Zonation of Land Value as a Part of Comprehensive Land Management in Indonesia

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**Keywords:** Zonation, Land Value, Land Administration.

**SUMMARY**
Land Valuation is a part of land management. The government must deal with 4 (four) functions as an integral part of land in land management is land tenure, land values, land use and land development (Enemark, 2012). National Land Agency of Republic Indonesia as an institution that specifically deal with land management directly under the president until year 2006 only run two functions in land management, which is land tenure dan land use. Land Value as one of the important elements in the land management began implementation in 2006, when Directorate of Land Potential formed under Deputy of Surveying and Mapping. Nowadays, as land acquisition becoming very important issues for the government, since 2014 Directorate of Land Potential becoming Directorate of Land Valuation under Deputy of Land Acquisition for Public Purposes.

Considering the extent of the territory of Indonesia, land valuation is not an easy thing to do. Although the Ministry of Finance has conducted it before for fiscal interests, but considering this is a new task for the National Land Agency of Republic Indonesia to achieve land management can consider all functions of land, the National Land Agency of Republic Indonesia must find a way to implement fast and effective, at least in order to obtain an accurate picture of land value in Indonesia.

Method to overcome this is to zoning land value by taking into account the methods of assessment of land in obtaining land value samples in it. With this zonation of land value can be obtained a description of land value in Indonesia which in turn can be one of the spatial reference in land management and land policy-making.
SUMMARY
Penilaian tanah sebagai bagian tidak terpisahkan dari pengelolaan pertanahan. Pemerintah harus menangani 4 fungsi pertanahan sebagai bagian yang utuh dalam manajemen pertanahan yaitu pemilikan tanah, nilai tanah, penggunaan tanah dan pengembangan tanah (Enemark, 2012).
Badan pertanahan nasional sebagai instansi di Indonesia yang secara khusus menangani manajemen pertanahan secara langsung di bawah presiden baru menjalankan 2 fungsi dalam manajemen pertanahan yaitu pemilikan dan penggunaan tanah. Nilai tanah sebagai salah satu unsur penting dalam manajemen pertanahan baru dimulai pelaksanaannya tahun 2006. Mengingat besarnya wilayah Indonesia, masalah penilaian tanah bukanlah hal yang mudah untuk dilakukan. Meski Kementerian Keuangan telah melaksanakan sebelumnya untuk kepentingan fiskal, namun mengingat ini merupakan tugas baru bagi BPN untuk mewujudkan manajemen pertanahan yang dapat mempertimbangkan segala fungsi pertanahan, maka BPN RI harus menemukan cara untuk melaksanakannya dengan cepat dan terarah, setidaknya agar dapat memperoleh gambaran yang tepat tentang nilai tanah di Indonesia.

Cara yang dilakukan untuk mengatasi hal ini adalah melakukan zonasi nilai tanah dengan tetap memperhatikan metode-metode penilaian tanah dalam memperoleh nilai sampel di dalamnya. Dengan zonasi nilai tanah ini dapat diperoleh gambaran nilai tanah di Indonesia yang selanjutnya dapat menjadi salah satu referensi spasial dalam pengelolaan pertanahan dan pengambilan kebijakan pertanahan secara menyeluruh.
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1. INTRODUCTION

1.1 Land Value in Indonesia

Land Valuation is a part of land management. The government must deal with 4 (four) functions as an integral part of land in land management is land tenure, land values, land use and land development (Enemark, 2012).

![Figure 1: A global land administration perspective (Enemark, 2012)]

National Land Agency (NLA) as an institution directly under the President in Indonesia since the Act No.5 of 1960 just focus with 2 (two) functions in land management, namely land rights and land use. Land value as one of the important elements in the new land management began implementation in 2006, through Presidential Decree No. 10 of 2006 on the National Land Agency Jo. Presidential Decree number 85 of 2012 regarding the amendment of Presidential Decree No. 10 of 2006, organized a land management policy and national, regional and sectoral, including in terms of the implementation of the survey and mapping of land value. This was reinforced by the release of Presidential Decree No. 17 of 2015 concerning the Ministry of Agricultural and Spatial reinforces the importance of assessment of land in Indonesia.

Indonesia’s land area is very large, with a total land area of ± 190 million hectares that makes implementation of land valuation problem is not an easy thing to do. This makes the assessment of land takes a long time and large funds. Although the Ministry of Finance has conducted prior to fiscal interests, but considering this is a new task for the NLA to achieve land management can consider all functions of land, NLA must find a way to implement fast and effective, at least in order to obtain an accurate picture of the value of land in Indonesia.
For that, we need an efficient and effective method for assessing land assets throughout Indonesia. Estimated of land value with zoning approach the land value was considered the most appropriate to be able to estimate the value of the land quickly.

1.2 Research Objectives
The main objective of this research describes how the implementation of mass land valuation in the NLA as an effort to realize the comprehensive land administration in Indonesia.

2. KNOWING THE DIRECTORATE OF LAND VALUATION

Land valuation in National Land Agency has existed since 2006, ie since the release of Presidential Regulation No. 10 Year 2006 on the National Land Agency Jo. Presidential Decree number 85 of 2012 regarding the amendment of Presidential Decree No. 10 of 2006. At that time, land valuation is conducted by the Directorate of Land Potential Survey under the Deputy Surveying, Mapping and Measurement. Along with the need for the smooth implementation of land acquisition in Indonesia, then pursuant to Presidential Decree No. 17 of 2015 of the Ministry of Agrarian Affairs and Spatial Planning, land valuation become the task of the Directorate of Land Valuation under the Directorate General of Land Acquisition for Public Interest.

The main task of the Directorate of Land Valuation carry out these following functions:

a. preparation of technical policy formulation in the field of development cooperation system and land valuation, as well as technical guidance land appraisers.

b. prepare the formulation of norms, standards, guidelines and criteria in the field of development cooperation system and land valuation, as well as technical guidance land appraisers.

c. assessment activities of land, land value zone district / city, the economic value of the zone district region / city and regional assets.

d. implementation of the ratification of making assessment of land, land value zone district / city, the economic value of the zone district region / city and regional assets

e. preparation and determination of assessors in NLA

f. preparation of land appraiser licensing in order to procure land for the construction of public interest

g. coordination and cooperation activities plot development and regional assessment

h. implementation of the guidance, supervision, monitoring and evaluation in the field of development cooperation system and land valuation, assessment and regional plot and technical guidance land appraisers and assessors land

i. coordinating the implementation of the synchronization of activities in cooperation to manufacture and or presentation of the ground plane and regional assessment with other directorates within the NLA

j. cooperation with other parties in the assessment and regional plot and presentation of information and ratings plot area

k. program activities of the field assessment of land and territories around the territory of the Republic of Indonesia.

Position Directorate of Land Valuation in NLA’s strategic plan for 2010-2014 is: Zonation of Land Value as a Part of Comprehensive Land Management in Indonesia (7712)
Andrayani Andrayani, Teddi Guspriadi, Manase Daniel Binsar and Ramadhany Atang Suryana (Indonesia)
1) Achieve national land mapping to support orderly control, ownership, use, and use through surveys, assessment and mapping of land values and indigo asset region or community and public assets;

2) Accelerate the realization of development results and management information system of national land (SIMASTAN) offices throughout the ranks of the National Land Agency of the Republic of Indonesia, through the construction and development of sub Land Asset Information System Management (SIMASTAN);

3) Improving the quality of public services in the field of land in order to better quality, fast, accurate, precise, transparent and accountable, while maintaining the rule of law, through the intensification of land valuation and land area or community asset value and asset professionally for other public and the public interest and welfare of the community, particularly in meeting the provisions of Article 16 and Article 18 of Regulation 13 of 2010 on non-tax revenues applicable to NLA.

Based on the foregoing, it can be seen that the focus of the land valuation in the Ministry of Agricultural and Spatial / National Land Agency is accelerating land value information globally, with the aim of supporting public services in the areas of land and the implementation of land acquisition. For the assessment of land with the purpose of acquisition, carried out by independent assessors outside agencies that are licensed by the Ministry of Agricultural and Spatial Planning/ National Land Agency.

3. IMPLEMENTATION OF LAND VALUATION

Land Valuation in NLA conducted through several phases such as:

1. Preparation
2. Survey and Preparation of Preliminary Zone
3. Field Survey and Data Collection
4. Data Entry
5. Calculation and Data Analysis
6. Spatial Data Processing
7. Mapping the Zonation of Land Value

This paper took an example implementation in Muaro Jambi. Muaro District is a district in Jambi Province, Indonesia. This district is one of the district division of the District Batanghari by Act No. 54 of 1999, with an area of 5246 km², is divided administratively into 11 districts, 129 Village, with a population of 342 952 inhabitants with a growth rate of 3.93 percent per year. This Muaro Jambi Land Value map using scale 1:25.000.

3.1. Preparation

Preparation includes the preparation of administration and preparation of a technical nature, such as:
- Handling Letter of Assignment
- Basic data collection
- Preparation of the work program
- Presentation of the work plan
3.2. Survey and Preparation of Preliminary Zone

Making preliminary zone as a reference zoning in land value zone map. Each zone is made over land base map, with the minimum of 0.5 cm x 0.5 cm x scale peta. Land value zone is a zone that the distribution of land value in the range of less than or equal to 30%.

Figure 3.1. Preliminary Zone

3.3. Field Survey and Data Collection

This activities aims to collect data and information from the physical and legal aspects of data on land parcels, collecting market price data and socio-economic data relating to land value and implemented by coordinating all relevant parties that exist in the location of work.

a. Determine for points of sample plot
b. Determine the coordinates of the location of the sample plot
c. Interviews with a sample of respondents
d. Physical and non physical aspect data of land.

Sample question in the survey and mapping of land value is registered plot / land which provide information transaction price or the land parcels offer during the period of 24 months for non-agricultural land and 48 months for farmland. Attempted transaction price or offer in question is the price of buying and selling. If there is no transaction price or offer can be used land rent data of that area.

Sample selected by purposive technique, which is based on considerations of the characteristics of the village or villages, in proportion to the use of residential land, commercial and agricultural land market value reflected in the zone of land with a minimum number of three (3) samples for each zone land value , whereas for zone more 10x10cm, the minimum sample is 5 (five). For each 10x10cm excess number of samples plus 2 (two) and so on every multiple of 10x10cm. Evaluators can determine the number of samples for each zone so that it can be done leveling or statistical analysis. The selected sample sought in the form of vacant land parcels which refers to the base map used as a map of the existing work. Such data must be apple to apple, evenly distributed / represented in a zone and must be in accordance with the designation / zoning. For mass appraisal, the data needed as much in accordance with the land value zone.
Respondents are the main data source that can provide an overview and reliable information about the transaction price information or offer good price for jualbeli or lease tanah. Responden that can be selected are;

1) The transaction price is:
   - Landowners who are making transactions
   - Real estate agent / broker
   - Developer
   - Tenants plot or property

2) The offering price is:
   - Real estate agent / broker
   - Developer
   - Landowners who intend to sell / rent out their land
   - Notary, headman, other officials who believed as a reliable source of information if the market price of all respondents are required are not available.

3.4. Data Entry

Appraisers who collects the data will store all the data that has been collected in digital form. Entry field data using excel software from Microsoft Office.
3.5. Calculation and Data Analysis

Data entered by assuming a vacant parcel (because NLA only map the land value only), so if there is a building on it used a formula to reduce the price of these samples with a building on it.

3.6. Spatial Data Processing

Sample point value is then performed in accordance number of the data in the zone. The result of this processing standard deviation values obtained on condition scale 1: 25,000 average value of less than or equal to 30% If the above conditions are not met appraiser will perform validation of data calculation results.
3.7. Mapping the Zonation of Land Value
Zone classification is done based on the value of land.

Figure 3.5. Map of Land Value

4. CONCLUSIONS
Land valuation carried out by the NLA since 2006 may not be able to provide information for the entire value of the land so vast Indonesian territory in a short time. Especially if the focus of the land valuation in the Ministry of Agricultural and Spatial / National Land Agency with the aim of supporting public services in the areas of land and the implementation of land acquisition. With this zonation of land value can be obtained a description of land value in Indonesia which in turn can be one of the spatial reference as integral part in land management and and become a useful land information for government in land policy-making.

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REFERENCES

Enemark, Stig, (2009), *Sustainable Land Administration Infrastructures to support Natural Disaster Prevention and Management*, Ninth United Nations Regional Cartographic Conference 2010


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