Regional Capacity Building Project for Sustainable National Greenhouse Gas Inventory Management Systems in Southeast Asia (SEA Project)

The 6th Workshop of GHG Inventories in Asia (WGIA6)
16-18 July 2008, Tsukuba, Japan

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Background

- Collaborative scoping meeting for sustainable national ghg inventory management systems in SEA, 11-13 June 2007, Manila
- Common problems in SEA:
  - lack of local or country-specific EF and appropriate AD
  - inadequate database management system
  - difficulty in sustaining inventory system (team)
  - lack of capacity for inventory management
  - key category analysis not implemented (mostly)
  - need for sharing information/experience
  - Lack of financial and human resources

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

Proponent/Lead Agency: UNFCCC

Collaborating Institutions/Partners:

- US- Environmental Protection Agency (US-EPA)
- Colorado State University (CSU)
- Workshop on GHG Inventories in Asia (WGIA (GIO/NIES))
- International Rice Research Institute (IRRI)

Participating Countries:

1. Cambodia
2. Indonesia
3. Lao P.D.R.
4. Malaysia
5. Philippines
6. Singapore *
7. Thailand
8. Viet Nam

Project Duration: 3 years (2007 – 2010)

Funding Source:

- US Government
- UNFCCC (in-kind, etc.)
- WGIA/GIO/NIES (in-kind, etc.)
- IRRI (in-kind)
- Participating countries (in-kind)

Project Objectives

Overall: To strengthen the capacity of SEA countries to improve the quality of their national GHG inventory for the development of sustainable inventory management systems

Project Objectives

Specifically:

1. To strengthen the institutional arrangement, its functions, and operations of managing national GHG inventories;
2. To enhance technical capacity of designated personnel in each sector (special attention to Agriculture and LULUCF);
3. To improve national methodologies, AD and EF through regional networking;
4. To support the preparation of SNC and subsequent NCs to UNFCCC; and
5. To develop sustainable inventory management systems in SEA.

Project Components

Component 1: Improving National Inventory Management Systems

Component 2: Comprehensive multi-tier GHG software for Agriculture and LULUCF (SEAALU software)

Component 3: Targeted improvements to LULUCF sector (Forest land)

Component 4: Targeted improvements to Agriculture sector

Component 5: Targeted improvements to Energy sector

Component 1: Improving National Inventory Management System

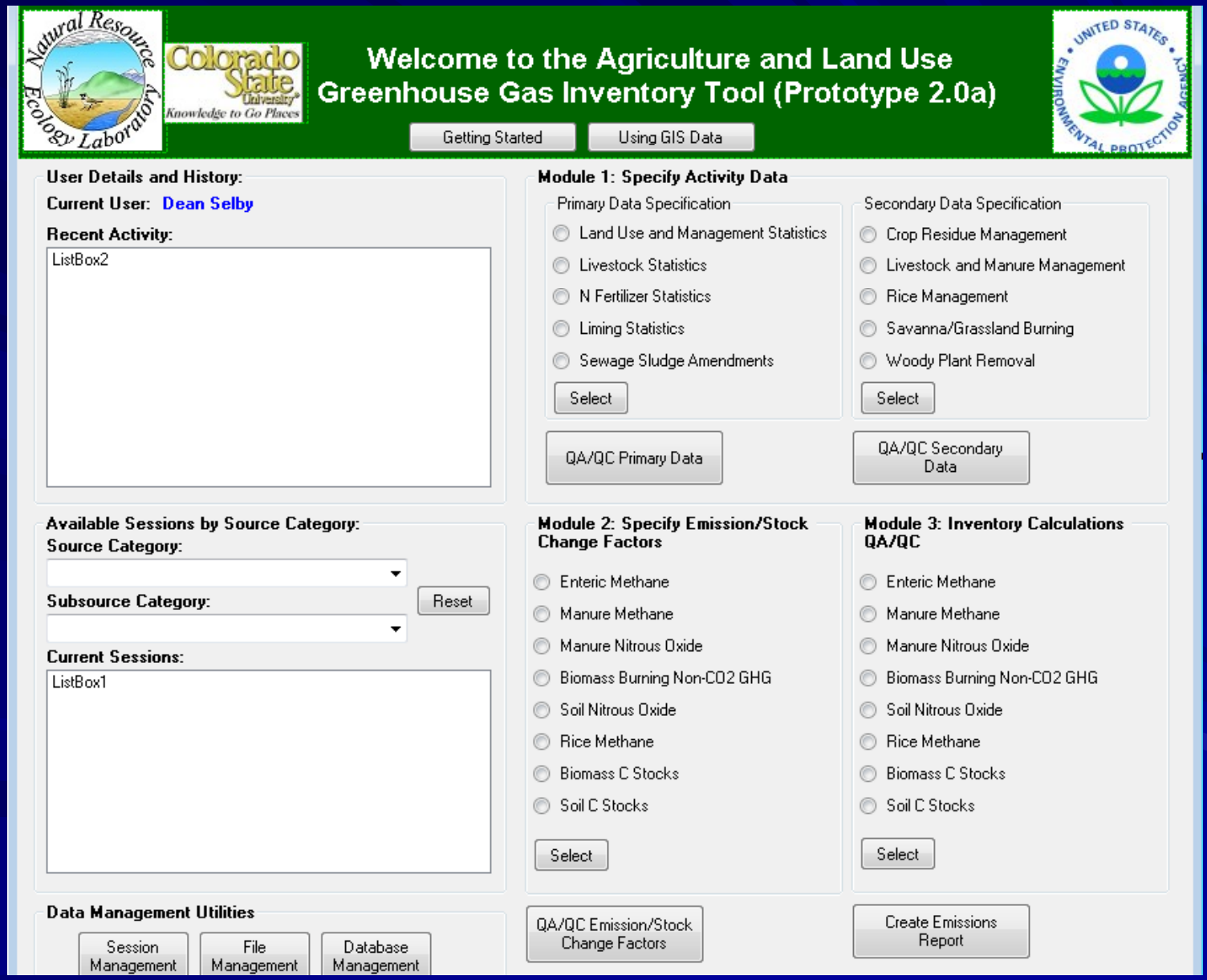
Template Workbook for
Developing a National Greenhouse
Gas Inventory System

USAID

Component 1: Improving National Inventory Management System

Templates	Description
1. Key Category Analysis (KCA)	- first step in documenting NIMS - most important sources as focus of improvement efforts.
2. Institutional Arrangement (IA)	- assess and document the strengths and weaknesses - ensure continuity and integrity of the inventory - promote institutionalization of the inventory process - facilitate prioritization of future improvements.
3. Source-by-Source Background Document (SBS)	- document and report the origin of methodologies, AD, EF - future reference for each source
4. Quality Assurance and Quality Control (QA/QC)	- guides to establish a cost-effective QA/QC program - improve transparency, consistency, comparability, completeness, and confidence
5. Archiving System (AS)	- collection of records and where records are kept - appropriate and systematic archiving of all compilation - national inventory must be transparent and reproducible - foundation for development of subsequent inventories
6. National Inventory Improvement Plan (NIIP)	- priorities for future CB based on needs identified in 5 templates - serves as an official national road map for the national inventory

Component 2: Comprehensive multi-tier GHG software for Agriculture and LULUCF (SEAALU software)



“Kick-off” Workshop of the Regional Capacity Building Project for Sustainable National Greenhouse Gas Inventory Management Systems in Southeast Asia

21-23 April 2008
Singapore

Component 1: Progress and Plans

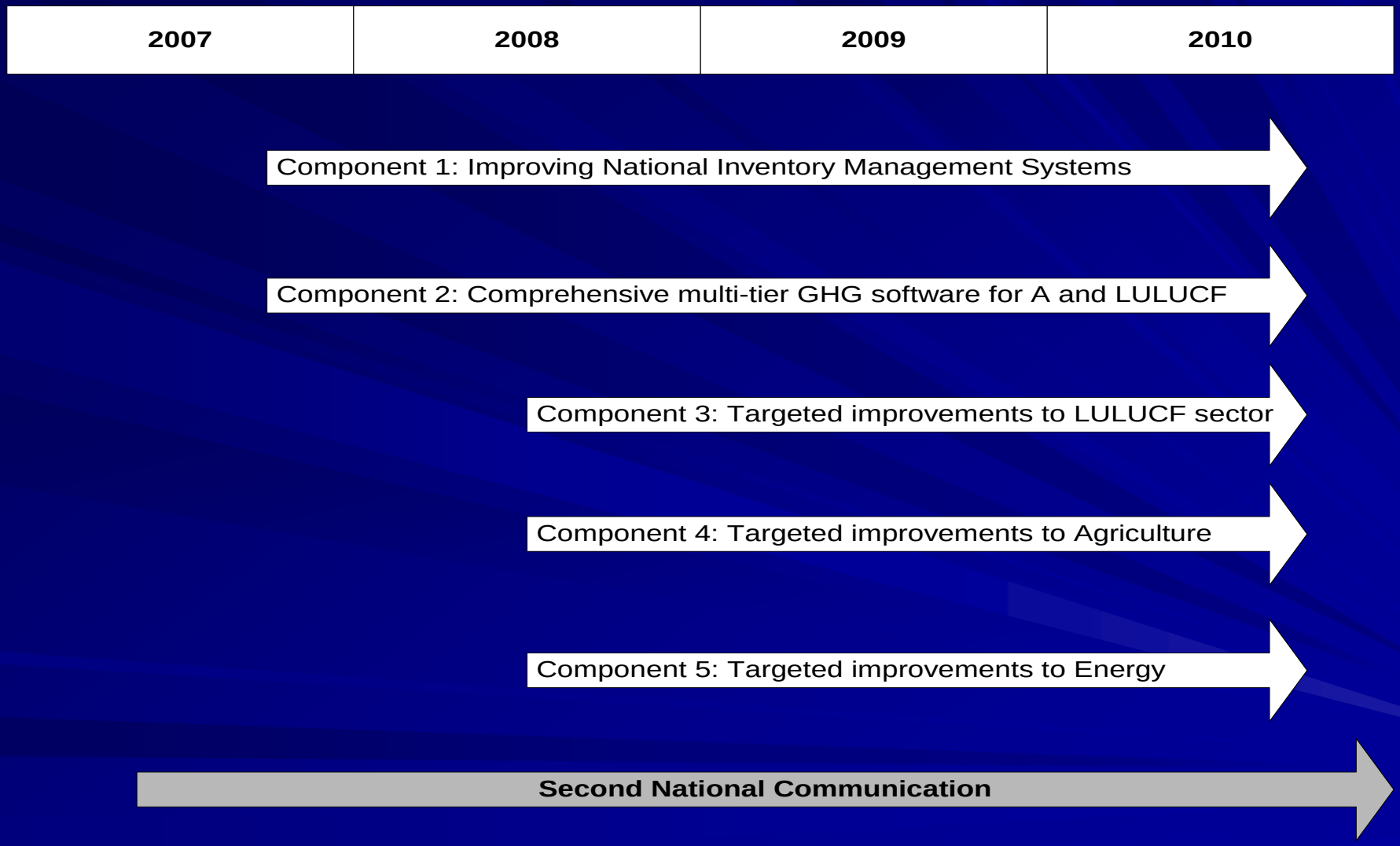
Templates	Accomplishments/Plans
1. Key Category Analysis (KCA)	- Each country presented preliminary KCA; need to check initial findings
2. Institutional Arrangement (IA)	- Already reported in the scoping meeting in June 2007; need to continue improving IA with template guidance
3. Source-by-Source Background Document (SBS)	- Each country presented SBS documentation of (one) key category; need to continue/complete for other key categories
4. Quality Assurance and Quality Control (QA/QC)	- Templates provided for use; follow up activity as part of the ALU software in-country training in early 2009
5. Archiving System (AS)	- Templates provided for use; follow up activity as part of the ALU software in-country training in early 2009
6. National Inventory Improvement Plan (NIIP)	- Templates provided for use; follow up activity as part of the ALU software in-country training in early 2009

Table 2. Summary of identified key categories based on preliminary key categories analysis by participating SEA countries						
	Rank (1 means highest level of contribution)					
Country	**CH_4 enteric fermentation**	**CH_4 rice cultivation**	**N_2O agricultural soils**	**CO_2 manufacturing and construction**	**CO_2 mobile combustion**	**CO_2 energy industries**
Cambodia	1	2	4	NA	NA	NA
Indonesia	5	3	NA	2	4	1
Lao PDR	QA	QA	QA	QA	QA	QA
Malaysia	NA	NA	NA	4	2	1
Philippines	6	3	5	4	2	1
Singapore	-	-	-	-	-	-
Thailand	6	2	7	4	3	1
Viet Nam	4	1	2	3	6	5
TOTAL	**22**	**11**	**18**	**17**	**17**	**9**
NA = not applicable QA = qualitative analysis was used						

Component 2: Progress and Plans

Activity	Target Date
1. Distribute ALU Workbook	April 2008
2. Compiling activity data for all primary and secondary data	July – December 2008
3. Distribute ALU Software	January 2009
4. In-country ALU software training and workshop	January - June 2009
5. Participate in WGIA meeting	Q3 2009
6. Wrap-up Workshop	Q1 2010
7. Participate in WGIA Meeting	Q3 2010

Project Roadmap



Issues for Components 3, 4, and 5

Issues	Component 3 (LULUCF)	Component 4 (Agriculture)	Component 5 (Energy)
Common issues on emission factor (EF) and activity data (AD) that need to be addressed	- EF for biomass increment for managed native/secondary forest - Soil C EF (stock change factors i.e. input, management, land use) - Reference soil C stock (from soil survey, literatures, etc.) - need for GIS/RS data for SEA countries to improve AD	- rice cultivation – how to categorize water regime for rice (AD) - EF and AD (related to water mgt. and amount of fertilizer input); N_2O emissions from Cropland; soil C from cropland (soil category is broad) - crop residue ratio for use in biomass burning GHG inventory - enteric fermentation: enhanced characterization - need local EF for manure management for different AWMS	- reference approach vs. sectoral approach; how to reduce the gaps between the two approaches
Specific issues on EF and AD	- activity data; mostly based on statistical report from FAO, etc. - EF (removal factor) only for specific forests (for uncertainty assessment) - AD and EF only from plantation forest (data are limited) - need historic data on soil for soil C estimate; also for belowground - Peat fires (Indonesia); AD for fire is not easy; country-specific EF is needed - AD for forest type (consistent representation of land); EF for biomass increment; EF for biomass losses (fuelwood gathering)		

Issues for Components 3, 4, and 5

Issues	Component 3 (LULUCF)	Component 4 (Agriculture)	Component 5 (Energy)
Proposed methodology or approaches	- develop mechanism to share experiences in improving inventory (WGIA as a platform for info exchange) - e-group to be established (during project duration) - sharing not only EF and AD but also SBS (completed template) - need to be clear in categorization (e.g. forest) for AD before deciding what EF to use - collaborate with ICRAF and CIFOR - EF; literature review/scoping (Malaysia has some data) - Invite expert to come to country to assist inventory compilers	- refer to Huke Database of IRRI for rice AD based on rice ecosystems -refer to IPCC GPG - countries are encouraged to develop their own categories - Encourage participating countries to develop EFs using measured data -collaborate with IRRI (for rice) and New Zealand LEARN Project (for livestock)	- collaborate with institution having experience in terms of narrowing the gaps between the reference and the sectoral approaches - WGIA has gross calorific value (updated every 5 years by Japan); WGIA to share to SEA Project
Date needed	mid 2009	mid 2009	mid 2009


Thank You !