GRAMP
Global Research Alliance Modeling Platform

Global Research Alliance Modelling Platform (GRAMP): An open web platform for modelling greenhouse gas emissions from terrestrial ecosystems

Jagadeesh B. Yeluripati[1], Agustin del Prado[3], Bob Rees[4], Changsheng Li[5], Dave Chadwick[6], Emma Tilston[4], Kairsty Topp[4], Laura Cardenas[2], Pete Ingraham[7], Sarah Gilhespy[2], Steven Anthony[8], Sylvia H. Vetter[1], Tom Misselbrook[2], William Salas[7] and Pete Smith

1. Institute of Biological and Environmental Sciences, School of Biological Sciences, University of Aberdeen, Aberdeen, Scotland, UK.
2. Sustainable Soils and Grassland Systems, Rothamsted Research, North Wyke, Okehampton, Devon, England, UK.
3.BC3, Basque Centre for Climate Change, Bilbao, Spain
4.Crop & Soil Systems, SRUC Edinburgh Campus, Edinburgh, Scotland, UK
5.Institute for the Study of Earth, Oceans, and Space; University of New Hampshire, Durham, New Hampshire, USA
6. School of Environment, Natural Resources and Geography (SENRGY), Environment Centre Wales, Bangor University, Bangor, Wales, UK
7.Applied GeoSolutions, Durham, New Hampshire, USA
8.Soil, Crops and Water, ADAS Group Ltd, Pendeford Business Park, Wolverhampton, England, UK

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Update on GRAMP activities

- Many user registration ~ 100 in last one year
- New model families –
  - Century - DayCent and
  - BasFor – BasGra
- Supported several Webinars.

MAGGnet and GRAMP integration

Network and Modeling Activities within the GRA Croplands Research Group: MAGGnet and GRAMP

Mark A. Liebig[1] and Jagadeesh Yelurpati[2]
[1]USDA-ARS, Mandan, ND USA; [2]The James Hutton Institute, Aberdeen, Scotland UK

Context

Concurrent efforts to mitigate agricultural greenhouse gases (GHGs) while adapting production practices to projected hardships of climate change will be essential to ensure long-term sustainability and food security. Relevant and timely agricultural research must focus on how to best respond to climate change by utilizing a balance of thoroughly tested and novel management practices and technologies. Mitigation research in agriculture should provide a mechanistic understanding of the underlying processes affecting natural resources, be scalable to provide useful predictions for a range of management scenarios, and be translated in such a way that it effectively supports both adoption of best practices/systems by producers and informed decision making for regional and national policies.

In response to these challenges, the **Global Research Alliance on Agricultural Greenhouse Gases** (GRA) was formed in 2009 to develop trans-national strategies for reducing GHG intensity of agricultural production. To facilitate focused efforts, the GRA is organized in four research groups (Cropland, Livestock, Paddy Rice, Integrative) each of which developed work plans to enable successful collaborations, as well as to share knowledge and best practices, build capacity and capability among participants, and move towards transformative solutions to reduce agricultural GHG emissions. Two activities within the GRA Croplands Research Group – **Managing Agricultural Greenhouse Gases Network** (MAGGnet) and **Global Research Alliance Modeling Platform** (GRAMP) – have served to contribute to contribute to these efforts.

Managing Agricultural Greenhouse Gas Network (MAGGnet)

MAGGnet was established in 2012 to provide a platform for the inventory and analysis of agricultural GHG mitigation research throughout the world. MAGGnet is currently focused on compiling metadata from experimental sites where GHG fluxes and soil carbon dynamics are monitored. A metadata entry template is used to collect key experimental attributes listed in peer-reviewed publications.

Metadata Entry Template

Worksheet Tabs

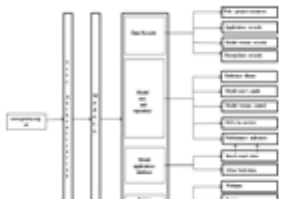
- Experiment description
- Experiment location
- Experiment duration
- Climate attributes
- Soil and drainage attributes
- Data type
- Treatments
- Key Findings
- Journal citations
- Primary contact

Experimental Sites

Global Research Alliance Modeling Platform (GRAMP)

GRAMP was initiated in 201? to provide a web-based modelling platform to unify environmental modeling and assessment. By linking researchers with appropriate datasets, models, and training material, GRAMP seeks to improve predictions of soil C and N cycling in agro-ecosystems in the context of climate change, and facilitate the establishment of a worldwide collaborative network to identify promising GHG mitigation strategies.

GRAMP Network



Navigation Icons

Will be presented at **2017 ASA, CSSA, and SSSA Annual Meeting in Tampa, USA**

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Jagadeesh B. Yeluripati [a,i,*], Agustin del Prado [b], Alberto Sanz-Cobeña [j], Robert M. Rees [c], Changsheng Li [d], Dave Chadwick [e], Emma Tilston [c], Cairistiona F.E. Topp [c], Laura M. Cardenas [f], Pete Ingraham [g], Sarah Gilhespy [f], Steven Anthony [h], Sylvia H. Vetter [i], Tom Misselbrook [f], William Salas [g], Pete Smith [i]

[a] The James Hutton Institute, Craigiebuckler, Aberdeen AB15 8QH, UK
[b] BC3 Basque Centre for Climate Change, Alameda Urquijo 4, 4a 48008 Bilbao, Bizkaia, Spain
[c] SRUC, King's Buildings, West Mains Road, Edinburgh EH9 3JG, UK
[d] Institute for the Study of Earth, Oceans, and Space, University of New Hampshire, Durham, NH 03824, USA
[e] School of Environment, Natural Resources and Geography, Environment Centre Wales, Deiniol Road, Bangor University, Bangor LL57 2UW, UK
[f] Rothamsted Research, North Wyke, Okehampton, Devon EX20 2SB, UK
[g] Applied Geosolutions, LLC, 87 Packers Falls Road, Durham, NH 03824, USA
[h] ADAS Group Ltd, HQ Pendeford House, Pendeford Business Park, Wolverhampton WV9 5AP, UK
[i] Institute of Biological and Environmental Sciences, University of Aberdeen, 23 St Machar Drive, Aberdeen AB24 3UU, UK
[j] Technical University of Madrid, School of Agriculture, Av Complutense s/n, 28040 Madrid, Spain

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