Newsletter No.1

April 2019

Network Name change

At the third meeting of the Integrative Research Group (IRG) of the Global Research Alliance on Agricultural Greenhouse Gases (GRA), Colombia, 4th and 5th February 2019, it was proposed that the name for the IRG "Greenhouse Gas Inventories Network" should be changed to "the Inventories and Nationally Determined Contribution's (NDC's) Support Network" to encapsulate the significance of highlighting the role of greenhouse gas emission and mitigation research in achieving NDC's across all GRA members. The full IRG meeting report can be found at https://globalresearchalliance.org/wp-content/uploads/2019/02/Colombia-Cali-IRG-Meeting-February-2019-Meeting-Report.pdf

Inventories and NDC Network

Newsletter

Welcome

Welcome to the first newsletter for the Global Research Alliance on Agricultural Greenhouse Gases (GRA) Inventories and Nationally Determined Contributions (NDC) Support Network. This regular newsletter aims to provide you with information relating to National Agricultural Greenhouse Gas (GHG) Inventories and NDC support, from training opportunities to available resources to possible collaborations among courtiers. Over the coming months your Network co-leads will be working towards developing the objectives of the Network. If you have any questions, or would like any information distributed to the wider Network, please contact one of the network co-leads.

Introducing the co-leads

Alberto Sanz-Cobena

Alberto Sanz-Cobeña has a PhD in agro-environmental technology (2010). He has been deeply involved in the generation of robust data on GHG emissions from cropping systems under Mediterranean conditions, also assessing and proposing regional-based mitigation strategies. Most of this work has been published in JCR research papers and reviews as well as in a Special Issue on the matter edited by Alberto in AGEE (2017). He was one of the promotors of the Spanish National Research Network on GHG mitigation in the agricultural sector (REMEDIA) in 2011. He is an active part of the Excellence Research Network for Updating Emission values in Spanish Agriculture (NUEVA) (2018-2020). He is scientific co-coordinator of the national initiative to update and improve nitrous oxide emission factors, towards tier 2, for Spanish agriculture.

Andrea Pickering

Andrea has a PhD in Plant Physiology and works for the New Zealand Minister for Primary Industries. She was the Agricultural sector lead for the New Zealand National Inventory Report from 2009 to 2012, and then managed New Zealand's activities in the Global Research Alliance on Agricultural Greenhouse Gases. She is certified as a United Nations Framework Convention on Climate Change (UNFCCC) expert reviewer for national agricultural GHG inventories. More recently she has been writing a web based course on how to compile an agricultural GHG Inventory. She is currently on the Intergovernmental Panel on Climate Change (IPCC) Emission Factor Database (EFDB) Editorial Board.

Links

MRV platform

https://www.agmrv.org/

IPCC Emission factor database

https://www.ipcc-nggip.iges.or.jp/EFDB/main.php

IPCC Guidelines

https://www.ipcc-nggip.iges.or.jp/public/2006gl/

Inventories and NDC support webpage

https://globalresearchalliance.org/research/integrative/networks/greenhouse-gas-inventories-network/

GRA website

https://globalresearchalliance.org/

Marci Baranski

Marci Baranski manages projects on greenhouse gas estimation and conservation data for agriculture and forestry at US Department of Agriculture (USDA). These include GHG inventory data and method improvements, tools and methods for GHG estimation, and reporting of USDA conservation data. She is certified as a UNFCCC expert reviewer for national agricultural GHG inventories. She received her PhD in Biology and Society from Arizona State University in 2015 where she worked under Ann Kinzig and studied international agricultural innovation systems.

Ngonidzashe Chirinda

Ngonidzashe is a Research Scientist at the International Centre For Tropical Agriculture where he works within the Agroecosystems and Sustainable Landscapes (ASL) Research Area. He holds a PhD in Agroecology, Master of Philosophy in Agriculture and BSc in Soil Science. He is a lead author for the 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. His current research is on developing and evaluating feasible climate change mitigation options in agriculture. He is a member of the United Kingdom Research and Innovation International Development Peer Review College and Agriculture Technical Working Group of the Climate Bonds Initiative. During the past 15 years, he has worked in Africa, Europe, Latin America and the Caribbean.

Richard Eckard

Richard Eckard is Professor and Director of the Primary Industries Climate Challenges Centre (www.piccc.org.au), in the Faculty of Veterinary and Agricultural Sciences at the University of Melbourne. His research focuses on climate-smart and sustainable agricultural production, with a recent focus on carbon farming and options for agriculture to respond to a changing climate. He is a science advisor to the Australian, New Zealand and UK governments, and the EU and UN Food and Agriculture Organization (FAO), on climate change adaptation, mitigation and policy development in agriculture.

Job opportunities

GODAN is currently looking for an experienced Monitoring and Evaluation ,and Research Coordinator to join the team. The post will be based in Montreal, Canada, with significant opportunity for travel. The post holder would be coordinating activity and work on behalf of GODAN across the African continent.

You will find the full job description their Website: https://www.godan.info/sites/default/files/documents/M%26E%20AND%20RESEARCH%20COORDINATOR.pdf

The Network

In the context or agricultural greenhouse gas emissions, inventories remain the main tool connecting policy with mitigation. However, many countries face major challenges with either a lack of relevant data or non-existent data. Only 5 out of 141 countries conduct a tier 2 inventory for their agriculture sector. Further, increases in productivity and efficiency are not captured in developing nations and most national inventories do not yet have direct mitigation technologies included.

Work related to inventories is carried out through the wider GRA's other research groups. At the recent Integrated Research Group (IRG) meeting it was emphasized that the role of international partners is crucial for inventory capability building in developing nations. In many cases, research departments are not responsible for national inventory development and maintenance, nor for training. This highlights the value of the GRA's Network in assisting with connecting relevant partners, organizations, research institutes and member countries for these activities.

It was decided at this meeting that this Network should be policy relevant, and avoid being policy prescriptive. The Network was redefined with a central aim of improving the evidence base and to better connect governments and relevant expertise to subsequently improve the quality of agricultural NDC's and the way their achievements are reflected by national GHG inventories. Incorporating a focus on agricultural NDC's arises from the approaching requirement for countries to revise their NDC in 2020.

The objective of the Network has therefore been defined as the facilitation of links across organizations, research institutes and government so that the expertise is accessible. The Network will focus on:

- Increasing access to methods to improve the collection of activity data as well as inform the collection of GHG emissions and uptake data where it has not previously been available;
- providing technical support and skills training, for capacity building and knowledge transfer;
- building upon existing shared databases and developing new platforms where necessary; and
- creating in-country capability and avoiding international consultancy so as to build country capabilities.

Over the coming months the Network leadership team will develop activities to facilitate the achievement of these objectives.

Available training

Food and Agriculture Organization (FAO) national greenhouse gas (GHG) inventory for land use.

The course gives a general introduction to greenhouse gas (GHG) reporting as well as an overview of the processes behind the production of GHG emissions from the land use sector. It provides guidance for calculating GHG emissions using the IPCC default method and emissions factors (Tier 1), and contains complementary exercises and questions.

It can be particularly useful for staff in national agencies to strengthen institutional and technical capacities. This course is part of the e-learning series "Building a sustainable national greenhouse gas inventory for Agriculture, Forestry and Other Land Use" developed by FAO through the Mitigation of Climate Change in Agriculture (MICCA) Programme. The first course on national greenhouse gas inventory for agriculture was launched in 2017 and is also available through the FAO E-learning Centre. Follow this link to start learning: http://bit.ly/2VzQ5CT

For any questions related to the e-learning please contact micca@fao.org

At the time of writing the Network had 108 members from 57 different countries and 5 organizations. Many of these countries are not members of the GRA, but this does not preclude these countries from participating in the Network. However, for non member countries, if you would like to join the GRA, please contact the GRA secretariat@globalresearchalliance.org. For a full list of member counters and Partners see https://globalresearchalliance.org/community/.

We have had many questions about what is expected of Network members. Like all things with the GRA, there is no mandatory obligation to participate in any of the activities under the Network. However, a successful Network depends on the membership and how much involvement members have. So we do encourage you to participate as much as you are able. If you have any information related to Agricultural GHG Inventories and NDCs that you would like to disseminate, please send it to one of the Network co-leads. Also, if any of your colleagues are interested in joining the Network again, please get them to contact one of the Network co-leads.

Inventory and NDC Activities

MRV Platform

The Measurement, Reporting and Verification (MRV) Platform for Agriculture is an online platform of tools, approaches, and case studies for MRV of GHG emissions and mitigation actions in the agriculture sector. This platform provides information to guide the technical and institutional design of MRV systems for agricultural mitigation actions, including those outlined in Nationally Appropriate Mitigation Actions (NAMAs) and Nationally Determined Contribution (NDC) goals.

The platform houses a wide range of tools, approaches, and case studies about how to design and implement MRV of greenhouse gas (GHG) emissions and mitigation actions in the livestock sector. The platform will expand to include other agriculture sectors.

https://www.agmrv.org/

An objective for the Inventories and NDC Network will be to contribute to the online MRV Platform synthesizing inventory methodologies and approaches.

Available training

The Greenhouse Gas Management Institute

The Greenhouse Gas Management Institute is a non-profit organization providing training on the principles, concepts and techniques to manage and credibly account for GHG emissions. Their courses cover all aspects of climate change. Courses are self-paced, available 24-hours per day, and authored by leading experts in their fields. Lessons are designed for both beginners and experienced professionals and may be taken individually or as part of a diploma program. Courses are interactive and include exercises and quizzes. If you pay the exam fee, you also may earn a Certificate of Proficiency. They have recently developed a diploma in MRV. https://ghginstitute.org/

Agricultural Greenhouse Gas Inventory training

New Zealand is leading the development of a new GHG Inventory training web-based course, which focuses on the emissions that are currently reported under the agricultural sector. The course is split into 5 components:

- climate change science
- International climate change policy
- Introduction to Agricultural inventories
- How to do a Tier 1 Inventory
- How to do a Tier 2 Inventory

A 6th component, a week long workshop, will also be developed to provide students with guidance on implementation of what they have learnt throughout the course, into a country specific Inventory. It is planned that the first 3 components will be available for testing by people in July 2019, and the next 2 components by October 2019. Further updates will be provided through subsequent Network newsletters.

Spanish Inventory Network

The Network for Updating Emission values in Spanish Agriculture (NUEVA) has as main objective to analyze the state of emission factors (EF) of GHGs in the Spanish agricultural sector and propose measures that allow to improve their accuracy in the future. The global context of climate change and binding agreements following the Paris Summit Agreement make it necessary to address an in-depth study of EFs so that, on the one hand, the Spanish inventory system adequately reports according to the productive reality of the country and, on the other hand, so that mitigation strategies applied in any activity can be computed. This objective is clearly limited by the heterogeneity of production systems in Spain and the lack of a coordinated effort at national level to address the peculiarities of these systems. The Network NUEVA has a multidisciplinary team of 9 national and international reference centers in the study of GHG, crop management, Carbon and Nitrogen cycles in agricultural soils, animal feeding, excreta management, agroforestry systems, inventory calculation and integration and modeling at different scales. The Network proposes (i) to agree on evaluation criteria for emission data and EFs, (ii) to review available methodologies, (iii) to explore alternative GHG estimation methodologies for Tier 3, (iv) to identify 'gaps of knowledge' (v) to strengthen the internationalization of Spanish groups in the area and (vi) to establish a direct communication with different official bodies and the agricultural sector. To this end, a plan of activities has been designed which includes: i) 3 thematic worshops, ii) stays of researchers and PhD students, iii) transfer of results via web, blog, youtube channel, iv) direct dialogue with public agents and private partnerships. https://www.rednueva.es/

Available training

The Greenhouse Gas Management Institute

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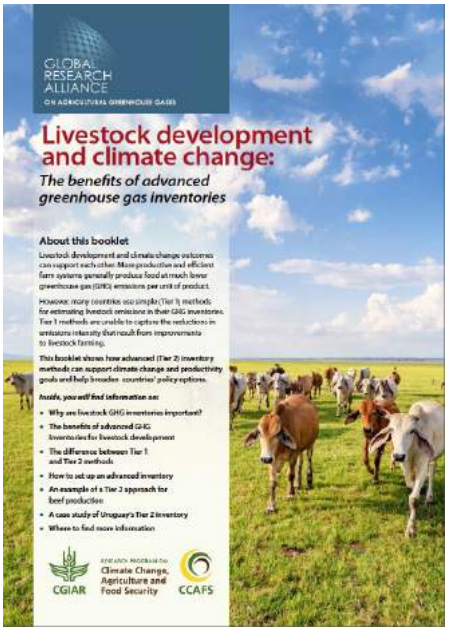
Research Groups

The Livestock Research Group (LRG) is supporting tier 2 livestock inventory improvements in developing countries, and contributes to the growing body of science for emissions from enteric fermentation. A core part of the Livestock Research Group's capability building programme supports countries to develop advanced national greenhouse gas inventories for livestock emissions. For more details see the LRG's webpage https://globalresearchalliance.org/research/livestock/capability-building/greenhouse-gas-inventories-for-livestock/



The LRG has also developed a collection of information and examples describing how countries have used different data sources, methods, approaches and institutional processes to adopt and continually improve a Tier 2 approach for estimating livestock GHG emissions in national GHG inventories. The collection provides numerous case studies of how different countries have applied Tier 2 approaches in the livestock sector. These case studies are intended to inform about the practical methods countries use to compile their livestock GHG inventories and to stimulate those involved in livestock GHG inventories to devise methods for improved inventories that are suited to their national context. The collection also provides links to more formal guidance from the IPCC and other sources. This publication can be found at https://globalresearchalliance.org/wp-content/uploads/2018/12/Livestock-Tier-2-collection_Final_181130.pdf or is also available interactively via the MRV Platform for Agriculture.

The Croplands Research Group and *Paddy Rice Research Group* are focusing on activities related to increasing understanding in soil carbon sequestration and emission factors, as well as emissions from different rice management practices respectively.

The Paddy Rice group has also developed a Handbook of Monitoring, Reporting, and Verification (MRV) for a Greenhouse Gas Mitigation Project with Water Management in Irrigated Rice Paddies. https://globalresearchalliance.org/wp-content/uploads/2018/02/PRRG-MRV-Handbook-Water-Management-Irrigated-Rice-Paddies-Feb-2018.pdf

Available training

UNFCCC Inventory training

As in previous years the UNFCCC is providing training in compiling GHG Inventories using the IPCC guidelines again this year. Nominations to attend these workshops must be through your National Focal Point. If you or a colleague is interested in attending this training please contact your National Focal Point.

The 2 remaining workshops for this year are:

Workshop on the Building of Sustainable National Greenhouse Gas Inventory Management Systems, and the Use of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories for the **Latin American and the Caribbean Region**. Organized by the UNFCCC Secretariat in collaboration with the IPCC, and the FAO.
2 – 6 September 2019

Workshop on the Building of Sustainable National Greenhouse Gas Inventory Management Systems, and the Use of the 2006 IPCC Guidelines for National Greenhouse Gas Inventories for the ***Asia-Pacific and Eastern European Regions***. Organized by the UNFCCC Secretariat in collaboration with the IPCC, and the FAO.
22 – 26 September 2019

Reports

Making trees count: Measurement, reporting and verification of agroforestry under the UNFCCC

About half of developing countries express ambition to use agroforestry—the integration of trees with crops, livestock and other non-forest timber products—for adaptation and mitigation of climate change. In order for agroforestry contributions to be recognized and rewarded, however, countries need reliable systems for MRV. CGIAR's Research Program on Climate Change, Agriculture and Food Security (CCAFS) has released a review on how agroforestry is addressed in national MRV under the UNFCCC.

https://ccafs.cgiar.org/publications/making-trees-count-measurement-reporting-and-verification-agroforestry-under-unfccc#.XKPNCutKhTY

Measurement, reporting and verification of greenhouse gas emissions from livestock: current practices and opportunities for improvement

CCAFS, the GRA and the FAO, with support from the New Zealand government, the United States Agency for International Development (USAID) and the World Bank, published a study of current MRV practices and opportunities for improvement. The study focused on three areas: 1. Do current livestock GHG emission MRV practices meet countries' policy needs? 2. What are the common barriers to improving MRV of livestock GHG emissions? 3. How can international organizations support improvements in MRV of livestock GHG emissions?

Summary of findings

https://ccafs.cgiar.org/publications/measurement-reporting-and-verification-greenhouse-gas-emissions-livestock-current#.XLZUZOgzaUk

Full report

https://cgspace.cgiar.org/bitstream/handle/10568/89335/CCAFS_Report17.pdf

Mitigación con Sistemas Silvopastoriles en Latinoamérica: Aportes para la incorporación en los sistemas de Medición Reporte y Verificación bajo la CMNUCC

This report analyses the progress of Latin America countries in the incorporation of silvopastoral systems in the national MRV systems of National GHGInventories. It generates a short-term road map as well as technical guidelines to reduce the existing gap. Only available in Spanish.

https://ccafs.cgiar.org/node/56861#.XLZWt-gzaUl

Contact Us

Alberto Sanz-Cobena

a.sanz@upm.es

Andrea Pickering

andrea.pickering@mpi.govt.nz

Marci Baranski

marci.baranski@usda.gov

Ngonidzashe Chirinda

n.chirinda@cgiar.org

Richard Eckard

rjeckard@unimelb.edu.au

Livestock development and climate change: The benefits of advanced greenhouse gas inventories

The Livestock Research Group partnered with CCAFS to publish a guide on advanced inventories for livestock greenhouse gases. This provides helpful information on the differences between Tier 1 and 2 methods, why the latter are important for livestock emissions, and how to set up an advanced inventory.

https://globalresearchalliance.org/wp-content/uploads/2018/06/Inventory-Brochure-on-Livestock-Development-and-Climate-Change-2016.pdf

Webinars

Integrative Research Group:

Linkages with the 4p1000 initiative and the CIRCASA project

Tuesday 30th April 2019 at 4:00 P.M (UTC+2).

The Integrative Research Group (IRG) of the Global Research Alliance on Agricultural Greenhouse Gases (GRA) is glad to invite you to our First Webinar Meeting "IRG linkages with the 4p1000 initiative and the CIRCASA project".

To register: https://zoom.us/webinar/register/WN_prB5ypbsQ3moLhdghBaG9g

This first webinar is part of a series of Webinars which aim to inform the GRA community and others about the IRG activities contributing to the GRA goals. For this first time, we will mainly talk about other projects and initiatives' structure and how they interact with and complement the IRG activities. We will present "The Coordination of International Research Cooperation on Soil CArbon Sequestration in Agriculture" (CIRCASA) and the "4per1000: Soils for food security and Climate" initiative.

Program: 1 hour

- Presentation of the IRG network and activities: Pamela Joosse
- Presentation and structure of CIRCASA Project: Jean-François Soussana
- Presentation and structure of the 4p1000 Initiative: Paul Luu

Discussion: Link between initiatives and possible interactions

Pamela Joosse – IRG co-chair

Senior Soil and Nutrient Management Specialist with Agriculture and Agri-Food Canada, Science and Technology Branch working out of Guelph, Ontario, Canada.

Jean-François Soussana - IRG co-chair and CIRCASA project coordinator

Agronomist specialized in grasslands ecology and carbon/nitrogen cycles working as vice-president in charge of international politics at INRA, Paris, France.

Paul Luu - Executive Secretary of the 4p1000 initiative

Agronomist specialized in tropical agronomy and agroforestry, former Protocol Officer in CGIAR, working at Montpellier Area, France.

Reviewing scientific and technical evidence

Friday 03rd May 2019 at 2:00 P.M (UTC+2).

We are pleased to invite you to our WP1 "Strengthening the research community and structuring knowledge" Webinar on Friday 03 May 2019 - 2:00 P.M (Paris UTC+2).

In this webinar, our WP1 leader and colleagues will present the WP1 activities, first results of the researcher's survey as well as current cartography of the scientific network working on the field of soil organic carbon sequestration in agriculture.

To register: https://zoom.us/webinar/register/WN_LV1dKIQ6SMyzrBUT_HKfeQ

Program: 1 hour

- Intro
- WP1 overviews and activities: Pete Smith
- Researchers survey results: Andy Bray
- The Research Network: Jan Verhagen

Pete Smith - WP1 leader

Professor of soils and Global Change at the Institute of Biological Sciences at the University of Aberdeen, Scotland, UK.

Andy Bray - Research fellow

Specialized on biogeochemistry and environmental mineralogy at the School of Earth and Environment, University of Leeds, UK.

Jan Verhagen - Senior scientist

Specialized in agricultural systems, carbon cycle, and climate adaptation at the Wageningen University & Research, the Netherlands.