, ILRI, UNECA)
- Joint projects with CCAFS on MRV capabilities



## Next Meeting

August 2019 in Iguazu Falls, Brazil





# PADDY RICE RESEARCH GROUP

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## Co-Chairs

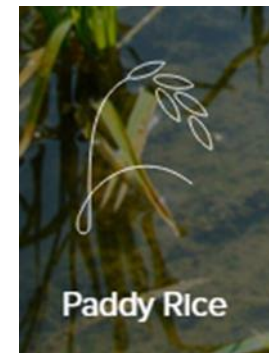
- Yasukazu Hosen, NIAES, Japan
- Álvaro Roel, INIA, Uruguay
- Laure Tall, ISRA, Senegal

## Group Activities

- Published MRV guidelines
- APEC funded workshops in Asia and Latin America on management technologies in Paddy Fields.
- Mitigation options for Latin America - with CIAT and funded by Fontagro.

## Last Meeting

- Asia sub-Group, October 2018 in Bangkok, Thailand – alongside APEC funded workshop.



# CROPLANDS RESEARCH GROUP

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## Co-Chairs

- Rosa Mosquera, USC, Spain
- Mark Liebig, USDA-ARS, USA
- Ladislau Martin, EMBRAPA, Brazil

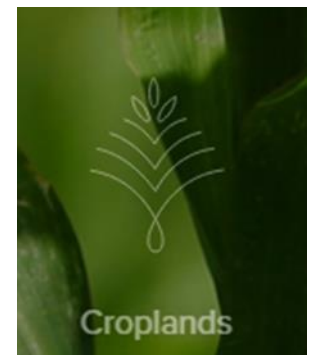


## Group Activities

- Peatland management, Workshop held in Norway
- Nutrient Management, fact sheet in progress (10 countries)
- Conservation Agriculture Network, special session at SSSA International Soils Conference, San Diego, January 6-9, 2019.
- N2O measurement workshop, Canada in July 2019
- Merging the Agroforestry Network with the Integrated Crop & Livestock Systems Network (crops-livestock-trees)

## Next Meeting

- November 2019, San Antonio, Texas. Alongside the US ASA/CSSA/SSSA conference.



# INTEGRATIVE RESEARCH GROUP

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## Co-Chairs

- Jean-François Soussana, INRA, France
- Pamela Joosse, Agriculture and Agri-Food Canada
- Richard Eckard, University of Melbourne/ACIAR, Australia

## Group Activities

- *Soil carbon*: Planning for systematic review of tropical agriculture on soil C sequestration
- *Field Integration*: Testing models and their limitations for ability to model published mitigation options
- *Farm-Region*: Soil Organic Carbon management for climate change mitigation survey.



Integrative





- A joint scholarship of CCAFS and the GRA - Climate Food and Farming Network (CLIFF) and the GRA Development Scholarships (GRADS).
- The CLIFF-GRADS programme is open to students from developing countries currently enrolled in PhD programs for short-term scientific training and research stays.
- Topics related to measurement and management of greenhouse gas emissions and carbon storage in agricultural systems as well as GHG emissions from food loss and waste.
- Funding currently provided by: CCAFS, NZ MPI, USAID. Administration by Aarhus University.

Ministry for Primary Industries  
Manatū Ahu Matua



- **First call – December 2017**
  - 18 opportunities advertised.
  - 9 scholarships awarded to recipients from Nigeria, Tunisia, Ethiopia, Colombia, and Argentina.
  - Hosted at CGIAR centres (CIAT, CYMMIT) and GRA member country research institutes (Netherlands, Chile, UK).
- **Second call – September 2018**
  - 50 opportunities advertised (including 10x FLW).
  - 243 applications from students from > 50 developing countries.
  - 33 scholarships awarded to recipients from 18 countries.
  - Hosted at following institutions: 2019 #CLIFF-GRADS fellows go to  
[@inra\\_france](#) [@USDA\\_ARS](#) [@ISRICorg](#)  
[@Thuenen\\_aktuell](#) [@unimelb](#) [@intaargentina](#)  
[@irri](#) [@ilri](#) [@iniachile](#) [@queensu](#) [@BangorUni](#)  
[@CIAT\\_](#) [@CATIEOficial](#) [@CIFOR](#) [@\\_SLU](#)  
[@SyddanskUniv](#) [@ICRISAT](#) [@mustmw](#)  
[@HokkaidoUni](#) [@GRA\\_GHG](#)

- Planned 3<sup>rd</sup> call for 2019 – announced at COP25 end of 2019.
- CLIFF-GRADS recipients to attend GRA Council meeting and CCSA Scientific Conference in Bali, Indonesia in October 2019.
- Welcome support from GRA members and partners:
  1. Need research opportunities to advertise in 3<sup>rd</sup> call
  2. Funding to support scholarships (USD10k – USD12k per student for between 4 and 6 months).



## Development of solutions

- N management: rate, source, timing & placement
- Develop and implement N inhibitors
- Crop rotation, cover crops, perennials, biomass management and conservation tillage
- Water management (irrigated or paddy systems)
- The interdependence between N and C
- Role of soil microbiome

## Improved quantification of N<sub>2</sub>O emissions and mitigation

Emissions factors – direct, indirect and yield scaled

- Cropland/pastureland Tier 2 and Tier 3
- Improved activity data

## Implementation of mitigation solutions

- Identification of locally appropriate mitigation actions
- Capacity building
  - Farmers / producers
  - MRV practitioners
  - For Tier 3 modelling
  - Students/interns
- Scientific exchange
  - Conferences
  - Innovation networks

# CIRCULAR FOOD SYSTEMS FLAGSHIP

## Components of the Flagship:

1. Describing and understanding the existing concepts of circular agrofood systems, their impact on each scale and the possible benefits (create an economy on by-products);
2. Assessing the feasibility and potential of decreasing GHG emissions;
3. Identifying the gaps within research and involve partners to transfer the new knowledge to stakeholders;
4. Develop a strategy to accelerate the transition including identifying enablers and barriers;
5. From the concept to the practice: identify and develop showcase; monitor showcases as learning cases (data collection).



**FOR MORE INFORMATION**

**[www.globalresearchalliance.org](http://www.globalresearchalliance.org)**

**[secretariat@globalresearchalliance.org](mailto:secretariat@globalresearchalliance.org)**

**Twitter: @GRA\_GHG**