




# GLOBAL RESEARCH ALLIANCE

ON AGRICULTURAL GREENHOUSE GASES

## Reflections and future directions



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# What is the GRA?

- Inter-Governmental Organisation
- Launched in December 2009
- Operationalised in June 2011 at Ministerial Summit
- Governed by a Council of Members
- Guided by a Charter
- Activities undertaken by four Research Groups
- Supported by a Secretariat and Special Representative



# Objectives of GRA

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Underlining the need for **food security**, and to **promote synergies between adaptation and mitigation** efforts, the Members set forth the following Charter for the Global Research Alliance on Agricultural Greenhouse Gases (“the Alliance”). The Alliance provides a framework for **voluntary action** to increase **cooperation and investment in research** activities to help **reduce the emissions intensity of agricultural production** systems and increase their potential for **soil carbon sequestration**, and improve their **efficiency, productivity, resilience and adaptive capacity**, thereby contributing in a sustainable way to overall mitigation efforts, while still helping meet food security objectives.

# Membership

## 46 Member Countries



# Partners of the GRA

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**Inter-American  
Development Bank**



worldAgriculturalforum



**The World Bank**



**CLIMATE &  
CLEAN AIR  
COALITION**  
TO REDUCE CLIMATE-RELATED  
CLIMATE POLLUTANTS



Solutions for environment and development  
Soluciones para el ambiente y desarrollo

**gODAN**

Global Open Data  
for Agriculture & Nutrition

# Reflecting on last 5 years

- Operationalising the Charter
  - ❖ Establishment (and restructuring) of Research Groups and Networks
  - ❖ Expanding membership
  - ❖ Development of Partnerships
  - ❖ Development of work programmes
- Addressing capability within the membership through fellowships and regional training activities
- Generation of knowledge fundamental to underpin future innovations, e.g. rumen census
- Development of best practice guidelines / protocols



# The next 5 years?

- More dynamic relationship between GRA Research Groups and Council
  - More active and mutually beneficial relationships with GRA Partners
  - Identification and articulation of top priorities for GRA
  - Mechanisms for coordinating national research programmes and mobilising resources
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- GRA Strategic Plan 2016-2020....
  - GRA Flagship projects....

# GRA Strategic Plan 2016-2020

## Key Strategies

Further Research Collaboration	Foster Outreach, Knowledge Sharing and Information Exchange	Build Effective Partnerships	Leverage Financial and Other Resources
Strategic Objectives	Strategic Objectives	Strategic Objectives	Strategic Objectives
<p>The GRA has achieved broad global participation in research cooperation and investments to help develop relevant practices and technologies.</p>	<p>There is broad awareness of the GRA's work, particularly its research results and impacts, through an integrated outreach strategy.</p>	<p>The GRA is well connected with other initiatives that carry out activities relevant to GRA work and objectives.</p>	<p>The GRA has strong and ongoing financial and other resources to support its activities and Research Groups, including through multilateral development banks and private and philanthropic organisations.</p>
<p>The GRA has built global expertise in relevant knowledge and technologies.</p>	<p>There is increased availability and accessibility of research results to relevant stakeholders, including farmers.</p>		<p>GRA Members and Partners will invest in research and capability building relevant to the GRA mandate, and develop effective mechanisms for resourcing and coordinating collaborative research.</p>
<p>The work of the GRA is efficient, effective, and coherent.</p>	<p>There is widespread adoption of relevant practices and technologies.</p>		

Implementation through Priority Actions and the Council, Research Groups, Partners, Special Representative and Secretariat



# GRA Strategic Plan – some Priority Actions

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- Research agenda:
  - ❖ Identify and promote research priorities that contribute to and support the 2030 Agenda for Sustainable Development and the UN Framework Convention on Climate Change.
  - ❖ Identify synergies between mitigation and adaptation practices and technologies.
- Linking with relevant organisations
  - ❖ Seek to be admitted as an observer to IPCC
- Capacity building
  - ❖ Increase the number and types of scholarships for studies and training available to GRA Members
  - ❖ Assist Members to develop improved GHG Inventories in order to recognise sustainable productivity increases, in accordance with nationally defined priorities and policies.
- Resourcing
  - ❖ Undertake joint programming to support collaborative research, including GRA Flagships.
- Knowledge transfer
  - ❖ Link with pilot development projects and demonstration farms to facilitate the diffusion and adoption of relevant technologies and practices.

# GRA Flagship Projects

- Addresses a critical research and/or capability building need of the GRA.
- Makes a major contribution to:
  - ❖ Reducing greenhouse gas emissions while supporting food security
  - ❖ Advancing global knowledge through collaboration
  - ❖ Supporting countries in their developing and implementing solutions
  - ❖ Promote synergies between mitigation and adaptation
- Facilitate engagement by a broad range of GRA Members and Partners.
- Excellent opportunity to align Council members' domestic research programmes and Partner activity to the Flagships and to utilise upcoming research calls, both of the GRA and of GRA.
- Establishment of Task Forces to transform each of the proposals into fully scoped projects ready to be implemented.

# 1. On-farm assessment of multi-beneficial water management techniques in the rice sector

**FOCUS:** Validating alternate wetting and drying (AWD) irrigation in farmers' fields confirming no yield penalties.

## ACTIVITIES / KEY COMPONENTS:

- Research around the globe confirmed that AWD sharply reduces CH<sub>4</sub> emissions, water consumption, production costs and arsenic in the grain
- Going from research to massive adoption
  - ❖ Identifying appropriate AWD for each rice system
  - ❖ Validation plots installed in commercial fields of innovative farmers in different countries
  - ❖ Emissions, water consumption, costs, arsenic in grain and yields recorded
  - ❖ Results documented and shared
  - ❖ Regional networks expand the techniques to other countries and regions



## 2. Improved GHG inventories: Making them count

**FOCUS:** Supporting countries to advance their GHG inventories for agriculture

### ACTIVITIES / KEY COMPONENTS:

- Improved quantification of mitigation actions
- Summary of current inventory practices and country experiences of adopting improved methodologies
- Develop guidance for improving inventories
- Targeted training and technical support for inventory improvement and for using inventory to support national climate change actions
- Dissemination & development of emissions data and factors to improve inventory development



### 3. Enteric fermentation mitigation hub

**FOCUS:** Practices that increase the productivity and reduce enteric methane emissions intensity of ruminant livestock

#### ACTIVITIES / KEY COMPONENTS:

- Assess potential for productivity-based interventions to reduce emissions intensity
- Links science to farm-level implementation
- Assess options, barriers and enabling factors
- Implement appropriate interventions in demonstration sites
- Demonstrate success in supporting policy
- Supported by open global databases for wider benefits:
  - ❖ Database on feed options and their effects on productivity, GHG, costs
  - ❖ Influence of rumen microbial communities on productivity under different feeds
  - ❖ Etc...



## 4. Soil carbon sequestration

**FOCUS:** Agricultural practices that sequester carbon and restore soil quality



### ACTIVITIES / KEY COMPONENTS:

- Assess potential and dynamics of carbon sequestration in crop and pasture systems and interactions with nitrogen
- Identify practices for soil C sequestration
- Assess co-benefits for yields, water balance, and non-CO<sub>2</sub> greenhouse gases
- Monitoring, verifying and reporting soil organic carbon stocks
  - ❖ Improvement of technical tools (e.g. maps) through and carbon calculators
  - ❖ Improving national GHG inventories by integrating soil organic carbon stock changes
- Development of web-based knowledge hub to support national action plans

# Concluding remarks

- Opportunity to align major work areas of multiple initiatives – should attempt to do so where possible. Resources are scarce.
- Complementary nature of different organisations and initiatives needs to be exploited.
- Already very good alignment between some, e.g. 4/1000, CGIAR, and GRA.
- Flagships are one useful vehicle – common to GRA, CGIAR.
- Short-term opportunity to align national research programmes to deliver common objectives of GRA, 4/1000, GACSA, GSP, etc.

## FOR MORE INFORMATION

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