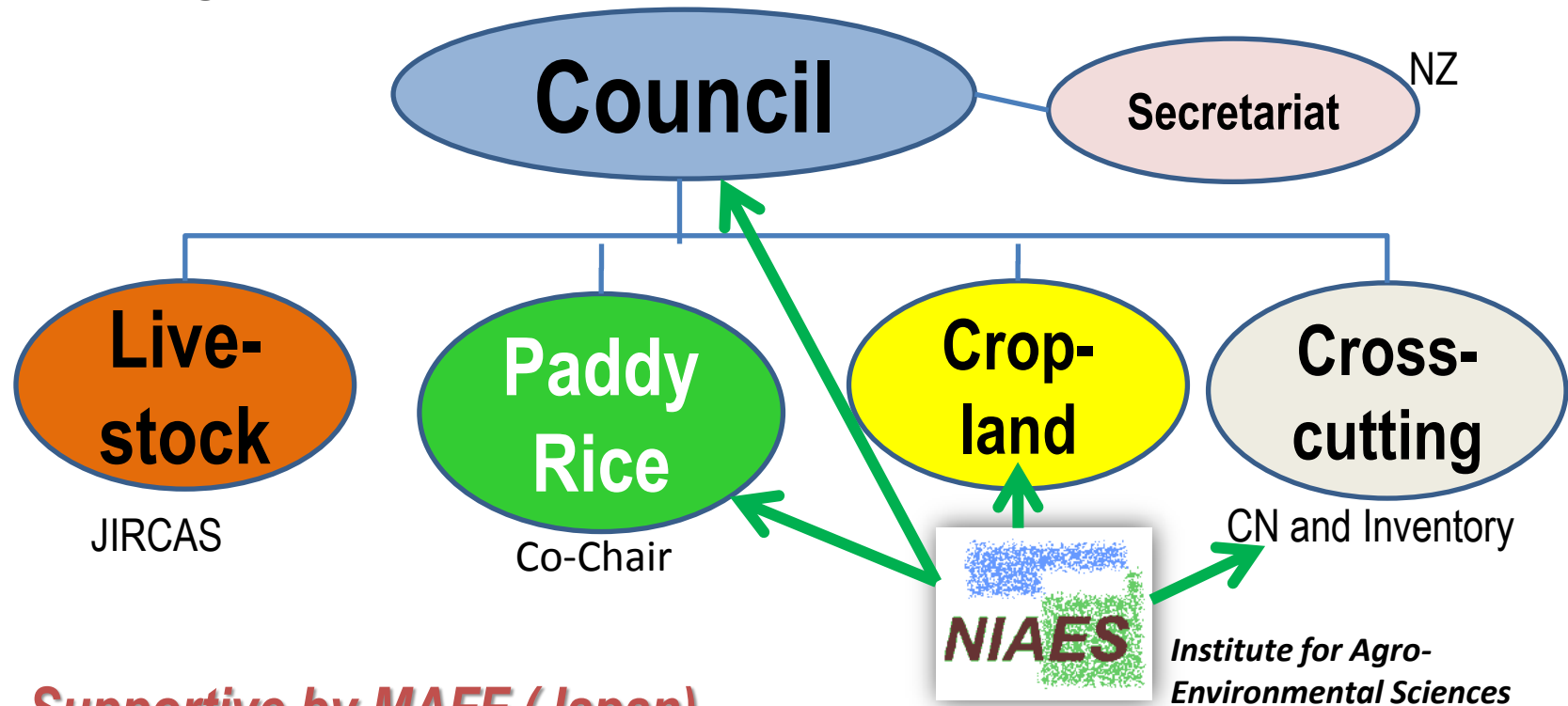


# Country update - Japan

GLOBAL  
RESEARCH  
ALLIANCE

ON AGRICULTURAL GREENHOUSE GASES

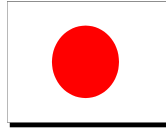
July 11<sup>th</sup>, 2015@Brasilia



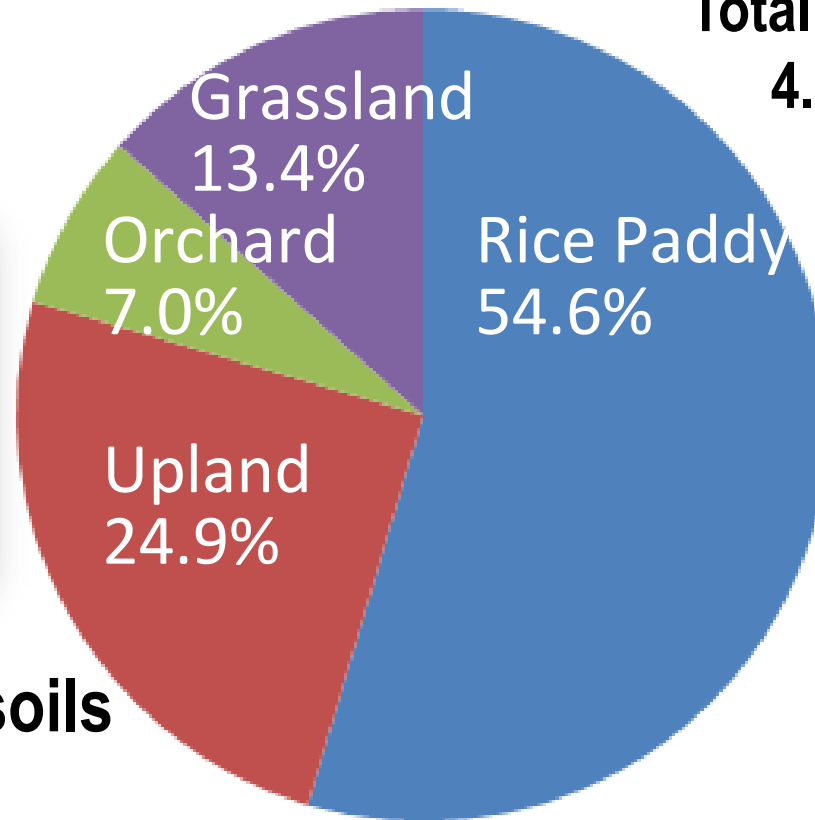
*Supportive by MAFF (Japan)*



# Agriculture land use in Japan



Total cultivation area  
4.3 Mha (2008)

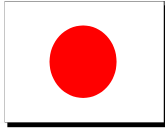


- ✓ 40% of upland soils
- ✓ High SOC
- ✓ Low N<sub>2</sub>O emission

Difficulty on developing N<sub>2</sub>O  
process model

# Croplands group –Active members of Japan Action Plans

*\* The first person of each component is the contact point of each action plan.*



**Registered date: Jan 31, 2012**

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# Japan Croplands Research Group

## Summary of GRA related research and/or outreach activities during 2014

### GRA related research projects

- Development of mitigation technologies for reducing greenhouse gases (GHGs) in the agriculture sector – a MAFF (Japan Ministry of Agriculture, Forestry and Fisheries) funded research program (2010-2014) initiated by the National Institute for Agro-Environmental Sciences (NIAES);



- **Improved SOC inventory using Roth-C model** (Dr. Y. Shirato will give an oral presentation on July 13, 17:45)
- **Developed web tool for GHG calculating** (similar to COMET-Farm)

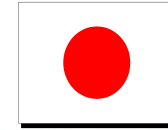


Dr. Yasuhito Shirato



# Japan Croplands Research Group

## Summary of GRA related research and/or outreach activities during 2014



GLOBAL  
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### On-going GRA related research projects

- Evaluating specified emission factor (EF) of  $N_2O$  for organic amendment – a MAFF funded research program (2011-2013, 2014-2017) initiated by NIAES. It includes 10 field observation sites of the prefectural agricultural experimental stations across Japan. The  $N_2O$  EFs for dairy manure composts would be reported and used for national GHGs inventory of Japan.



# Japan Croplands Research Group

## Summary of GRA related research and/or outreach activities during 2014

### Japan joined the GRA Croplands GHG Network Database Project

- Japan joined the GHG Network Database Project (MAGGNET) which led by USA and submitted 9 sites information and other metadata (more sites will be updating).



| A              | B                              | C                            | D  |            |
|----------------|--------------------------------|------------------------------|--|------------|
| Climate        |                                |                              |  |            |
| Experiment ID  | Mean annual precipitation (mm) | Mean annual temperature (°C) | paddy rice original parameter (tentative)<br>rainy season(Month-Month) | dry season |
| Vietnam001     |                                |                              |  |            |
| Thailand001    |                                |                              |  |            |
| Indonesia001   |                                |                              |  |            |
| Philippines004 |                                |                              |  |            |

**Treatment!**

**Parameter for rice paddy!**

paddy rice original parameter (tentative)

**Sowing and transplanting**

Direct seeding

Direct seeding

Direct seeding

broadcasting

broadcasting

broadcasting

Direct seeding

Direct seeding

Direct seeding

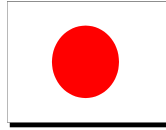
Manual Transplanting

Manual Transplanting

Manual Transplanting

This is a help  
Thank you!

# Opportunity and challenge for Japan-CGR



- **Bridge Croplands Group with Paddy Rice Group**
  - **MAGGnet spreadsheet etc...**
  - **Keep input more sites to MAGGnet**
  
- **Challenge to develop DNDC for Andosols with the help of Dr. Jagadeesh Yeluripati (UK, GRAMP) --- in progress!**
  
- **Link and offer the Japan knowledge system to GRA (global network)**
  - **Unique rotation system --- Rice paddy – Upland crop**
  - **Precise and smart agriculture**