

Summary of WG 2 “Non-CO₂ Gases”

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2011.7.15



Outline

- Overview of Inventory WG
- Presentation Summaries
- Discussion summary and Key findings
- Conclusions



Overview of Non-CO₂ WG



Overview of Inventory non-CO₂ WG

- ❑ Over 20 experts from 13 countries were attended.
- ❑ WG was chaired by Dr. Magcale-Macandog (Philippines).
- ❑ 4 experts presented national conditions relating to non-CO₂ gas emissions.
- ❑ The WG discussion was focused on Agriculture issues, F-gases issues and potential area for improvement.

Presentation Summaries



Presentation Summaries (1)

- Dr. Hirai (JPN) made a brief introduction of WG including the overview of Non-CO₂ emissions by gases in eight countries based on the preliminary questionnaire feedback. Some country's representatives added their counties situation by oral report.



Presentation Summaries (2)

- Dr. Hirai (JPN) also presented the status of F-gases emissions in Japan, and introduced emissions from refrigerator and air-conditioning are important in terms of both emissions and mitigation measures.
- Mr. Am (Cambodia) introduced the status of estimation of GHG emissions and removals in Cambodia for the year 2000.

Presentation Summaries (3)

- Mr. Nouansyvong (Laos) presented the scope and methodologies used in Agriculture sector in Laos.
- Dr. Swe (Myanmar) introduced Myanmar's GHG emissions and removals for the year 2000, background information about sources of emissions and proposed action for SNC.



Discussion summary and Key findings



Summary of Non-CO₂ gas emissions in various Asian Countries

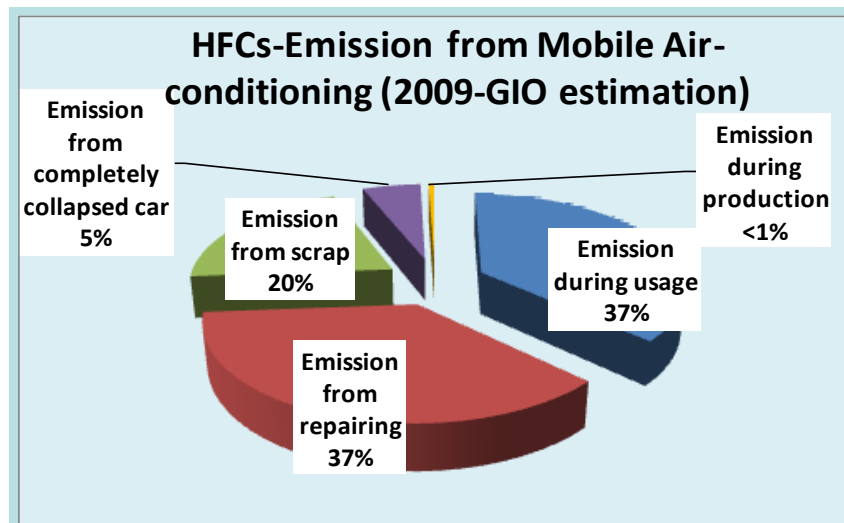
Country	1 st Dominant			Other interested source
	Gas	Sect.	Sub-category	
Japan	CH ₄	Agri.	Rice Cultivation	F-gases
China	CH ₄	Agri.	Enteric Fermentation	F-gases
Vietnam	CH ₄	Agri.	Rice Cultivation	N ₂ O from Fertilization
Thailand	CH ₄	Agri.	Rice Cultivation	
Myanmar	CH ₄	Agri.	Rice Cultivation	
Cambodia	CH ₄	Agri.	Rice Cultivation	
Lao PDR	CH ₄	Agri.	Rice Cultivation	
Philippine	CH ₄	Agri.	Rice Cultivation	N ₂ O from Fertilization
Malaysia	CH ₄	Agri.	Rice Cultivation	CH ₄ from Landfill
Mongolia	CH ₄	Agri.	Enteric Fermentation	
India	CH ₄	Agri.	Enteric Fermentation	

Situation of Non-CO₂ gases emissions.

- CH₄ is the largest non-CO₂ source of emissions for ALL countries and the most dominant category of CH₄ was Agriculture for also all countries.
- Rice cultivation or Enteric fermentation are the top emitters at sub-category level.
- Some countries pointed out the importance of N₂O emissions from chemical fertilization due to increase of applied amount.

About F-gases (1)

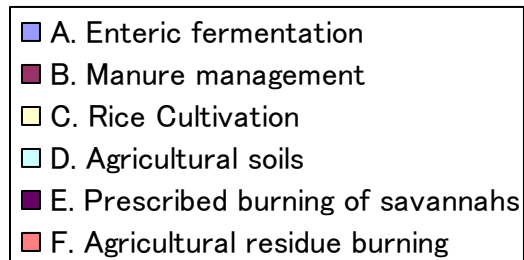
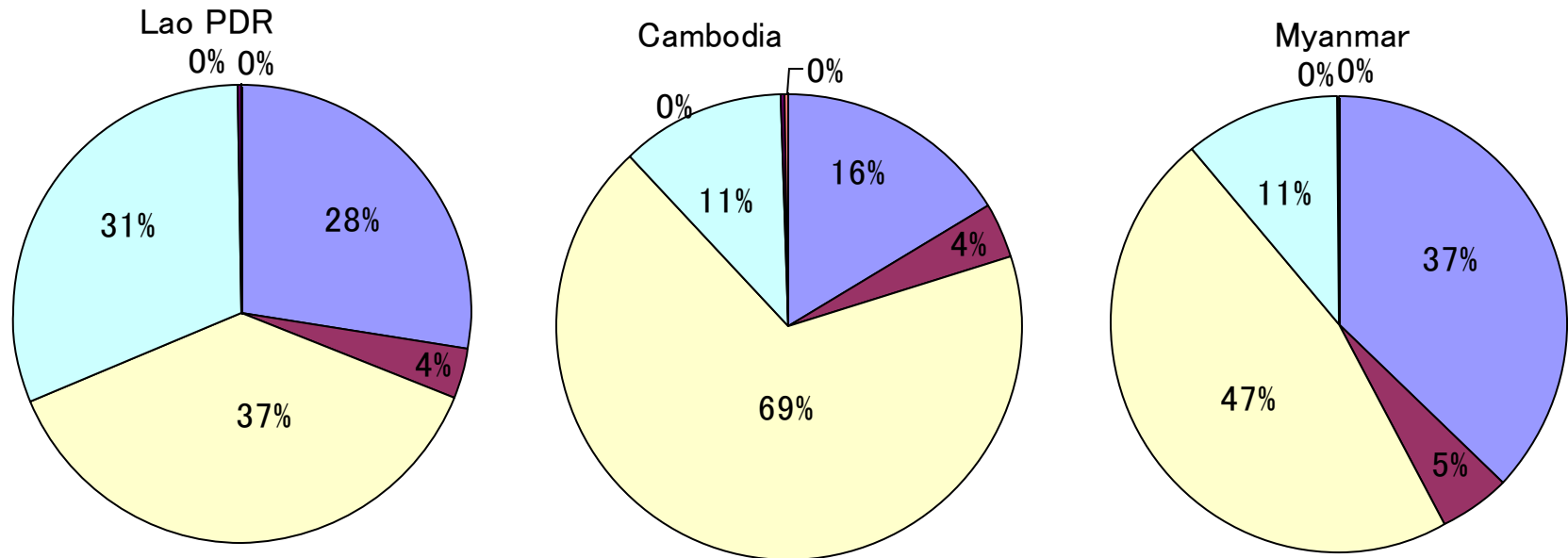
- Japan, China, Mongolia estimates F-gases emissions at present.
- F-gases produced country is limited in Asian region. However, emissions from production stage contributes small proportion within a life cycle (see example of Japan below).
- It is assumed that every Asian country has F-gases emissions from usage, repairing and scrap stage.



About F-gases (2)

- It is recognized by attendees that F-gases emissions were potential missing source of emissions and some countries showed interest to estimate F-gases emissions.
- However, there are problem of data collection for F-gases and this data issue has not domestically discussed yet for most countries.
- IPCC TFI TSU advised that Tier 1 method in “2006GL (NOT 96GL)” is simple and good method for calculation.

Non-CO₂ emissions in Agriculture sector in Cambodia, Lao PDR, Myanmar



Outstanding issue and area of potential improvement: Cambodia

□ Cambodia

■ Status

- Cambodia prepared GHG inventory for 2000 including CO₂, CH₄ and N₂O emissions.
- CO₂ contributes 52% and non-CO₂ gases 48% (CH₄ 42%, N₂O 6%). Agriculture is the dominant category for non-CO₂ gas emission.

■ Area of potential improvement

- Some area cultivated once per year, other area cultivated multiple times per year. This situation has not reflected to GHG Inventory.
- Soil type data are old and have not been updated.
- Definition of soil type is also problematic.
- Cultivation of Histosol is not estimated.

Outstanding issue and area of potential improvement: Lao PDR

□ Lao PDR

■ Status

- Agriculture GHG inventory in 2000 for Lao PDR is based on Tier.1 method and default EF. Some parameters are derived from expert judgment.
- Most of important categories are covered.

■ Area of potential improvement

- The country is interested in mitigation measures for rice cultivation and livestock.
- Subscribed burning of savanna is linked to shifting cultivation but is not estimated due to lacking of illegal activity data.

Outstanding issue and area of potential improvement: Myanmar

□ Myanmar

■ Status

- GHG inventory in 2000 was prepared as a part of Initial National Communication.
- Myanmar is a net sink country in INC.

■ Area of potential improvement

- CO₂ emissions from Deforestation is calculated based on official data, however, this may be underestimation of emission due to an existence of illegal activity.
- Savanna burning is not estimated.
- GHG inventory institutional arrangement is relatively strong but support is still needed

Other common issues identified in Agriculture sector

- ❑ Methodologies and data for INC and SNC are not always same for some countries. This situation causes difficulty in trend analysis for emission reduction amount and mitigation measure. Other countries conducted recalculation.
- ❑ Estimation has improved but data collection problem is still remaining.
- ❑ Institutional arrangement is important.
- ❑ Research co-corporation may helpful in Asian region.

Conclusions



Conclusions

- ❑ F-gases emissions is the area which should be put efforts in the next stage of inventory improvement, if country has not estimated these source of emissions.
- ❑ Agriculture inventory have been improved so far for some countries but there are still remaining data limitation issues. Experience of other Asian countries may be helpful.
- ❑ Although recalculation of past data is difficult, ensuring time series for future submission is important in terms of quantifying mitigation effect and emission reduction.

Thank you for your attention.



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