Agricultural Statistics within National Statistics System in the Decentralized System

By

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National Agriculture Statistical System

decentralized   system

Ministry of Information and Communication Technology (MICT)

Ministry of Agriculture and Cooperatives   (MOAC)

National Statistical Office (NSO)

Office of Agricultural Economics. (OAE)

Census
- **Agriculture**
- **Marine Fisheries**

Intercensal Survey
- **Agriculture**
- **Marine Fisheries**

Frame

- **Agricultural Surveys**
- **Agri. Socio-Economics Survey**

2

Role of NSO *(by Statistics Act 2007)*

Statistics production (statistics & indicators)	Statistical service	Management of national statistical system

Produce basic information from
 	
 • **Censuses**
   - **Population and Housing Census**
   - **Agricultural Census**
   - **Business and Industry Census**
 	
 • **Surveys**
   - **Economic**
   - **Social**
   - **Public opinion**
	• **Advice on statistical technique**
	
	 • **Training/Study visit**
	   - **Statistics**
	   - **Computer programs**
	
	 • **Collaboration in statistical matter**
	   - **Domestic**
	   - **International**
	
	 • **Compile statistics / indicators**
	   - **from NSO**
	   - **from other agencies**
		• **Develop national statistical master plan**
		   - **develop fundamental statistics of the country for decision making** *(official statistics)*
		
		 • **Establish statistics development plan**
		   - **quality assessment**
		   - **statistical standard** *(definition, classification for occupation/industry/education, ..)*
		
		 • **Statistical Information Integration and Sharing** *(develop a centralized system)*

Responsibility of NSO : *Central state agency in charge of the technical statistics work*

3

Role &Responsibility of OAE

- **To carry out duties as stipulated by the Agricultural Economics Act and other relevant laws.**

- **To study and analyze agricultural economic situation, conduct agricultural and cooperative development plan.**

- **To study and conduct research on production economics, agricultural marketing research, farm management, agri-business, farm households, socio-economic and labor forces in agricultural sector.**

- **To study, analyze, conduct and disseminate agricultural statistic information, agricultural economic warning information.**

- **To study, analyze, monitor and evaluate progress outcome and impact of the implementation of programmes, plans, projects under provided budget.**

- **To perform any other responsibilities required by laws or by the Ministry or assigned by the Cabinet.**

Collection and Dissemination

Agricultural Statistics

by

NSO

Background

Agricultural Census | **Intercensal Survey**

1st   1950

2nd   1963

3rd   1978

                              1983 ←

4th   1993   1988

                              1998 ←

5th   2003

                              2008 ←

6th   2013

                              2018 ←

Objectives

1. To collect basic information on agricultural structure.

2. To obtain information for consturcting sampling frame for agricultural surveys.

3. To provide data at the lower levels eg. village

Coverage

All holdings engaged in agricultural activities as follows

1. Cultivating crops

2. Rearing livestock

3. Freshwater culture

4. Sea salt farm

The 2013 Agricultural Census

Collaboration with

the Ministry of Agriculture and Cooperatives

Enumeration Area (EA) of the 2013 Agricultural Census

Total 129,048 EAs

EA with agricultural holding 87,434 EAs

EA without agricultural holding 41,614 EAs

EA with agri. holding ≤ 20 holdings 15,582 EAs (NSO interviewers)

EA with agri. holding > 20 holdings 71,852 EAs (DAE interviewers)

EA with marine fishing/aquaculture 438 EAs (NSO interviewers)

EA without marine fishing/aquaculture 41,176 EAs (not collect data)

10

The 2013 Agricultural Census

Data Collection in May 2013 by Tablet

Schedules

2012 Planing & Preparing
(budget, questionnaire, legislation,…)

2012 Pilot survey (2 provinces)

2013 Field Operation

Data processing
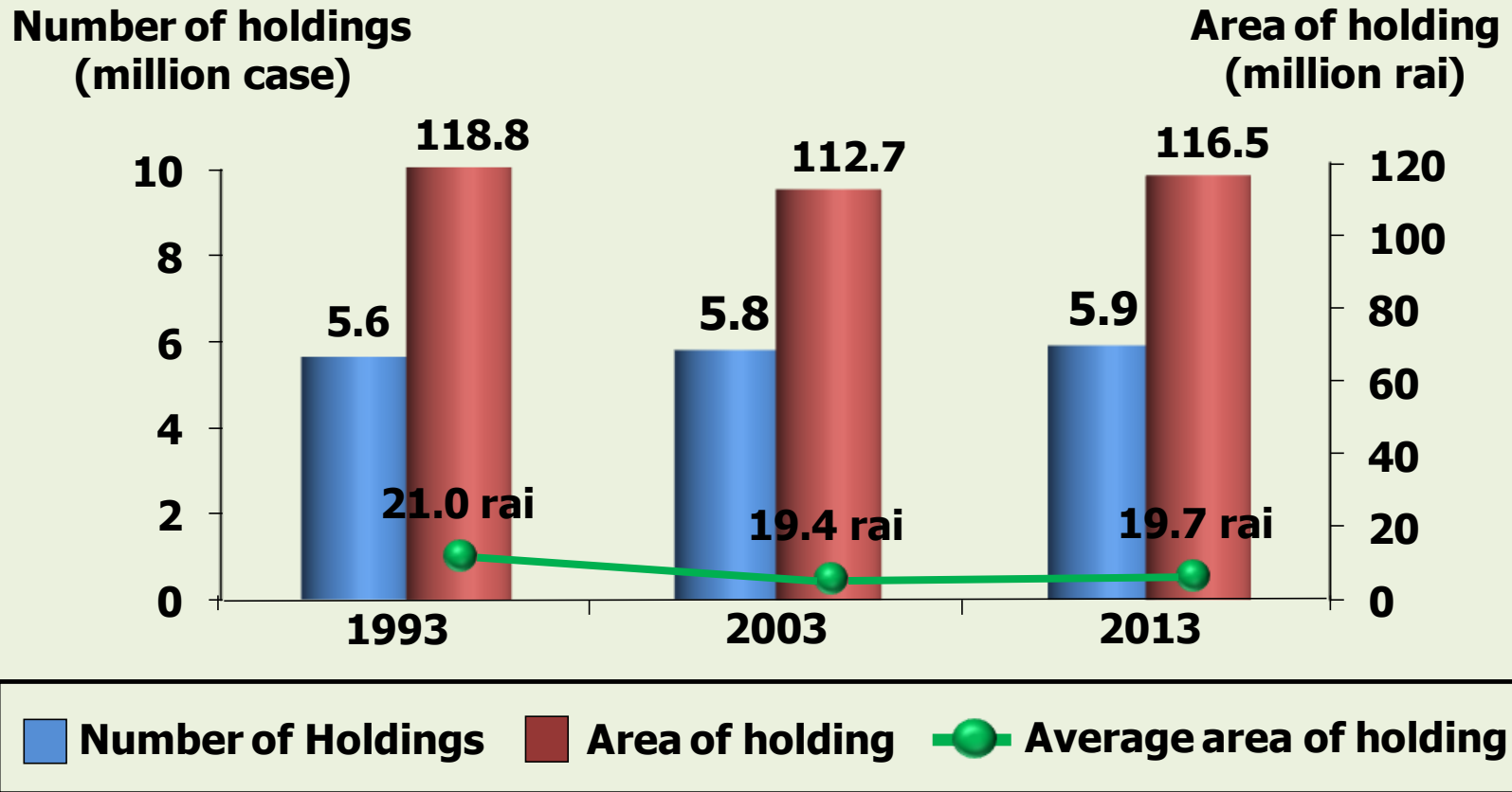
Preliminary report (Listing form)

Advanced report (Enumeration form 1%)

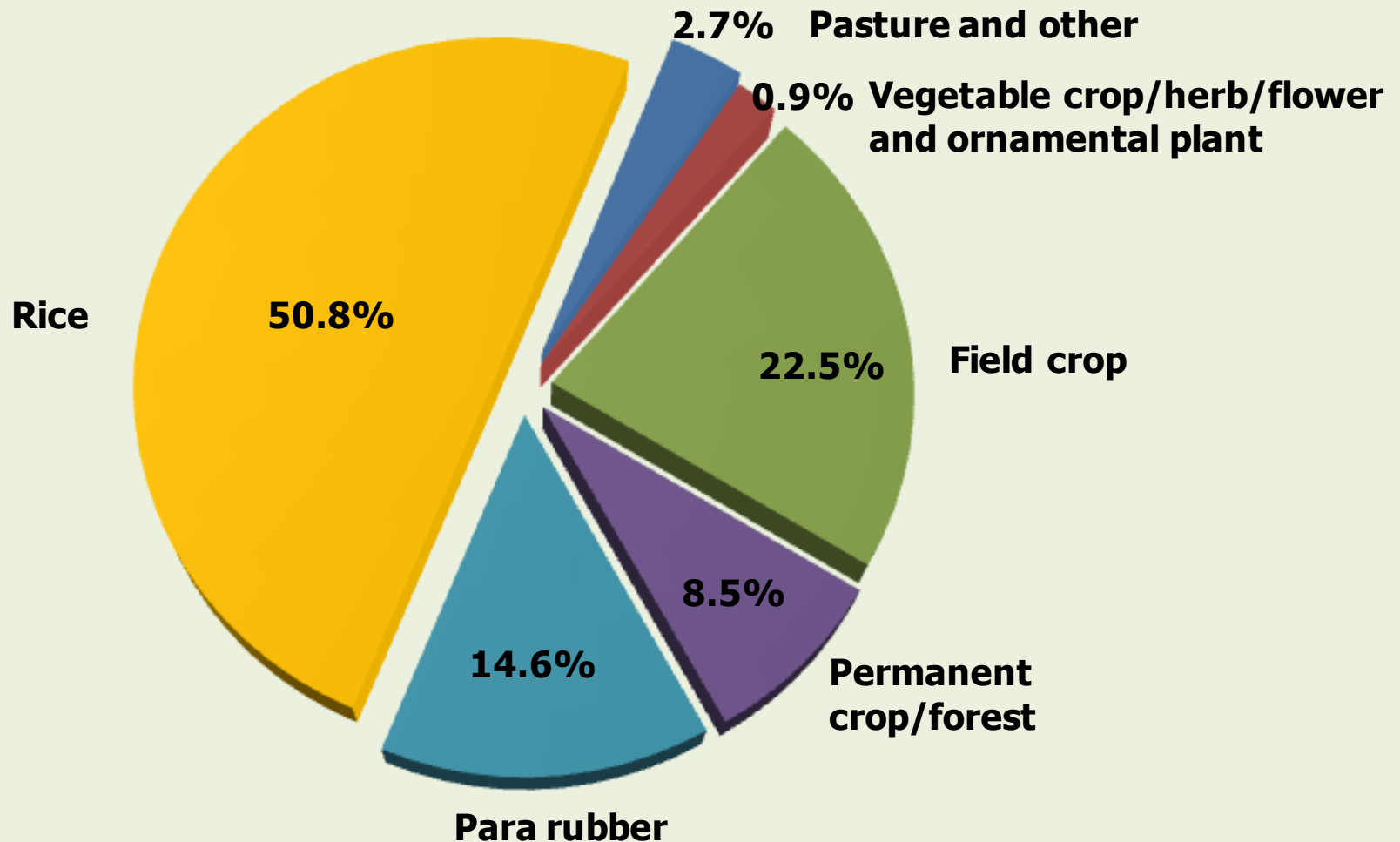**2014 Final report (Enumeration form 100%)**

(77 provinces , 4 regions , whole kingdom)
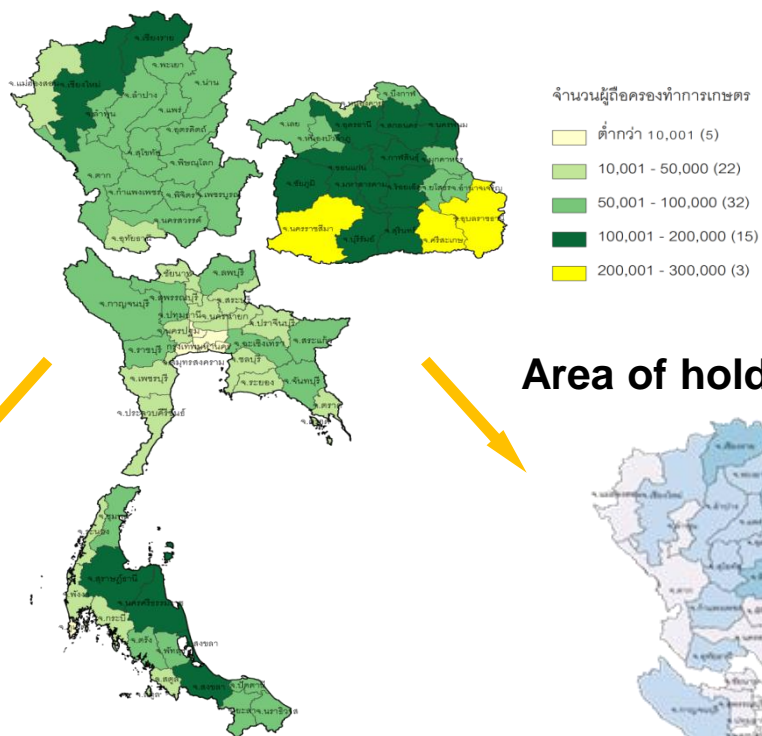
Some main findings
from the 2013 Agricultural Census
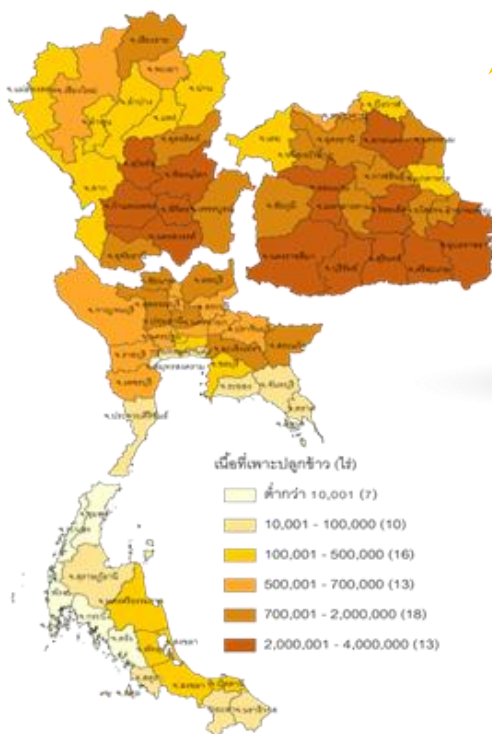
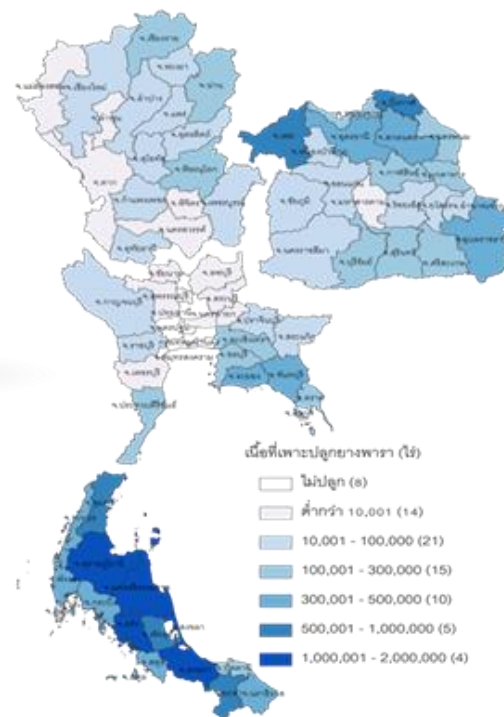## Comparing number and area of holdings (1993 – 2013)

**Number of holdings
(million case)**

**Area of holding
(million rai)**

Legend:
- Number of Holdings
- Area of holding
- Average area of holding

Data shown:
- 1993: Number of Holdings 5.6, Area of holding 118.8, Average area of holding 21.0 rai
- 2003: Number of Holdings 5.8, Area of holding 112.7, Average area of holding 19.4 rai
- 2013: Number of Holdings 5.9, Area of holding 116.5, Average area of holding 19.7 rai

Area of holding by land use

Number of agricultural holdings by province

จำนวนผู้ถือครองทำการเกษตร

- ต่ำกว่า 10,001 (5)
- 10,001 - 50,000 (22)
- 50,001 - 100,000 (32)
- 100,001 - 200,000 (15)
- 200,001 - 300,000 (3)

Area of holding under rice

เนื้อที่เพาะปลูกข้าว (ไร่)

- ต่ำกว่า 10,001 (7)
- 10,001 - 100,000 (10)
- 100,001 - 500,000 (16)
- 500,001 - 700,000 (13)
- 700,001 - 2,000,000 (18)
- 2,000,001 - 4,000,000 (13)

Area of holding under para rubber

เนื้อที่เพาะปลูกยางพารา (ไร่)

- ไม่ปลูก (8)
- ต่ำกว่า 10,001 (14)
- 10,001 - 100,000 (21)
- 100,001 - 300,000 (15)
- 300,001 - 500,000 (10)
- 500,001 - 1,000,000 (5)
- 1,000,001 - 2,000,000 (4)

Collection and Dissemination

Agricultural Statistics

by

OAE

Collection & dissemination Agricultural Statistics by OAE

1. **Survey**

2. **Report**

3. **Forecasting**

4. **Remote sensing and GIS**

1. Survey

➢ **Crops production**

➢ **Livestock production**

➢ **Fisheries production**

➢ **Cost of production**

➢ **Agri. Socio-Economics**

➢ *Crop production Survey*

: 27 commodities; Rice, Cassava, Soybean, Pineapple, Maize, Onion, Potato, Longan, Durian, Mangosteen, Oil Palm, Rubber etc.

➢ *Livestock production survey*

: 9 commodities; Swine, Broiler, Layer, Native Chicken, Dairy Cow, Cattle, Buffaloes, Laying duck and Duck

➢ *Fisheries production Survey*

: 4 Commodities; Jumbo tiger prawn, Vannamei prawn, Nile tilapia and Thai red Tilapia

Frequency : Annual survey

➤ *Cost of production*

: *37 commodities*

Rice, Maize, Cassava, Oil Palm, Rubber etc.

: *Commodities varied from year by year.*

: *Wage rate survey every quarter.*

➤ *Agri. Socio-economics*

: **multi purpose**

Characteristics of farm household, Land holding, Land utilization, Income and Expenditure etc.)
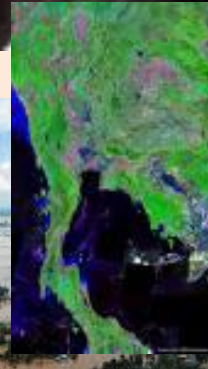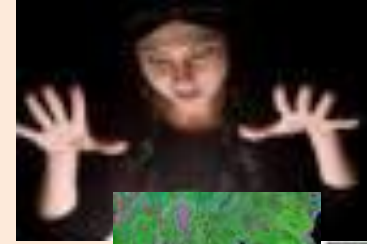
Frequency : Annual survey

2. Report

- Items : *Farm gate Price,*

  Spot Price

- Level : *grade, provincial*

- Frequency : *daily, weekly*

3.Forecasting

Methodology : Econometrics model

Forecasting Data

Typing : Quarterly & Outlook forecasting data

Items

Crops: *production, area, yields*

crop calendar

Livestock: *production, inventory,*

calendar year

Fisheries: *Production, area, yield*

calendar year

Quarterly Forecasting data : 28 commodities

➢**Field crop (6) :** *Major Rice, Second Rice, Maize, Soybean, Pineapple, Cassava.*

➢**Perennial crop(13):** *Longan, Lychee, Durian, Mangosteen, Rambutan, Longong, Oil Palm, Natural Rubber, Coffee, Onion, Shallot, Garlic, Potato.*

➢**Livestock(5) :** *Broiler, Layer, Cattle, Diary Cow, Swine.*

➢**Fisheries(4)** : *Jumbo tiger prawn, Vannamei prawn, Nile tilapia and Thai red Tilapia*

Frequency : *Quarterly*

Level: Provincial, National

Outlook : 70 commodities

➤**Field crop(17) :** *Major Rice, Second Rice, Maize, Soybean, Pineapple, Cassava etc.*

➤**Perennial crop (22) :** *Longan, Durian, Rambutan, Mangosteen, Oil Palm, Natural Rubber, Coffee, Onion, Shallot, Garlic, Potato etc.*

➤**Vegetables(24):** *Onion, Shallot, Garlic, Potato etc.*

➤**Flower(1):** *Orchid*

➤**Livestock (9):** *Broiler, Layer, , Swine, Cattle, Diary Cow.*

➤**Others :** *Fisheries*

Frequency: *semi-annually*

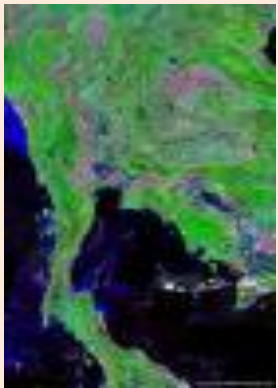**Level :** *National*

4.Remote sensing & GIS

➢ *Composed of Sampling*

Survey Technique and Geo-Information

Technology

➢ **To estimate the most correctly data**

of planted area and production

of crops.

Current Situation of National Statistical System

Thailand National Statistical System ➡️ Decentralized Statistical System

Too many sources of data collection

⬇️

Too many data produced

⬇️

Could not find the right source/kind of data
*(duplication, omission,
quality & statistical standards problems)*

⬇️

Could not do any analysis or make decision for effective
national policies formulation & for urgent crisis
(user confusion, coordination problems)

⬇️

Due to data are not being
integrated and linked

Amendment of Statistics Act in 2007
(1952 → 1965 → 2007)

- Thailand National Statistical System is still Decentralized System, but with clear roles, function and relation of various agencies in the National Statistical System

- To empower NSO to do better coordination roles for effective management of National Statistical System

- Statistical Data of Government organizations will be linked and used integratedly

Strategy in Development of Thailand National Statistical System

- *Official Statistics* concept be used as reference data of the country

- Consideration of *Official Statistics* be done by each sector

- Development of system to link, integrate and share statistical data from government agencies

- Promote and support the use of statistical data

- Improvement of quality of *Official Statistics*

Vision and Strategy of Thailand Statistical Master Plan 2011-2015

Vision: "Thailand has a statistical system that drives all the agencies together. Thailand will have the official statistics to develop country."

Strategy for the development of statistical systems:

Strategy #1 Efficient management of the statistical system
   Goals : 1. Thailand has Official Statistics.
            2. Thailand has a statistical system of high standard and efficiency.
            3. Thailand has a system to develop statistical teams and units.
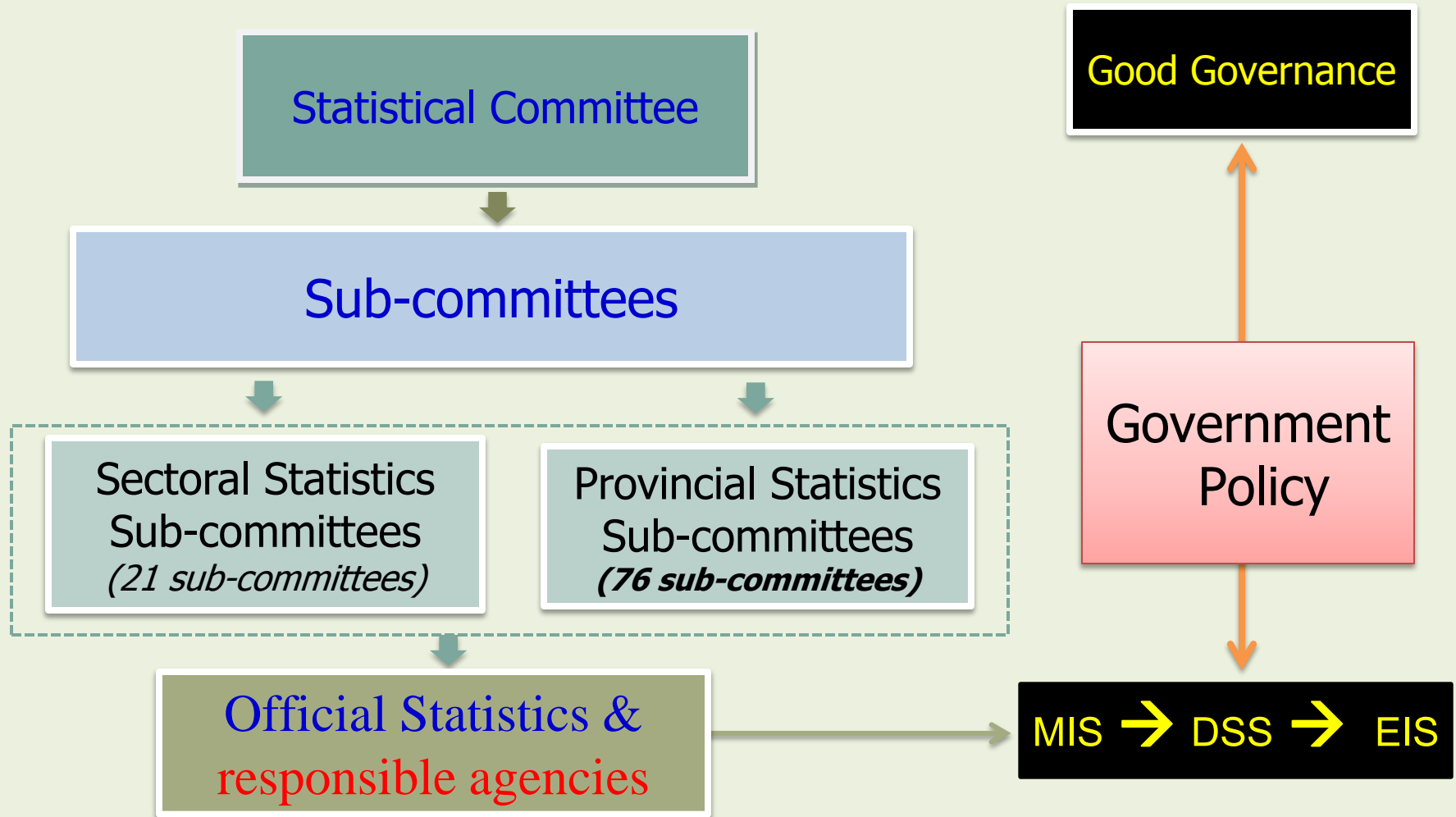
Strategy #2 Standardized statistical production
   Goals : 1. Thailand has good statistical practices.
            2. Thailand produces statistical data in accordance with the quality standards.

Strategy #3 Equal access to statistical data
   Goals : 1. People have equal access to statistical data.
            2. Official Statistics are widely used.

Thailand Statistical Master Plan: Principal Idea

Statistical Committee

↓

Sub-committees

↓ ↓

Sectoral Statistics Sub-committees
(21 sub-committees)

Provincial Statistics Sub-committees
(76 sub-committees)

↓

Official Statistics & responsible agencies

→ MIS → DSS → EIS

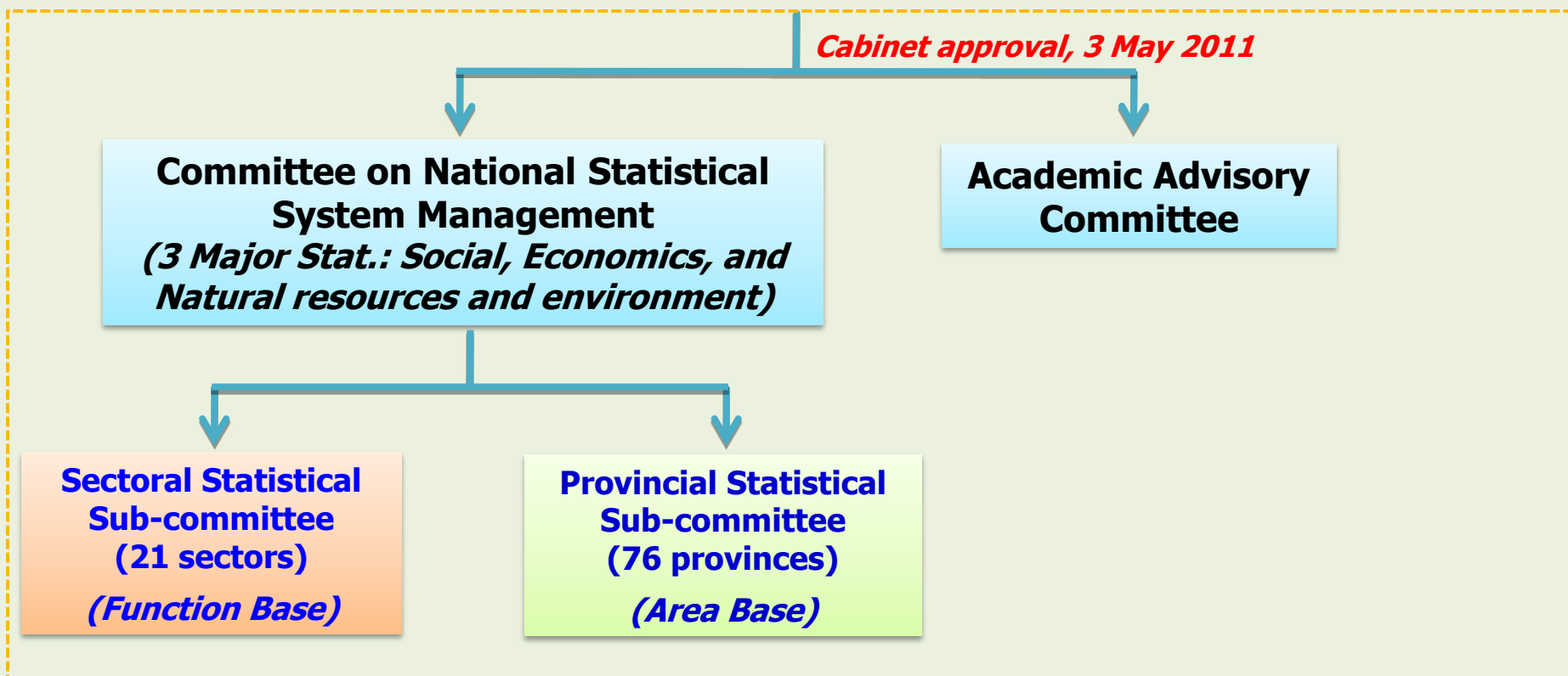Good Governance

↑

Government Policy

↓

Official Statistics Concept

" Key statistical items in each sector that are commonly used for national development planning and monitoring, and ensure that Official Statistics (OS) are produced and disseminated periodically, timely, and high quality"

The Implementation of Thailand Statistical Master Plan 2011-2015

Cabinet approval, 28 Dec 2010

Cabinet approval, 3 May 2011

Committee on National Statistical System Management
(3 Major Stat.: Social, Economics, and Natural resources and environment)

Academic Advisory Committee

Sectoral Statistical Sub-committee (21 sectors)

(Function Base)

Provincial Statistical Sub-committee (76 provinces)

(Area Base)

Constructing the country statistical database from registered base data, survey/census data
- have official statistics; key statistics items in each sector with quality, completeness and no duplication, host agency of official statistics will be clearly identified
- all levels of administrators will have statistical data for decision making

Implementing TSMP: Role & Responsibility

Cabinet

Committee on National Statistical System Management

- <u>Chair</u>: ICT minister
- <u>Members</u>: Perm Sec-Gen of line Ministries
- <u>Secretariat</u>: NSO (DG)
- <u>Duty</u>: - consider & approve framework of TSMP
  - report progress to Cabinet

Sectoral Statistical Sub-committee (21 sectors)

Provincial Statistical committee (76 provinces/18 provincial clusters)

- <u>Core component</u>:
  1) Responsible Ministries serves as Chairman (Perm Sec-Gen) and Secretary
  2) NSO serves as Vice Chairman and Assistant Secretary
  3) Agencies responsible for OS and other concerned
- <u>Duty</u>: - identify OS and responsible agencies
  - outline measures for quality development of OS
  - outline measures to enhance the capacity of Statistical units and necessary resources
  - implement the plan
  - prepare annual report to the above committee

- <u>Chair</u>: Provincial Governor
- <u>Members</u>: Representatives from concerned statistical units
- <u>Secretariat</u>: NSO provincial officer
- <u>Duty</u>: - identify OS and responsible agencies
  - investigate and approve in quality assurance
  - outline measures for quality development of OS
  - outline measures to enhance the capacity of Statistical units and necessary resources
  - implement the plan
  - prepare annual report to the above committee

Implementing TSMP: 21 Sectoral Statistics

Social Statistics

1. Demographic, population and housing statistics
2. Labour statistics
3. Education statistics
4. Culture statistics
5. Health statistics
6. Social security statistics
7. Gender statistics
8. Statistics of household income and expenditure
9. Justice and other social statistics

Economic Statistics

1. National accounts
2. Agricultural statistics
3. Industrial statistics
4. Energy statistics
5. Trade statistics and price statistics
6. Transportation statistics
7. Information communication and technology statistics
8. Tourism statistics
9. Money, finance and insurance statistics
10. Fiscal statistics
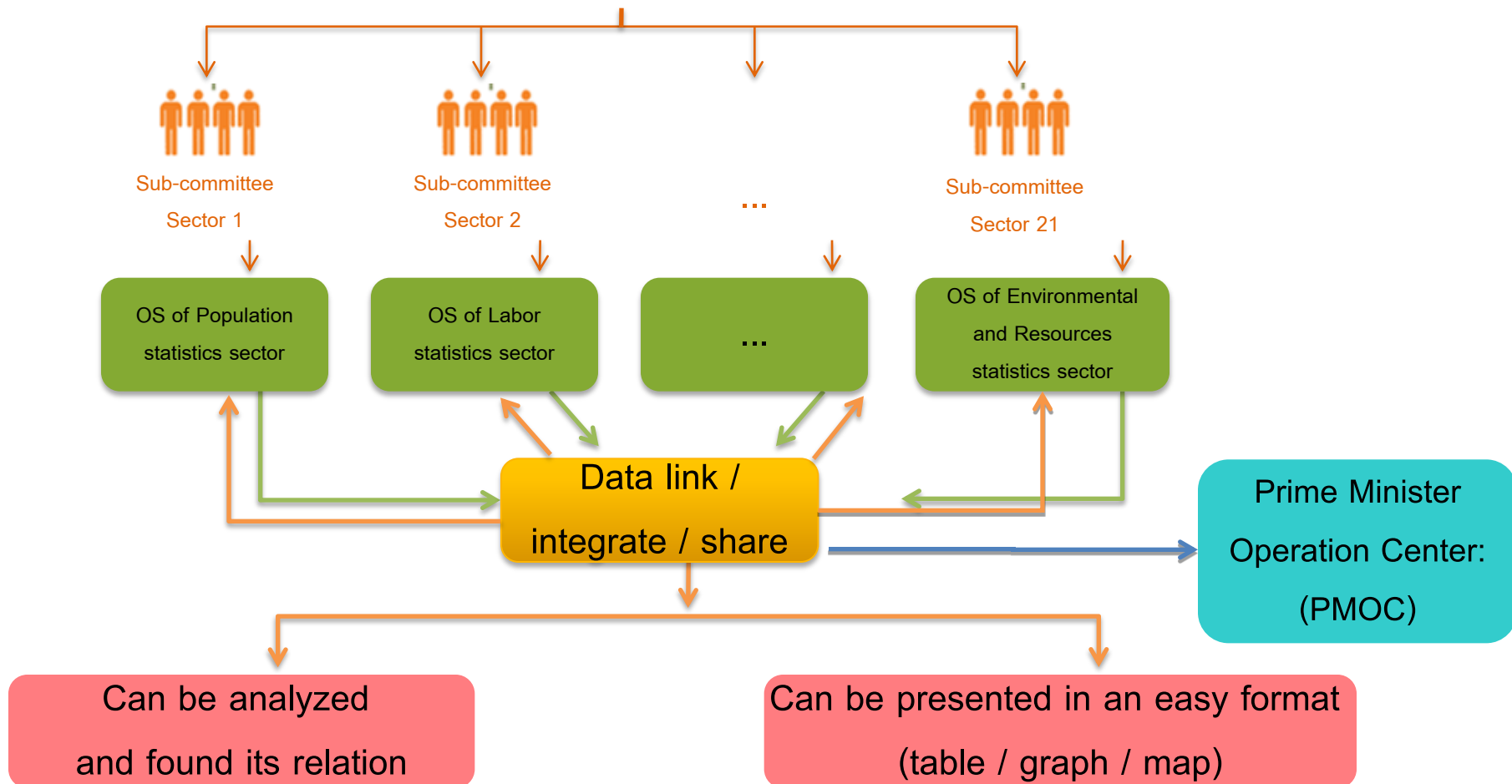11. Statistics of science and technology

Natural Resources and Environment Statistics

1. Natural resources and environment statistics (including Meteorology statistics)

Implementing TSMP: Function Base Approach

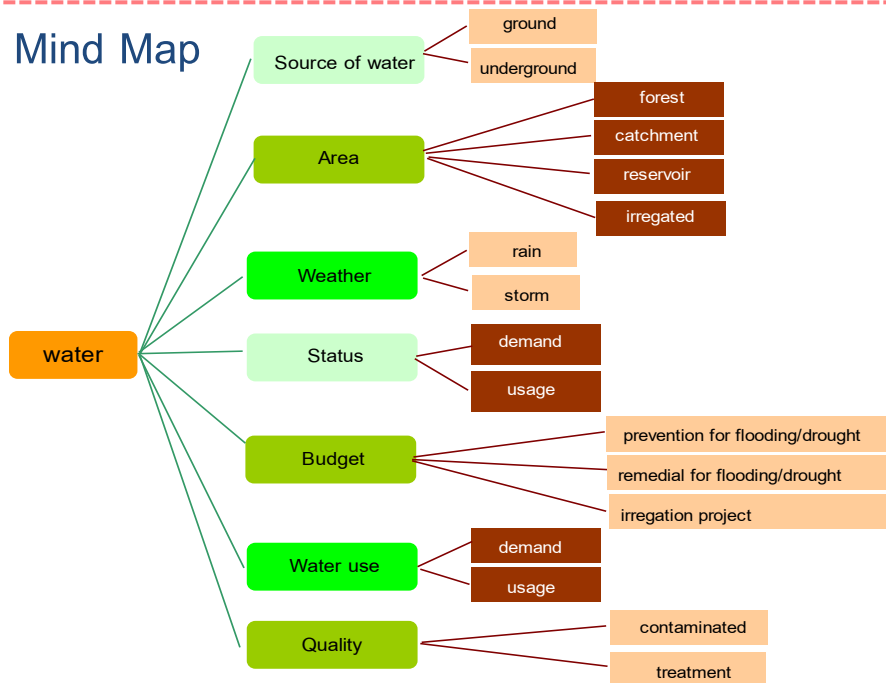Sectoral Committee on Statistics Data (21 sectors)

Sub-committee Sector 1

Sub-committee Sector 2

...

Sub-committee Sector 21

OS of Population statistics sector

OS of Labor statistics sector

...

OS of Environmental and Resources statistics sector

Data link / integrate / share

Prime Minister Operation Center: (PMOC)

Can be analyzed and found its relation

Can be presented in an easy format (table / graph / map)

Data link / integrate / share

Can be analyzed and found its relation

Can be presented in an easy format (table / graph / map)

1. Mind Map

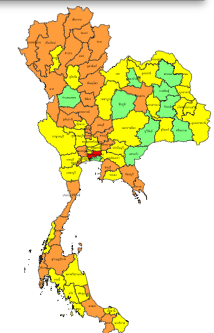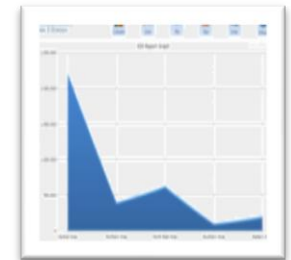
- water
  - Source of water
    - ground
    - underground
  - Area
    - forest
    - catchment
    - reservoir
    - irregated
  - Weather
    - rain
    - storm
  - Status
    - demand
    - usage
  - Budget
    - prevention for flooding/drought
    - remedial for flooding/drought
    - irregation project
  - Water use
    - demand
    - usage
  - Quality
    - contaminated
    - treatment

2. Function ; $Y = a + bx_1 + cx_2 + \ldots$

Evidence base for decision making

	2545	2552	2554
Gini Coefficient (5 groups)	0.403	0.385	0.376
Monthly current income per capita	3,844	6,219	7,226

Sectoral Statistical Sub-committee and Working Group for Agricultural Statistics
(as coordinated with Ministry of Agriculture& Cooperatives)

Chairman: Permanent Secretary of MOAC

Vice chairman: Deputy Permanent Secretary (Administration) of MOAC
and Deputy Director-General of NSO

Committees: Representatives from major government agencies related to
agricultural statistics (producers and users) such as NESDB,
Office of Agricultural Economics, Department of Fishery,
Department of Land Development, Department of Agricultural
Extension, Department of Livestock, Department of Cooperatives
Extension, NSO, etc.

Secretariat: Representatives from Centre for Agricultural Information, OAE
and National Statistical Office

Working group: - Chaired by the secretariat of the sub-committee,
- Committees comprise of representatives from agencies related to
agricultural statistics (same as those agencies in the sub-committees
but the working team are staffs who work directly with agriculture data)

Implementing TSMP: Way Forward

❑ The Cabinet approval on 4 June 2013;

   - merging statistical development plan with government agencies action plan

   - maintaining manpower related to statistical staff

   - flexibility in mobilizing budget of government NSO will conduct the assessment of OS

❑ NSO will develop the centralized system for statistical service (including the development of the input, searching and presentation feature) such as Data Networking, for which the statistics is used worthwhile

❑ NSO will provide the capacity building programs;

   1) a good practice for the production of statistics

   2) the use of statistical service system

Thank You

ขอบคุณค่ะ

Khob khun kha