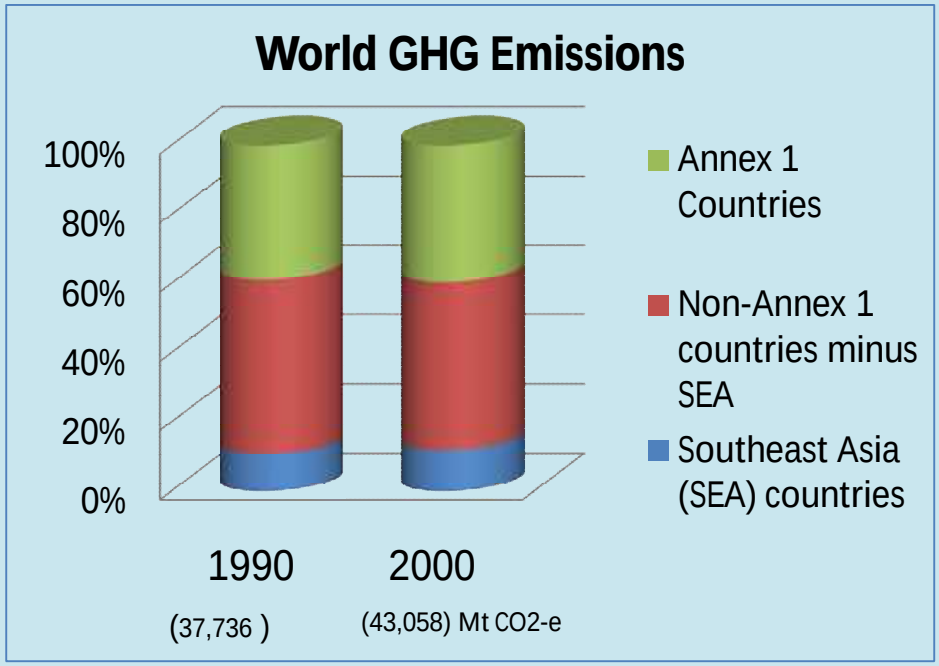
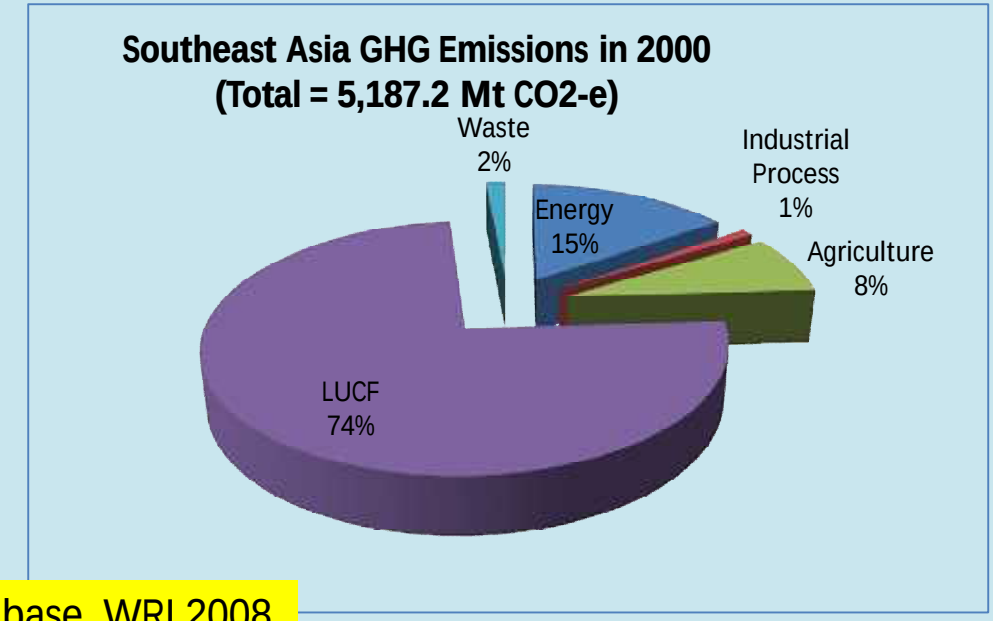
Progress in the use of ALU Software by Participating Countries to the SEA GHG Project

The 8th Workshop on GHG Inventories in Asia (WGIA8)
(13-16 July 2010, Vientiane, Lao PDR)

Leandro Buendia
Coordinator, SEA GHG Project





Source: CAIT Database, WRI 2008

Some Issues and Concerns

- ✔ Technical expertise already exists in the region and country level
- ✔ Insufficient documentation of methods, activity data (AD), emission factors, and processes
- ✔ Lack of AD and non-representativeness of Efs
- ✔ Needs for technical and institutional capacity building
- ✔ **Lack of data and tools to move to higher tiers**

Challenges

... Parties to the UNFCCC have agreed to use the IPCC Guidelines in reporting to the convention…

Non- Annex I Parties are required to use:

1. Revised 1996 IPCC Guidelines; and

Are "encouraged" to use:

2. Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (GPG2000); and
3. the Good Practice Guidance for Land Use, Land-Use Change and Forestry (GPG-LULUCF).

Challenges

- The UNFCCC Software – assists in implementing the Revised 1996 IPCC Guidelines
  - Tier 1 approach only

- **Need to have 'tools'** to assist Non-Annex 1 Parties to implement:
  - Good Practice Guidance 2000 (non-LUCF)
  - Good Practice Guidance 2003 (LUCF)
    - Inventories are neither over- nor underestimates, so far as can be judged, and in which uncertainties are reduced as far as is practicable.

Project Title: **Regional capacity building for sustainable national greenhouse gas inventory management systems in Southeast Asia (SEA GHG Project)**

Proponent/ Lead Implementing Agency: **UNFCCC**

Collaborating Institutions/Partners:

- **US- Environmental Protection Agency (US-EPA)**
- **Colorado State University (CSU)**
- **Workshop on GHG Inventories in Asia (WGIA (GIO/NIES))**

Participating Countries:

1. Cambodia
2. Indonesia
3. Lao P.D.R.
4. Malaysia
5. Philippines
6. Singapore *
7. Thailand
8. Viet Nam
9. Papua New Guinea (new)

Project Duration: 3 years (2007 – 2010)

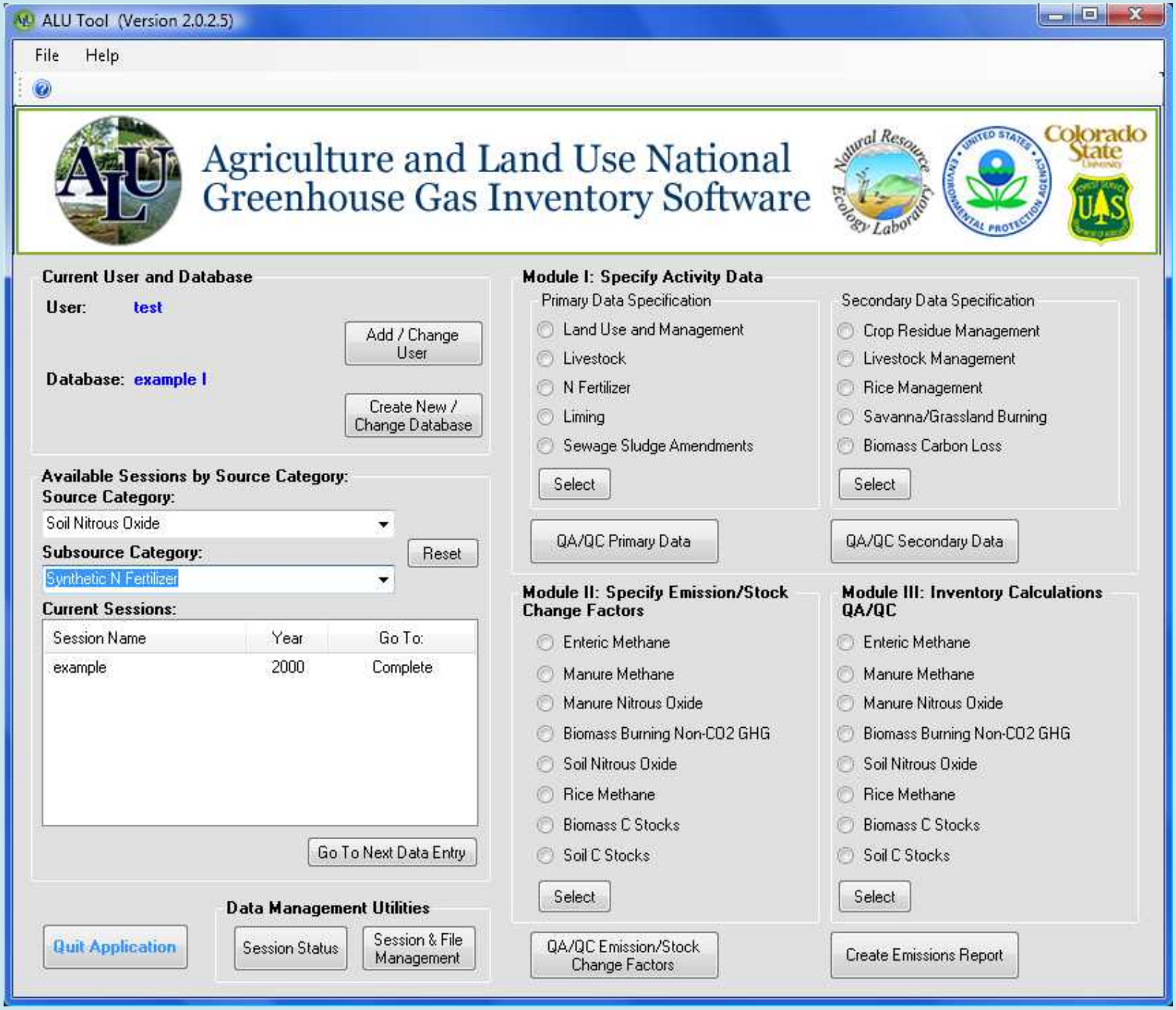
Funding Source:

- US Government
- UNFCCC (in-kind, etc.)
- Japanese government, WGIA/GIO/NIES (funds and in-kind, etc.)
- Participating countries (in-kind)

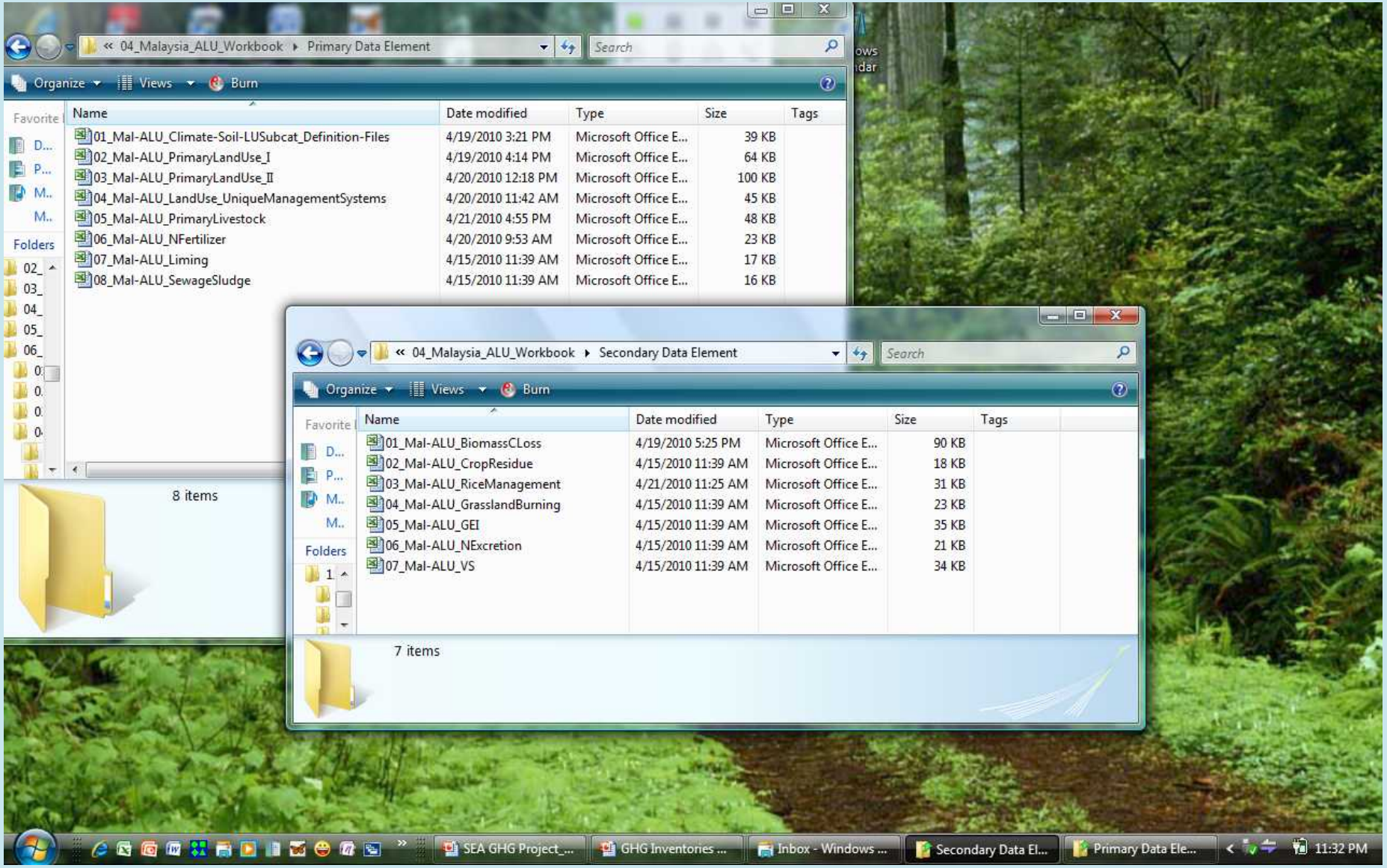
The "Regional capacity building for sustainable national greenhouse gas inventory management systems in Southeast Asia (SEA GHG Project)" has brought in inventory tools to SEA countries to:

- Template Workbook for National Greenhouse Gas Inventories
- Agriculture and Land use Software (ALU Software) and Workbook

The ALU Software and Workbooks for AFOLU Inventories


ALU Tool (Version 2.0.2.5)
File
Help
Agriculture and Land Use National Greenhouse Gas Inventory Software
Current User and Database
User: test
Add / Change User
Database: example I
Create New / Change Database
Available Sessions by Source Category:
Source Category:
Soil Nitrous Oxide
Subsource Category:
Synthetic N Fertilizer
Reset
Current Sessions:
Session Name
Year
Go To:
example
2000
Complete
Go To Next Data Entry
Data Management Utilities
Quit Application
Session Status
Session & File Management
Module I: Specify Activity Data
Primary Data Specification
Land Use and Management
Livestock
N Fertilizer
Liming
Sewage Sludge Amendments
Select
Secondary Data Specification
Crop Residue Management
Livestock Management
Rice Management
Savanna/Grassland Burning
Biomass Carbon Loss
Select
QA/QC Primary Data
QA/QC Secondary Data
Module II: Specify Emission/Stock Change Factors
Enteric Methane
Manure Methane
Manure Nitrous Oxide
Biomass Burning Non-CO2 GHG
Soil Nitrous Oxide
Rice Methane
Biomass C Stocks
Soil C Stocks
Select
Module III: Inventory Calculations QA/QC
Enteric Methane
Manure Methane
Manure Nitrous Oxide
Biomass Burning Non-CO2 GHG
Soil Nitrous Oxide
Rice Methane
Biomass C Stocks
Soil C Stocks
Select
QA/QC Emission/Stock Change Factors
Create Emissions Report

ALU Workbooks



Milestones

June 2007, Manila, Philippines; Scoping Meeting
- introduced to the GHG Management Template Workbooks (Component 1)

April 2008, Singapore: Kick-off Workshop
- introduced to ALU software and ALU Workbook (Component 2)

May 2009, Seam Reap, Cambodia: Regional Training on ALU Software
- trained on how to accomplish the ALU Workbooks for in-country training

ALU In-Country Trainings in 2009:
- conducted hands-on training in the Philippines, October 2009; and Thailand, November 2009

ALU In-country Trainings in 2010:
- conducted hands-on training in February 2010 in Viet Nam and Cambodia; April 2010 in Malaysia and Indonesia

Follow up ALU In-country Training in 2010:
- conducted follow up training in July 2010 in Cambodia

How SEA Countries see the ALU Software?

- Module 1: Specify Activity Data
  - provides better understanding of IPCC GL data requirements
  - allows to manage data more effectively, as good practice
- Module 2: Specify Emission/Stock Change Factors
  - facilitates quick and easy access to IPCC default values
  - allows to derive country-specific emission factors from inputted data
- Module 3: Inventory Calculations; QA/QC
  - easy and straight-forward generation of reports
  - Some flexibilities in generating reports

How SEA countries see the ALU Software?

- A useful tool to better understand and implement the IPCC GLs and GPGs in Ag/Forestry sector (many find them complicated);
- A significant improvement of the UNFCCC Software; allows moving to Tier 2 approach;
- Enhances transparency to inventory process as it facilitates export and review of data inputs and assumptions;
- QA/QC feature guides and ensures that data/ assumptions are checked; and
- A useful tool for GHG inventory in REDD-related activities.

Challenges in ALU Software

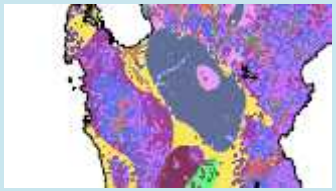
- Completing the ALU Workbook's primary and secondary data elements is difficult:
  - these are the requirements of IPCC GL and GPG;
  - **however,** after the in-country training, participants realized the importance of completing the ALU Workbook and are considering options for collecting data requirements;
  - Completed ALU Workbooks facilitate inputting of data into ALU Software

Future Activities

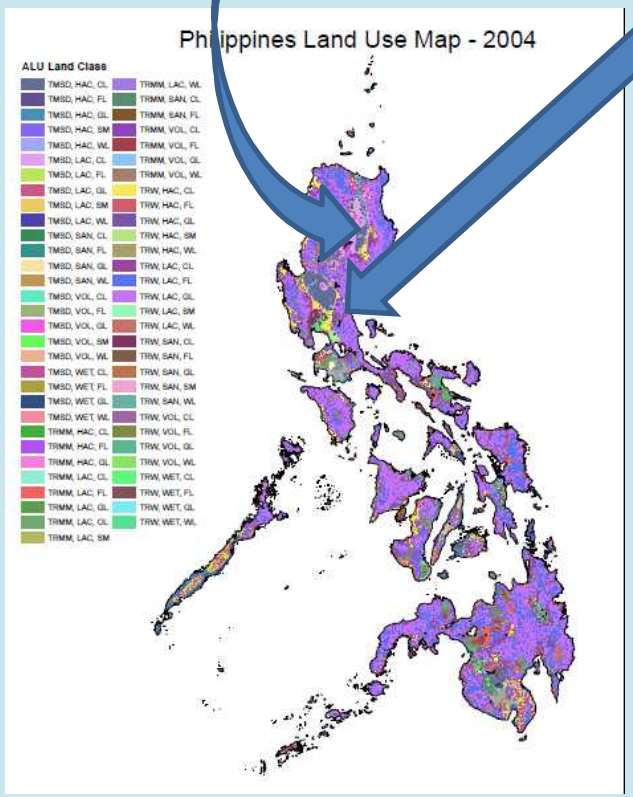
- **July 2010**
  - Papua New Guinea ALU Training
- **October 2010 - Wrap-up workshop**
  - Case studies in using the ALU Software
  - Accomplished Template Workbooks
- **Potential follow up meeting** to discuss Phase II of SEA GHG Project

Case studies in the Philippines using ALU Software…

REDD (Region 2 Cagayan Valley)



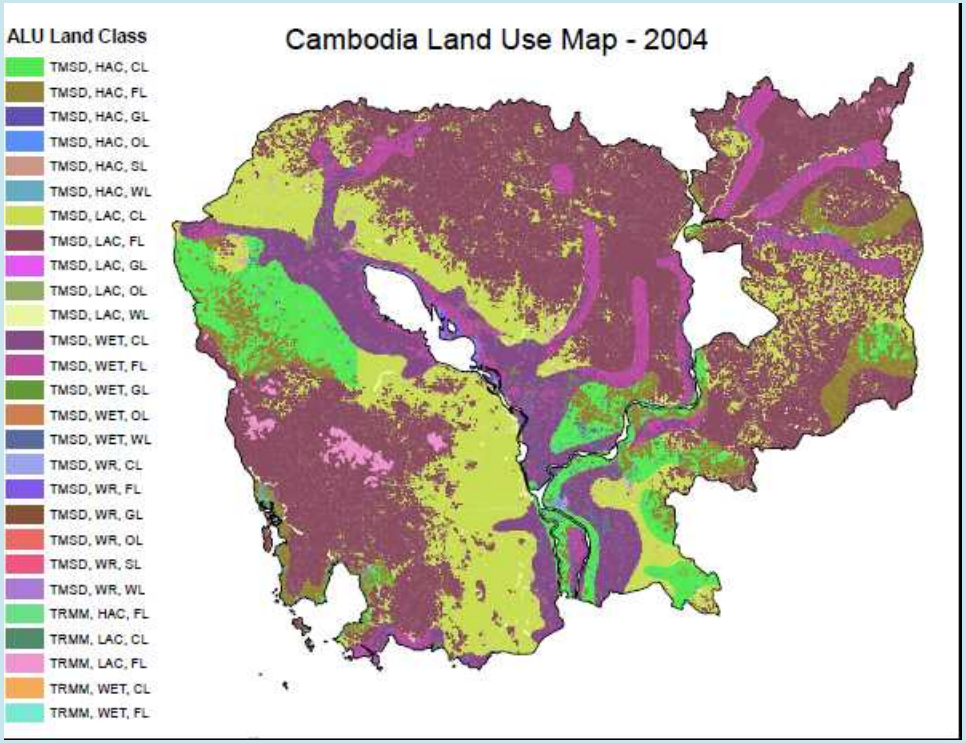
Rice residue management (Region 3 Central Luzon)



Text file (CSV) imported into ALU Software

1	TRW	HAC	CL	IRPERCL	275
2	TMSD	HAC	CL	IRPERCL	1305
3	TMSD	LAC	CL	IRPERCL	225
4	TRW	LAC	CL	IRPERCL	424
5	TRW	VOL	CL	IRPERCL	9
6	TRMM	HAC	CL	RFANNCL	201
7	TRW	HAC	CL	RFANNCL	99540
8	TMSD	HAC	CL	RFANNCL	304928
9	TRMM	LAC	CL	RFANNCL	28569
10	TMSD	LAC	CL	RFANNCL	229727
11	TRW	LAC	CL	RFANNCL	282765
12	TRW	VOL	CL	RFANNCL	933
13	TRMM	HAC	CL	OTHERCL	276
14	TRW	HAC	CL	OTHERCL	76033
15	TMSD	HAC	CL	OTHERCL	92260
16	TRMM	LAC	CL	OTHERCL	52324
17	TMSD	LAC	CL	OTHERCL	152261

Case study on REDD and rice cultivation in Cambodia using ALU Software …



Text file (CSV) imported into ALU Software

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2	TMSD	LAC	CL	IRANCL	428079
3	TMSD	WET	CL	IRANCL	850070
4	TMSD	HAC	CL	RFANNCL	786082
5	TRMM	LAC	CL	RFANNCL	37
6	TMSD	LAC	CL	RFANNCL	2444404
7	TRMM	WET	CL	RFANNCL	7
8	TMSD	WET	CL	RFANNCL	707428
9	TMSD	HAC	CL	RFANNCL	37
10	TMSD	LAC	CL	RFANNCL	19
11	TMSD	WET	CL	RFANNCL	19
12	TMSD	HAC	CL	OTHERCL	359059
13	TRMM	LAC	CL	OTHERCL	121
14	TMSD	LAC	CL	OTHERCL	979644
15	TMSD	WET	CL	OTHERCL	285510
16	TMSD	HAC	CL	NATIVGL	375894
17	TRMM	LAC	CL	NATIVGL	894
18	TMSD	LAC	CL	NATIVGL	1149905

Conclusions

- SEA countries appreciated the experience in using ALU Software:
  - better understanding of the IPCC methods and the concepts of good practice guidance
  - became more organized in managing the ALU data and information

- ALU Software gave them an idea of the status (completeness) of data for ALU GHG inventory to meet the IPCC GL/GPG requirements;

- There are **opportunities** in using ALU Software in SEA countries key categories:
  - Forest management;
  - REDD
  - Rice cultivation
  - Livestock
- **More exposures** to GHG inventory tools/software, **more chances** of having a **'sustainable inventory management'** in the country, so experts can come and go, but inventory continues and meets needs of policymakers.