GLOBAL RESEARCH ALLIANCE

ON AGRICULTURAL GREENHOUSE GASES

GRA Council meeting, Tsukuba, Japan

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Flagship Project on Reducing GHG Intensity of Rice Systems

Gonzalo Zorrilla and Kazuyuki Yagi

Objectives

Finding practical measures that reduce emission intensity of the rice systems, while sustaining or improving its overall production efficiency

Task Force

18 scientists – Americas, Asia, Africa, Europe

Components

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- Developing solutions
  - Water management
  - Organic matter management
  - Cultivar selection
- Improving quantification
  - Database compilation
  - Improved emission factors
  - Modelling
- Adopting new solutions
  - Identification of suitable areas for AWD
  - MRV guidelines
  - Promotion
- Building capabilities
  - Workshops
  - Coordinated networks

Project 1
Leader – G. Zorrilla, Uruguay

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"On farm assessment of multi-beneficial improved water management techniques in America´s rice systems"

- Who: Americas + Europe interested members, regional partners
- What: Improve adoption of AWD by farmers
- Why: research shows great reductions without yield losses, but it is difficult to implement in scale
- How: Validating appropriate AWD in farmer´s fields
- Funding: competitive funds + local counterpart*

** Note: Project presented to FONTAGRO approved for full proposal: "More rice with less emissions and less water consumption" – Colombia, Perú, Chile with CIAT, FLAR and PRRG-GRA*

Project 2
Leader: K. Yagi, Japan

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"On-farm assessment of multi-beneficial integrated management techniques in the rice sector of Asia"

- Who: all PRRG-GRA members in Asia – IRRI, CCAFS, private sector
- What: Improved production with less emissions combining fertilizer and organic matter management with water management.
- Why: interactions between irrigation regimes, fertilizer uses and organic matter management in the soil
- How: Field experiments on effects of water management, chemical and organic fertilizer application on GHG emissions, soil carbon stock, and rice production. Simulation models will be applied.
- Funding: Japan and …..

Project 3
Leader: K. Yagi, Japan – P. Setyanto, Indonesia

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"Identification of high yielding rice cultivars as related to low methane (CH_4) emissions"

- Who: all PRRG-GRA members – IRRI, CIAT, FLAR, CCAFS
- What: selection of high yielding rice cultivars with low methane (CH_4) emissions
- Why: genetic diversity exists and cultivars are a very efficient tool for adoption
- How: rice plant controlling factors affecting CH_4 emissions will be assessed by meta-analysis and new experiments, and mechanisms causing different emission intensity among rice cultivars will be investigated. CH_4 emissions from newly released cultivars will be quantified
- Funding: competitive funds + in-kind