COUNTRY REPORT

**AGRICULTURAL DATA AND
INFORMATION SYSTEM
IN INDONESIA**

Regional Workshop on Statistical Literacy:

Increasing Effective Use of Agricultural and Rural Statistics

13-17 July 2015

Daejeon, Republic of Korea

AGENDA

I.   Introduction

II. Ministry of Agricultural Organization and Agricultural Statistic Organization

III. Agricultural Data Management

IV. Increasing Statistical Literacy :

    A. Input (Database, publication, data collection methodologies, e-form and IT services)

    B. Target Groups

    C. Self Assessment

V. Communication Practices

I. INTRODUCTION

INDONESIA IN THE WORLD MAP

INDONESIA

- ✓ Area : Land 1.9 millions Sq. Km
  Sea 8 millions Sq. Km (including EEZ)

- ✓ Population : 237.64 Millions (2010)
  ±60% people live at rural areas
  ±61,2% employment at rural areas work at agricultural sector

- ✓ Location : $6^0 08^1$ North - 11^0 South
  $94^0 45^1$ - 141^0 longitude

- ✓ Season : Dry Season ; April - September
 Wet Season; October - March.

II. MINISTRY OF AGRICULTURAL (MOA) ORGANIZATION AND AGRICULTURAL STATISTICS ORGANIZATION

MOA

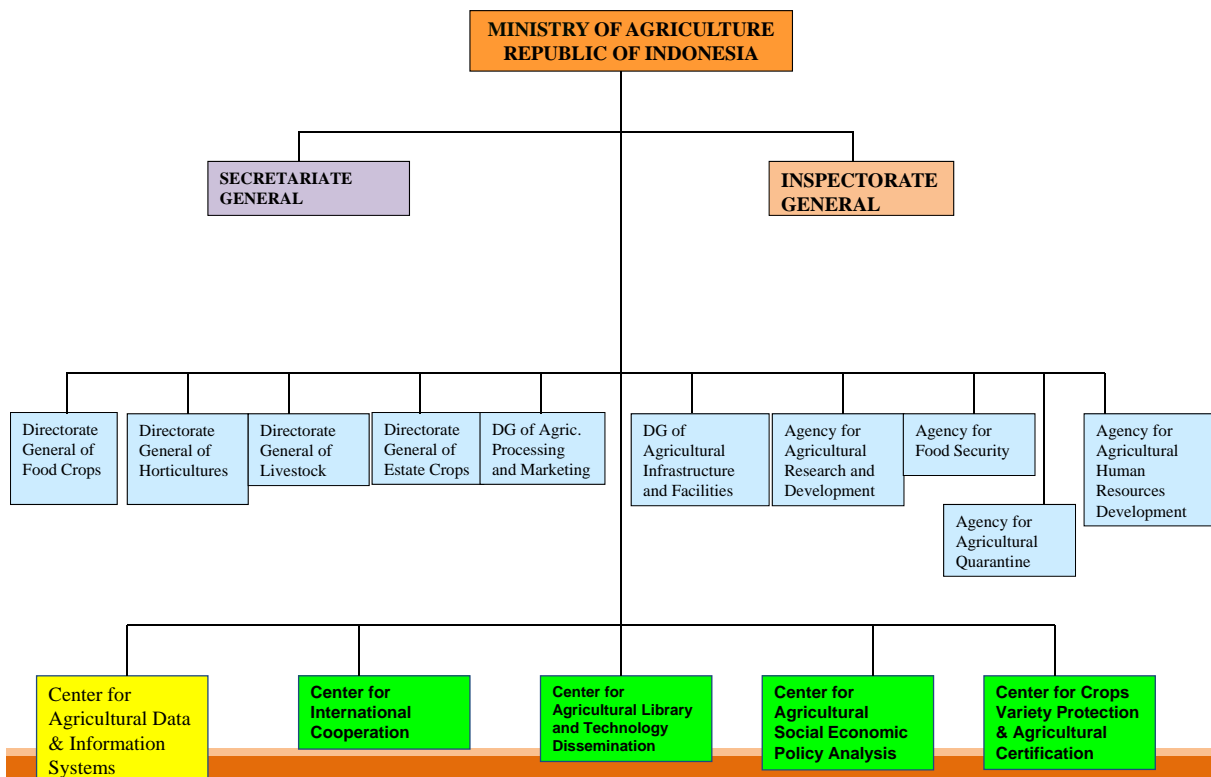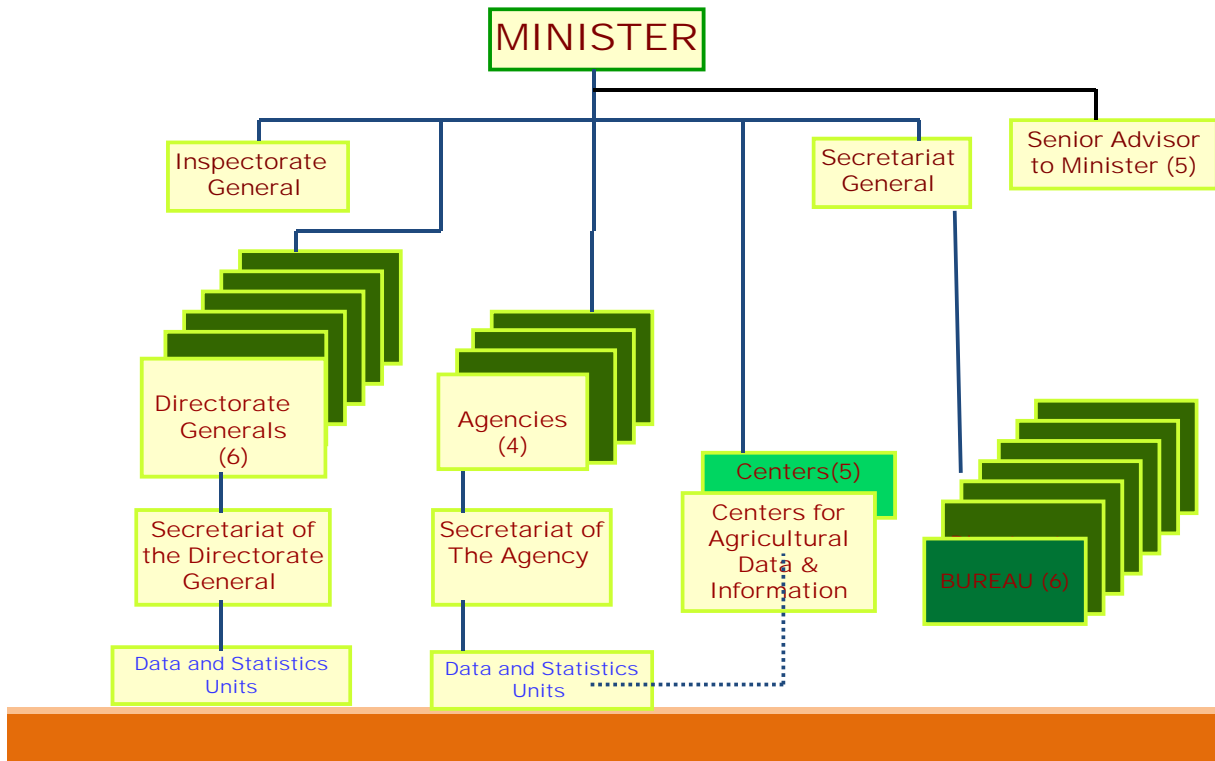| VISION	MISSIONS
Realization food agricultural system -bioindustry sustainable produce diverse food Healthy and products high value-added based local resource to food sovereignty and farmers welfare "	1. To achieve food sovereignty 2. To achieve agriculture bioindustry sustainable system 3. To achieve farmer welfare 4. To achieve bureaucracy reformation

Main Strategy MOA
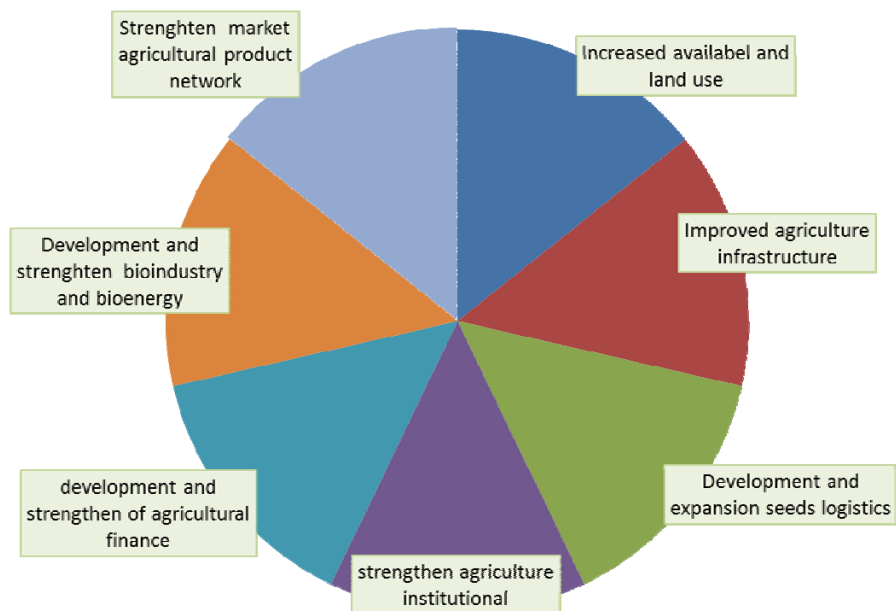
SUPPORTING STRATEGY IN MOA

1. Strengthening and human resources agricultural capacity building
2. Improved support for quarantine
3. Improved support for innovation and technology
4. Service public information
5. Management of regulation
6. Management of information and communication technology
7. Management Planning
8. Structuring and strengthening of the organization
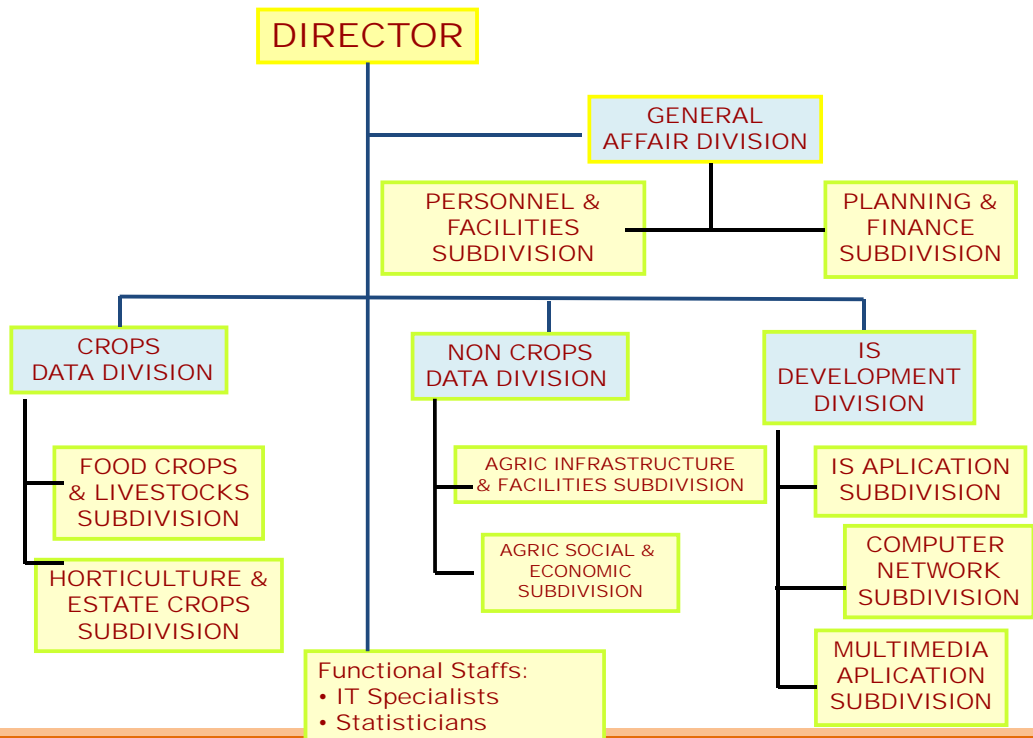9. Management control system

9

MOA ORGANIZATIONAL STRUCTURE

ORGANIZATION OF STATISTICAL SYSTEM WITHIN MOA

MINISTER

- Inspectorate General
- Secretariat General
- Senior Advisor to Minister (5)

- Directorate Generals (6)
  - Secretariat of the Directorate General
    - Data and Statistics Units
- Agencies (4)
  - Secretariat of The Agency
    - Data and Statistics Units
- Centers(5)
  - Centers for Agricultural Data & Information
- BUREAU (6)

CENTER FOR AGRICULTURAL DATA AND INFORMATION SYSTEMS (CADIS)

DIRECTOR

- GENERAL AFFAIR DIVISION
  - PERSONNEL & FACILITIES SUBDIVISION
  - PLANNING & FINANCE SUBDIVISION

- CROPS DATA DIVISION
  - FOOD CROPS & LIVESTOCKS SUBDIVISION
  - HORTICULTURE & ESTATE CROPS SUBDIVISION

- NON CROPS DATA DIVISION
  - AGRIC INFRASTRUCTURE & FACILITIES SUBDIVISION
  - AGRIC SOCIAL & ECONOMIC SUBDIVISION

- IS DEVELOPMENT DIVISION
  - IS APLICATION SUBDIVISION
  - COMPUTER NETWORK SUBDIVISION
  - MULTIMEDIA APLICATION SUBDIVISION

Functional Staffs:
- IT Specialists
- Statisticians

TWO MAIN TASKS OF CADIS

(a) To conduct agricultural statistics and information systems services,

(b) To conduct capacity building in agricultural statistics and information systems

VISION AND MISSION OF CADIS

Vision: To become a leading centre in providing agricultural data and information

Missions:

❖ To continuously develop and improve methodologies for data collection, processing, analysis, and publications

❖ To conduct data collection, processing, analysis, publication, and dissemination.

❖ To develop and operate agricultural information systems.

❖ To continuously improve skills and knowledge of human resources in statistics and information system.

DATA and INFORMATION FLOW
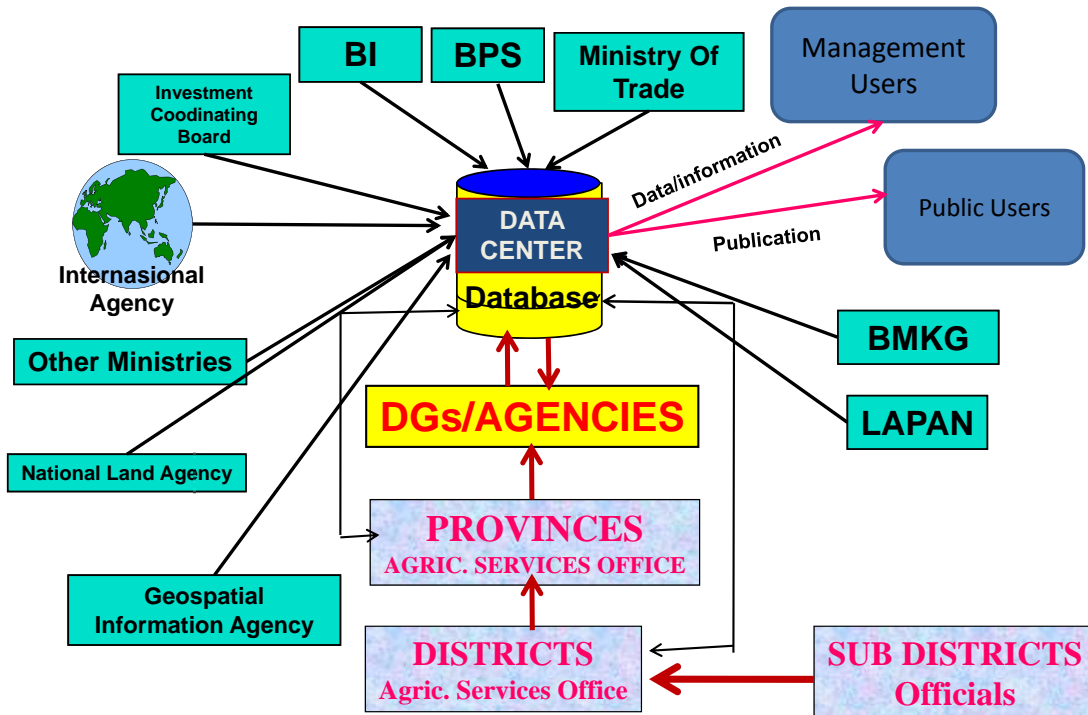
Main Programs

1	To provide agricultural data and information services
2	To provide networks infrastructure and agricultural information system services
3	Capacity building on statistics and information technology

1.   Agricultural data and information services

a) Methodologies and systems development
b) Develop guidelines and standard operating procedures in data management activities
c) Socialization of systems and methodologies
d) Implementation
   - Data collections in sub districts
   - Data verifications, validations, and data entry at district level
   - Data verifications, validations, supervision at province level
   - Data verifications, validations, supervision at central level
   - Updating the database

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1.   *Agricultural data and information services…. continued*

e) Publications
   - Provide standard in agricultural statistics publication at district, province, and central level
   - Data analysis and forecasting
   - Agricultural statistic publications
f) Data/statistics dissemination through website
g) Conduct evaluation survey (customers satisfaction)

2. Networks infrastructure and agricultural information system services

- To provide computer networking services
- To provide agricultural information systems development services and access
- To provide multimedia application development services

3. Capacity building on statistics and information technology

- Statistical knowledge and skills improvement:
  - Data collection and sampling survey method
  - Data Processing method
  - Data analysis method
  - Data presentations and publications
- Information communication technology knowledge and skills improvement:
  - Office software applications
  - Internet
  - Emailing
  - Website Design
  - Multimedia
  - Programming
  - Systems analysis and design

III. AGRICULTURAL DATA MANAGEMENT

AGRICULTURAL DATA

UPSTREAM DATA	ON - FARM	DOWN-STREAM DATA	SUPPORTING DATA
• Agricultural Input • Machineries • Natural Resources • Capital Resources, • Pest and Deseases	• Food crops • Horticulture • Estate crops • Livestock	• Processing • Trading • GNP/GDP • Farmer's Term of Trade • Investment, export/import, price, • Consumption	• Manpower resources • Technology resources • Agricultural Institution
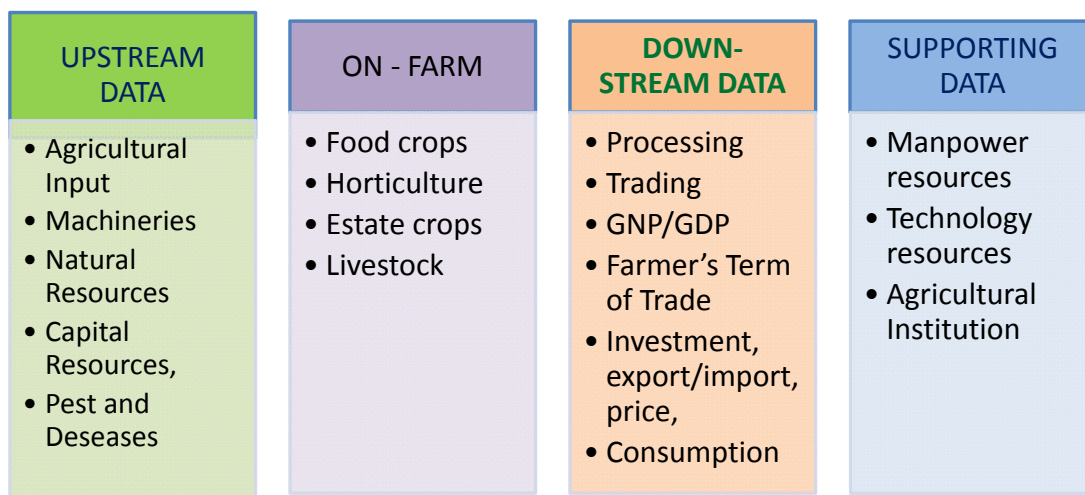
AGRICULTURAL DATA FLOW (TRADITIONAL SYSTEM)

•Data collection
•Recording

USERS

Sub Districts

•Samples
•Reports

Information
Dissemination

Districts

•Estimation
•Validation
•Tabulation

Analysis/
Publish

Provinces

CENTRAL/DG

**Agricultural
Database**

**Other
Databases**

•Estimation
•Validation
•Tabulation

•Estimation
•Validation
•Tabulation
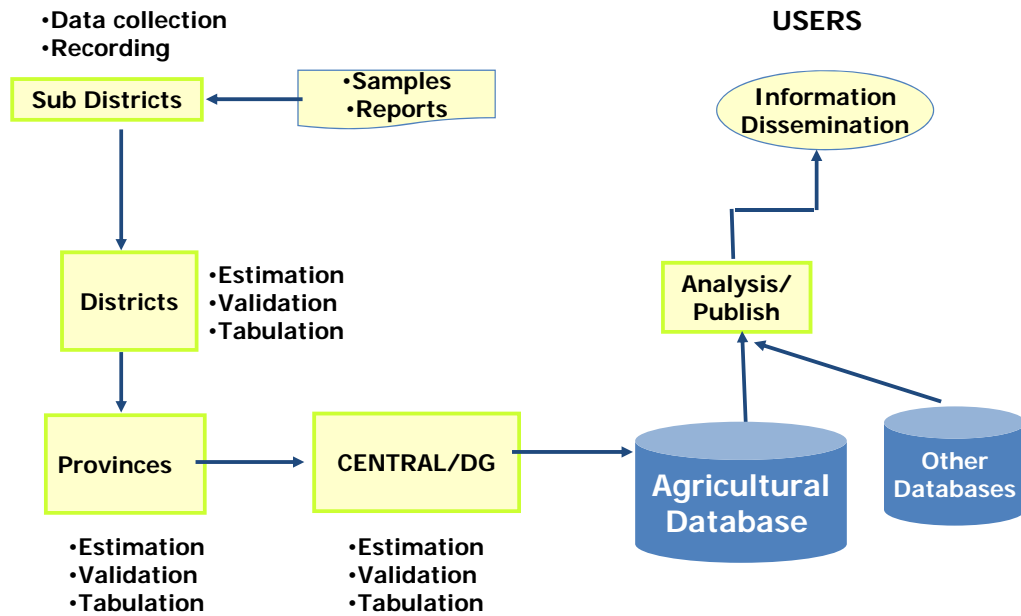
AGRICULTURAL DATA FLOW (ELECTRONIC FORM)

• Database Management
• Networks Management
• Information System
  Management

Agricultural
Database
(sharable)

-INFORMATION &
-KNOWLEDGE

Minister:
• Data/Information Access

Head Office:
- Data/Information
  Access
- Update data

Districts:
-Estimation
-Tabulation
-Entry

Provinces :
• Data Entry
• Data/Information Access
• Update data/info

PUBLIC:
-Data/Information
Access
-Feedback

Data
Collection
Form

Sub Districts:
-recording

IV. INCREASING STATISTICAL LITERACY

A. INPUT

A.1. Statistical database for agricultural commodities (Foodcrops, Horticulture, Estate Crops, and Livestock)
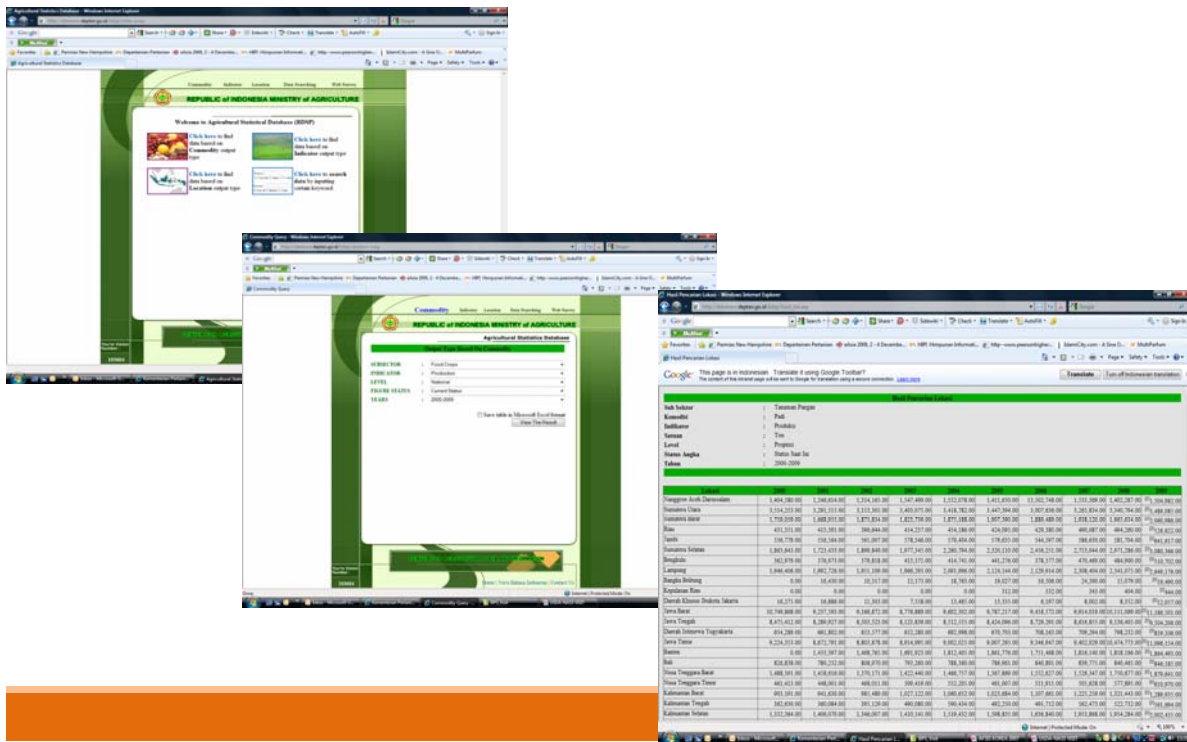
A.2. Statistical database for agricultural infrastructure and social-economics

- Export – Import
- GDP
- Per Capita Consumption
- Land Use
- Population, employment and poverty
- Agriculture machinery, fertilizer, and seed

A.3. Statistical Publications

- Agricultural Statistics, annually
- Foodcrops commodities Outlook, annually
- Horticulture commodities Outlook, annually
- Estate crops commodities Outlook, annually
- Livestock commodities Outlook, annually
- Agricultural macro-economic Indicators, quarterly and annually
- Bulletine of agricultural Gross Domestics Product(quarterly)
- Bulletine of agric. export/import (monthly)
- Bulletine of agric. commodities price (monthly)
- Bulletine of internasional price (semiannually)
- Analysis of agricultural trade performance
- Analisys on Farmers Welfare
- Paddy Field Base Map (Java)

A.4. Improving of Data Collection Methodologies

- Methodology for Foodcrops data collection
- Methodology for Horticulture data collection
- Methodology for Estate crops data collection
- Methodology for Livestocks data collection
- Methodology for farmer welfare survey
- Methodology for stock and consumption survey
- Methodology for paddy field mapping by GPS
- Methodology for Paddy field Mapping by using satellite imagery

A.5.Electronic Forms for data Entry and Reporting

- e-Form for Food Crops
- e-Form for Horticulture
- e-Form for Estate Crops
- e-Form for Live stocks

A.6. NETWORKS INFRASTRUCTURE AND AGRICULTURAL INFORMATION SYSTEM SERVICES

A.6.1. Computer Network Services

- Network Infrastructure
- Internet access (browsing)
- Hot spots services
- E-Mailing
- Documentation of computer network system in MOA
- Helpdesk services for network system
- Ministry of Agriculture Data Center Operation
- Computer laboratory services

A.6.2. Information system applications services

- Management Information System for: personnel, project monitoring, extensions, finance, facilities, and office administration
- Agricultural database access services
- Geographic Information System services
- Implementation of Electronic Forms
- **e-Petani (e-Farmers) portal**
- National Single Windows project support
- **Village Agribusiness information system**
- Online buying & selling
- Online recruitment

A.6.3. Multimedia Applications Services

- Maintaining and updating Website of Ministry of Agriculture (MOA)
- MOA Website for mobile/WAP
- CD series for Training Material in Agricultural Technology
- Multimedia portal for agriculture (video collection database)
- Agriculture website contest (yearly)
- Touchscreen Information Kiosks
- SMS Center and Agriculture Consultation Forum

B. TARGET GROUPS

Capacity building on Statistics and Information Technology

Trainings and Socializations

TRAINING & SOCIALIZATION	1. Statistics Training for official provinces and districts
	2. Computer applications and networks training for provinces and districts
	3. Training for Statisticians (central staff)
	4. Training of GPS utilization for paddy field mapping
	5. Training of GPS utilization for Estate Crops Area mapping

TRAINING & SOCIALIZATION

6. Training in Geographics Information System

7. Elektronic form training for provinces and distric

8. e-Petani training for Extension workers and famers (FEATI project)
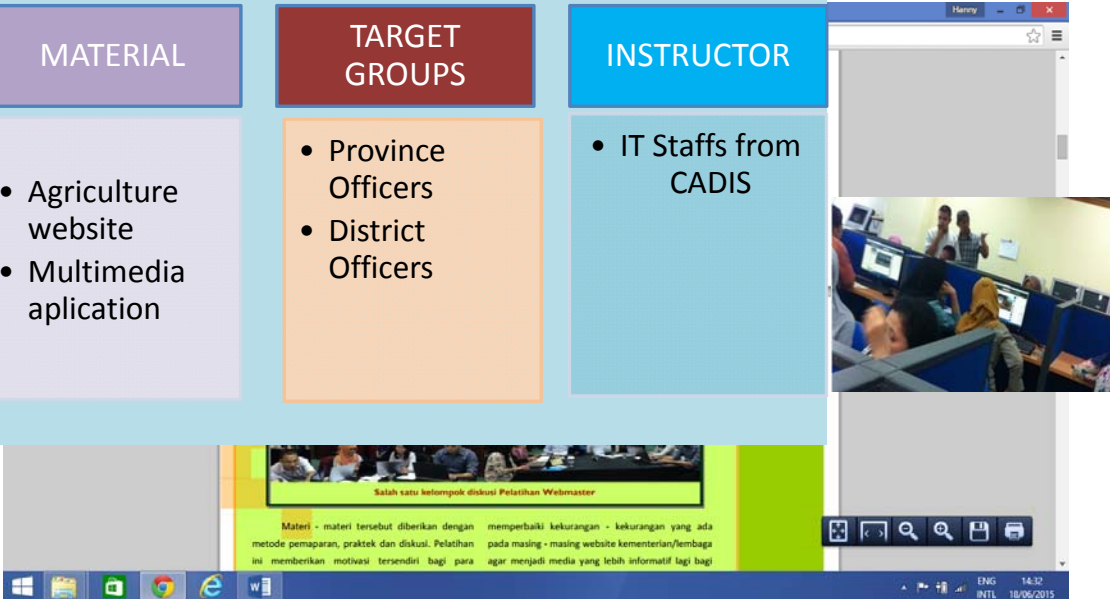
1. Statistics Training for provinces and districts

MATERIAL	TARGET GROUP	INSTRUCTOR
• Theory and practice : Data collection methodologies (Food Crops, Horticulture, Estate crops, Livestock)	• Provinces Officer • District Officer • Sub District Officer / Mantri Tani	• Statistician from CADI

2. Computer applications and networks training for provinces and districts

MATERIAL	TARGET GROUPS	INSTRUCTOR
• Agriculture website • Multimedia aplication	• Province Officers • District Officers	• IT Staffs from CADIS

3. In House Training for Statisticians

❑ To improve knowledge and skill for Statisticians

❑ Material :
  - Econometry,
  - SPSS
  - Costumer satisfaction analisys

4. Training of GPS utilization for paddy field mapping

MATERIAL	TARGET GROUPs	INSTRUCTOR
• Theory and practice GPS utilization for paddy filed mapping	• Provinces Officer • District Officer • Sub District Officer	• Statisticians

5. Training of GPS utilization for Estate Crops Area mapping

MATERIAL	TARGET GROUPS	INSTRUCTOR
• Theory and practice GPS utilization for Estate Crops Area mapping	• Provinces Officer • District Officer • Sub District Officer	• Statisticians

6. Training in Geographics Information System

MATERIAL	TARGET GROUPS	INSTRUCTOR
• Theory to make mapps of agricultural land	• Provinces Officer • District Officer • Sub District Officer	• Structural Officials • Statisticians

7. Elektronic form training for provinces and distric

MATERIAL	TARGET GROUPS	INSTRUCTOR
• Theory and practice : Electronic form for : Food crops, Horticulture, Estate Crops and Livestock	• Provinces Officer • District Officer	• Statistician from CADIS
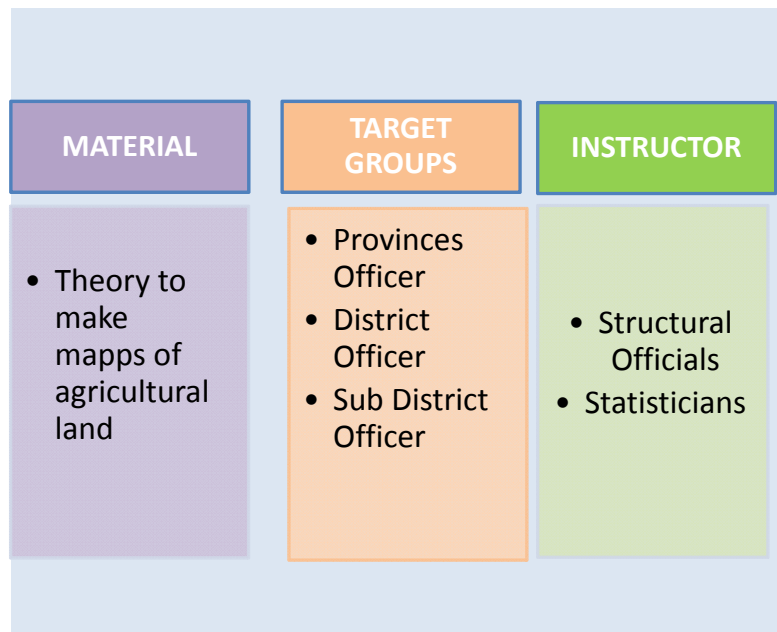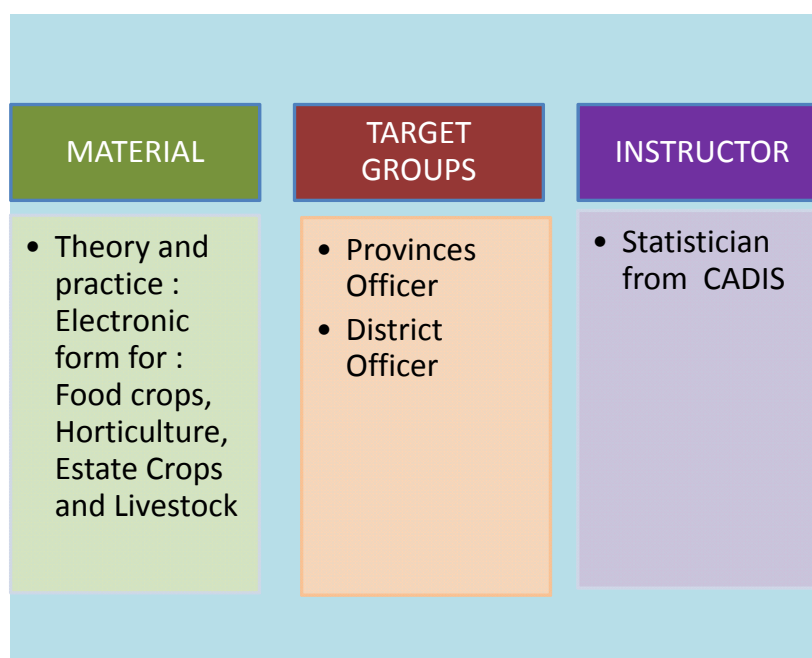
8. e-Petani training for Extension workers and famers (FEATI project)

- ➢ Target Groups: farmers/ fishermen
- ➢ To improve capacity and communication computers and internet-based farmers.
- ➢ This trained aims to help farmers and fishermen in the interaction network of agribusiness information
- ➢ They can interact directly information to facilitate the flow of information about the development and marketing of their agricultural products

C. SELF ASSESSMENT

CONDUCTING SERVICE SATISFACTION SURVEY

Respondents :
- Official Staffs of MoA
- Official staffs of Provincial level
- Public who obtain data and information from CADIS

Method
- Questionnaire → Respondent should assess the expectations and reality they obtain from CADIS regarding the data services, publications, human resource development and information technology services, capacity building.
- Online survey → through agricultural website
- The survey can know the level of user satisfaction due to the services provided by CADIS

V. COMMUNICATION PRACTICES

INTERACT WITH KEY USERS

1. **REGURAL MEETING at CADIS**

   Schedule → monthly
   Participant → all stakeholders on data and statistics unit within Ministry of Agriculture
   Agenda → releases update monthly data on harvested area and production of food crops

2. **WORKSHOP and TRAINING SESSION**
   Schedule → annually
   Participant → all stakeholders on data and statistics unit within Ministry of Agriculture
   Agenda → discussion on data collection methodologies, data analysis and dissemination

TOOL COMMUNICATION

1. **Provide** computer kiosk or <u>interactive kiosk</u> **at each building within Ministry of agriculture**
   → **Accessible to all visitors/guests in Ministry of Agriculture**
   → **Provide information about the ministry of agriculture, such as building directories, official name, etc**

2. **Data dissemination product**
   - **Statistical Books**
   - **Bulletins**
   - **On-line publications**
   - **On-line databases**

3. Media Releases

1. **Website**
   → **Data, publication**

2. **National Radio/TV**
   → **Agricultural Price data broadcast**
   → **Daily**

Thank you