

# Update on UNFCCC Regional Capacity Building for Sustainable National Greenhouse Gas Inventory Management Systems in Southeast Asia Phase II (SEA GHG Project)

## Workshop on GHG inventories

July 11-12 2012

Hanoi, Viet Nam

**Presented by:**

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US EPA GHG Inventory Capacity Building Program



**United Nations**  
Framework Convention on  
Climate Change



# Capacity Building Efforts to Date



**Central America** : First regional project. Developed our current approach and designed our tools.  
Phase I: 2004-2007  
Phase II: 2007-2010

**South East Asia**: Currently 6 country project. Strong partnership with UNFCCC. Applied the lessons and tools developed in CA. Phase I: 2008-2010. Phase II: 2011-2014.

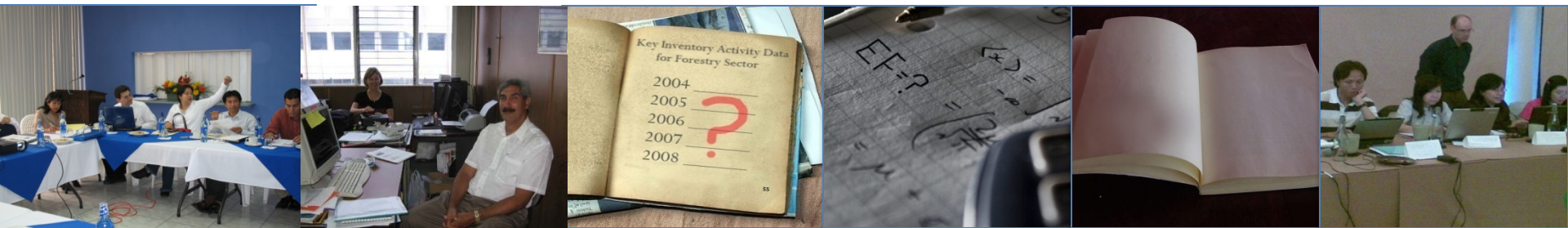
**Andean Region**: Scoping trips to Colombia, Peru and Ecuador in 2011/12. Applying the lessons learned and tools developed for other regions.

**China**: Provided initial training, currently proposing new work plan, translated existing tools for use in provinces

**Eastern and Southern Africa**: Apply the lessons and tools developed in other regions. Strong partnerships with UNFCCC, CD-REDD and others so we can provide the expertise needed to get the job done.  
Phase I: 2011-2014



# Continued challenges NA-I Countries have with preparing national GHG inventories



**Lack of Functional Institutional Arrangements (e.g. roles/responsibilities)**

**Small teams with limited resources and multiple responsibilities**

**Incomplete or non-existent activity data**

**Lack of country-specific emission and stock change factors**

**Insufficient documentation from previous inventories**

**Difficulty retaining expertise**

- **Objectives of Phase II**

- Strengthen the capacity of SE Asian countries to
  - Improve the quality of their national GHG inventories
  - Develop sustainable inventory management systems

- **Proponent/Lead Agency**

- UNFCCC

- **Project Period**

- January 2011- September 2014 (extended)

- **Collaborating Institutions/Partners**

- US Environmental Protection Agency (USEPA)
- US Agency for International Development (USAID)
- Colorado State University (CSU)
- Workshop on GHG Inventories in Asia (WGIA (GIO/NIES))
- USAID Low Emissions Asian Development (LEAD)

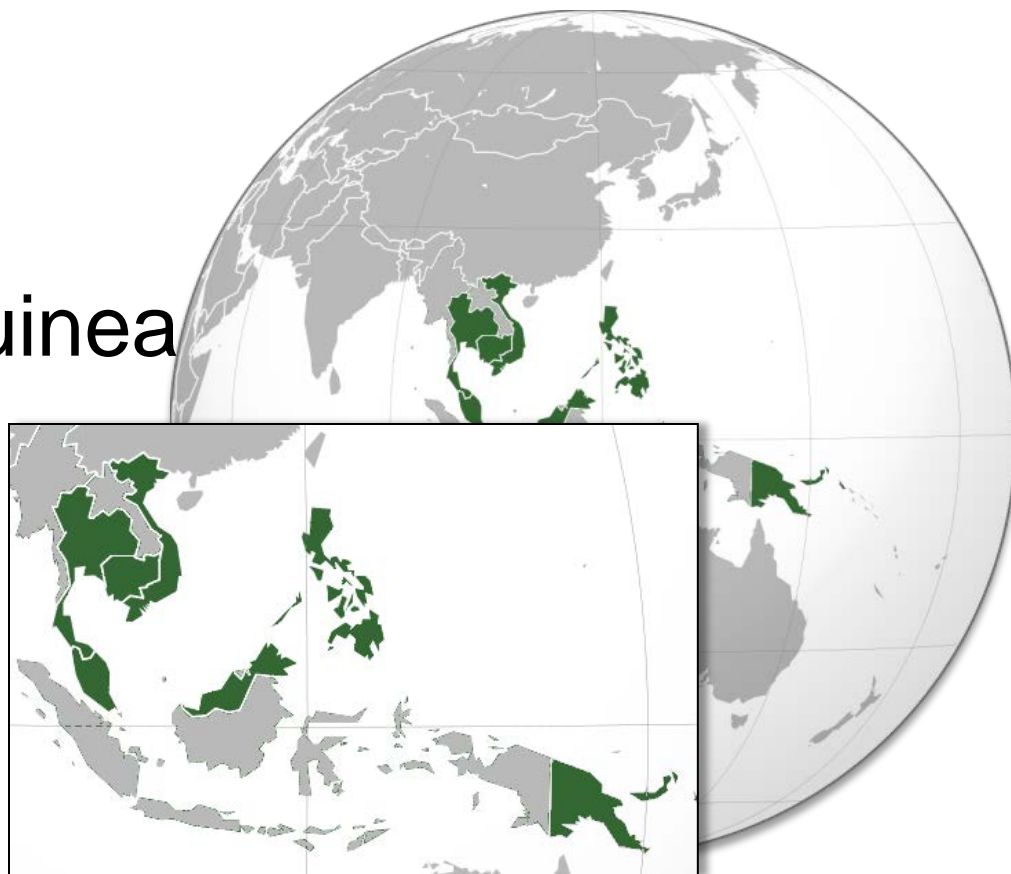
- **Project Coordinator**

- Leandro Buendia



# Project countries

- Cambodia
- Malaysia
- Papua New Guinea
- Philippines
- Thailand
- Vietnam



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## Moving from SEA Phase I to Phase II

*Phase II focus based on feedback from Phase I Wrap up Regional Meeting (Malaysia October 2010)*

- Greater regional focus (4 regional meetings)
- National Systems Tools, but limited resources for bilateral support
- Focused more on Training of updated ALU software rather ALU workbooks and data collection



- **Regional, but greater bilateral focus/assistance**
- **Greater focus on working with countries to**
  - fundamental components of national systems to support more frequent preparation (institutional arrangements, QA/QC, Archiving)
  - improve data, especially for Ag/LULUCF sectors
  - produce next national Ag/LULUCF GHG inventory, consistent with IPCC requirements

# A Simple Approach to GHG Inventory Capacity Building

- **Overarching objective**

- Work alongside country experts to develop an improved GHG inventory (focusing on Agriculture, LULUCF, and other key sectors)
  - Completing a transparent, accurate, complete, consistent and comparable is capacity building!
  - Builds a solid foundation for more regular reporting and steadily improving inventory quality

- **Strategy - Focus on two key activities:**

- I. Improve institutional capacity of a country to establish a sustainable National GHG Inventory System
- II. Provide technical assistance on inventory methods, AD collection and documentation

Cannot “train” experts on methods alone—  
must *learn* by *doing*



# Project Strategy

## I. Improving Institutional Capacity

### Component 1: Improving National Inventory Systems

- Institutional Arrangements
- Methods and data documentation
- QA/QC plans
- Archiving



## II. Improving data and methods

- **Component 2:** Activity data collection and use of ALU Software for the production of complete, well documented/transparent, good quality Agriculture and LULUCF inventory
- **Component 3:** Targeted improvements to LULUCF sector (Forest land)
- **Component 4:** Targeted improvements to Agriculture sector
- **Component 5:** Targeted improvements to other sectors
- **Component 6:** Mitigation analysis

**National  
GHG  
Inventory  
Produced  
in  
Transparent,  
Accurate,  
Complete,  
Consistent,  
and  
Comparable  
manner**



# Model GHG Inventory Capacity Building Project



## Scoping Meeting

Meet with countries & through a participative approach determine objectives



## Select Project Team

Select team members based on objectives; Regional Coordinator selection is key!



## Kick-off Workshop

Countries present current inventories; review methodologies; and identify AD gaps



## In-country Technical Meetings

Assist with assembling AD; produce inventory and document the process/result



## Wrap-up Meeting

Countries present improved inventories and discuss next steps<sup>9</sup>

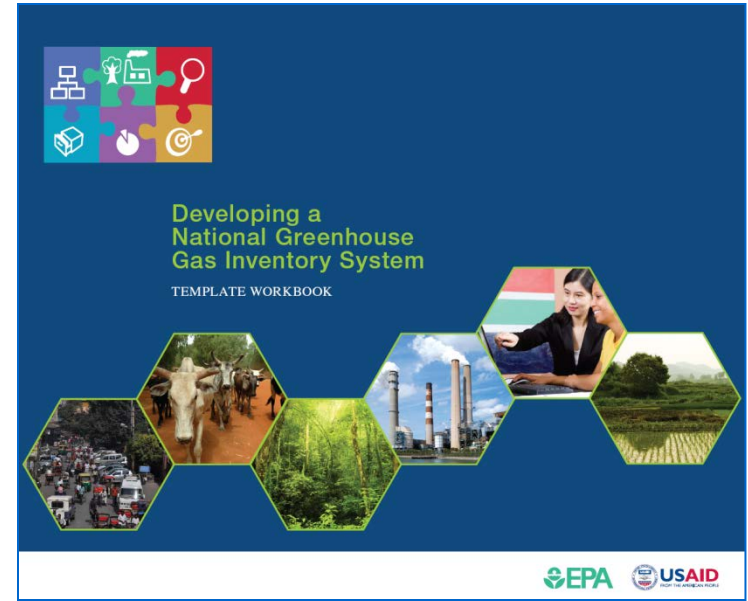
# Phase II Strategy Implementation Approach SEA Project and Country Partnership



# GHG Inventory Capacity Building Tools

## National System Templates

Helps to document, institutionalize and streamline the inventory management process



## ALU Tool

Helps to compile AD, perform calculations, implement QA/QC procedures and produce reports

- **2011 – Launched Phase II**

- Distributed project document
- Completed initial planning meetings with all countries in Summer/Fall 2011

- Reviewed project objectives
- Introduce and review tools

⇒ Institutional arrangements template

⇒ Data assessment questionnaire

⇒ ALU Workbook

- Draft country-specific work plan (includes draft timeline for completing data assessment questionnaires, prioritized based on key category analysis, etc.)

- Highlight - Assisted PNG complete Ag/LULUCF GHG inventory for Second National Communication (SNC) using ALU

Planning and Technical Meeting on GHG Inventory  
for the Philippines  
(28 February - 3 March 2012, Shimada Hotel, Xigaya Center, Pang City, Philippines)

**Meeting Report**

**Background and Purpose of the Meeting**  
The Philippines is one of the participating countries in Phase 2 of the South-South Regional Capacity Building for Sustainable Resource Management and Inventory Management System in Institutional and Data Based Project. It has benefited from the project through the use of inventory tools and templates that were prepared, conducted to conduct a pilot inventory which is consistent with the IPCC guidelines and Good Practice Guidance on Reporting, including identifying opportunities and constraints to success.

The Philippines is participating in Phase 2 of the GHG Inventory. The country is about to submit its prepared to first national communication and land use, land-use change, and forestry communication.

The country is also one of the countries that are the subject of the project. This program includes assistance that will help the country to develop its national communication and land use, land-use change, and forestry communication.

This meeting was held to discuss the Philippines' progress in developing its national communication and land use, land-use change, and forestry communication. The meeting was held in Pang City, Philippines.

**Table 1. Proposed work plan to address gaps on cross-cutting issues**

Activity	Sub-activity	Priority	Responsible Agency	Lead	Timeline
Completion of the workbook template for institutional arrangements	Address existing/proposed institutional arrangements	P1	CCC	Ms. Joy Goco	2 <sup>nd</sup> Quarter 2012
Completion of the workbook template for institutional arrangements	Promote institutional sector (note: it was suggested, after the meeting, that this sub-activity be considered P1 taking into account the importance of institutional arrangements)	P1	CCC and relevant sectoral agencies	Ms. Joy Goco	2 <sup>nd</sup> Quarter 2012
	Review of the institutional arrangements (note: it was suggested, after the meeting, that this sub-activity be considered P1 taking into account the importance of institutional arrangements)	P1	CCC and relevant sectoral agencies	Ms. Joy Goco	2 <sup>nd</sup> Quarter 2012
Completion of the workbook template for the ALU	Establishment of QA/QC Plan	P4	CCC	Ms. Senoche Recobar	4 <sup>th</sup> Quarter 2012 - 1 <sup>st</sup> Quarter 2013

- **2012 - Focus on institutional arrangement planning and data collection/improvements**

- Assisting well data collection/compilation to apply IPCC methods to develop Ag/LULUCF and other sector inventories (e.g. Energy)
- PNG – Follow up July 30-August 1
- Philippines – Follow up August 2-3

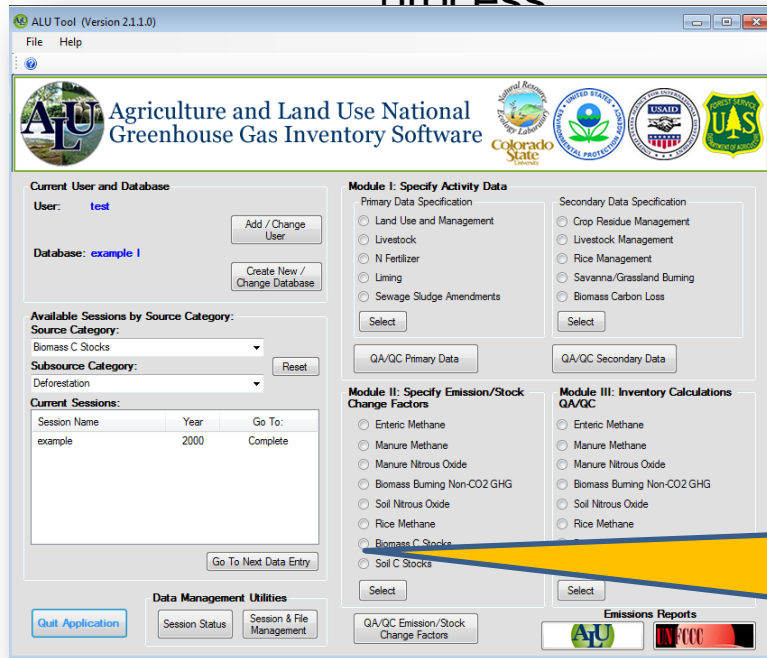


*Philippines – National GHG Inventory  
Energy Sector Meeting  
Identifying data needs/gaps  
April 24-25, 2012*

# Updates to GHG Inventory Capacity Building Tools

**NEW!**  
Updated in  
Summer 2011

Helps to document, institutionalize and streamline the inventory management process



- NEW!**
- Mitigation Module completed
  - Updated activity data workbooks
  - Uncertainty analysis coming soon
  - Link to UNFCCC software and IPCC software link in development

# Communicating the Importance of GHG Inventories

### But that's just the beginning!

GHG inventories also provide information on emissions and removals, such as forest production, forest management, crop production. Collecting and analyzing the data used to participate in climate change programs, and helps with market prioritizes investments, and helps with market

### Participate in International Climate Change Programs

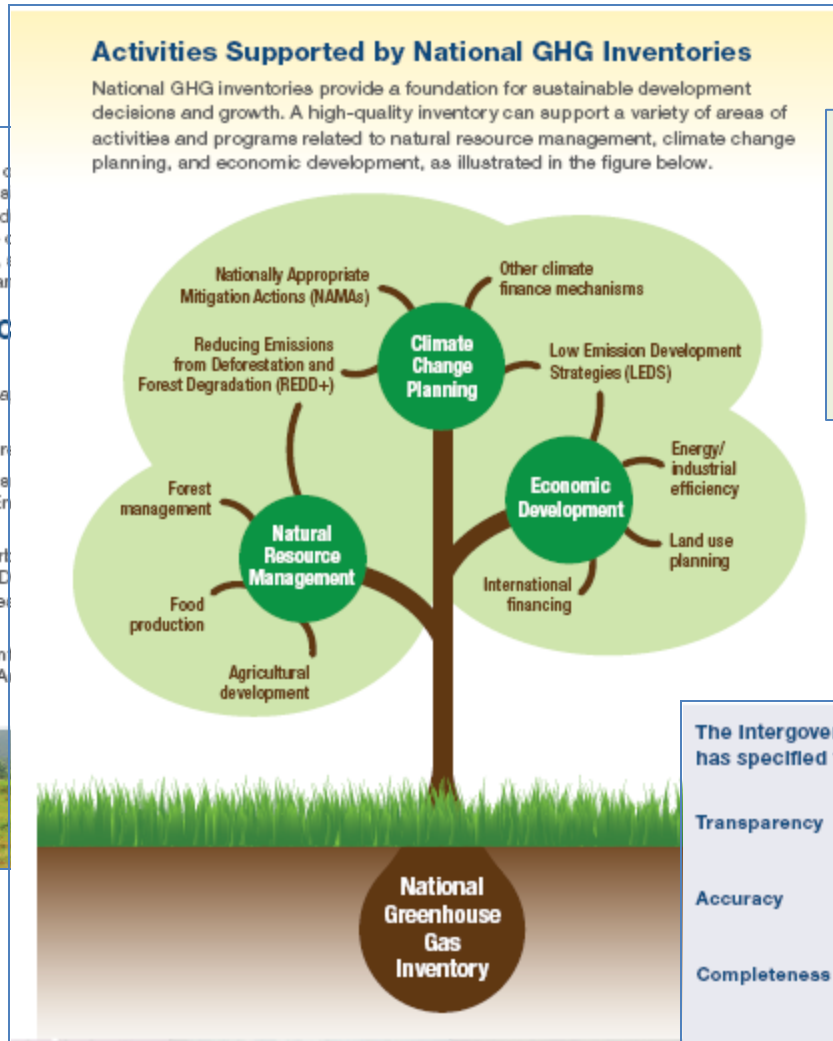
With a complete inventory, countries can:

- Build technical expertise that can be used in policies and programs
- Build a foundation for carbon market readiness
- More easily access financial mechanisms and funds available from the Global Environment Facility to reduce emissions
- Estimate and report forest-related carbon stocks will be necessary to participate in REDD+ financial value for maintaining or increasing forest in developing countries
- Implement Low Emission Development Appropriate Mitigation Actions (NAMA) to support economic growth



### Activities Supported by National GHG Inventories

National GHG inventories provide a foundation for sustainable development decisions and growth. A high-quality inventory can support a variety of areas of activities and programs related to natural resource management, climate change planning, and economic development, as illustrated in the figure below.



*Inside of brochure – finding ways to communicate importance of inventories*

### The Intergovernmental Panel on Climate Change (IPCC) has specified five indicators of inventory quality:

<b>Transparency</b>	Assumptions and methods are explained clearly so the inventory can be understood and replicated
<b>Accuracy</b>	Estimates reflect actual emissions and removals, with no systematic overestimation or underestimation
<b>Completeness</b>	All existing, relevant sources, sinks, and gases across a country's full geographic area are included
<b>Consistency</b>	The same methods and data inputs are used across all years for estimating emissions and removals

# Lessons learned to date...

- *Developing a high quality<sup>1</sup> inventory is not* easy—but we all know there are many reasons to do it!
- Initial emphasis should be on *institutional arrangements* to support **data** needs to determine emissions on ongoing basis
- *Dedication* from the National Inventory team is crucial!
- Each country is unique – *flexibility* is important
- Inventory teams *learn by doing*, not by just training
- Sustained, *long term* effort is required



<sup>1</sup> Transparent, Accurate, Complete, Consistent, and Comparable



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## **U.S. EPA Inventory Preparation Tools**

[www.epa.gov/climatechange/emissions/ghginventorycapacitybuilding](http://www.epa.gov/climatechange/emissions/ghginventorycapacitybuilding)

**ALU Software**

[www.nrel.colostate.edu/projects/ghgtool](http://www.nrel.colostate.edu/projects/ghgtool)