

Activity Summary of AFSIS



ASEAN Food Security Information System
Expert Shoji KIMURA

AFSIS

ASEAN Food Security Information System

-Bangkok, THAILAND-

- 2002** Establishment Agreement (*AMAF+3 Minister Meeting*)
- 2003 - 2007** First Phase
- 2008 - 2012** Second Phase
- 2013 - 2015** Post 2nd Phase (*Preparation for Permanent Mechanism*)
- 2015 -** Third Phase (*Permanent Mechanism*)

AFSIS Vision

To provide accurate, reliable and timeliness food security information

AFSIS Mission

- **Food Security Information Network Development**
- **Human Resource Development**
- **Agricultural Statistics and Information Research Development**

Main Activity of AFSIS

1. AFSIS Database (2005-)

The screenshot shows the AFSIS (ASEAN Food Security Information System) Database Query interface. The header includes the AFSIS logo and navigation links: Home, About Us, Statistics, Publications, Blogs, and Contact. Below the header is a search bar and a breadcrumb trail: Home / Statistics / Database Query.

The main content area is divided into three sections:

- crope**: A list of crops including Paddy, Soybeans, Maize (Corn), Dried, Sugarcane, Cassava, and Other items.
- years**: A list of years from 1983 to 1990.
- Pivot Settings**: Configuration options for data display:
 - Nested by: Country
 - Y1-axis: Crop
 - Y2-axis: Item
 - X-axis by: Year

Below these sections is a list of **country** options: Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, and Singapore.

At the bottom of the main content area are four buttons: show table, show graph, show bar graph, and Reset.

A yellow box at the bottom contains the following **Unit:** information:

- Planted area and harvested area is in 1,000 hectares; yield in ton/hectare; Production in 1,000 tons.
- Farmgate price, wholesale price and cost of production are in US Dollar/ton
- Population is in million persons
- Labor force is in 1,000 persons
- Import and export quantities are in 1,000 tons
- Import and export values are in million US Dollar

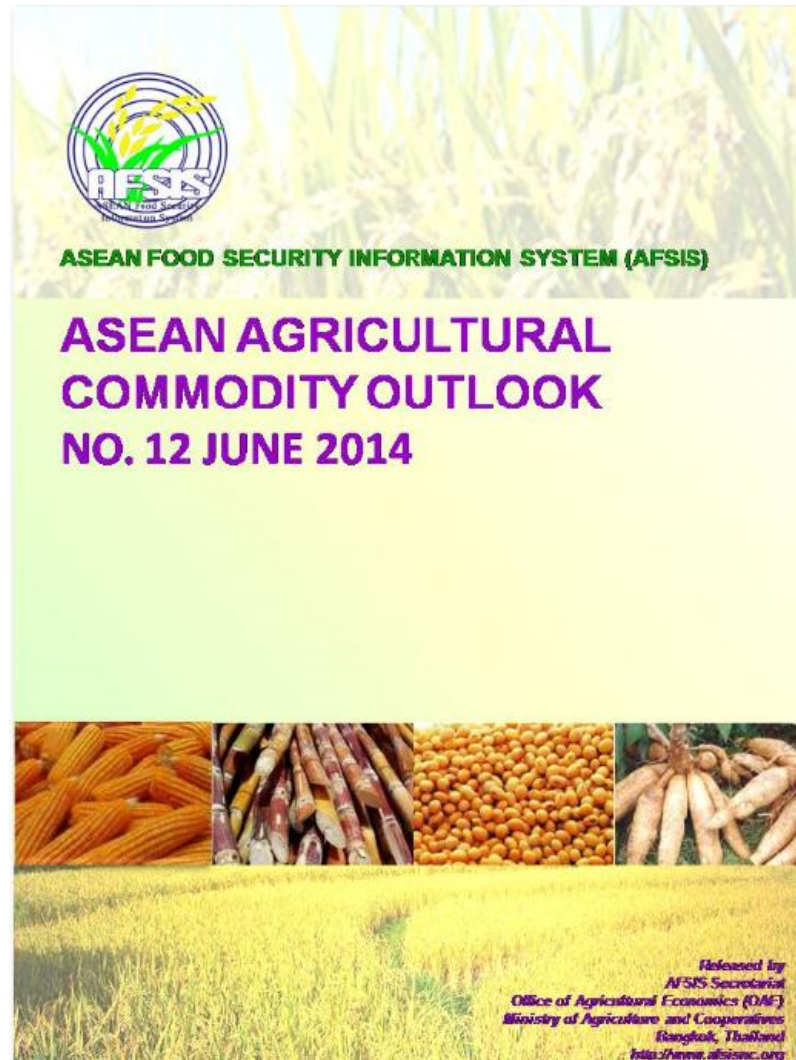
Additional unit abbreviations are listed below:

- k = 1,000
- m = 1,000,000
- b = 1,000,000,000

1. AFSIS Database *(cont.)*

- **Time Series Data** : (1985 – 2013)
- **Coverage** : Rice, Maize, Soybean, Sugarcane, and Cassava
- **Crop Calendar**
- **Data Items** : Planted and harvested Area, Production and Yield
Wholesale / Farm Gate Price
Value and Quantity of Imports and Exports
Food Balance Sheet
General and Economics Indication

2. Agricultural Commodity Outlook Report (2008-)

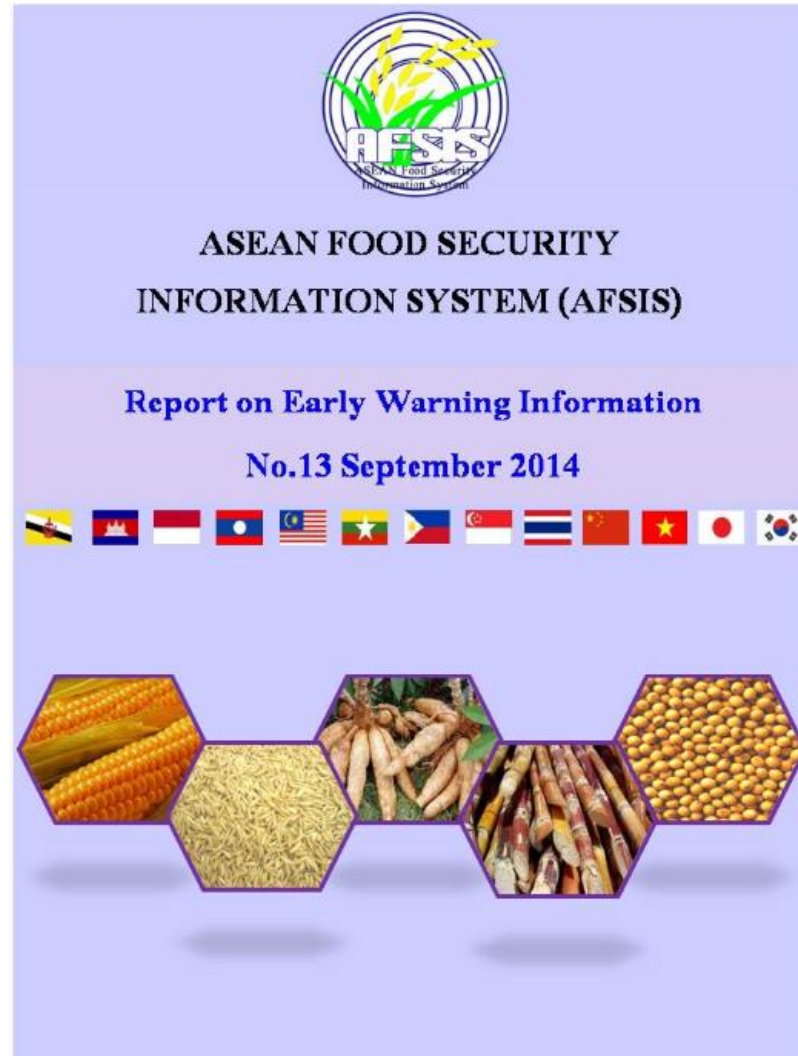


2. Agricultural Commodity Outlook Report *(cont.)*

- **Member Countries Official Report**
- **Issue** : June and December
- **Coverage** : Rice, Maize, Cassava, Sugarcane, and Soybean
- **Content** : *Supply Side* : Planted/ Harvested Area
Production and Yield
Damaged Area
Import
Beginning Stock

Demand Side : Domestic Utilization
Export
Ending Stock

3. Early Warning Information Report (2008-)



3. Early Warning Information Report *(cont.)*

- **Member Countries Official Report**
- **Issue** : March and September
- **Coverage** : Rice, Maize, Cassava, Sugarcane, and Soybean
- **Content** : Planted/ Harvested Area
Production and Yield
Damaged Area

4. Mutual Technical Cooperation (2009-2012)



4. Mutual Technical Cooperation *(cont.)*

Countries

Topics

Indonesia and Cambodia

*Supply-Demand Analysis and Forecasting
for Agricultural Commodities*

Thailand and Lao PDR

Remote Sensing

Philippines and Myanmar

Sampling Techniques and Information Technology

Malaysia and Vietnam

*Sampling Technique and Forecasting
for Selected Agricultural Commodities*

Malaysia and Lao PDR

*Sampling Technique
for Selected Agricultural Commodities*

Philippines and Cambodia

Survey Methodology and Information Technology

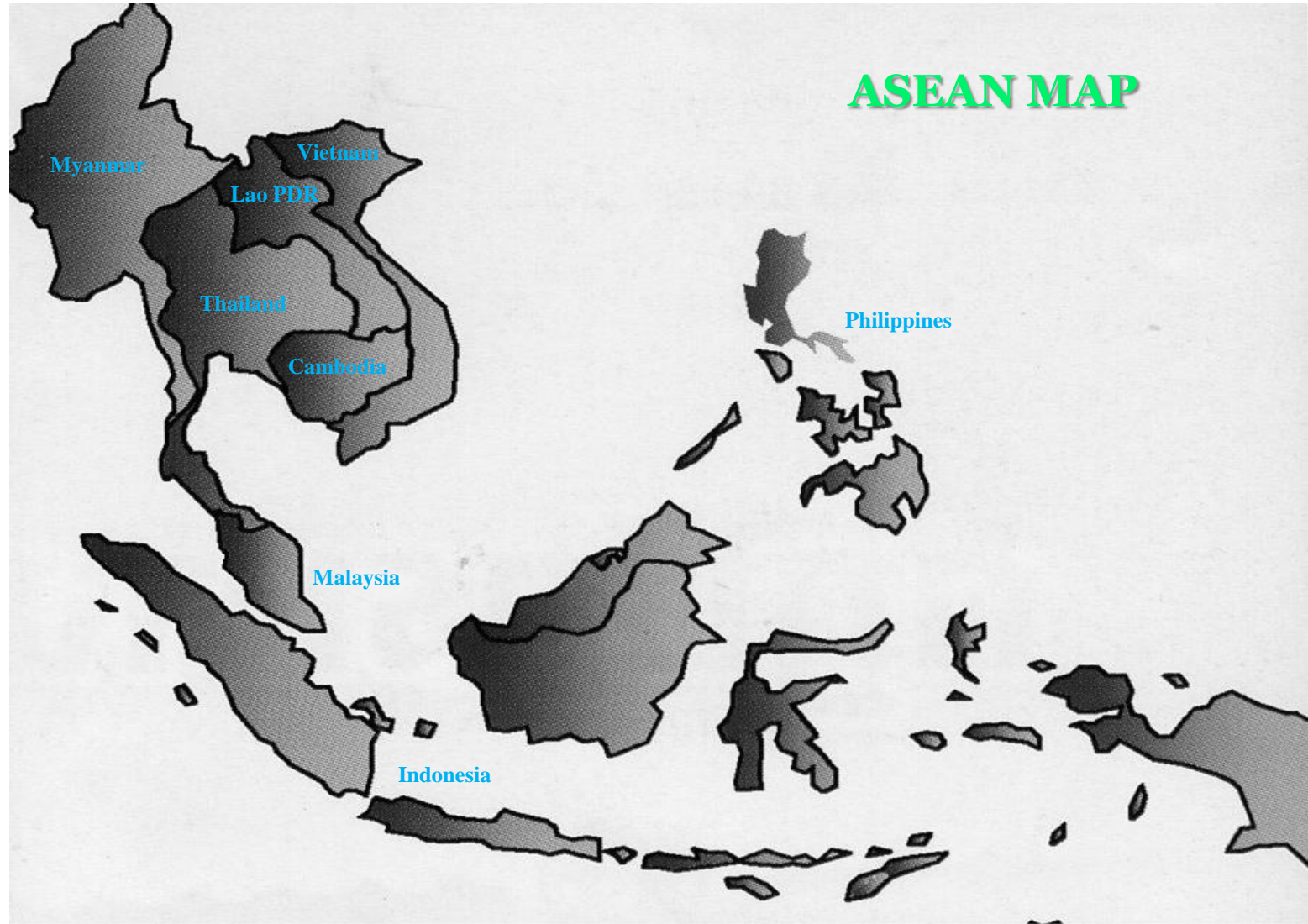
Thailand and Vietnam

Statistical System and Survey Methodology

4. Mutual Technical Cooperation (2009-2012)



5. Forecasting Model Training Activity (2013-2015)



5. Forecasting Model Training Activity *(cont.)*

Activity

- To create the mid-long term supply and demand forecasting information
- To enlarge the necessary data for creating forecasting information

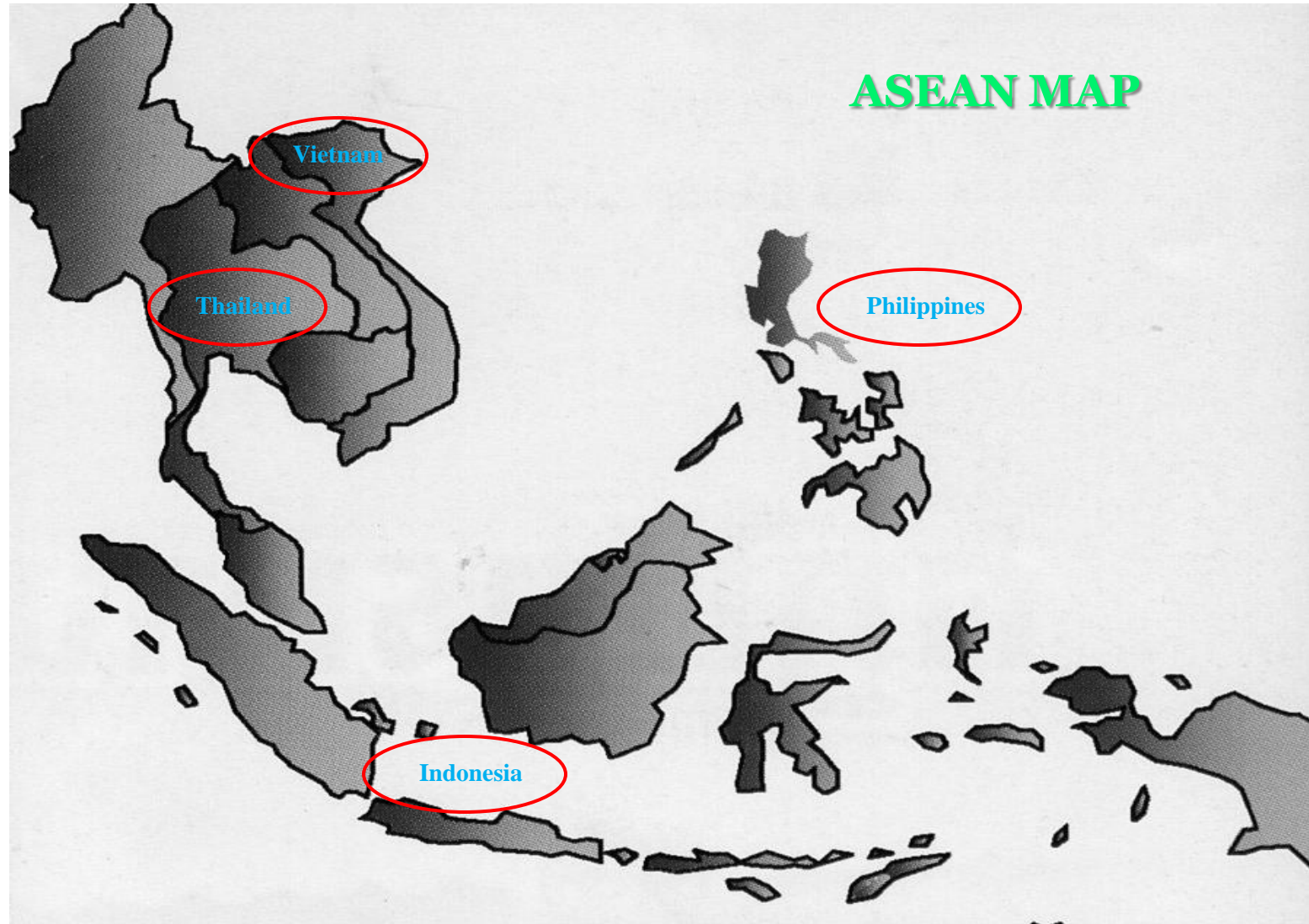
Target Commodity

- Rice, Maize, Cassava, Sugarcane, and Soybean

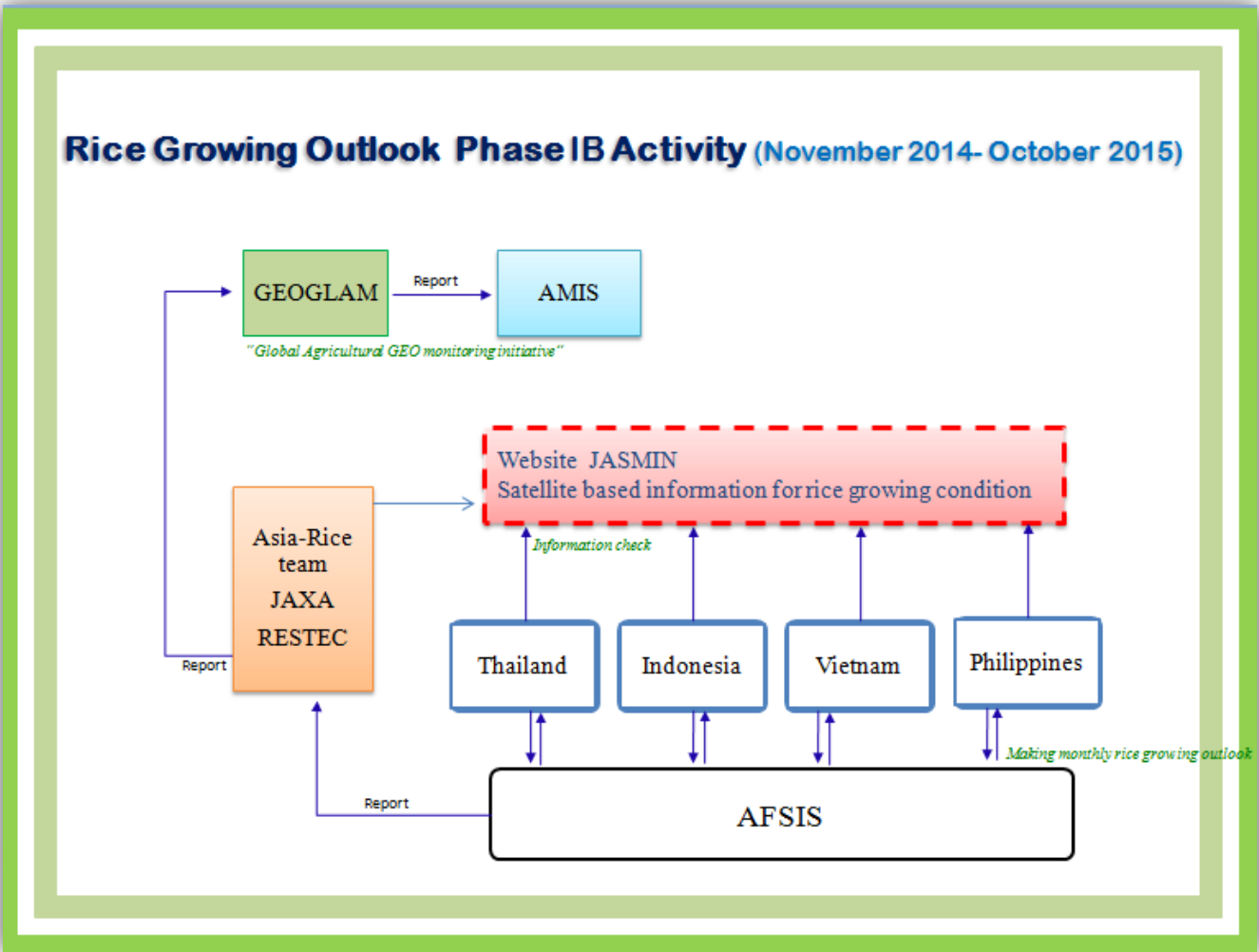
5. Forecasting Model Training Activity *(cont.)*



6. Rice Growing Outlook Activity (2013-)



6. Rice Growing Outlook Activity (cont.)



6. Rice Growing Outlook Activity (cont.)

JASMIN
- Jaxa's Satellite based MonItoring Network system for FAO AMIS outlook -

Asia-RiCE
Crop Estimation and Monitoring

GEGLAM
Global Agricultural Monitoring

Top | Image | Time Series Graph

area : Thailand | year : 2014 | month : Oct | day : Second half | << prev | next >> | latest

Precipitation	Drought Index	Soil Moisture	Solar Radiation	Surface Temperature	Vegetation Index
Precipitation anomaly	Drought Index anomaly	Soil Moisture anomaly	Solar Radiation anomaly	Surface Temperature anomaly	Vegetation Index anomaly

Drought index is provided by [Institute of Industrial Science, The University of Tokyo](#).

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JAXA Explore to Realize | EORC

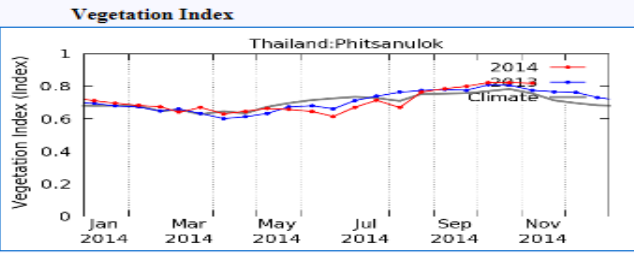
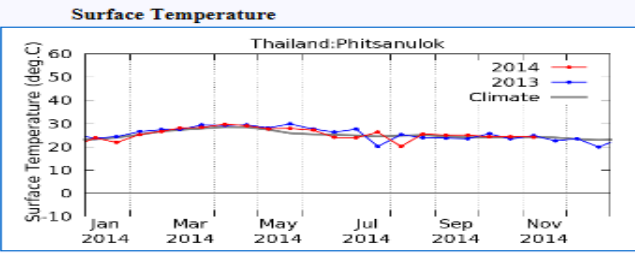
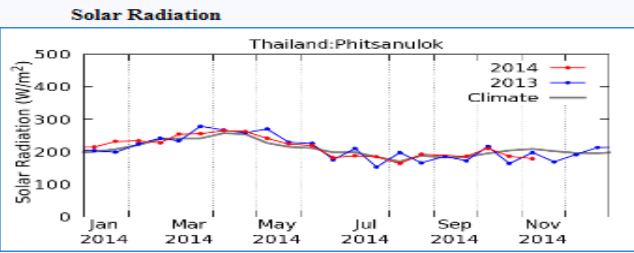
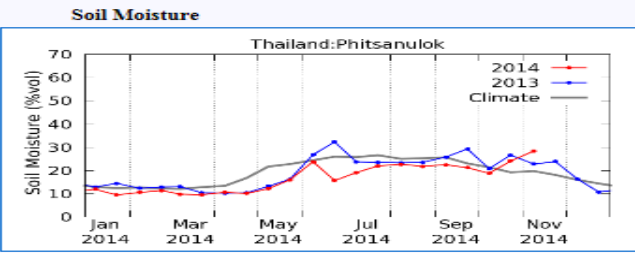
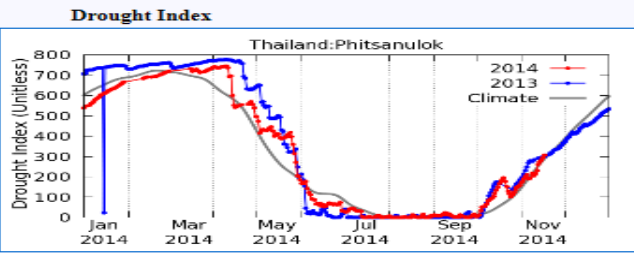
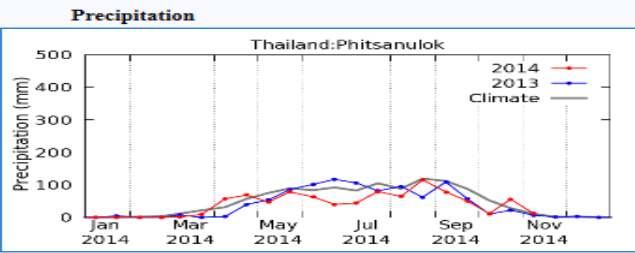
6. Rice Growing Outlook Activity (cont.)

JASMIN

- Jaxa's Satellite based Monitoring Network system for FAO AMIS outlook -



area : Thailand subarea : 4 year : 2014 << prev next >> latest



Drought index is provided by [Institute of Industrial Science, The University of Tokyo](#).

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6. Rice Growing Outlook Activity *(cont.)*

Thailand

In the Northern and Central regions have started the harvesting of major rice (Wet season rice). The number of harvested area increases than the previous month. For the whole country, the cumulative production from August until the end of October, expected to be about 4 million tons of paddy.

The yield condition of major rice is generally good. The rice in the grain filling stage has the fair growth condition for all regions. On the other hand, some areas in the Southern region, the rice growing have slight damage by a shortage of agricultural water.

Ms. Chidchanok Lekkao

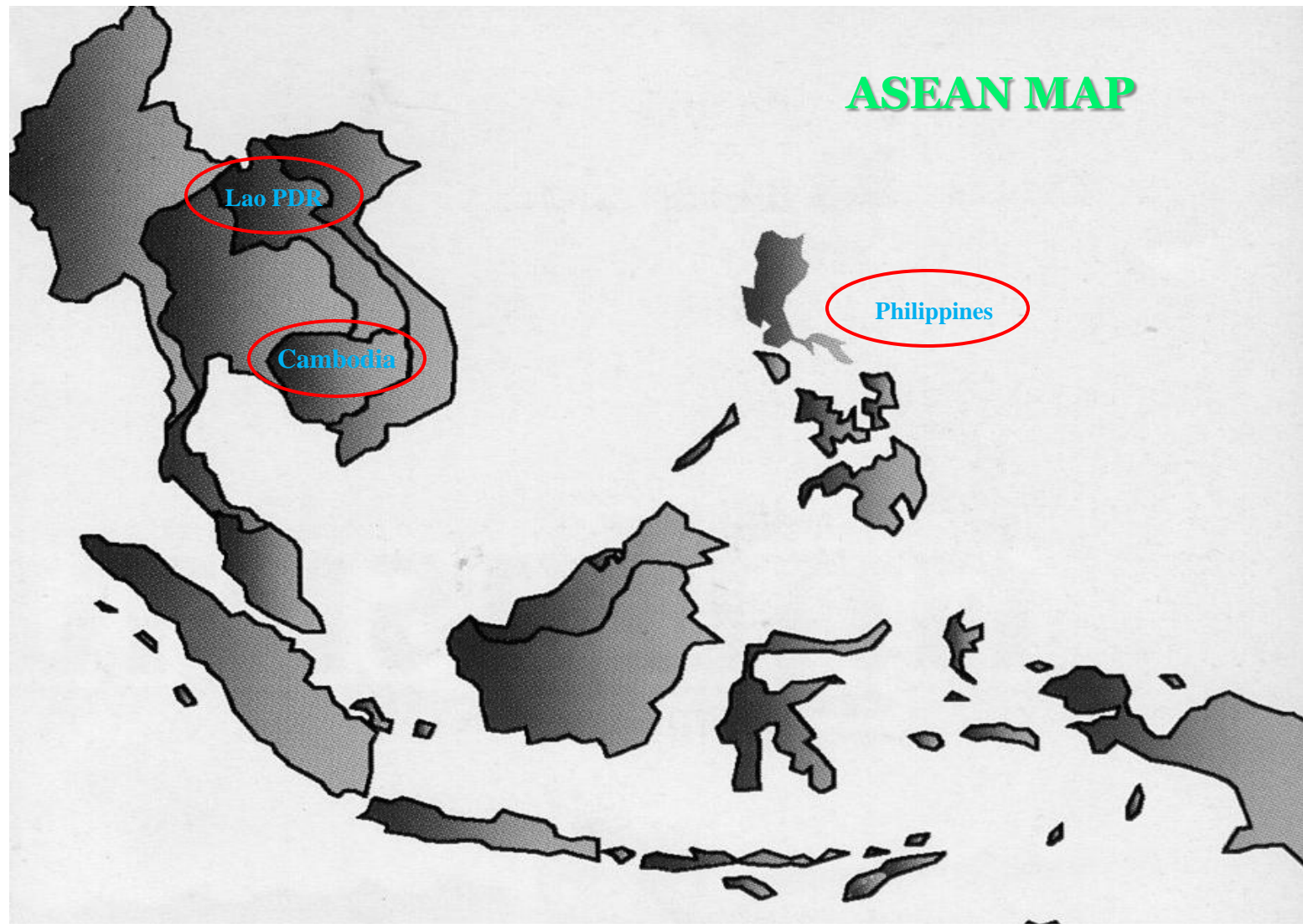
Statistician

at Office of Agricultural Economics,

Ministry of Agriculture and Cooperatives



7. Agricultural Land Information System Program (2011-)



7. Agricultural Land Information System Program *(cont.)*



7. Agricultural Land Information System Program (cont.)

The Area Estimation Formula by using ALIS

$$Y = \frac{\sum_{i=1}^{n'} x_i}{\sum_{i=1}^{n'} y_i} y$$

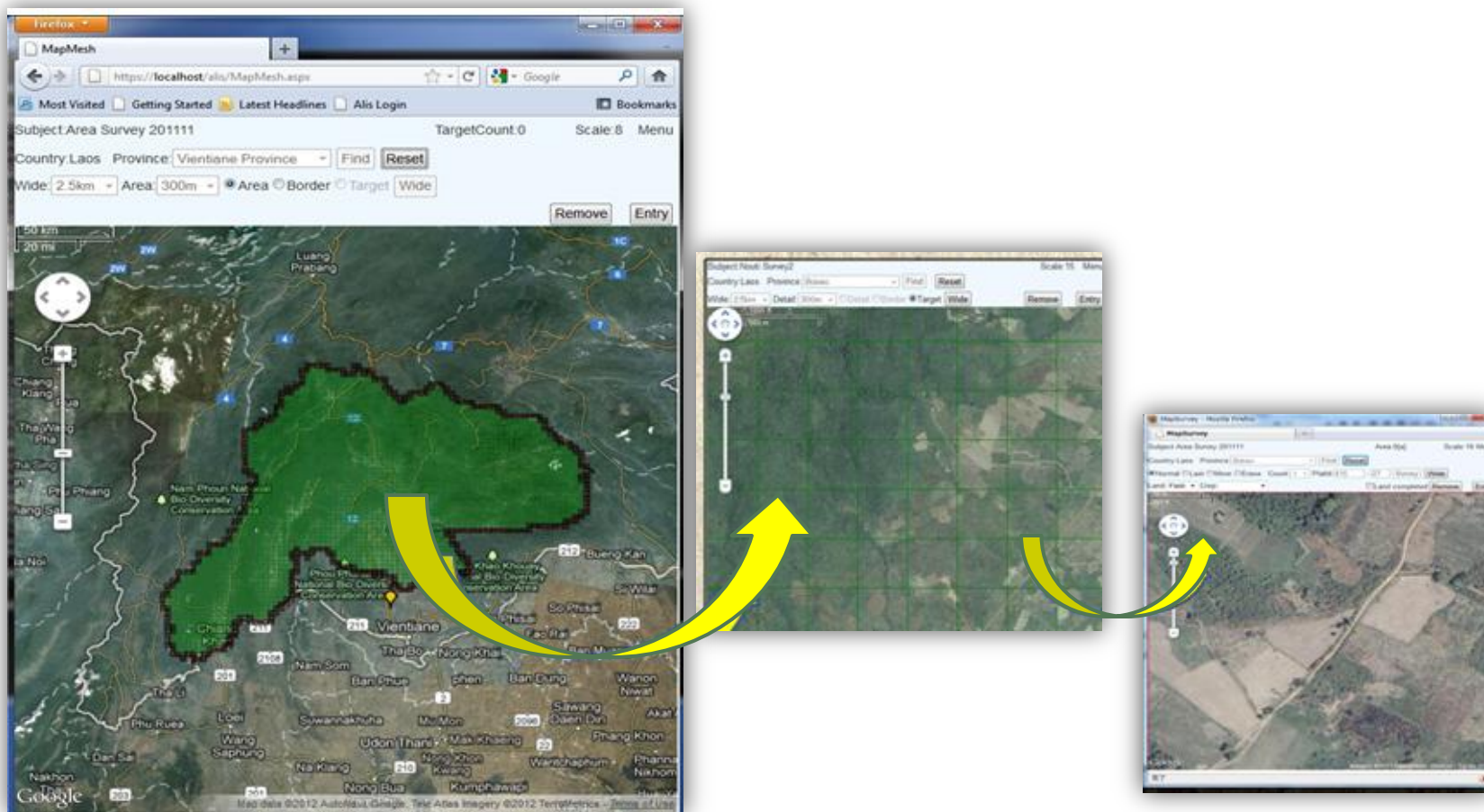
at this time $y = \frac{\sum_{i=1}^n y_i}{n} N$

Agricultural land area

- Y = Estimated agricultural land area
- n = Number of the 1st sampling
- n' = Number of the 2nd sampling
- x_i = Agriculture land area on field survey in "i" number sample of 2nd sampling
- y_i = Agricultural land area on the monitor in "i" number sample of 1st sampling
- y = Total Agricultural land area by estimation from the first sampling
- N = Number of area mesh including Agricultural land

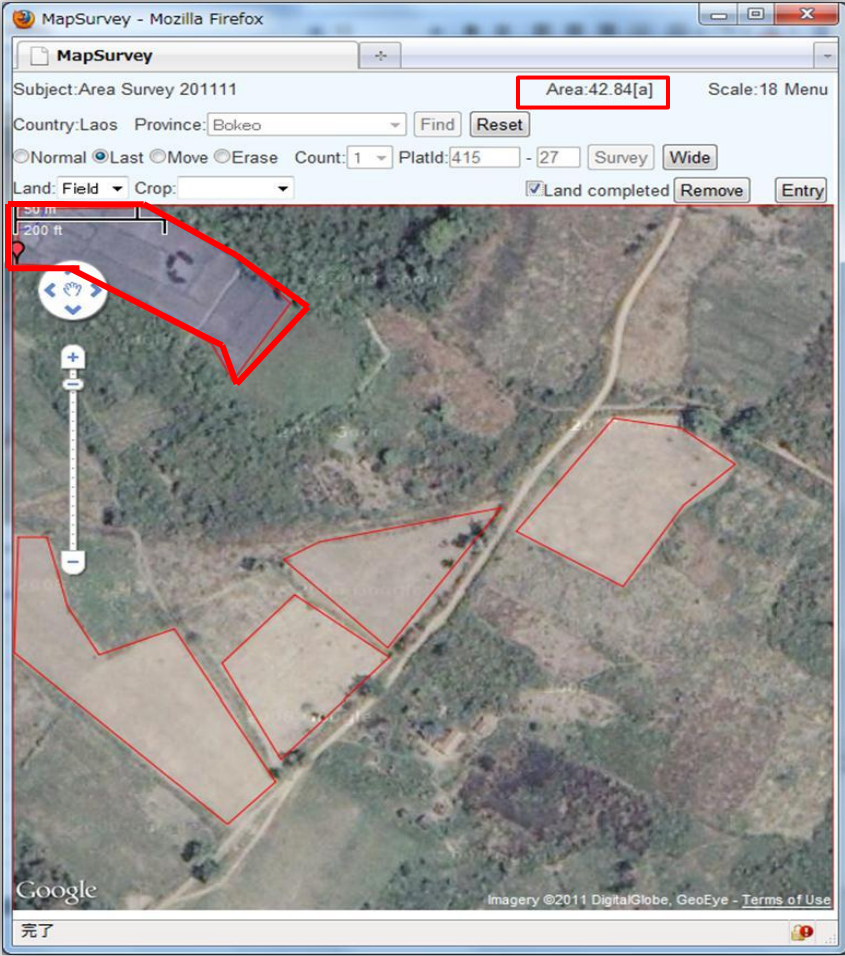
7. Agricultural Land Information System Program (cont.)

Function – 1 : Make the area framework and count the number



7. Agricultural Land Information System Program (cont.)

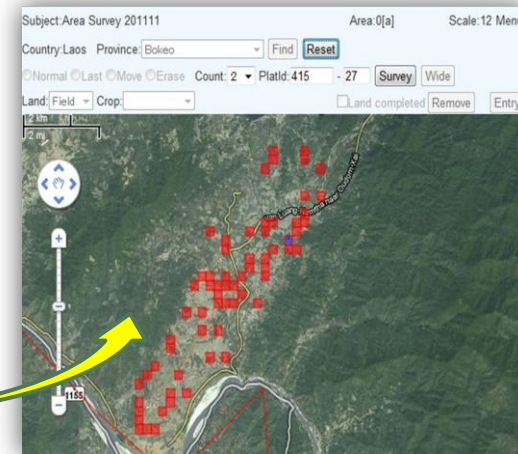
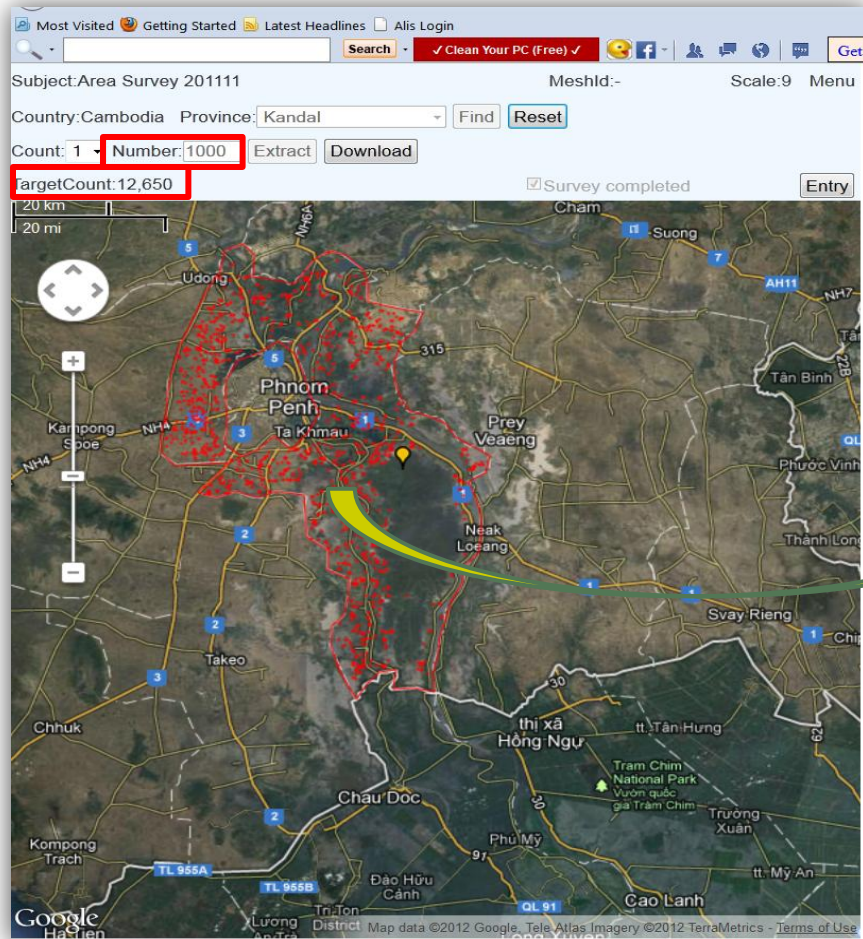
Function – 2 : Calculate the area of sample



Cereal Data Sheet							Issue date	2012/4/26
Subject: Area Survey 201111								
No	Country	Province	MeshWideld	MeshAreald	Land	Crop	Area [a]	
1	Laos	Vientiane Province	230	34	cultivated land	rice	389.84	
2	Laos	Vientiane Province	230	34	cultivated land	mais	143.34	
3	Laos	Vientiane Province	232	41	cultivated land	rice	60.38	
4	Laos	Vientiane Province	232	57	cultivated land	rice	659.49	
5	Laos	Vientiane Province	232	59	cultivated land	rice	836.80	
6	Laos	Vientiane Province	234	5	cultivated land	rice	458.94	
7	Laos	Vientiane Province	234	5	cultivated land	mais	227.56	
8	Laos	Vientiane Province	234	10	cultivated land	rice	647.04	
9	Laos	Vientiane Province	234	38	cultivated land	rice	825.13	
10	Laos	Vientiane Province	254	55	cultivated land	rice	443.86	
11	Laos	Vientiane Province	254	55	cultivated land	mais	66.76	
12	Laos	Vientiane Province	254	56	cultivated land	rice	672.95	
13	Laos	Vientiane Province	254	56	cultivated land	mais	317.84	
14	Laos	Vientiane Province	257	21	cultivated land	rice	874.07	
15	Laos	Vientiane Province	257	44	cultivated land	rice	1,001.83	
16	Laos	Vientiane Province	261	16	cultivated land	rice	532.12	
17	Laos	Vientiane Province	261	18	cultivated land	rice	548.55	
18	Laos	Vientiane Province	261	18	cultivated land	mais	48.30	
19	Laos	Vientiane Province	277	24	cultivated land	rice	1,028.56	
20	Laos	Vientiane Province	277	24	cultivated land		6.50	

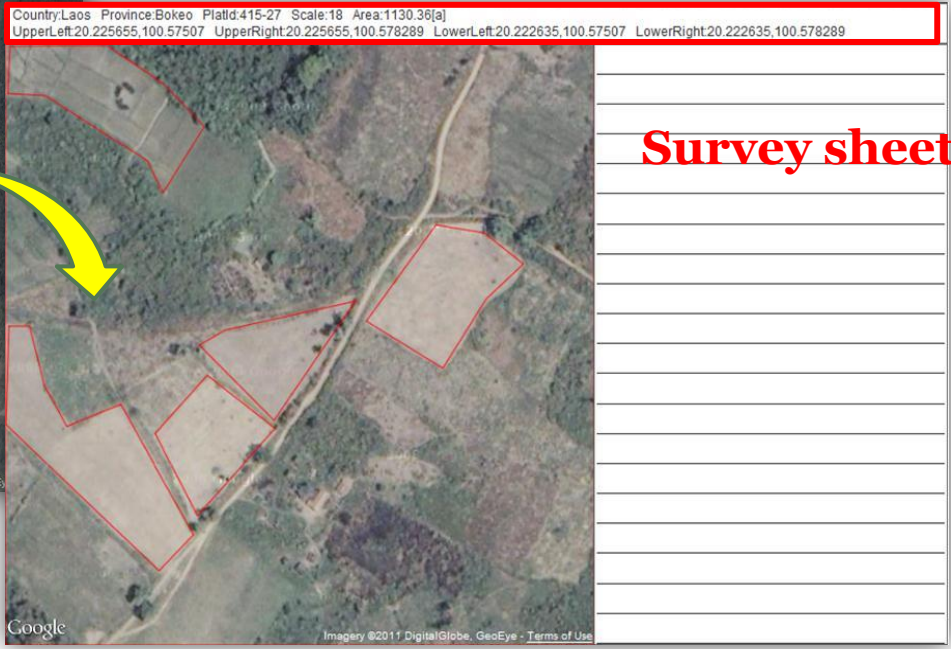
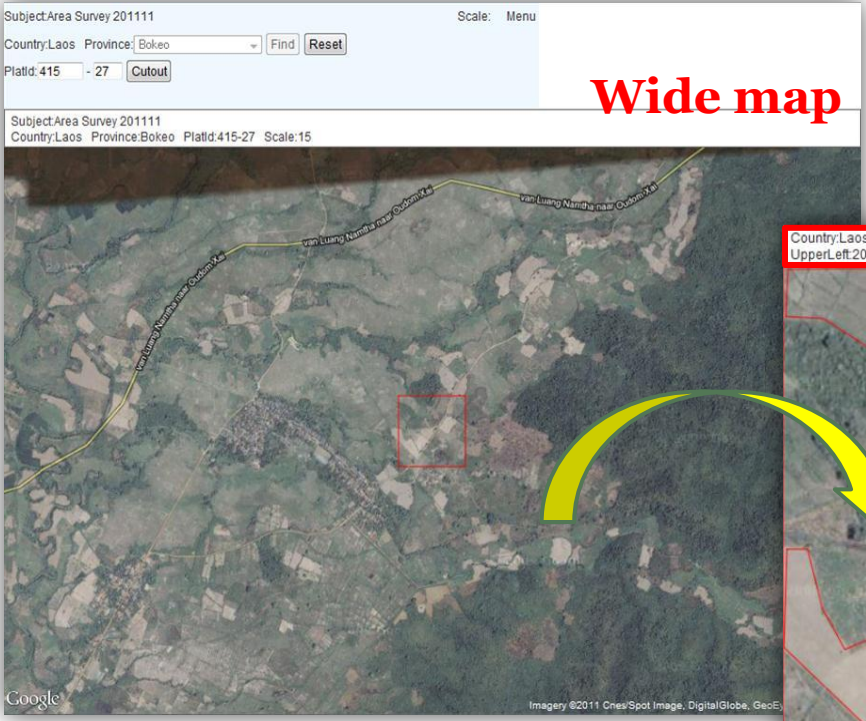
7. Agricultural Land Information System Program (cont.)

Function – 3 : Select the indicated sample randomly



7. Agricultural Land Information System Program (cont.)

Function – 4 : Support the field survey



7. Agricultural Land Information System Program (cont.)

Function – 5 : Estimate the area

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
1	Estimate Result Sheet																		Issue date	2011/10/19			
2	<<Search Condition>>																						
4	Subject	Area Survey 201111																					
5	Country	Laos																					
6	Province	Bokeo																					
7	Land	- ALL -																					
8	Crop	- ALL -																					
9	ExtractCount	2																					
10	Order	Land																					
11	<<Cultivated Land Mesh>>																						
13	[1]	Mesh in border line	1,167	mesh																			
14	[2]	Mesh on border line	12,480	mesh																			
15	[3]	All Mesh	7,407	mesh	* [3] =	[1] +	([2] / 2)																
16	<<Sampling Mesh>>																						
18	[4]	First sampling	1,000	mesh																			
19	[5]	Second sampling	300	mesh																			
20	<<Cultivated Land Area>>																						
22	[6]	First sampling on the monitor	623.11	a			* Aggregate cultivated land area on																
23	[7]	Second sampling on the monitor	184.65	a			* Aggregate cultivated land area on																
24	[8]	Second sampling in the field	2,130.91	a			* Aggregate cultivated land area in t																
25	<<Crop Planted Area>>																						
27	[9]	Cassava	170.73	a																			
28		Corn	195.90	a																			
29		Onion	241.65	a																			
30		Rice	568.56	a																			
31		Soybean	189.56	a																			
32		Sugarcane	78.92	a																			
33		Wheat	500.94	a																			
34		- Empty - Field	184.65	a																			
35	<<Estimate Cultivated Land Area>>																						
37	[10]	Simple Estimate	4,615.38	a			* [10] =	[6] / [4] * [3]															
38	[11]	Ratio Estimate	53,262.66	a			* [11] =	[8] / [7] * [10]															
39	<<Estimate Crop Planted Area>>																						
41	[12]	Cassava	4,215.32	a			* [12] =	[9] / [5] * [3]															
42		Corn	4,836.77	a																			
43		Onion	5,966.34	a																			
44		Rice	14,037.75	a																			
45		Soybean	4,680.24	a																			
46		Sugarcane	1,948.53	a																			
47		Wheat	12,368.21	a																			
48		- Empty - Field	4,559.01	a																			

<<Estimate Cultivated Land Area>>

[12]	Simple Estimate	3,332,052.85	a
[13]	Ratio Estimate	4,357,456.55	a

$$*[12] = [8] / [6] * [5]$$

$$*[13] = [10] / [9] * [12]$$

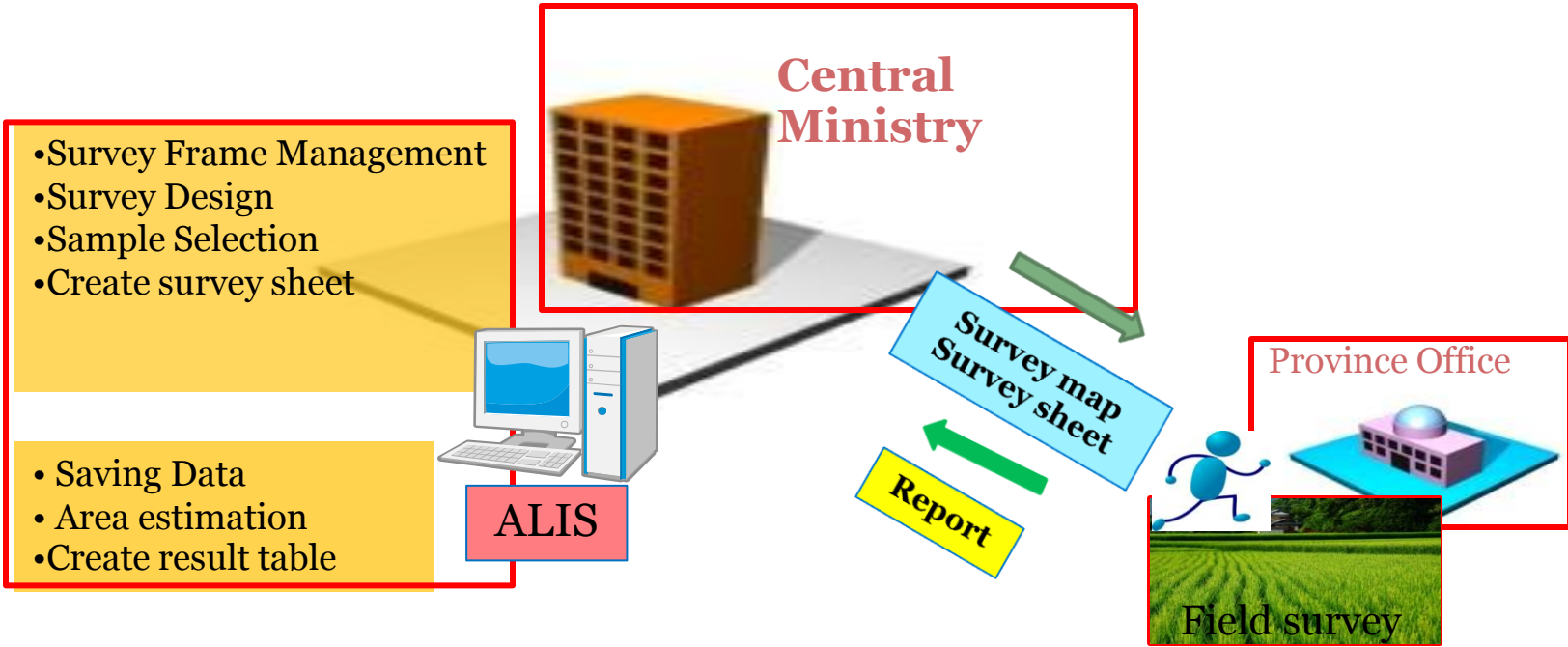
<<Estimate Crop Planted Area>>

[14]	cassava	146,174.33	a
	maize	306,652.78	a
	rice	3,630,305.25	a
	soybean	8,265.40	a
	sugarcane	26,655.75	a
	- Empty - cultivated land	7,895.80	a
		0.00	a

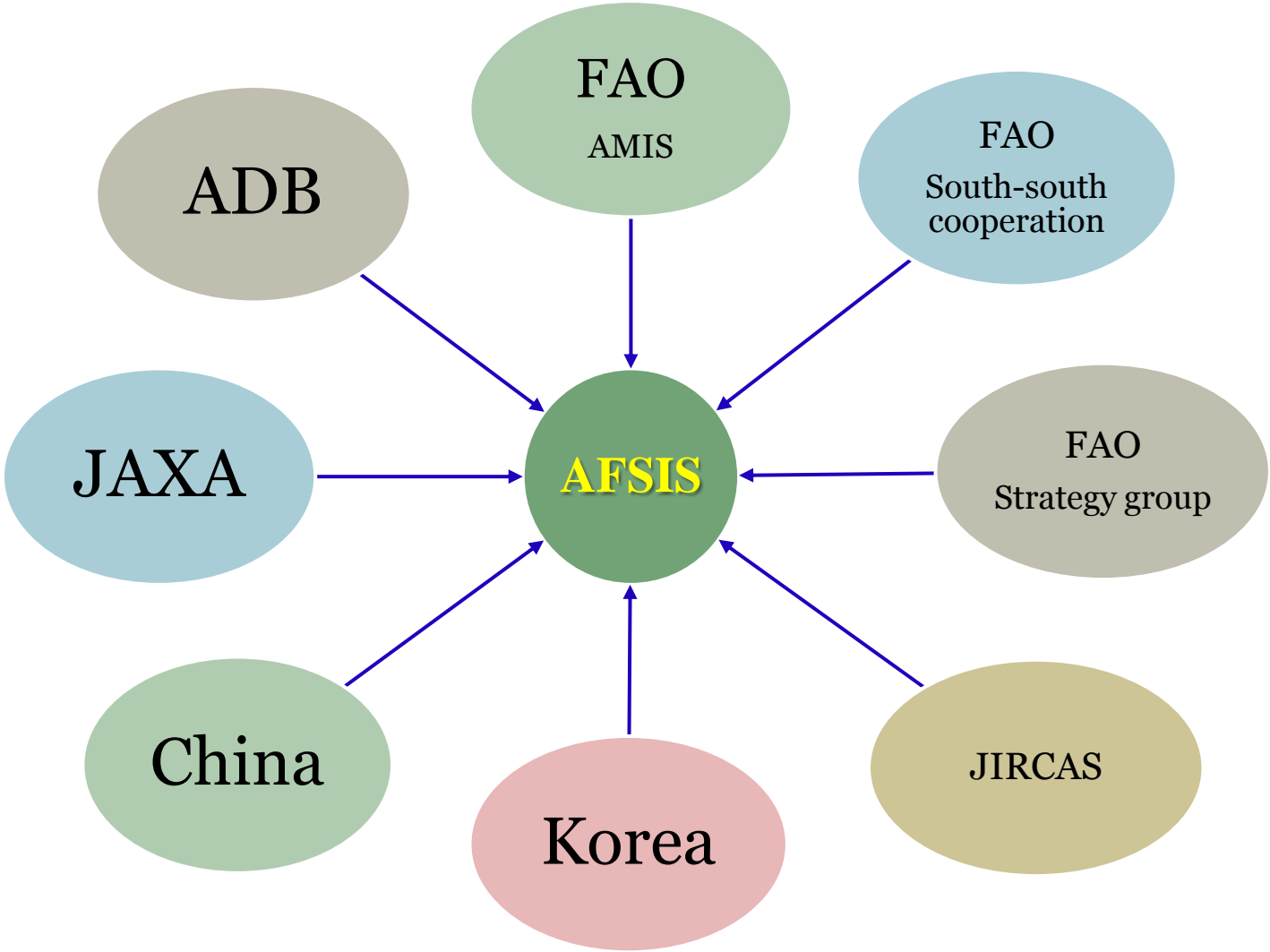
$$*[14] = [11] / [7] * [5]$$

7. Agricultural Land Information System Program (cont.)

ALIS is a Centralized Management Survey System



Cross – Cutting and Training



AFSIS Website (<http://www.afsisnc.org/>)

The screenshot displays the AFSIS website homepage. At the top, there is a green banner for the 'AFSIS Secretariat organized the 2nd AFSIS Forecasting Model Training Programme'. Below this, there are several sections: '11 MEMBERS' with a Facebook 'Like' button, 'Events' with a calendar icon, 'Publications' with a document icon, 'Statistics' with a bar chart icon, 'ALIS' with a globe icon, 'Organization' with a group of people icon, and 'Cross-Cutting' with a document icon. There is also a 'Data highlight' section with a bar chart and a 'Publication' section with three book covers. At the bottom, there are logos for the 'Federal Agriculture Department of the United Kingdom', 'MAFF' (Ministry of Agriculture, Food and Fisheries), 'ASEAN Agriculture Centre' (Center of Agricultural Cooperation), and 'APTERR'. The footer contains 'What we do', 'RSS Feed', and 'Stay Connected' with social media icons for Facebook, Twitter, YouTube, and RSS.

- Event
- Publication (*ACO and EWI*)
- Database
- ALIS
- Rice Growing Outlook
- Cross – Cutting
- Others

Thank You