

Working Group 4  
(Cadastre and Land Management)

# Status Report

17 October, 2016  
Kuala Lumpur, Malaysia

**Chair**

Prof. BG Lee, Republic of Korea

**Vice Chair**

Mr. Ali Bakar Kasim, <b>Brunei Darussalam</b>	Mr. Zhao Yousong, <b>China</b>
Mr. Azamat Karypov, <b>Kyrgyzstan</b>	Dr. Teng Chee Hua, <b>Malaysia</b>
Mr. Gankhuyag Radnaabazar, <b>Mongolia</b>	Mr. Soh Kheng Peng, <b>Singapore</b>
Dr. Luu Van Nang, <b>Viet Nam</b>	Mr. Solomon Nata, <b>Fiji</b>

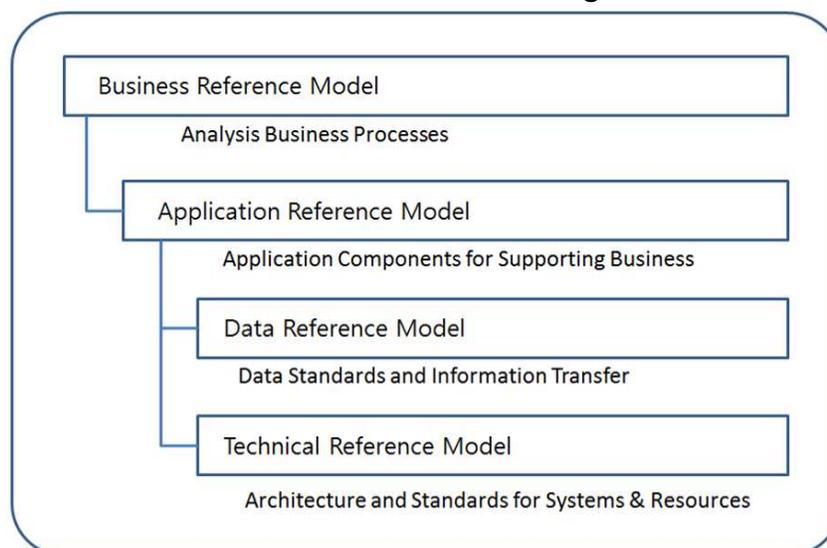
## *Contents*

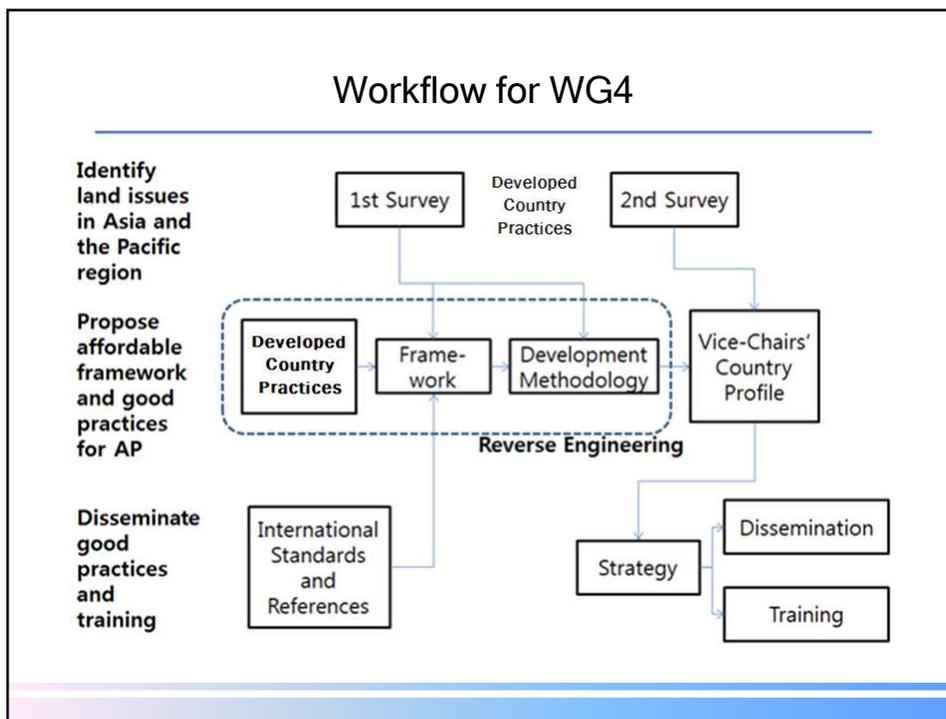
- 1. WG4 Plans for 2015-2018**
- 2. A Conceptual Model for Cadastre and Land Management**
- 3. Workflow for WG4**
- 4. Questionnaire I and II**
- 5. Some Results on the Questionnaires**
- 6. Summary**

## WG4 Plans for 2015 - 2018

No	Activities/Steps	period	Targeted goals
1	<b>Identify land issues in Asia and the Pacific region</b> <ul style="list-style-type: none"> <li>Conduct the 1<sup>st</sup> and 2<sup>nd</sup> questionnaires;</li> <li>Investigate status of land management situation in cultural, social, administrative and technical environments at different levels;</li> <li>Analyses results of the responses using matrix analysis between demands (needs) and supply (capability).</li> </ul>	2015-2017	<ul style="list-style-type: none"> <li>1<sup>st</sup> survey analyses draft in the middle of 2016; 2<sup>nd</sup> final report for land issues in the end of 2017.</li> </ul>
2	<b>Propose affordable framework and good practices for Asia and the Pacific region</b> <ul style="list-style-type: none"> <li>Identify the concepts and goals of land administration and management for AP region;</li> <li>Review and analyse the land administration efforts experienced in developed and developing countries;</li> <li>Share the results of reviews and get feedback on the distributed documents;</li> <li>Propose affordable framework and country profile considering existing standard model and approach for land administration and management by working with international organisations.</li> </ul>	2016-2018	<ul style="list-style-type: none"> <li>1st draft in the end of 2016; 2nd draft in the end of 2017; final report in the middle of 2018.</li> <li>Affordable framework and country profile will be finalised by the middle of 2018 through cooperation effort among chair and vice-chairs' countries.</li> </ul>
3	<b>Disseminate good practices and enhancing training and capacity development</b> <ul style="list-style-type: none"> <li>Propose the strategies for geospatial-enable land management, capacity building, and cost-effective implementations;</li> <li>Disseminate the affordable framework and good practices to get comments on and revise it;</li> <li>Make a liaison with UN-GGIM Expert Group on Land Administration and Management;</li> <li>Hold regional workshop, training and seminars.</li> </ul>	2016-2018	<ul style="list-style-type: none"> <li>regional workshop in conjunction with UN-GGIM-AP Plenary meeting contributed by Malaysia Vice-Chair of WG4</li> <li>2 or 3 training or seminars co-organised with international organisations (UN-Habitat/GLTN, UNESCAP, ISO/TC211 and etc.) or liaison group (UN-GGIM).</li> </ul>

## A Conceptual Model for Cadastre and Land Management





## Characteristics of the Questionnaire

For Vice Chair Countries  
(Brunei Darussalam, China, Fiji, Kyrgyzstan, Malaysia,  
Mongolia, Singapore, Viet Nam) + 1

## Questionnaire I

### A. Country Information

1)Country 2)Name 3)Institution 4)Position 5>Contact 6)E-mail Address

### B. General Status of Nation

1. Please describe the total population and the population rates for urban and rural areas.
  - 1) Total population : 2) Urban population ratio : 3) Rural population ratio
2. What is the total area of nation and the ratio for each category of land respectively?
  - 1) Total area of nation 2) Farm land 3) Forest land 4) Building site
  - 5) Undeveloped land and etc.

### C. Land Related Law System

### D. Land Investigation and Registration

### E. Utilization of Land Information

### F. Land Management Information System

### C. Land Related Law System

#### I. Establishment of Law System

1. Do you have a law system regarding the management and operation of land?
2. Do you include the contents of spatial information in the land related law system?
3. Regarding the management and operation of land, do the roles of the central and the local governments differ?
4. Regarding the management and operation of land, are the roles between the central and the local governments well established?
5. Please check on all the major roles of central government regarding the management and operation of land.
6. Please check on all the major roles of local government regarding the management and operation of land.

#### II. Ownership and Operation of Land

1. Who has the main ownership of land?
2. Is the registration of land ownership mandatory or optional?
3. What is the type of land ownership?
4. What is the method for the transaction of land?
5. What is the type of the period of land ownership?
6. What is the range for the exercise of rights for land?
7. Is land ownership approved for foreigners?
8. Are the agents for registration of land and management of land register separated?

#### III. Topographic Map and Cadastral Map

1. Is your country using a united survey control point?
2. Is your country using a united coordinate system?
3. Are you constructing each topographic and cadastral map respectively?
4. Are the agents for the management of topographic and cadastral maps different?
5. What is the current status for the construction of topographic map?

#### **D. Land Investigation and Registration**

1. Are you surveying for land investigation and registration?
2. If the survey mentioned in the question above is carried out, does the survey related license exist?
3. When was the time you started to register land by document through land management system?
4. Did you complete the registration of your country's whole land by document through land management system?
5. When was the time you started to draw up the maps of land through land management system?
6. Did you complete the maps for your country's whole land through land management system?
7. If you have a map (cadastral map), what is the scale of the map?

#### **E. Utilization of Land Information**

1. Please select all the options that you think necessary for real estate related administrative documents.
2. Please select all the options that are included in your cadastral map and register information.
3. Please select all the options that are included in major civil complaint relating to the land
4. Please select all the options that are included in major land related administrative tasks.

#### **F. Land Management Information System**

1. Is there a system operated to manage land register and land map?
2. Do you manage land register and land map (cadastral map) by linking them together?
3. If there is an information system being operated to manage land register, what is the corresponding region?
4. Is there is an information system operated to manage land map, what is the corresponding region?
5. Is the institution that manages the systems for land register and land map identical?
6. If you have land maps (cadastral map) in digital version, what is the type of its format?
7. If there is a land related information system constructed, please select all the types of security method in use.

## Questionnaire II

### I. Type of a Country

#### System and Foundation

- Human Factor
- Condition of Infrastructure

#### II. Requirement Level

- National Policy
- Cadastral, Topographic and Estate Information

#### III. Current Status of Construction

- Construction of GIS data
- Current Status of Construction of Land Management System

## I. Type of a Country

### (System and Foundation)

- Is there a country's long term spatial information plan established?
- Is there a general plan established at national level for the construction of land information system?
- Is there a law/system organized to construct and operate land information system?
- Do you have an organization which can comprehensively carry forward the land information system for the whole nation?

### (Human Factor)

- Is there any inconvenience regarding the system connection and information sharing among various public institutions in the country?
- If a system which can manage land information is developed, is there a basic environment(networks and hardware) prepared to utilize this system for related government institutions?

### (Condition of Infrastructure)

- If a system which can manage land information is developed, is there a basic environment(networks and hardware) prepared to utilize this system for related government institutions?

## II. Requirement Level

### (National Policy)

- What would be the one thing that should be done most urgently for your country regarding the construction of land information system?

### (Cadastral, Topographic and Estate Information)

- If cadastral and topographic information are constructed, can they be operated with the connection between them?
- If cadastral and estate(registration, trading, price, building etc) information are constructed, can they be operated with the connection between them?

## III. Current Status of Construction

### (Construction of GIS data)

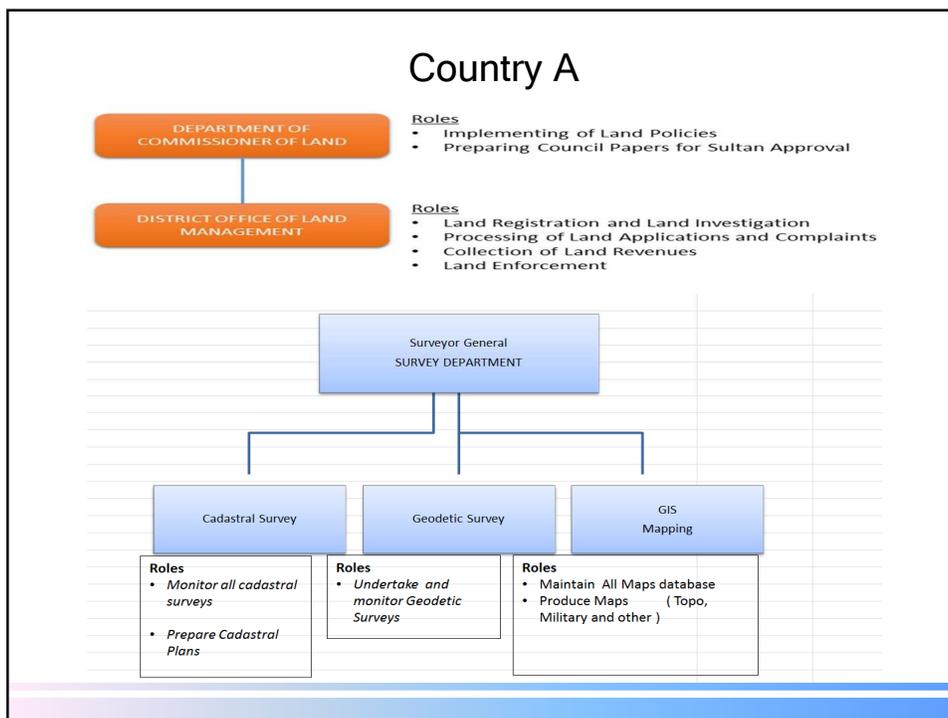
- Are topographic information constructed in forms of digitalized information(features and properties) for the country's whole area?
- Are all the information of the country related to land management constructed through digitalization?
- Do you have an organization which can comprehensively carry forward the land information system for the whole nation?

### (Current Status of Construction of Land Management System)

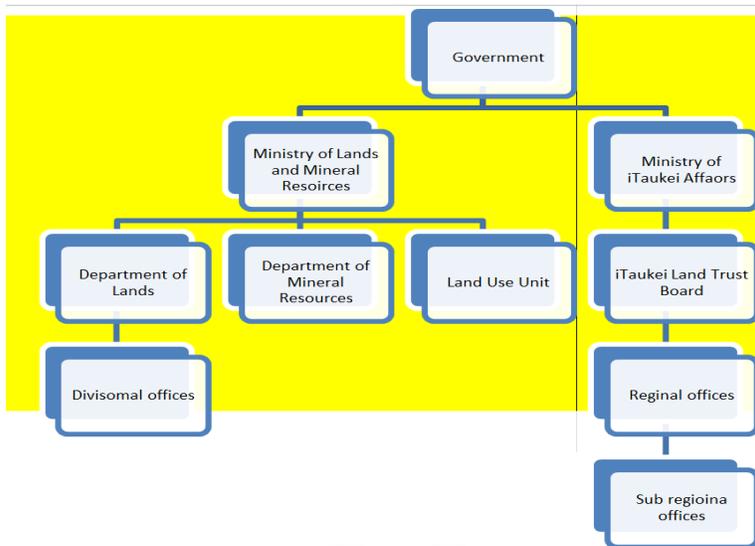
- What is the level of construction regarding registration and management of land information?
- What is the level of construction of functions in order to utilize them for land usage plan and various administrative tasks?
- What is the level of construction of functions regarding civil compliant and service?
- If the land information system is already constructed, what is the most problematic issue in carrying out land-related tasks using the system?

# Some Results on the Questionnaires

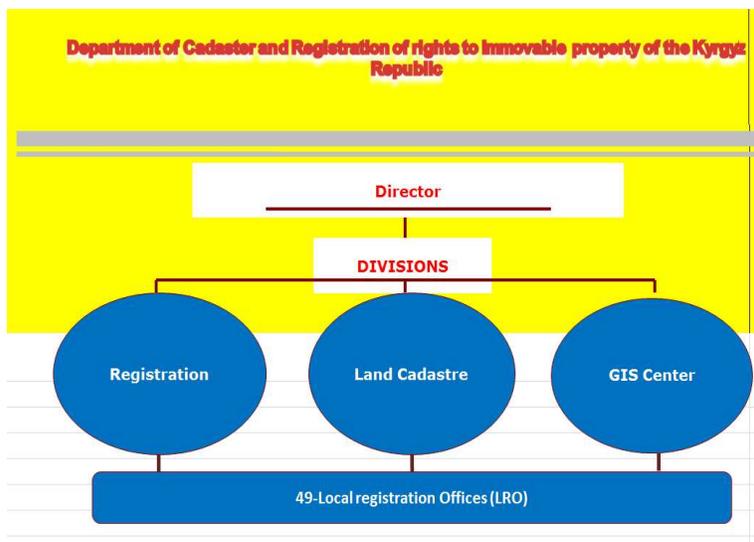
Based on Vice Chair Countries  
(Brunei Darussalam, China, Fiji, Kyrgyzstan, Malaysia, Mongolia, Singapore, Viet Nam) + 1

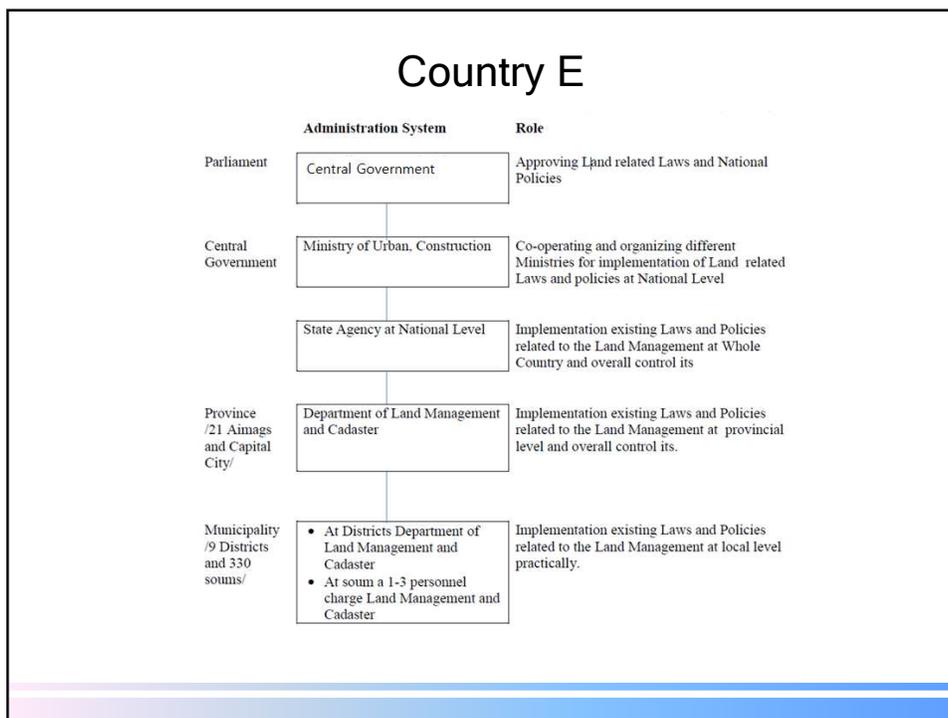
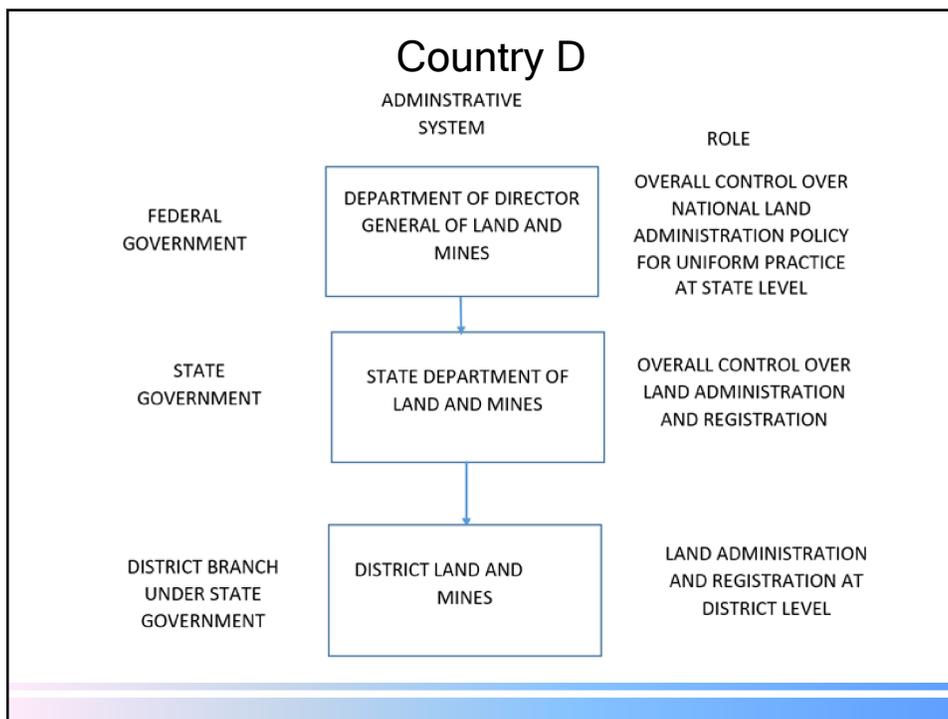


## Country B



## Country C

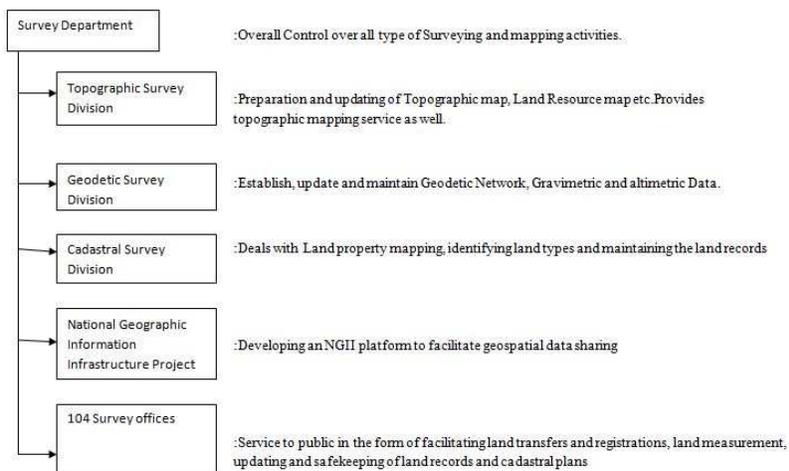




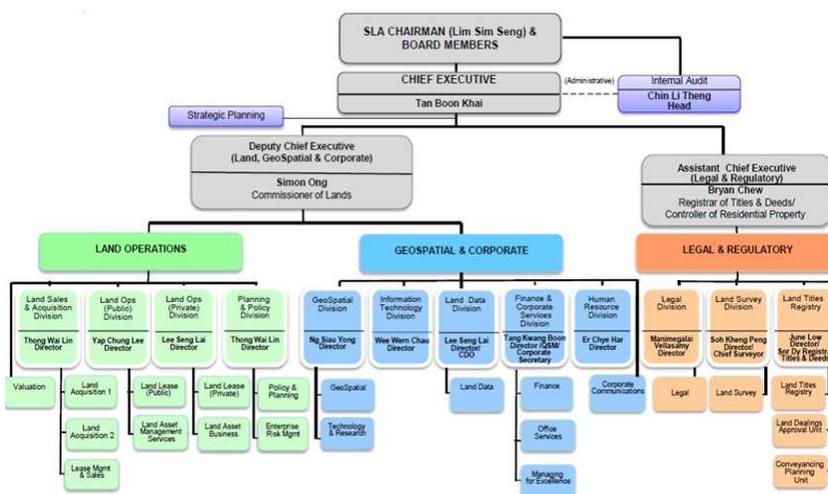
# Country F

Administration System:

Role:



# Country G



## Some Results on the Questionnaire II

I. Type of Country	A	B	C	D	E	F	G
<b>System and Foundation</b>							
1 Is there a country's <b>long term spatial information plan</b> established?	1	1	1	1	1	1	
It is not established yet.							
It is established, but still at much inadequate level.			✓	✓			✓
It is established and needs only few improvements.		✓			✓		
It is well-established and applied.	✓					✓	
<b>Land Planning and Infrastructure</b>							
2 Is there a general plan established at national level for the	2	2	2	2	2	2	
It is not established yet.			✓				
It is established, but still at much inadequate level.				✓			
It is established and needs only few improvements.		✓			✓		✓
It is well-established and applied.	✓					✓	
<b>Legal and policy frameworks</b>							
3 <b>Is there a law/system</b> organized to construct and operate land	3	3	3	3	3	3	
There is not law/system made yet.				✓			
There is a law/system, but it is still at inadequate level.			✓				
There is a law/system available for operation to some degree.		✓			✓		✓
There is a law/system almost perfectly prepared.	✓					✓	
<b>Land Administration and Organization System</b>							
4 Do you have an organization which can comprehensively carry	4	4	4	4	4	4	
There is no organization at national level constructed.							
A specific institution (single institution) is operating the organization		✓					
A few institutions (two or three) are cooperating to operate the			✓		✓		✓
We are maintaining an organization for the construction of land	✓			✓		✓	
<b>System Service and Technology</b>							
5	5	5	5	5	5	5	
System connection and information sharing are not carried out well			✓				
Efforts are being done for system connection and information							✓
Efforts are being done for system connection and information sharing		✓		✓	✓		
System connection or information sharing can be carried out	✓					✓	

## II. Requirement Level

### (National Policy)

7 What would be <b>the one thing</b> that should be <b>most urgently</b> for	7	7	7	7	7	7	
Digitization o land information and data construction							
Preparation of land information management method through							
Implementation of various administrative service through digital land					✓		
Utilization of digitalized land information in whole area of the country		✓	✓			✓	✓
Not applicable in above options	✓			✓			
<b>Cadastral and Topographic and Estate Information</b>							
8 If <b>cadastral and topographic information</b> are constructed, can they be	8	8	8	8	8	8	
The connection will be infeasible.							
The connection will be feasible, but there will be several critical		✓					✓
The connection will be feasible, but there will be minor problems to be			✓	✓	✓	✓	
The connection will be made easily or the information will be	✓						
If cadastral and estate information are constructed, can they be operated with the connection between them?							
9 If <b>cadastral and estate (registration, trading, price, building etc)</b>	9	9	9	9	9	9	
The connection will be infeasible.							
The connection will be feasible, but there will be several critical							✓
The connection will be feasible, but there will be minor problems to be		✓		✓	✓	✓	
The connection will be made easily or the information will be	✓		✓				

III. Current Status of Construction						
<b>Construction of GIS data</b>						
10	Are <b>topographic information</b> constructed in forms of digitalized	10	10	10	10	10
	They are not constructed yet.					
	Necessary information in priority are in progress of construction.		✓			✓
	Necessary information in priority are completely constructed.					
	All topographic information of the country are completely constructed.	✓	✓	✓	✓	✓
<b>Construction of Cadastre Information</b>						
11	Are all the <b>information of the country related to land management</b>	11	11	11	11	11
	They are not constructed yet.					
	Necessary information in priority are in progress of construction.					✓
	Necessary information in priority are completely constructed.		✓		✓	✓
	All topographic information of the country are completely constructed.	✓	✓	✓	✓	✓
<b>(Current Status of Construction of Land Management System)</b>						
Please answer to the question below only if you have a system established regarding						
<b>The level of construction of land registration and management</b>						
12	What is the level of construction regarding <b>registration and</b>	12	12	12	12	12
	Relevant functions are not constructed yet.					
	It is constructed so that it can partly operate essential functions only.			✓		✓
	It is not complete, but constructed to operate significantly several		✓			
	Functions are constructed to carry out all tasks.	✓			✓	✓
<b>Land usage plan and various administrative tasks</b>						
13	What is the level of construction of functions in order to utilize them for	13	13	13	13	13
	Relevant functions are not constructed yet.					
	It is constructed so that it can partly operate essential functions only.			✓	✓	✓
	It is not complete, but constructed to operate significantly several		✓			
	Functions are constructed to carry out all tasks.	✓				✓
<b>Civil compliant and service</b>						
14	What is the level of construction of functions regarding <b>civil compliant</b>	14	14	14	14	14
	Relevant functions are not constructed yet.					
	It is constructed so that it can partly operate essential functions only.		✓		✓	✓
	It is not complete, but constructed to operate significantly several					
	Functions are constructed to carry out all tasks.	✓				✓
<b>The most problematic issues</b>						
15	If the land information system is already constructed, what is the <b>most</b>	15	15	15	15	15
1	Congruity with tasks or sufficient support of tasks					
2	Various implementations of system functions					
3	Fidelity or completeness of data	✓	✓		✓	✓
4	Sufficient support of hardware and equipment					
5	There is no problem					

Results of Questionnaire II							
Cadastre and Land Mangement System State and Level							
	A	B	C	D	E	F	G
I. Type of Country							
System and Foundation	1	2	3	3	2	1	3
Land Planning and Infrastructure	1	2	3	3	2	1	1
Legal and Policy Frameworks	1	2	3	4	2	1	2
Land Administration & Oraganizer System	1	3	2	1	2	1	2
System Service & Technology	1	2	3	2	2	1	2
Sub Total	5	11	13	13	10	5	10
II. Requirement of Level							
National Policy	1	2	2	1	3	2	2
Connection between Cadastre and Topographic Information	1	3	2	2	2	2	3
Connection between Cadastre and Estate Information	1	2	1	2	2	2	3
Sub Total	3	7	5	5	7	6	8
III. Current Status & Constructure							
Construction of GIS	1	3	1	1	1	1	3
Construction of Cadastre	1	2	1	1	2	2	3
The Level of Land Registration & Management	1	2	N/A	3	3	1	3
Land Usage Plan and Administration Tasks	1	2	N/A	3	3	1	3
Civil Compliance & Service	1	3	N/A	3	3	1	3
The Most Important Issues	Data	Data	N/A	Data	Data	Data	N/A
Sub Total	5	12	?	11	12	6	15
Total	13	30	?	29	29	17	33

**G1 Group: Advanced Type**

- Near-perfect land management and administration system

**G2: Data Management Issue Type**

- Improving Data Management with a certain methodology

**G3: Data Management and Application Issue Type**

- Improving Data and System Management with long term plans

**G4: All System Issue Type**

- GIS and Cadastre Systems have already been formed.  
But rechecking all systems in detail.

## *Summary*

### Survey Investigation Result of the 1<sup>st</sup> questionnaires

- All the countries have land related legislation, law system and spatial information system.
- Most countries have an unitary datum point system.  
But, **a few countries use various coordinate systems.**
- Regarding the land ownership, many countries acknowledge an individual's land ownership and the registration of land mandatory.
- Regarding the land management,  
**the roles of central and local government are different from each other.**
- Digitalized topographic map is constructed in most countries.  
However, **the digitization of cadastral map has made less progress.**
- All the countries are making the land registration mandatory.
- In many countries, **agents for managing topographic and cadastral maps, and real estate are different from each other.**

## *Summary*

Survey Investigation Result of the 2<sup>nd</sup> questionnaires

- Many countries which use hardware or network environment to operate the land information system have not faced significant problems.
- A few countries are pointing out that there are a lot of problems regarding the comprehensiveness of data related to land information.
- Many countries find it necessary to improve the functions of their current land management systems.
- The results show that land informatization and utilizing land information to cover the whole regions of the country are necessary for various administrative services.

*Thank you*