

Overview of the Paddy Rice Research Group

2015 Asia Sub-Group Meeting

18 September 2015

**Institute of Soil Science, CAS
Nanjing, China**

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Paddy Rice Research Group

– Vision

- Paddy rice production causes significant **methane emissions** in comparison to other cropping systems.
 - The Paddy Rice Research Group is working together to find ways to reduce the emissions intensity, while improving overall production efficiency of paddy rice.
 - Trade-offs with emissions of **nitrous oxide** and changes of the quantity of **carbon stored in paddy soils** are also being considered.
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Paddy Rice Research Group

– Overview

- The Group's work is focused on **helping provide knowledge** of source/sink extents and mitigation options to paddy rice farmers, land managers and policy makers by looking at the impacts of water management, organic matter and fertilizers, cultivation systems and cultivar selection.
 - It will also improve countries' **national inventories** of greenhouse gas emissions from paddy rice cultivation systems.
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Paddy Rice Research Group

- **Co-chairs**

Kazuyuki Yagi, NIAES, Japan



Gonzalo Zorrilla, INIA, Uruguay



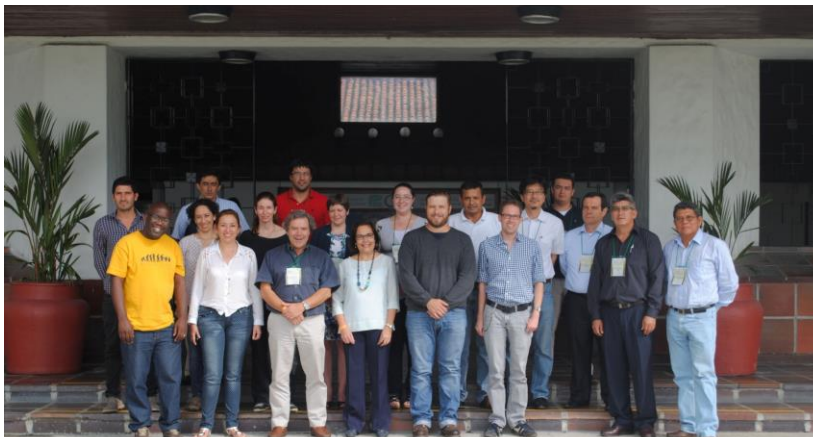
- **Action plan:**

1. Standardize measurement techniques
2. Database of publications and experts
3. Increase country participation
4. Pilot multi-country experiment
5. Network for mitigation and adaptation synergies



Paddy Rice Research Group 2014

America Sub-Group Meeting
May 2014, CIAT, Colombia



Asia Sub-Group Meeting
August 2014, IRRI, Philippines



- The Group is structured into two regional sub-Groups: **America** and **Asia**, as a practical way of organizing the Group, in order to ensure meetings can be attended by more member countries.
- However, the Groups will share and agree on **the same workplan**.



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Paddy Rice Research Group 2015

America Sub-Group Meeting

February 2015, EMBRAPA, Brazil



- Alongside the XII Latin American and The Caribbean International Rice Conference 2015
- Attended by 6 Alliance member countries and 3 partner institutions.

Asia Sub-Group Meeting

September 2015, Nanjing, China



- in conjunction with the 12th International Conference of East and South East Asia Federation of Soil Science Societies (ESAFS2015)
- Expected to be attended by 6 Alliance member countries and 3 observer/partner institutions.



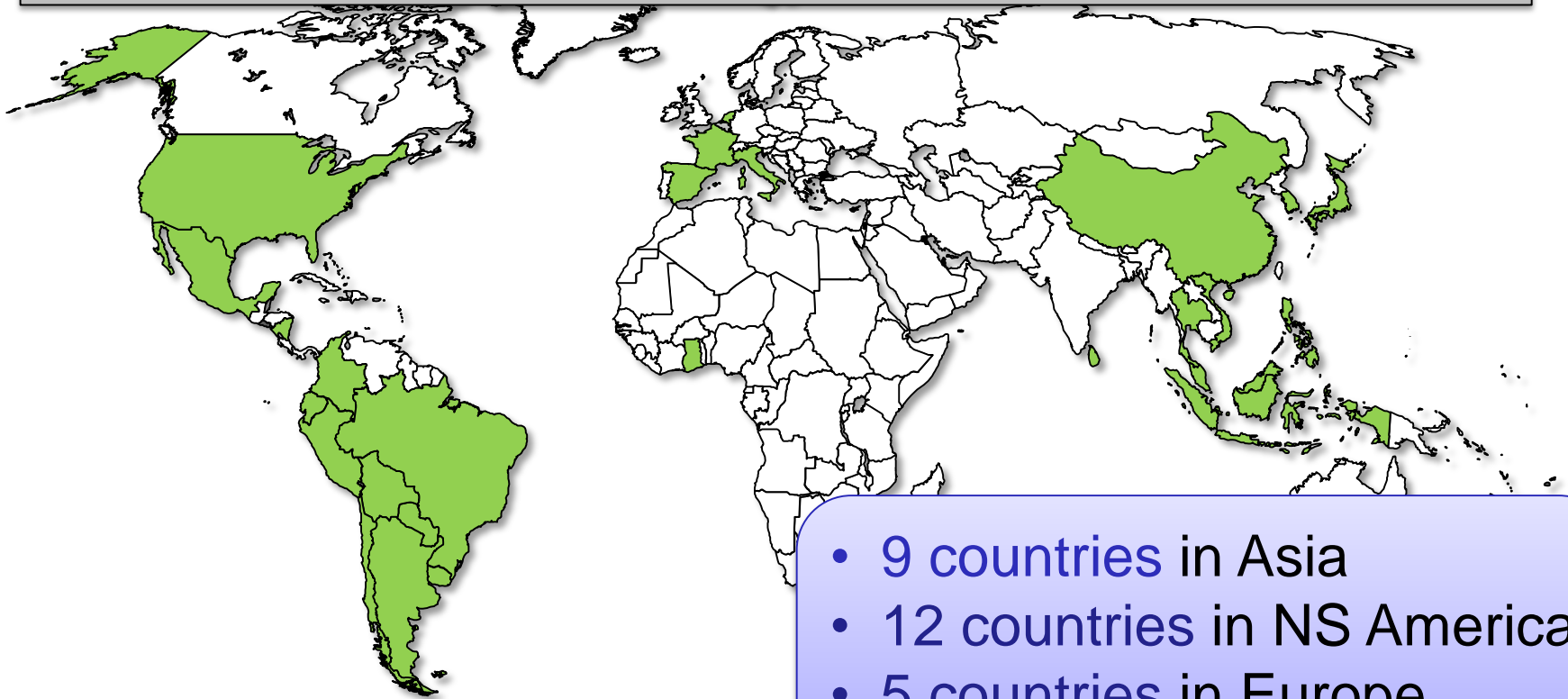
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Paddy Rice Members

- **27 countries** are members of the paddy rice group



- 9 countries in Asia
- 12 countries in NS America
- 5 countries in Europe
- 1 country in Africa

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– Partners & Networks

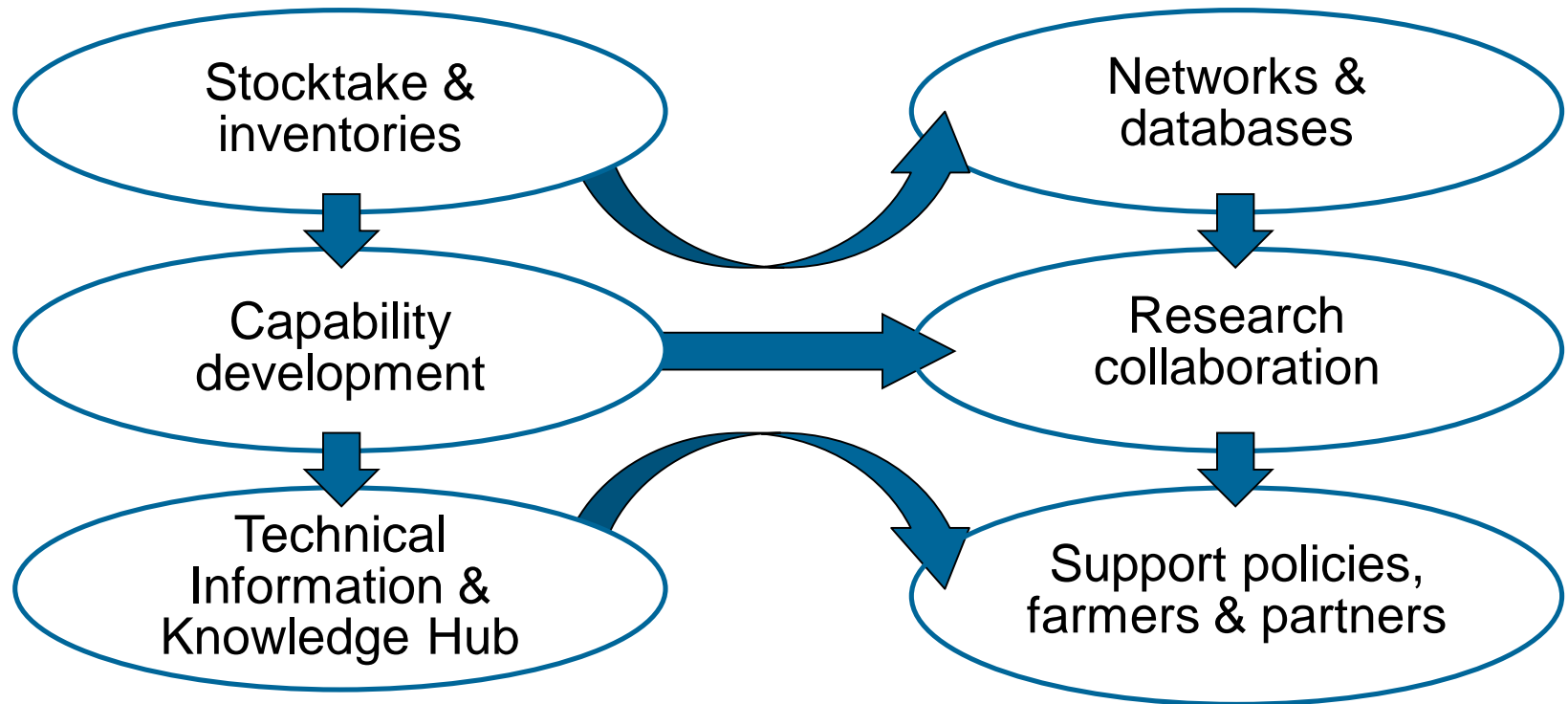
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- The Group collaborates with **partners** (IRRI, CIAT, CCAFS) and **other international networks** (MARCO, PROCISUR, FluxNet).
 - Some **rice experts** from non-member countries are actively participating in the Group's activities.
 - The Group endorsed to collaborate with the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (**CCAC**) to their new agricultural component focusing on mitigating methane emissions from paddy rice.
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From Stocktake towards Support

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Common understanding

Concerted actions

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– Technology Transfer

- The Group made a comparison of **the measurement protocols** at different countries.
 - Experts have analyzed **automated measurement data** for the closed chamber technique.
 - From these exercises, experts in the MIRSA Project published the 1st version of the Guidelines for measurement techniques at the website of the NIAES, Japan, in August 2015.
 - The Group further plan to develop a standardized methodology of MRV for rice GHG emissions.
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Measurement Guidelines just published

Guidelines for Measuring CH₄ and N₂O Emissions from Rice Paddies by a Manually Operated Closed Chamber Method



Version 1

August, 2015

National Institute for
Agro-Environmental
Sciences, Japan

Preface

Table of contents

Recommendations

Experimental design

Chamber design

Gas sampling

Gas analysis

Data processing

Auxiliary measurements

Evolving issues

1. Experimental design

2. Chamber design

3. Gas sampling

4. Gas analysis

5. Data processing

6. Auxiliary measurements

References

Appendices

Officially published online on 11 Aug.

Available from NIAES's webpage:

http://www.niaes.affrc.go.jp/techdoc/mirsa_guidelines.pdf

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– Database

- A new proposal to develop **a database (DB) of experimental sites** was endorsed.
 - **Spreadsheets** for data input were circulated to member countries in early 2015.
 - The DB compiles **metadata** from experimental sites throughout the world where greenhouse gas fluxes are monitored.
 - This activity collaborates with the **MAGGnet** activity of the Cropland Research Group.
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Paddy Rice Research Group – **Research Collaboration**

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- A multi-country research project for Southeast Asia, **MIRSA**, was launched in 2013.
- A concept note for similar multi-country project in NS America was prepared.



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– Mit. & Adapt. Synergies

- **Possible options** for mitigation and adaptation synergies relate to paddy rice were Identified.
 - The Group agreed to consider the discussion of the synergy activities and the review of current activities underway in the work plan within the **Network** created.
 - Vietnam, with the support of Indonesia and other experts coordinate the development of this framework.
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– Goals

Short-term goals:

1. The **database** of experimental sites is compiled and shared in the Group.
 2. A network for **mitigation and adaptation synergies** is developed.
 3. A multi-country mitigation-adaptation **project in north-south America** is launched.
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– Goals

Long-term goals:

1. **A standardized methodology of MRV** for rice GHG is developed.
 2. Several **international research projects** and **capacity building activities** for local experts are carried out by promotion and collaboration of the Group members.
 3. All countries with relevant to rice production come to have **involvement** in the activities of the Group.
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– Message to the Council

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- Greater **mobilization of resources** (experts and funds) is requested to the member countries in order to support the workplan activities
 - *At least, support to attend Group meetings*
 - Strengthening the two PRRG **Sub-groups**:
 - Americas: S America + N&C America + Europe
 - Asia: inclusion of big rice countries (India, Bangladesh, Cambodia, Australia, ..., + Europe)
 - Links to the projects of **CCAFS and other partners** with similar objectives
 - Capability building activities in **Africa**?
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OBJECTIVES :

■ Information Exchanging

- research update in each member country
- research update of partners and associated experts

■ Action plan discussion

- review of activities
- next steps to implement the Action Plan
- upcoming milestones

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AGENDA :

1. Opening
2. Overview of the Alliance
3. Overview of the Paddy Rice Research Group
4. Action Plan discussion:
 - (1) Standardisation of measurement techniques
 - (2) Databases for experimental sites
 - (3) The pilot multi-site/country experiment
 - (4) Mitigation and adaptation synergies
 - (5) others
5. Research activity reports from experts & partners
6. Future activities

Action Plan Discussion

- (1) Standardisation of measurement techniques**
 - Further revisions of the measurement GLs
 - Development of R&V GLs, lead by MIRSA project
- (2) Databases for experimental sites**
 - Data compilation of
- (3) The pilot multi-site/country experiment**
 - Any proposals for new projects?
- (4) Mitigation and adaptation synergies**
 - How we can develop the network?
- (5) Others**



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Other Issues

■ Outreach

- Group brochure & Case studies of success

■ Increasing country participation

- in Asia
- in Europe, others

■ Upcoming milestones

- Organizing seminars & capacity building activities
- Next sub-group meeting



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