Agriculture WG in WGIA 8

- ***Chair: Kazuyuki YAGI***
- *Rapporteur: Amnat CHIDTHAISONG*

- Theme: ***Estimation Methods and Development of Parameters***

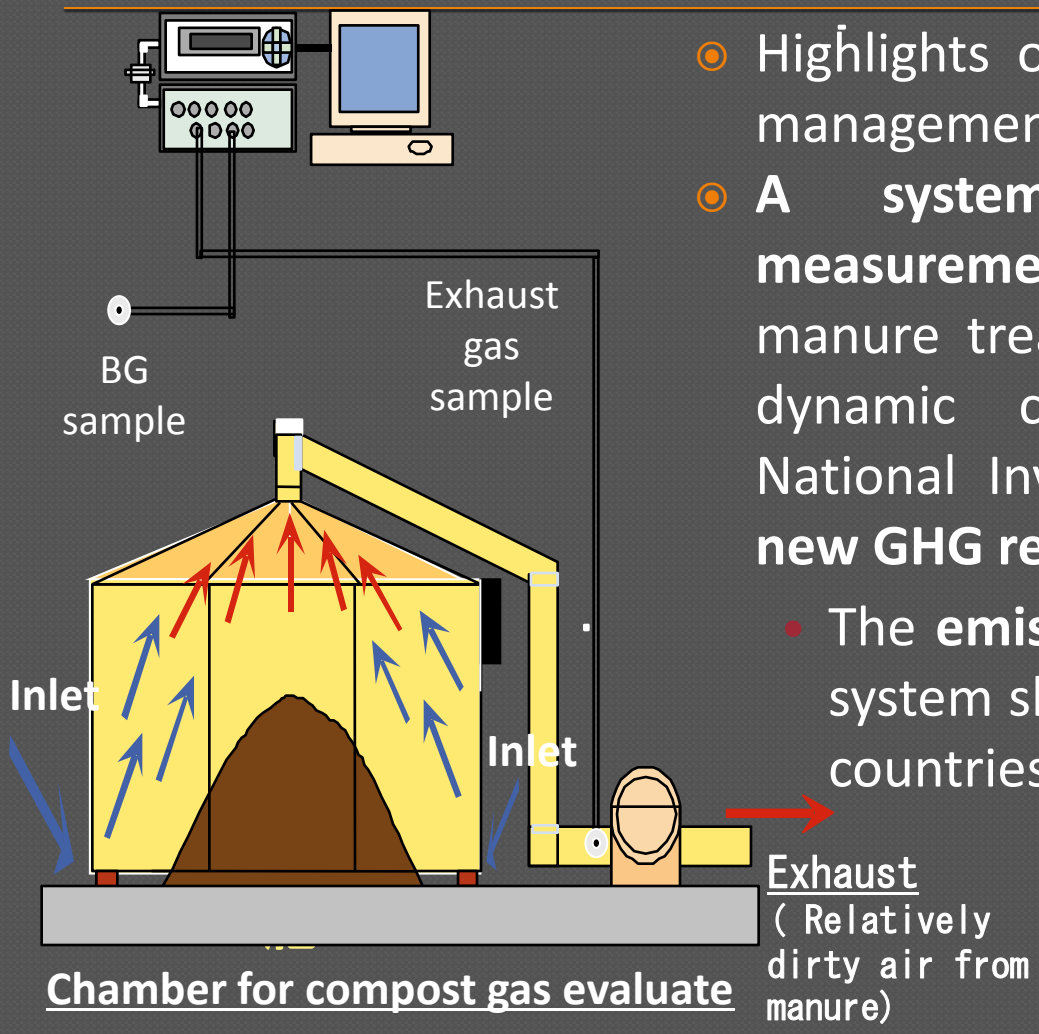
Discussion Points

- Improvement of estimation method of Enteric fermentation and Manure management
- Improvement of estimation method of Agricultural Soils,
- Development of parameters by joint research
- Mutual Learning
- Exchange agriculture information (including mitigation potential)

Time Schedule *(WGIA8 Day 2, 9:30~12:30)*

- 10min. Introductory Presentation
- 15min. Takashi Osada (Japan) GHG measurement for manure management of Livestock
- 15min. Sultan Singh (India) Enteric CH_4 emissions of Indian livestock from prevalent feeding systems in different agroecological regions
- 15min. Kazuyuki Yagi (Japan) Recent Research Progress for Improving Japanese GHG Inventories of Agricultural Soils
- 15min. Chhemendra Sharma (India) GHG emissions from Agriculture Soils in India
- 15min. Amnat Chidthaisong (Thailand) Emissions of N_2O from Agricultural Soils in Thailand
- 15min. Khin Lay Swe (Myanmar) National Inventory of GHG Emissions in Myanmar
- 65min. *Group discussion*

Presentation summary



- Highlights on the importance of manure management (T. Osada)
- **A system for the quantitative measurement of emissions** from major manure treatment systems using a large dynamic chamber-important tool for National Inventory, and for **developing new GHG regulation technology** .
  - The **emission factor** of each treatment system should be evaluated under each countries procedure

Presentation summary

- Developments of CS-EF for **Enteric fermentation;** Crossbred, indigenous cattle, goat, sheep-ages and activity (growing, lactating and maintenance), across ecological regions of India (S. Sigh)
  - The effects of feed component and quality on enteric CH_4---local mitigation technology and measures

Methane emission factors for different ruminant species (S. Singh)

Livestock category	CH_4 g /day /head
Cattle crossbred (male)	
< one year	21.0317
1 – 1.5 year	29.6708
Breeding	96.9185
Work	112.2449
Breeding + work	99.0314
Other	72.9948
Cattle crossbred (Female)	
< one year	21.5439
1 – 2.5 year	40.3079
Milking	100.8445
Dry	81.2349
Heifer	47.9742
Other	54.9628

Cattle Indigenous (male)	
< one year	21.4239
1 – 1.5 year	31.2951
Breeding	99.8437
Work	101.2912
Breeding + work	101.1519
Other	71.0611
Cattle Indigenous (Female)	
< one year	20.7075
1 – 3 year	42.9336
Milking	101.1519
Dry	80.0693
Heifer	64.3712
Other	71.5443

Presentation summary

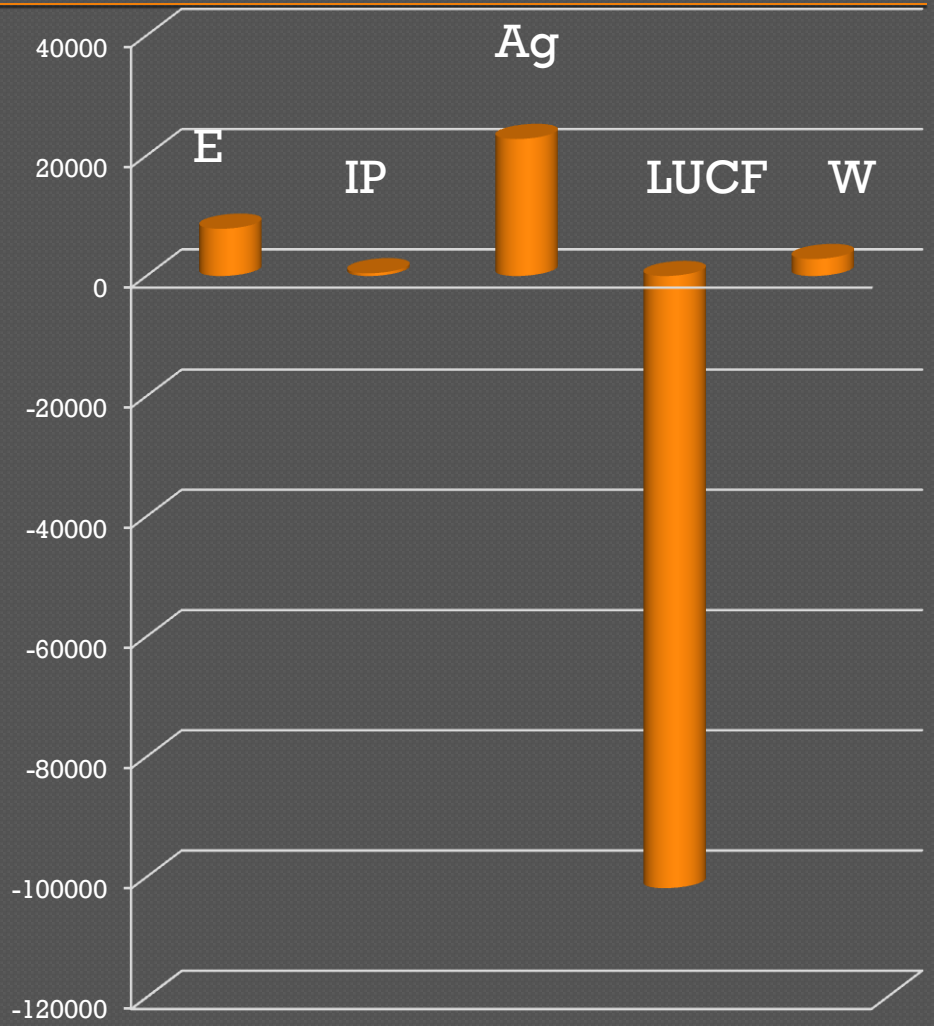
- **Moving from Tier 2 to Tier 3, example from Japan (K. Yagi)**
  - **the effects of field aeration that helps reduce GHG emission (xxx%), but grain yield is reduced about 3-4%**
  - **DNDC model with GIS-based information to estimate CH_4 emissions from paddy fields—better represents and incorporate local factors (drainage, climate, and soil factors)**

Presentation summary

- N_2O emission from agricultural soils;
  - Two countries
  - India (C. Sharma) presented the results of using CS for rice-wheat system
  - Thailand used CS for $F_{CR,}$ highlight the importance and need of improvement of N_2O emission from livestock-related activities.

Presentation summary

- Myanmar
  - Overview on the progress of Initial National communication
  - **Ag is major source**
  - Net sink of about -70 Mt CO_2e
  - Most based on T1 approach, few CS data



GHG emission from Myanmar in $GgCO_2e$

Discussion

- **CS parameter development, improvement vs. WGIA9**
  - **After SNC submission at the end of the year 2010-a synthesis of country-specific factor, activity data**
  - **Basis for mutual learning and future cooperation**

    ➔Enteric fermentation, manure management, Ag soils

Next WGIAs

- Sessions for learning on developing CS parameters;
  - Japan, India-N_2O from soil, manure management, N_2O from Ag soils
  - India-enteric fermentation (CH_4),
  - Japan, Thailand and Philippines-rice cultivation
- Inventory planning
- Documentation on CS parameters
- Linking CS parameter and mitigation measures
- Soil carbon

Thank you


Calculation of GHG emission
from composting
E (mg/30 min) =
Drawn by an
inverter-controlled
blower