

Exchange of Experiences and Knowledge in Land Administration and Cadastral Services between Sweden and Indonesia

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Key words: land administration, cadastral services, exchange, Indonesia, Sweden.

SUMMARY

Presentation of experiences from the Sida (Swedish International Development Agency) financed project Institutional Partnership for Strengthening Land Administration, IPSLA, in Indonesia. Exchange visits in both countries have resulted in finding differences and similarities between Lantmäteriet (Swedish Mapping, Cadastral and Land Registration Authority) and BPN (Badan Pertanahan Nasional Republik Indonesia, National Land Agency of Indonesia).

The IPSLA project is a cooperation between Swedish Lantmäteriet and Indonesian BPN. The project has four components, all of which work with capacity building. As a part of the exchange component two employees from Lantmäteriet joined a mission to Indonesia in the IPSLA project in October 2008 and four employees from BPN went to Sweden for a three week study visit in the end of 2008. During the visits a lot of similarities and differences in work procedures, techniques, history, legislation, archives and registers were found.

The systems are similar but the way to work differs. In Sweden the registers are digital, archive dossiers are scanned and GPS technology is regularly used for cadastral services. In Indonesia the records are manual and the digital index map is not comprehensive. Another difference is that in Sweden the real property unit has one unique identity used by all authorities. In Indonesia BPN gives the real property unit one identity and the Tax Authority give another. The authorities use their own systems of identification. Lantmäteriet has a long history of cooperation with other authorities. In Indonesia the authorities work more independently and cooperation is on a low scale. A big difference in legislation is that in Indonesia there are several hundreds of regulations connected to land administration while in Sweden there are only a few laws.

The experience increased the awareness for both parties of the advantages of a highly reliable digital data register of land information. The systems and registers are not always completely accurate and comprehensive in Sweden but there are a lot of benefits from having a digital land register and using fixed property boundary marks and coordinates.

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1. THE IPSLA PROJECT AND THE EXCHANGE COMPONENT

The Sida (Swedish International Development Agency) financed project Institutional Partnership for Strengthening Land Administration, IPSLA, is a cooperation between Swedish Lantmäteriet (Swedish Mapping, Cadastral and Land Registration Authority) and Indonesian BPN (Badan Pertanahan Nasional Republik Indonesia, National Land Agency of Indonesia). The project started in 2007 and is scheduled to be completed in the beginning of 2010. IPSLA consists of four components, all of which work with capacity building. The components are; legalisation of computerised land records; land valuation; handing of informal settlements; and, exchange of knowledge and experiences. As a part of the exchange component two employees from Lantmäteriet joined a mission to Indonesia in the IPSLA project in October 2008 and four employees from BPN went to Sweden for a three week study visit in the end of 2008. Karolina Larsson is part of the informal settlements component as a junior consultant and has made four trips to Indonesia 2008-2009. Endri Diyanto has been working to manage and regulate land data in Indonesia and was one of the participants at the study visit in Sweden in 2008. During the visits a lot of similarities and differences in work procedures, techniques, history, legislation, archives and registers were found.

1.1 Indonesian visit in Sweden

The agenda for the three week visit to Sweden for two of BPN staff, including Mr Endri Diyanto, was carried out at Lantmäteriet head office in Gävle, at Lantmäteriet in Stockholm as well as at Lantmäteriet local office in Norrtälje where routine activities was followed. In Gävle general information was received, among others about Lantmäteriet, geographic information system, cadastral system in Sweden, land registration, updating base maps and digital data conversion. In Stockholm the visit at Lantmäteriet office was hosted by the chief county surveyor as well as IPSLA project leader Mr. Anders Åberg. A visit was also made at Stockholm Metria office where a presentation was held about remote sensing among other things. In Norrtälje the service activities and field surveying conducted in the Lantmäteriet office, where Ms. Karolina Larsson works, was followed. A visit to Norrtälje municipality office showed coordination tasks between agencies and a visit to the land registry office in Norrtälje further showed the different divisions of Lantmäteriet.

1.2 Swedish visits in Indonesia

Karolina Larsson has visited Indonesia on four missions of two to three weeks each from October 2008 to November 2009. The missions have included several meetings within the

different deputies and levels of BPN as well as with other agencies and organisations. There have been no activities in the field except visits to informal settlement areas as well as to areas where land consolidation/upgrading has been conducted. The visits have showed structures and systems regarding land administration in Indonesia as well as functions of different authorities and agencies and the different deputies and levels of BPN. The main part of the missions have been in Jakarta with meetings at central BPN and different other authorities, but visits to local BPN offices and local government in other cities have also been conducted, including Medan (Sumatra), Batam Island, Yogyakarta (South Java) and Makassar (South Sulawesi), where a pilot area has been chosen.

2. PROPERTY FORMATION SYSTEM AND THE TASK OF NATIONAL LAND SURVEY

2.1 Geography and surveying history of Indonesia

Indonesia is located both north and south of the equator and is an archipelago country where the majority of its area, 70%, is water and 30% is land. Indonesia consists of 33 provinces, 418 districts and more than 75,000 villages spread over more than 17,000 islands with a total land area of almost 2,000,000 square kilometres inhabited by around 240 million people. Independency was received on August 17th, 1945. Although the independence of RI occurred on August 17th 1945, formally the Dutch royal government officially received the declaration on December 27th 1949. Since then the *de facto* and *de jure* government of Indonesia has been independent and sovereign. However, in the administrative regulations it is not completely carried out like that. To support the ongoing governmental organisations and to avoid any unwanted confusion because there was no law, it was stipulated that the rules that applied to the colonial period still remain valid and should not be withdrawn, added or modified as long as there is no conflict with the Constitution. This system also applies to the agrarian regulations, which distinguish between land rights ownership based on European law and based on customary law.

Land rights according to European law is under the Book of Civil European Law (*Burgerlijk Wetboek*), this right was given to Dutch people. But, since later on, indigenous people of Indonesia can also obtain these rights with certain requirements. Administrative systems have been running with record of the rights. Some examples of rights under European law is rights for *eigendom*, *opstal*, *erpacht*, *gebruik*. The rights for Indonesia people are still based on the customary law of that given to individuals. Customary land cannot be given to the Europeans. In addition to the individual ownership by indigenous people there is communal ownership or a specific community ownership (*ulayat* rights). *Ulayat* right is a right held by a group of villagers (not a foreign nation) and was recognised customary used for the purpose of its members. Responsibility for any legal actions that have imposed by themselves. Administrative system does not apply in the recording of a good system because the administration has more emphasis on oral and recognition of customary beliefs. If the land owner cannot prove that he owns the land is state land (*domeinverklaring*).

Publishing of Law number 5 in 1960 is a milestone for implementation of Basic Agrarian Laws (BAL) which aims to eliminate the dualism of the land law, namely the European law and customary law. With the enforcement of BAL, the rights which published on Dutch colonisation must be converted to the rights set out in the BAL. The customary rights are recognised after they have been registered to the Land Registration Office. In accordance with the provisions of Article number 16 of Basic Agrarian Law and completed by Law number 16 on 1985, Law number 4 on 1996, Government Regulation number 24 on 1997 states there are 7 type of rights applied in Indonesia; property right, cultivate right, use right, building right, apartment right (*strata title*), mortgage, endowment right and management right.

- Property right is the highest right, a right that can be inherited, the strongest and fullest of people can owns the land. Property right does not exclude the social function of land.
- Cultivate right is the right to cultivate state land and is given within a time bound period.
- Building right is the right to establish and have buildings on land which owned by the state and given within a certain period of time.
- Use right is the right to use and /or collect the results of the land which is owned by another party.
- Apartment right is the ownership right of apartment units that are individual and separate. That also includes the right to part shared, object together, land together, all of which is integral part to the units concerned.
- Mortgage is a guarantee charged to following or not following of object things that are an integral part of the land, for the repayment of certain debts, which gives priority status to certain creditors against other creditors.
- Endowments rights is the right to give up some of the property (land) to be used permanently or for a specified period in accordance with their interests for purposes of worship and /or the general welfare according to Islam rule.
- Management right is the state's right to control the implementation of some of the authority delegated to the holder.

Land registration listed in the Basic Agrarian Law is described in article 19, that is: (a) measurement, mapping and book keeping of land (b) registration of land rights and land transfer (c) providing a letter of proof applicable evidentiary rights instruments. Item (a) is called cadastral. Items (b) and (c) are called registration of rights.

The development of land registration is divided into three periods, that is:

- Period of 1620-1837. Although regulations of production of maps already existed, the regulation was not implemented properly due to limited human resources and skills. Land transfer should be reported to two government officials (*schepen*) that recorded it. Land taxation applied. The purpose of registration was to ensure certainty of rights.
- Period after 1837. The officer ordered the government measure to keep and maintain the map and make the block maps. Providing land block number and parcel number performed on the maps and classified according to location of the parcel. To describe a parcel a parcel letter is published which is called Land Measure (*Surat Ukur*). This period is called as the land transfer ordinance which every right transition occurs has

to be reported to the land transfer officials. Recording in two copies, the original files are stored in the office and other file given to the owner. The officials are responsible for negligence that has been caused.

- Period of published Basic Agrarian Laws in 1960. Measurement of parcels must be plotted in a base map to find out for certain relative positions. This is very important because the right certificate issued by the Land Office should be able to prove the two things are certain in the location of land and the certainty of their owners. The land transfer was made by the Land Official who makes Land Deed (PPAT) and must be registered to Land Office. Land Office will record the certificate of land with new owners. If required, can publish details of the land registration documents that stored at the office.

2.2 Indonesian system

Management of land is the Indonesian nationalism in a united homeland for all people as a Indonesia nation with respect to the substance of chapter 33 paragraph 3 of the 1945 Constitution. This paragraph states that all land, water, and space, including natural riches contained therein, in the territory of the Republic of Indonesia, as a gift of God Almighty, is a national treasure. Thus control and authority is given to the state the land is not **owned** by the state. As an organisation the power of the Indonesian nation, to the highest level have authority to:

- regulate and implement for allocation, use, supply and management
- determine and regulate the rights that can be acquired over (part of) the earth, water and space.
- determine and regulate legal relations between the peoples and the legal actions of the earth, water and space.

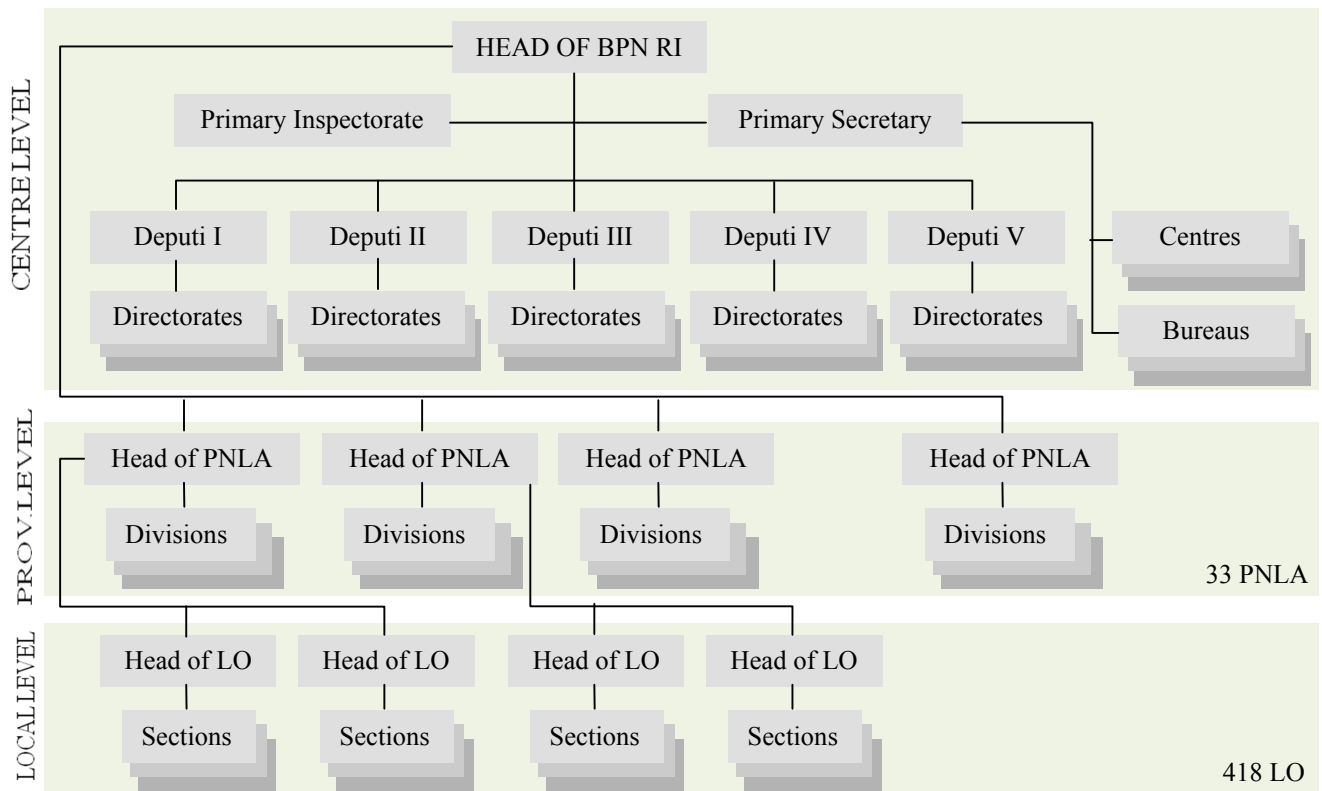
The objective is to achieve maximum prosperity of the community within the framework of a just society and prosperous land administration in terms of land management. It is the implementation of national policy formulation functions and technical policies in the surveying, land registration, grant of right, land use planning, land reform, land consolidation, community empowerment and land controlling, assessment and handling of disputes. Management of land by the government in this regard is BPN RI (National Land Agency Republic of Indonesia)

2.3 BPN task

Presidential Decree number 10 of 2006 establishes that the National Land Agency is given authority to manage the land at national, regional and sectoral level. Indonesia National Land Agency is not a new central government in managing land in Indonesia, but it is an old institution enriched and sharpened of the tasks and functions carried. It is expected to be fully realised of good governance with a more professional in land management.

BPN RI as an organisation is structurally divided into 3 levels; central level, provincial office level (Provincial National Land Agency/PNLA) and district level (Land Office/LO). At the

central level tasks and functions are more focused on matters of policy formulation. At the provincial level focus lies on coordination activities and guidance for the Land Office. While on the bottom level, the Land Office, focus is on the implementation activities of land to the public service. Figure 1 below shows the organisational of BPN RI.



I(Surveying, Mapping & Land Potential Survey).II(Land Right & Land Registration).III(Land Use & Land Management).IV(Community Empowering & Land Controlling).V(Assestment & Handling of Land Dispute)

Organisational Structure of BPN RI

Figure 1

BPN land duties are divided into seven tasks and functions, as follow:

- Surveying and mapping which is the production of land registration base maps, thematic maps and land value maps. This is the task of Deputy I.
- Determination and granting of land rights for individuals, legal entities and governmental ownership. This is the task of Deputy II.
- Establishment of parcel/land boundaries, land cadastral measurements and mapping, land registration. This is the task of Deputy II.
- Technical assistance for PPAT (Land Official that grant Land Deeds), coach for License Surveyor and Land Appraisal Institute. This is the task of Deputy II.
- Management and land use that are functions for designation, acquisition, maintenance, use, tenure and ownership of land. This is the task of Deputy III.
- Community empowerment and land controlling for abandoned and critical land. This is the task of Deputy IV.

- Assessment and handling of land conflicts and land disputes. This is the task of Deputy V.

2.4 Geography and surveying history of Sweden

Sweden is a long country located in Scandinavia in northern Europe. It extends from approximately 55°N in the south to 69°N in the north, crossing the polar circle at 61°33'39". Sweden has a size of about 450 000 square kilometres and a population just above 9 million, mainly concentrated in the south. Almost 60% of the land is covered with forest and forestry is an important industry in Sweden. Almost 10% of the land is used for agricultural purposes, lakes cover almost 10% of the land and there is about 2500 kilometres of coast.

Ownership has been documented and registered for centuries in Sweden so adjudications are not common today. The land conflicts that more commonly occur are boundary conflicts, i.e. when the boundary marks have disappeared or disputes about less clear rights like easements. Lantmäteriet then, after receiving an application, have to settle the position of the boundary or more clearly define the rights through property definition/determination.

In the 16th century the king decided that everyone should be registered to pay land tax and keep the information in land books. The land books developed into a register of ownership and other rights to land (the Land Register). The Swedish cadastral survey history goes back to the year 1628 when the National Land Survey was established. Authorities started to make maps over the various parts of the country and keep them in registers, as a ground for land tax levels. However, Sweden's oldest map, Carta Marina, was printed in 1539 and became a model of other maps as well as for several years being the main source of information for maps of the Nordic countries.

In Sweden there has been several big land consolidation programmes in the past. The most comprehensive - Laga skifte, the so called enclosure movements – was conducted for about hundred years in the 19th century. The programmes were initiated by the government and aimed at more efficient land use and development of new land for a rapidly increasing population. The land units had been fragmented when land was inherited and property units were split into a number of smaller units, one for each heir. This created a lot of long narrow sub-units that were difficult and ineffective to cultivate. After the land consolidation the land was divided into fewer but bigger units for each owner. Some families also moved their houses to their new land, and then the rest of the village had to help with manpower or money. Everything was handled in a procedure, headed by a cadastral authority. At Laga skifte land that was used for common purposes by all the inhabitants in the village, like roads, ditches, areas to store boats during winter time etc, were set as joint property units. These areas were jointly owned by the land owners in the village, the ownership was, and still is today, connected to the real property unit.

Many survey plans and other paper documents from Laga skifte era are today digitalised. These documents are still legally binding and play an important role for cadastral procedures of today, especially when agricultural or forest land is developed.

In one area of Sweden, Dalecarlia, the people were not interested in the Laga skifte and the ownership situation became more and more complex. In these areas it was necessary to start with adjudication programmes, after 100 years of private unofficial parcelling, to clarify the ownership situation and be able to issue land titles before the consolidation could be carried out. Land consolidation is still carried out in this province in big land consolidation projects. It is necessary to get most land owners in a village, with several hundreds or even more than thousand land owners, to agree on one proposal. The land consolidation can be carried through if a majority of the people want it to go through (not more than 50% oppose). The goal is to satisfy the needs and wishes of all land owners as far as possible, considering other land owner's wishes and the regulations in the Real Property Formation Act. When the land consolidation decisions are taken everyone who is not satisfied has the right to appeal to court.

The late 1800's was a period in Sweden characterised with a very liberal land policy and with total freedom for the land owners to split and divide land as they liked. Maps and fixed boundary marks were seldom established in these procedures, resulting in many cases of property determination when these boundaries are issue of new cadastral procedures.

2.5 Swedish system

Swedish real property formation and land administration system is a cooperation between different agencies at different levels. The common goal is to make the land use and the real property formation long-term effective and adequate. Property units should be durable adequate for its purposes, although some exceptions exist. I. e. a subdivision can be made from an already inadequate property unit if the lot - newly formed property unit - is durable adequate for its purpose, even though the residual property unit is not durable adequate. Property formation is carried out either by the cadastral services division of Lantmäteriet or in larger cities by municipal cadastral service offices. There are no private sector cadastral authorities in Sweden.

2.6 Lantmäteriet task

The fundamental mission of Lantmäteriet - The Swedish Mapping, Cadastre and Land Registration Authority - is to provide support for creating an efficient and sustainable use of Sweden's real properties, land and water. Lantmäteriet is divided into four divisions:

- *Fastighetsbildning (The Cadastral Services Division)*
The division is responsible for the overarching management of activities related to real property formation and cadastral procedures
- *Informatinsförsörjning (The Land and Geographic Information Division)*
The division is responsible for the generation, further development, management and distribution of geographic and land information
- *Inskrivning (The Land Registration Division)*

The division is responsible for checking registration transactions with regard to ownership, mortgages and other rights and charges and registering them in the Land Register section of the Real Property Register.

— *Metria (The Commercial Division of Lantmäteriet)*

Lantmäteriet 's Commercial Division and works on a competitive basis. Metria carries out a broad program of repayment services including consultancy.

The organisational structure of Lantmäteriet is: head of Lantmäteriet, head of division, head of region and/or head of local office. Lantmäteriet head office is located in Gävle and the authority has a total of approximately 2,000 employees at around 100 offices located throughout Sweden. In the responsibility of Lantmäteriet, to apply to the property formation legislation, lies to propose streamlining and improvements of the legislation to the Ministry of Justice.

2.7 Differences and similarities

Even though the geography, history and conditions of the two countries are diverse the systems concerning land administration are similar. Working methods and the technology used is different. The organisational structure of Lantmäteriet is slimmer than the one of BPN, which has a broader spectrum of tasks, including community empowerment and land control of abandoned land, as well as more position and region levels. Metria division at Lantmäteriet work with consultants as a profiting company, while BPN (as well as the other divisions of Lantmäteriet) is not allowed to seek advantage in carrying out service tasks. Registration of land in both countries started around the 16th century, but while Sweden has a rather conflict free history for the last centuries and has not been involved in any war since early 19th century. Indonesia has a history of colonialism with the conflicts related to that and received independence in the 1940's. In 1960 BAL was introduced and the national effective registration started.

3. SURVEYING – ACTIONS, BOUNDARIES, BOUNDARY MARKS ETC

3.1 Indonesian cadastral surveying

According to Agrarian Ministry Regulation number 3 in 1997, land surveying is a process to determine boundaries of one or more parcels as under application of the holder of rights or the prospective holders rights which were located adjacent to each other or scattered in one village or more. Products of field surveying are physical data which shows the position and location of parcels as well as descriptions about the information of the buildings or parts of buildings. The position of buildings is very important as a reference for surveyors to perform parcel position when required. Although, it is not mentioned in written in the regulations, cadastral surveying in Indonesia clearly explains the process of parcel measuring on a field that involves the owner of the land. Cadastral surveying process results in issuing a Land Measurement (*Surat Ukur*).

Cadastral surveying has two principles. Firstly, principle of specialise where involvement of adjacent neighbours. In addition, it must be possible to reconstruct the parcels boundaries. Secondly, the principle of publicity that is the transfer of land rights which has been registered in the office is known by all parties concerned. As an object of cadastral surveying the land according to the Laws can be given a certain right. Registration administration system unit is the village. In Indonesia, there are two kinds of villages, rural area is called *desa* and urban area is called *kelurahan*. Exceptions from this are for certain rights, i.e. cultivate right, management right and mortgage, where the district is the unit.

The number of parcels as the object of surveying and land registration refers to the tax object data received from the Tax Authority Department, an estimated 85 million parcels. Until now registered land area has only reached less than 50%. Thus a lot of land will be registered by the first registration process. The first activity performed is the surveying and mapping. In addition, the surveying activities are also used for other purposes such as sub division, land merge, land acquisition for housing development, widening roads, transmigration location planning, industrial development and so on.

In accordance with Government Regulation number 24 of 1997 chapter 14 surveying and mapping is the process of collecting and processing physical data conducted with several phases of activity, as follow:

- base map production, which is used to plot parcels that are cadastral measured. Base mapping is done by BPN RI centre.
- determination of parcel borders where that is approved by the applicant and adjacent neighbours. In case the applicant cannot directly come to the field, there should be a person appointed.
- technically on the field an agreement among the applicant and the adjacent neighbours can be showed by the placing of boundary markers as the fix point on the land. Boundary markers are permanent monuments, like pipes, concrete etc. To ensure the establishment of a juridical boundary, the parties sign a form document. This is called the principle of contradictories delimitation.
- surveying and measurement of land or parcel. In practise, measurement done by using various equipment. Some Local Offices are using sophisticated equipment, like GPS or total station. In many other offices they are still using a simple measure, such as Wild T0 and tape measure. Bonding measurement to buildings, roads, sewers, bridges and the permanent details that surround on the field is a technical requirement that must be done. This is important to ensure that the quality of the measurement can guarantee to be used for a reconstruction of the parcel borders, if there is a problem in the future.
- products of field activities is *Gambar Ukur* (GU, Drawing of Measurment, complete forms with field sketch, signed by surveyor, adjacent neighbour, drawing of parcel in map scale)
- plot on the base map to ensure the relative position of parcels by providing a NIB (parcel identification number). Data contained in *Gambar Ukur*, like parcels drawing, area, parcels location, land use, number of base map, NIB, name of owner, quoted to another form, is called *Surat Ukur* (SU, Letter of Measurement). SU is made in two

copies, the original one keep in Local Office, the other one merged with *Buku Tanah* (BT, Land Book, documents containing juridical data and physical data of a parcel and owner) delivered to the owner.

In certain cases, particularly to first registration process, the role of the surveyor is very important. The other one is the Land Examination Committee. Surveyor that is the adjudicator of parcels border. The Land Examination Committee has the task to examine of evidence ownership. Objection coming from the other parties is possible to occur. Mediation and formal meetings is one of the solutions that must be done if there are objections or refutation when issuance of a land rights. However, it is also possible that the mediation failed, last alternative is to reject an application or appeal to court.

In surveying of land acquisition for public interest, the surveyor and the judicial data collector are one of land acquisition committee members at local government in district level. Results of field surveying are parcel map attached with a list of names of land owners, area of each parcel, types of documents ownership. This data is used by local government to provide compensation to the land owners.

3.2 Swedish cadastral surveying

Up until the beginning of the 20th century stones were put into the ground as boundary marks. These are still valid boundary marks. When fieldwork is carried out the boundary marks are measured to find its coordinates. Today new boundaries are marked with fixed boundary marks, usually metal pipes in the ground or in rock/stone. The position of the boundary marks is noted in the cadastral documents. It is illegal to move boundary marks.

Cadastral procedures delivers real properties that are complete with different kind of attributes, like roads and sewage as well as improves the division of land and ensures that fragmentation of land is avoided and that the applicant has a sustainable investment for the future. The cadastral authority consists of one cadastral official and the authority is responsible for the whole process. This makes the cadastral process easier to understand for the interested parties and gives the authority a good overview of the process as well as alleviates the need to involve legal experts or other consultants.

A cadastral procedure can start when an application is received by the cadastral survey office. Depending on the nature of the application the cadastral procedure may involve anything from a few interested parties to several hundreds. Interested parties in a cadastral procedure are all private persons, companies and authorities that the cadastral officer finds to be concerned by the cadastral procedure, like landowners, leaseholders, usufructaries and right holders. The procedure consists of the following components: application, investigation, meeting/negotiation with interested parties, consultation with other authorities or companies, field survey, decision, registration, time to appeal/legal force and possibility to title and mortgages. GPS technology is often used at field surveys and the accuracy of the coordinates of new boundary marks should be 50 mm or less. The property owners are obliged to be active and provide certain information that is not recorded in public registers. A cadastral matter is

discussed and solved in cooperation between the cadastral officer and the parties involved. The cadastral authority is authorised to make legal, economic as well as technical decisions. The decisions made by the surveyor are to be regarded as a first instance law decision. Therefore the officials in the cadastral authority are employed by the state or a municipality. The decisions must consider the need of the society as well as concerned parties and the authority and the cadastral officer must be totally independent.

A cadastral procedure is based on an application and/or agreements/transfer deeds. New boundaries are marked with fixed boundary marks that are legally binding and it is a crime to remove boundary marks. If the application is not refused it results in a cadastral dossier consisting of i) a cadastral record – with i.e. the cadastral procedure orders, ii) a cadastral plan – with i.e. the boundary points with type of boundary marking and coordinates, and iii) a cadastral document describing the result of the cadastral procedure –with i.e. change of area of real property units and affected rights. These documents are always established and additional documents can occur. Cadastral services are financed by fees deriving from the various types of work done by the cadastral authorities.

When the cadastral procedure is concluded and the cadastral procedure orders are taken all interested parties have the right to appeal. From the day when a decision is taken, any concerned party may complain to court within four weeks. If no one complains, the cadastral procedure orders are binding decisions the real property register and the cadastral index map are updated with the new information. By that formal ending, the cadastral procedure is completed, implying full legal effect to the new facts. All decisions and maps are documented in a legal act and the applicant can get his/her own copy. The original document is filed in an archive. Nowadays all cadastral acts are in digital format.

The land registration authority is responsible for checking and recording title registration matters, such as information about ownership, site leaseholds, mortgages and some other rights to land. Along with these legal matters, the land registration authority also handles the collection of stamp duty and fees related to conveyance of real property. Land registration is mainly financed by fees for registration of ownership and other rights and small administrative fees.

3.3 Differences and similarities

The structure of surveying and registration is similar in the two countries, but the techniques, archives and registers are more manual and less comprehensive in Indonesia than in Sweden, where the registers and archives are digital and GPS technology is regularly used for cadastral services. In Sweden often only one person carries out almost all elements of the cadastral procedure. In Indonesia more people are involved in each cadastral process. The BPN staff members in Indonesia are more specialised in certain areas, as it has been in Sweden earlier.

During the Indonesian visit in Sweden a difference that was noticed is connected to the activities during and present concerned parties at field surveys. In Sweden only the owner(s) of concerned real property units are informed and can comment in a cadastral procedure. If it

is clear where the boundary to a neighbouring real property unit is located the owner(s) of that real property unit are not included even if a new boundary mark is put in the existing boundary. When new boundaries are created the cadastral surveyor and the owner(s) usually mark them with sticks and after that the cadastral surveyor mark the new boundaries with fixed boundary marks and do the field measuring, at this time the owner has usually already left the area. In Indonesia the owners of the parcels on each side of a boundary have to be present as well as a witness to make sure the boundary is at the right place. The cadastral surveyor will do all work while the owners are still present. Another big difference is that in Sweden the cadastral surveyor can make property determination and show where a boundary is, based on old cadastral dossiers. In Indonesia the field survey element of measurement of boundaries the owners point out where the boundary is and the cadastral officer do the measuring. If the owners do not agree on where the boundary is the conflict has to be settled in court before the field survey can be conducted.

4. LEGISLATION

4.1 Indonesian legislation

Law number 5 of 1960, Basic Agrarian Law, was published to avoid the dualism of land legislation with both customary law system and western law system. Customary law is very simple administration and western agrarian laws have been implemented by the standards of the administrative system countries in Europe. The condition is highly adverse for native citizens because there is no legal certainty. State legislate legal relationship between the people with the land and legal relationship concern between land, water and space. In the way ruling government there is a separation in authority to management of land. Base of Law number 5 of 1967, Forestry Law, forest areas are under Department of Forestry authority. This means that all land excluding forest land is object of land registration.

In the implementation of land management use, many other regulations have correlation about land management. Some laws and other regulations relating to land, among many others:

- with reference to land reform (Law number 10 of 1960)
- regarding surveying and land registration use (Government Regulation number 24 of 1997)
- in respect to mortgage (Law number 4 of 1996)
- space and land use planning (Law number 24 of 1992, Law number 16 of 2004)
- regulation of granting land rights (Law number 28 of 1956, Law number 29 of 1956, Government Regulation number 49 of 1996)
- rules of the apartment right (Law number 16 of 1985)

In essence, formation of land certificates considers two things, subject of right and object of right. Subject of right are individual, people, legal entity, corporation, company or government which can legally obtain land rights. Foreigners can obtain right of use. While the object of right is land as appropriate rules can be given a right, which is customary land, state land or land which has already the certain right. Another important thing to note is that all rights to land has a social function. This means, that the rights to any existing belong to

someone, it cannot be justified, that land would be used (or not used) solely for their own interests, especially if it caused harm to the public. The use of land must be adapted to circumstances and character of the right, to be useful both for the welfare and happiness of having it both useful to society and state. These provisions do not mean that individual interests would be driven entirely by the public interest (community). The interests of the public and private interests should offset each other, until eventually the main objectives will be achieved: prosperity, justice and happiness for all people. In concern with social functions, it is a natural thing that the land should be maintained carefully, in order to increase fertility and prevent the damage. Obligation to take care of land do not just accrue encumbrance to the owner or relevant right holder, but also a burden of other parties, peoples, legal entity, government who have a legal relationship with the land. In determining of certain right, technical requirements must be fulfilled in accordance to correlate with spatial planning, forestry area, land use planning, mortgage, etc. Coordination between other institutions, local governments and other parties must be done by the Land Office in carrying out their duties and functions to provide for land services to the public.

4.2 Swedish legislation

There are a few laws and regulations related to land administration and land use. Those are of different age and some of them have their origin in older regulations. The regulations can be changed when needed by altering, adding or removing paragraphs and they are not extremely specified – the interpretation depends on what is considered long-term sustainable usage of land at the time.

New legislation was introduced in 1928 and a new era with comprehensive land consolidation projects took place. Swedish current, modern, legislation was established in 1972 and included a new Land Code and a Real Property Formation Act. At this time conversion of the Land Register and Real Property Register into digital form started. The base of the regulations is the Land Code. Closely connected to this is the Real Property Formation Act. The main focus here is that the land should be used in the best way (i.e. forestry, farming, industry, residential) in a long-term perspective and that each property unit should be adequate for its purpose. These two laws always apply, but mainly when the land is not planned. When there is a plan the regulations of how the land can be used and divided is specified in the plan, i.e. in a detailed development plan.

The Real Property Formation Act states that a prerequisite to make any change in the property division is that the new division of land must be sustainable on a long-term basis and it must be suitable for its purpose. Otherwise it is not possible to make any change. I.e. you can create a new real property in an area with a detail plan only if it is according to the plan; a new real property meant to be used for permanent housing must have access to a road, water and sewage and also made sure that it will be possible to get a building permission (if there is not a existing, functioning building at the site); forest units can be divided into new real properties only if the new properties can be managed as professional forestry properties; coastal areas have special restrictions and the general public shall, as a general role, have access to the water – a subdivision for a summerhouse in such area can only be done as an exception.

Connected to real property formation is also the Joint Facilities Act – origin from the Private Roads Act - and the Utility Easement Act. When areas are decided to be joint facilities it is decided by the cadastral authority what management and what use the area is to have. The management is either part-owner management where all part-owners have to agree in all issues or it is carried out by a joint property association with an elected board committee. Each participating property unit gets a participatory share in correspondence to the usage of the joint facility and pay for the maintenance in accordance to the share. These laws are mainly used after agreements between the parties but for occasions when agreements cannot be made and the construction of i.e. a road or railway is seen as a common interest and need the implementation can be compulsory. If land or right is granted, for any reason, the land owner is entitled to compensation. This usually is decided by agreements, but if there is no agreement the loss of value is valued and the land owner is, within the cadastral procedure, compensated by the part benefiting from the right or ownership.

Apart from property division, cadastral procedures can be used to create legal easements, joint facilities and utility easements. Legal easements and joint facilities are usually created for roads (possible mooring for property units on islands), wells and sewerage. Utility easements are created for i.e. phone wires and electric cables, with the phone or electrical company as beneficiary. As with property formation the result must be long-term adequate and of enduring importance. To change or remove a legal easement, a joint facility or a utility easement there has to be a cadastral procedure where the adequacy is tried. There also have to be an advantage to carry out a cadastral procedure - the advantages of the cadastral procedure have to outweigh the expenses of it. Except for the rights stated above there are right of user, easements by agreement and lease. These rights have to consist of an agreement between the involved parties and can be registered on the property unit by Lantmäteriet (the Land Registration Division). To change or remove these rights all needed is an agreement between all involved parties that is sent to the Land Registration Division.

Easements and joint facilities are rights between real property units – independent of change of owner of the real property units. Right of user and leases are agreements between property owner and private person (or authority or company), this right cannot be transferred to another person/company/authority. Utility easements are benefiting a company (usually) and encumber one or more real property units. Rights can have a time limit or be indefinite.

New legislation has continuously been introduced in the cadastral field and the cadastral authority responsibility has extended. In 2004 the possibility to create three-dimensional property units consisting of commercial premises or several housing units was introduced and in 2009 the possibility to create single housing units, strata title, was added. Both of the new regulations were created by extending the Real Property Formation Act. Joint facilities and joint property management associations are often established to solve the management of the common constructions in three-dimensional property units.

In Sweden real property units can be owned by i) private person ii) private companies iii) public authority - like municipality, government, public company etc iv) estate of a deceased

person - represented by beneficiaries of the estate. An owner can own one or more real property units. The owner of a real property unit can be of any nationality and can live within Sweden or abroad.

4.3 Differences and similarities

A difference in legislation is that in Sweden there are a few laws and regulations that are altered, increased or decreased when needed while in Indonesia there are several hundreds of regulations related to land management. The Indonesian system can create difficulties in having an overall view of the regulations and may overlap or have gaps. Joint facilities are commonly used in Sweden and the cadastral authority can create a joint facilities association to manage the facility. In Indonesia right of joint facilities is given to individual ownership rights in apartments and the management is conducted by the owners.

Both in Indonesia and Sweden property can be owned by one or more individuals, legal entities and government. In Sweden foreigners can own land while in Indonesia only native citizens can be granted an ownership right. Foreigners can only be granted right of use.

5. REAL PROPERTY REGISTRY, CADASTRAL MAPS AND IDENTITY OF REAL PROPERTY UNITS

5.1 Indonesian real property registry and base map

Registration is part of a series of continuous land management activities that are continuous and regular, including collection, processing, book keeping (recording), presentation and maintenance of physical data and juridical data, in the form of a map and list of land areas and apartment units. In the end of the process is the issuing of land certificate as the evidence of ownership rights. The system of land registration in Indonesia is using negative tends to positive system. The Land Office staff must examine carefully and thoroughly on the entire requested application document. Errors in analysing the evidence ownership documents can lead to errors in the determination of granting a right. Process of announcement (principle of publicity) gives an opportunity to all parties to argue of right granting. It reduces errors to determine that the applicant have first priority to get right or not.

Land registration procedure has two kind of process. Firstly, first registration process. Secondly, maintenance of land data registration.

First registration process, phases should be done as follows:

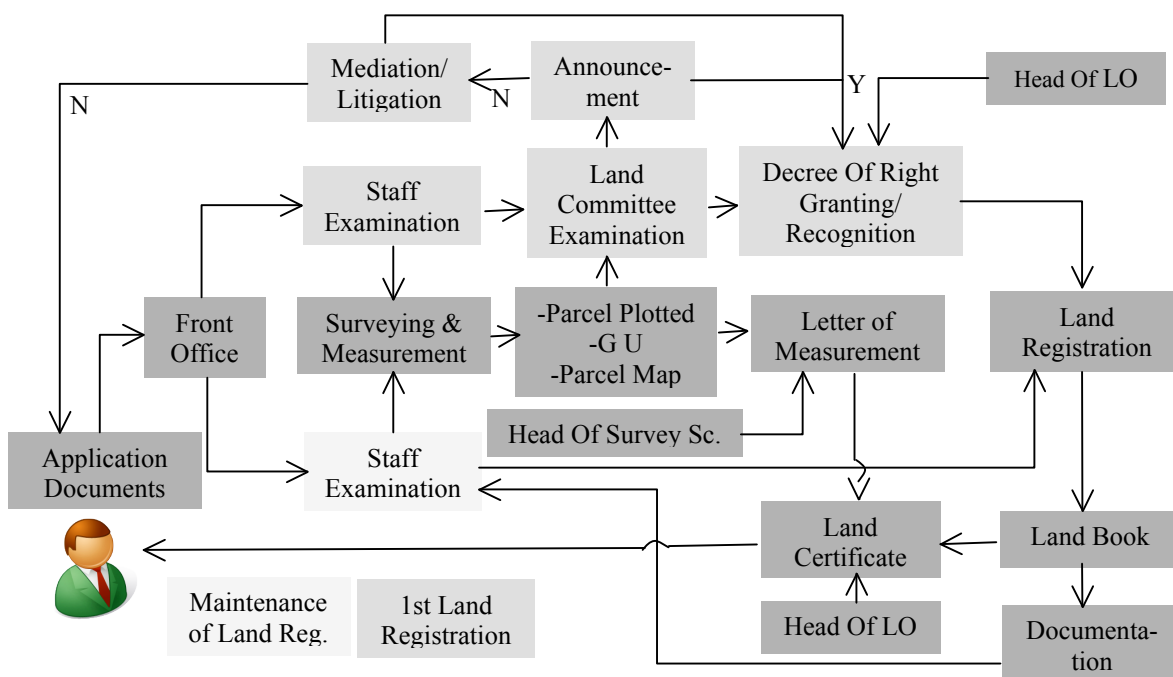
- Collection and processing of physical data will be done by surveying and mapping process. This process is carried out by surveyor who serves as a government official.
- Evidentiary of rights and booked, which examination process of document owned by the applicant. Investigation conducted by Land Committee and poured in a Minutes of Land Examination. To provide an opportunity for other parties who have an interest of the object announcement is made during a certain period.

- Issuing of land certificate, which gives a certain rights in accordance with the existing ownership document. Land certificate is a strong evidence letter that describes physical data and juridical data. Physical data means a parcel, juridical data means evidence letter.
- Information of physical data and juridical data. Land Office record and keep of land data in carrying out the administration of land registration in kind of forms, i.e. land registration map, land list, letter of measurement (*Surat Ukur*), land book (*Buku Tanah*) and name list.
- Documentation in special form.

Maintenance of land data registration, phases should be done as follows:

- Transfer of registration, namely that transition rights process by right holders or occur because of changes to the parcel for a division, subdivision or merger. The transition process is done through creation of land deed is made PPAT (Land Official who make Land Deed). Seven days after issuing of the deed, it has to be registered at the Land Office.
- Mortgage.

Land Certificate Procedure figured as below (figure 2):



Land Certificate Procedures

Figure 2

All document of the application and other paperwork that is created by the Land Office officers are kept together and become official documents and are stored in the Land Office. These files include:

- Identity of the applicant
- Evidence of land ownership or land tenure. Among others: letter of land acquisition, land tax payment receipt, letter from head of the village, letter of land that has no dispute etc.
- Surveying and mapping data, including Drawing Measurement (GU), letter of land use, land map, Letter Measurement (SU)
- Juridical data, including minutes of land examination, decree of granting rights and land books.

In Agrarian Regulation number 1 of 2005 about Standard and Operating Procedure it is explained in detail about the procedures to be performed by every Land Office staff in accordance with their respective functions, completion time of each activity and the costs to be paid by the applicant. In general, the scope of activities for the services of Land Office staff can be divided into three:

- Front office staff who serve directly with the applicant. Two kind of staff, duty in counter window and duty on the field, like surveyor, juridical data collecting staff, Land Examination Committee.
- Back office staff that perform administration procedure is a continuation of activities in the front office staff.
- Structural officer, namely the officers of Land Office who have authority to supervise, to sign on Land Book, on Measurement Letter or on decision letter of right granting.

Land Office Computerisation is a project for the development of computerised service system by developing an electronic database system. The project began in 2006 and until now has been done in 256 Land Offices. Electronic database have formed about 15 million (35%) of registered land and stored in each Land Office, distribute data system. Backup data is stored in Data Centre that is placed at BPN RI centre in Jakarta. Data backup is done manually; each Land Office sends backup files on CD or tape data. Currently, Land Data and Information Centre develop data network connection between the Data Centre with the Land Office. Data backup is expected to be done automatically on a certain period. Distribute data system will gradually be replace by centralised data system. Centralised data storage system have advantages, one is easy maintenance. A deficiency that must be faced is that there is not so good quality of the data network connection in some areas.

Acceleration of land registration can be done with the two approaches, systematic land registration and sporadic land registration, in a way closer to the community by using mobile services. Systematic land registration is registration activities for the first time conducted simultaneously covering all land registry objects that are not registered yet in one or more villages and carried out through government projects. Land service innovation through mobile service was developed to bring services close to the community, called LARASITA. The purpose is to have equality of service to the community. LARASITA service system use minibus vehicles with a special design for windows service. Inside the vehicle have three

notebooks to run service application. Data network connection infrastructure was prepared to run service applications on-line to land office computerisation system. Services targets are villages that are difficult to reach or that have quite low rates of registered land. If the village location cannot be reach by cars, motorcycles are another alternative that can be done to perform land services. In some regions of Indonesia, that are close to rivers and seas, boats are used. Four or more officers will serves in LARASITA mobile service. Except of land registration service, as office mobile service, LARASITA also have other functions services i.e. perform socialisation project activities, community empowerment in term of land issues, detection of abandoned land and mediation of land disputes.

The government has an obligation to provide a base map. Land registration base map is used for plot parcels cadastral measurement. In accordance with Government Regulation number 24 of 1997, base map using projection system in national standard, is the UTM (Universal Transverse Mercator) with a special wide zone of 3°. Before 1997, mapping process was made in local projection system. Some area was fully covered, while others were partially covered.

There are a few things to consider when creating base map, for the urban areas, parcels area below 1000 m², should be mapped to the scale of 1:1000. This area covers approximately 10 million ha. In rural areas, parcel area below 1 ha, should be mapped to the scale of 1:2500. This area is estimated to cover 10 million ha. Plantation areas or areas that are far from the settlement should be mapped to the scale of 1:10.000. This area covers approximately around 74 million ha. In fact, to reach full covered base map in the entire territory of Indonesia, which consists of 94 million ha (land registry objects excluding forest area), is difficult. As an illustration, today only 10 million ha is covered and has an available base map with different mapping standards, the national projection system and the local projection system.

When an area is not provided with a base map the registered land that has been published in *de jure* cannot be shown in exact positions. Although it will not necessarily lead to dispute, it has possibility to cause problems. For example it can be difficult to plot in the exact position for an adjacent parcel on the same base map. The phenomenon is called flying parcels. There is currently no definitive data about the number of flying parcels.

5.2 Indonesian identification of real property units

There are some identities given to parcels that are registered. As already explained above the land registration process will end with the issuing of land certificate. The certificate itself is a copy of the Land Book (*BT*) which is stored at the Land Office. The certificate combined with the Letter of Measurement (*SU*) is bound and delivered to the owner, called Land Certificate, as proof of legal ownership.

Some identities are listed in the certificate and used as keywords to search analogous document, i.e. type and number of rights, NIB (parcel identification number) and Letter Measurement number. NIB consists of a 18-digit number, means: first two digits indicate the province code, third and fourth digits indicate district code, fifth and sixth digit numbers show

sub district, seventh and eighth digit numbers show the village code and 5 last digits show sorted parcel number. For example, NIB 32.12.02.01.00576 means:

- 32, province code for West Java province,
- 12, district code for Indramayu district
- 11, sub district code for Gabus Wetan sub district
- 02, village code Rancahan village
- 00576, sorted issued parcel number in Rancahan village.

Right numbers has similarities and differences. Similarities are location code number. Differences are in the last five digits and added one digit number in between. For example, number right 32.12.11.02.1.00442 means:

- 32.12.11.02, see above
- 1, type of right (1= property right, 2= cultivate right, 3= building right, 4= use right, 5= management right, 6= apartment right, 7= mortgage, 8= endowment right)
- 00442, right number

5.3 Swedish real property registry and cadastral index map

Two separate cadastres of rural and urban areas respectively were created in the early 20th century. In 1968 it was decided to put these two registers together and 1970 to integrate them with the land register. The result was a comprehensive real property register that keeps record of most issues related to land and water in Sweden. Earlier all information was stored in paper form and the written register and the maps were separated. Now the real property register and the cadastral index map are digital and connected.

The real property register contains information about 3.2 million real property units and the total assessed value of Sweden's real property is 3,600 billion Swedish kronor (about US\$ 500 billion). Important information about real property units can be found in the real property register, such as: area, coordinates, registered owners, registered rights, tax value, registered titles and mortgages, archive cadastral dossiers, shares in joint facilities/joint property units etc. All archive cadastral dossiers are scanned and can be accessed in the system.

The cadastral index map is a continuous digital map that covers basically the whole country and contents of a fairly wide range of information. Somewhat simplified, the information can be divided into the following main groups: topographic, administrative, land use, zones of restriction, detailed development plans, and descriptive texts. All these groups of features are stored in different layers in the register data base. On the computer screen, the cadastral map can show all or only some layers on top of each other for a complete or selected picture. The national reference system of the cadastral index map is currently SWEREF99. The cadastral dossiers, the real property register and the cadastral index map are public acts and can be viewed by anyone.

The cadastral authorities, land registry authorities, municipalities and other public bodies involved in land administration have automatically full access to all data in the text parts. Some other users, such as banks and brokers, are also allowed full access to the data base, but

as external users they need a special permit from Lantmäteriet. In order to get this access, all parts pay a user fee. For those people who do not use the online facility, or who need the full record of a property, the cadastral authorities and some other public offices are obliged to provide a paper copy free of charge. Swedish land registration includes the recording of rights of ownership, mortgages etc. Such information not only becomes public through the registration – the rights even get guaranteed against potential claimers. Also, the willingness among credit institutes to lend money increases thanks to this rise in validity. The banks rely upon the cadastral system and can, without any vast investigations, use the real property as a pledge. The registration is of great importance for banks and other interested parties as well as for the land owner.

5.4 Swedish identification of real property units

In Sweden the real property unit has one unique identity used by all authorities. The unique property unit designation consists of four sections; municipality, district name, block and unit number; e.g. Norrtälje Liesta 3:2. Each property unit consists of one or more sub-units (parcels). Each property unit can consist of land and/or water areas and can include one or more buildings. Every property unit has a definition of its use. In cities where there are plans and blocks the property units can consist of a precinct name instead of district name and block, e.g. Norrtälje Norrland 15. There can also be fishery units connected to property units. Except real property units there are joint property units for land, water and fishery (block “s”), joint facilities (block “ga”), as well as rights and utility easements in the real property registry and the cadastral index map. Rights and utility easements are numbered with the cadastral dossier number as a base.

5.5 Differences and similarities

In Sweden all land and water is included in the real property registry while in Indonesia only land is registered, excluding forest areas. Regulations of registration for water (marine cadastral) are still in the stage of preliminary study. Data storage in Sweden is digital direct from source while in Indonesia the data is distributed manually from local offices to the central level. Sweden has regulations on what data is public but in Indonesia the regulation of determination of public data, private data or secret data is still in process of inter-departmental discussion. In Sweden one single property unit designation is used while in Indonesia there are three main types of numbering used; NIB (parcel identified number), Letter of Measurement number and combination type and right number. Progress in IT is conducted in both countries, in Sweden development of a more efficient online service system is ongoing and Indonesia is in a developing process of the national system of land information system.

6. LAND USE AND SPATIAL PLANNING SYSTEM

6.1 Indonesian land use and spatial planning system

When deciding to grant a right two things always have to be considered; the object and subject of rights. Subject of right is the person who will be granted a certain type of right. For

example the legal entity is never to be given property rights, but building right and cultivate right. Object of right is affected by lands, such as whether land use is in accordance with site plans that have been defined by the authority. Law is land use as the reference number 24 of 1992.

When determining land tenure some principles must be considered, which all interests in an integrated, efficient and effective, harmonious, balanced, and sustainable, openness, equality, justice, and legal protection. Spatial planning is made by central government, provincial and district government in accordance with their authorities in respective levels. In the level of implementation the government made region spatial planning in form of government regulation. Related to the tasks carried out by the Land Office, coordination in term of certain cases is conducted with local government. Land Committee will examine some issues related to incompatible land use with district region spatial planning. Land use permit, site plan planning, issued from the local government is one of the requirements that must be completed as attachment documents to grant rights to the owners.

6.2 Swedish land use and spatial planning system

The regulations for planning are restricted in the Planning and Building Act (PBL). This restricts i.e. the detailed planning, building permits and long-term planning. PBL is closely related to the Environmental Code, which is a collection of older regulations from different acts and new regulations put together.

Except these laws and regulations the County Administrative Board define protection areas (parts of it is regulated in the Environmental Code) for i.e. beaches and water life, protectable forest areas, historical and cultural findings, fishery and nature reserves. These defined areas and regulations for them have to be followed when property units are formed and rights granted. Sometimes a consulting meeting with the concerned section of the County Administrative Board is needed. Some of the regulations it is possible to get an exemption from, by applying to the proper authority. The main planning authority is the municipalities; they are responsible for the short term, detailed development planning. The municipalities also have the right of pre-emption to be able to plan for the best usage of the land. Long-term planning is carried out at national level and the median term planning at provincial level. There are clear responsibilities of which authority that should do what.

6.3 Differences and similarities

Both countries have planning carried out by authorities at different levels depending on the kind of planning conducted.

7. COOPERATION BETWEEN AUTHORITIES AND SHARING OF DATA

7.1 Indonesia

The use of data in accordance to development is not coordinated between agencies or institutions. Creation and retrieval of data are designed to the needs of each agency, although the data may already exist in other agencies. This is not economical and wastes time, because the government has to plan double budget for the same purposes. Communities feel disadvantaged because they have to spend more time to serve the officers to get the same data. Government through Presidential Regulation number 85 of 2007 issued regulations about infrastructure data spatial network (IDSN). The goals are to build structured data, transparent and integrated into a national network that will facilitate the exchange and dissemination of each agency, between government and the community. IDSN consists of 14 agencies that have authority to manage and maintain certain spatial data. As connections network node is *Bakosurtanal* (National Coordinating Agency for Survey and Mapping). BPN RI is one member of IDSN. The other agencies that are members of IDSN are Department of Public Works (*Departemen Pekerjaan Umum*), Ministry of Agriculture (*Departemen Pertanian*), Department of Transportation (*Departemen Perhubungan*), Ministry of Culture & Tourism (*Departemen Kebudayaan dan Pariwisata*), National Space Agency (*Lembaga Penerbangan dan Antariksa Nasional*), Statistic Planning Agency (*Biro Pusat Statistik*), Ministry of Energy and Mineral Resources (*Departemen Energi dan Sumber Daya Mineral*), Ministry of Forestry (*Departemen Kehutanan*), Ministry of Telecommunication & Information (*Departemen Komunikasi dan Informasi*), Ministry of Marine & Fishery (*Departemen Kelautan dan Perikanan*), Climatology, Meteorology & Geophysic Agency (*Badan Klimatologi Meteorologi dan Geofisika*), Department of Home Affairs (*Departemen Dalam Negeri*) and Local Government (*Pemerintah Daerah*).

7.2 Sweden

Lantmäteriet are cooperating with other authorities regarding for example the information in the digital real property register and the cadastral index map, which is collected and registered by the cadastral authorities, the land registration authority, the respective municipalities and the Swedish National Tax Board. The information is updated, comprehensive and well used in the society. This makes the market economy function. The fundamental principle is that the full contents of the real property register – the text part and the cadastral index map – is public and, in that respect, available to everyone (at least on paper copies). The fact that no groups of information are secret is a matter of transparency, which is important for the effectiveness and security on the property market. Credit institutes, potential buyers and other interested parties can hence easily access and trust the recorded data, knowing there is little need for additional investigations. Only in exceptional cases, i.e. when a property owner has a protected identity or information about military facilities, some personal data such as name and address is hidden to the general public.

However, in Sweden the data is not available for free in pure data form to whoever wants it. In neighbouring Norway the national land survey in 2009 started to offer free cadastral map information to developers that can be used integrated in other services. This is something that might be a result in Sweden as well in the future. In Sweden Lantmäteriet and Sjöfartsverket (Swedish Maritime Administration) have most of the national cadastral data. [Computer Sweden, 2009-11-18]

In cadastral processes the cadastral authority consult with the concerned municipality and County Administrative Board to make sure all permits needed have been granted and that plans and restrictions are followed.

7.3 Differences and similarities

In Sweden sharing of data among authorities as well as to the public in land administration matters is well developed, even though there is still progress to be made. In Indonesia the Governmental Regulation number 85 of 2007 about infrastructure data spatial network is still in process of inter-departmental discussion.

8. LAND TAX

8.1 Indonesian land tax

Land registration service needs administrative and operational costs to be paid by the applicant. Mechanism through the use of Law number 20 of 1997 and Government Regulation number 47 in 1997 is Non Tax State Revenue. Charges are made for all types of services provided at the Land Office, among other surveying, registration, transfer rights, mortgages, land information, land consolidation, land reform, and creation of land rights. Determination of cost depends on several parameters i.e. location of land, area, land tax value (*NJOP=Nilai Jual Obyek Pajak*). Especially for land registration for low income communities the service is free of charge. Government has many programs to carry out such activities, i.e. National Agrarian Programme (*Prona*), Adjudication Programme, Small and Middle Business Programme, etc. All costs associated with non-tax revenues are managed by the Land Office.

In addition to administrative and operational costs, is the land right transfer taxed of income tax. Two kind of tax will be paid. Tax of Land and Building Acquisition Rights (*BPHTB=Bea Perolehan Hak Atas Tanah dan Bangunan*) must be pay by a new owner (buyer). The other one is Income Tax (*PPH=Pajak Penghasilan*) that is paid by the old owner (seller). The amount is 5% from land tax value. Exceptions are granted if the transaction occurs at the minimum level that is not subject to tax (*NPOTKP=Nilai Perolehan Obyek Tidak Kena Pajak*). Amount for income tax is IDR 60 million (about US\$ 7,000) while land & building acquisition tax is IDR 30 million (about US\$ 3,500). Exceptions are given for first heritage of transfer right (50%) as well as no land tax for religious, social, health and education purposes that do not seek profit. Land tax management is done by the Department of Finance.

8.2 Swedish land tax

There are several types of taxes and fees related to real property in Sweden. The three most important taxes are real property tax, transfer tax and capital gains tax. Real property tax is paid annually for most types of properties. The basis of the real property tax is the tax assessment value and there is a maximum limit amount. The tax assessment value is

established as a base value, corresponding to 75% of the market value. Transfer tax, often referred to as stamp duty, is a national tax for conveyance of real property amount to 1.5% or 3%, depending on the nature of the buyer. The tax is calculated from the real property tax value or the purchase price (transaction value), whichever is higher, and is to be paid by the applicant of registration of title, who must also pay a small administrative fee. Capital gains tax is a national tax on profit on real property transactions. The actual collection of real property tax and capital gains tax is done by the Swedish Tax Agency as part of the ordinary income tax collection system. Transfer tax is collected in connection with registration of title, which is managed by the division of land registration at Lantmäteriet.

8.3 Differences and similarities

In Sweden two kinds of tax are related to land transfer, transfer tax for the seller and, if applicable, capital gains tax for the buyer. In addition the owner of real property pays property tax each year. In Indonesia there are two kinds of tax related to land transfer, income tax for the seller and land and building transfer tax for the buyer. The tax amount is the same for both buyer and seller, but differs in terms of the minimum value of transactions that are not subject to tax. Both buildings and land are included in the tax value in Sweden as well as and in Indonesia and three types of land value is used; tax value, market value and transaction value. The different types of values as well as the tax amounts are calculated and used in different ways in the two countries.

9. OUTCOME OF THE EXPERIENCES

The two countries are different when it comes to geography, history and conditions; still the systems of land administration and the structure of surveying and registration are similar in Indonesia and Sweden. Registration of land in both countries started several centuries ago, in Sweden the registration has been continuous since then, while in Indonesia the national effective registration started after the independence in mid 20th century. In Sweden all land and water is included in the real property registry and a real property unit can consist of both land and water. In Indonesia only land is registered, excluding forest areas, and regulations of registration for marine cadastral are still in the stage of preliminary study. There are more manual and less comprehensive techniques, archives and registers in Indonesia than in Sweden. In Sweden registers are digital, archive dossiers are scanned and GPS technology is regularly used for cadastral services. In Indonesia the records are manual and the digital index map is not comprehensive. Data is distributed manually from local offices to the central level in Indonesia, in Sweden digital data is sent directly from the local offices to a common database. Progress in IT is conducted in both countries, in Sweden development of a more efficient online service system is ongoing and Indonesia is in a developing process of the national system of land information system. In Sweden the contents of the real property registry are public, but not accessible for free in pure data form. In Indonesia the regulation of determination of public data, private data or secret data is still in process of inter-departmental discussion. The procedures during field survey in the two countries, for example for marking of new boundaries and concerned parties present, differ.

The legislation in Indonesia combines customary laws and Dutch laws in different regulations, there are several hundreds related to land management. The system of creating many new regulations can result in difficulties in having an overall view of the regulation system and may create overlaps and gaps. In Sweden there are a few laws and regulations related to land management, that can be changed, have additions or parts removed when needed. Both in Indonesia and Sweden property can be owned by one or more individuals, legal entities and government. In Sweden foreigners can own land while in Indonesia only native citizens can be granted an ownership right. In Indonesia staff members are more specialised than in Sweden where often only one person carries out almost all elements of the cadastral procedure. In Indonesia the authorities work more independently than in Sweden and cooperation is on a lower scale. Both countries have planning carried out by authorities at different levels depending on the kind of planning conducted. In Sweden one single property unit designation is used for real property units while in Indonesia there are different identifications for different purposes and by different authorities.

Infrastructure development in spatial planning and information technology communication is to assist government in the smoothness and acceleration in managing land data. Indonesia, which has a very large number of parcels, requires the completion of infrastructure. Centralisation of data can be achieved if the development of electronic databases, network connections and issuing of the rules is realised. It will accelerate implement of data sharing, data integration and e-government. The experience increased the awareness of the advantages of a highly reliable digital data register of land information. The systems and registers are not absolutely complete in Sweden but there are a lot of benefits from having a digital land register and using fixed property boundary marks and coordinates. Acceleration of land registration in Indonesia and making a land registration base map, which includes all land registration objects, is one way to achieve that 100 percent of the land is registered. This is important to reduce the amount of flying parcels.

The Swedish missions in Indonesia has mainly given a picture of the systems around land administration and legislations regarding land matters in Indonesia while at the Indonesian visit in Sweden the differences and similarities in the work procedures as well as the system of cadastral surveying, titling and actions at fieldwork emerged more clearly.

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Laws and regulations:

State Secretary Republic of Indonesia:

Law nr 5, 1960, Basic Agrarian Law

Laws nr 24, 1992, Spatial Planning Law

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Law nr 21, 2000, Land and Building Acquisition Tax

Government Regulation nr 22, 1997, Non Tax State Revenue

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Webpages:

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Lantmäteriet webpage, www.lantmateriet.se

Skatteverket (Swedish Tax Agency), www.skatteverket.se

BIOGRAPHICAL NOTES

Endri Diyanto

Employment:

Land Data and Information Centre, Land National Agency Republic of Indonesia since 1991

TS 10G – Knowledge Sharing

27/29

Endri Diyato and Karolina Larsson

Exchange of Experiences and Knowledge in Land Administration and Cadastral Services between Sweden and Indonesia (4204)

FIG Congress 2010

Facing the Challenges – Building the Capacity

Sydney, Australia, 11-16 April 2010

Scholar of Science Thesis:

Use of photogrammetry map for land and building tax, case study in Jatihulur catchment area, 1985.

Education:

Ir. Geodetic Engineering, Gadjah Mada University, Yogyakarta, Indonesia, 1986

Diploma of Photogrammetry, IPO, Stuttgart, Germany, 1995

Projects :

Land Office Computerization, Land Data and Information Centre, Land National Agency Republic of Indonesia

Project Commission:

Infrastructure Spatial Data Network, Republic of Indonesia, 2008

Membership:

ISI, Indonesia Surveyors Association, passive member

Karolina Larsson

Employment:

Cadastral surveyor at Lantmäteriet (The Swedish Mapping, Cadastre and Land Registration Authority) in Norrtälje since May 2006.

Master of Science Thesis:

Field work for the MSc thesis in Mombasa, Kenya, August-October 2005. Financed by MFS grant by Sida (Swedish International Development Cooperation Agency).

Presentation of thesis “*Ecological Awareness in Sustainable Planning of Low-income Housing - an ecologically sustainable subdivision scheme for low-income housing in Mombasa, Kenya*” at KTH (Royal Institute of Technology), Stockholm, Sweden, in March 2006.

Education:

MSc, Land Surveying. Högsolan i Gävle (College of Gävle) and KTH (Royal Institute of Technology) in Stockholm, Sweden, 2000-2006. Concentration on Spatial Planning.

Participant at Förärrättningslantmätarprogrammet (Cadastral Surveyor program) at Lantmäteriet 2006-2007.

Projects, Commissions etc:

Junior consultant in the Informal Settlements component of the IPSLA project (Institutional Partnership Strengthening Land Administration) - a Sida-financed cooperation between Lantmäteriet and BPN (Indonesian National Land Agency) - since June 2008.

Novice in the Mentor Program for Service Export at Lantmäteriet since September 2008.

Conferences:

Participant at UN-Habitat World Urban Forum III, Vancouver, Canada in June 2006.
Participant and partial hostess at the UN-Habitat sections at FIG Working Week in Stockholm June 2008.

Memberships:

Member of Aspect (Association for Chartered Surveying, Property Evaluation and Transactions) in Sweden.

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