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Jl. Tata Bumi No. 5 Banyuraden, Gamping,
Sleman, Yogyakarta, 55293
Tlp. (0274) 587239
Faxes: (0274) 587138

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Jl. Tata Bumi No. 5 Banyuraden, Gamping, Sleman
Yogyakarta, 55293
Tlp. (0274) 587239 (ext. 115)

Author: Oloan Sitorus, Sukmo Pinuji, Westi Utami,
Arif Suhattanto, Ferdy Nugraha, et al.

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LAND INFORMATION SYSTEM SUPPORTS THE IMPLEMENTATION OF LAND CONSOLIDATION

Nuraini Aisiyah^a, Kusmiarto^{b1}

^{a, b}: Land National College (STPN), Jl. Tata Bhumi No. 5 Gamping Sleman Postcode: 55293,
Yogyakarta, Indonesia

Abstract

Land Consolidation (LC) is one of the current focuses of the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency (ATR/BPN), which plays a role in realizing sustainable spatial planning. LC takes into account the provision/regulation of development and spatial planning. In the implementation of LC consider the carrying capacity, capacity, sustainability, participation and community empowerment. LC will be successful if all aspects of LC are met. The availability of land parcel data, such as land tenure, land ownership, land uses and land utilization are summarized in the IP4T activities. IP4T provides important data support for LC processes in physical and juridical data assessment activities. The purpose of this paper is to describe the importance of IP4T for the realization of Land Information System (LIS) in supporting the implementation of LC.

Keywords: Land Information System, Land Consolidation, IP4T.

1. Introduction

In some developing countries and in developed countries such as Taiwan, Latin America, Japan, Germany, and the Netherlands, a method of approach known as land consolidation has been said to have originated from Kukaku Seiri, a concept of rearranging the ownership of agricultural lands to support agricultural production, launched by the Emperor Meiji (Emperor of Japan) in 1899 through the Agrarian Land Restoration with the enactment of the Agricultural Land Readjustment Law. In subsequent developments, due to the arrangement on the farms is very successful, Kukaku Seiri eventually not only applied to agricultural sites, but also on the settlement sites so as not to develop into slum areas, but become an ideal area.

In accordance with BPN's Regulation No. 4 year 1991 article 1 verse 1, land consolidation is the land policy concerning the realignment of land tenure and land use and land acquisition for development purposes, to improve the quality of the environment and the maintenance of natural resources by involving the active participation of the community. In its theoretical concept, land consolidation is an effort to restructure the control, acquisition, land ownership by the land-owning community through joint efforts to build an environment ready to build and prepare the land plots in accordance with the applicable spatial plan. Rural land consolidation activities include: (1) Site selection, (2) Counseling, (3)

¹ Corresponding author. Tel.: +62 8121560816; +6281904000850. E-mail address: aisiyahnuraini@gmail.com; kusmiarto@stp.ac.id

Assessment of Agreement, (4) Determination of location by Decree of Regent of Head of District, (5) Identification of subject and object.

The data collection of land tenure, land ownership, land use and land utilization (IP4T) program is an activity that produces maps and information on land by applying Geographic Information System (GIS). As a final outcome of the program is the IP4T Map and the Physical Land Tenure Statement Letter (SP2FBT) signed by each applicant as well as copies of other land tenure evidence. The results of these activities can be used as the basis of the realization of land-based Land Information System (LIS) that supports the implementation of land consolidation.

2. The Land Consolidation

Land consolidation is the land policy on the realignment of land tenure, land use and land acquisition for development purposes, to improve the quality of the environment and the maintenance of natural resources by involving the active participation of the people (BPN's Regulation No. 4 of 1991 article 1 verse 1). Objectives and targets of land consolidation activities aim to achieve optimal land use for efficiency and productivity of land use. While the target to be achieved is the realization of an orderly tenure and land to use order and equipped with environmental facilities. In KaBPN Regulation no. 4 year 1991 article 3 stated that land consolidation covers the re-arrangement of land parcels including land rights and/or their use with equipped road infrastructure, irrigation, environmental facilities and/or other supporting facilities required. The implementation of the land arrangement is always guided by the existing regional spatial planning. The implementation of land consolidation activities coordinated by the District/Municipal Land Consolidation Coordination Team and its implementation by the Provincial Land Consolidation Control Team.

There are two activities in the consolidation, namely: land consolidation involves the activities of restructuring the form, extent, location, control and use, as well as the right to land parcel so as to be orderly and regularly equipped with necessary infrastructure and public facilities by involving the participation of landowners directly. The land consolidation is also an integrated cross-sectoral activity, and carried out in a coordinated manner as one of the activities of the land tenure and tenure management program, which functionally becomes the task of the Directorate of Land Administration of the National Land Agency. Implementation phases of land consolidation based on Letter of Head of National Land Agency no. 410-245 dated 7 December 1991 on the Implementation Guidance of Land Consolidation is as follows: (1) assessment of location determination/site selection; (2) Counseling; (3) Assessment of Agreement; (4) Determination of Land Consolidation Location; (5) Submission of Proposed List of Land Consolidation Activity Plans (DURK); (6) Identification of subjects and objects; (7) Measuring/mapping; (8) Detailed mapping, (9)

Creating land use map, 10) Making maps of road network plans and supporting facilities; (11) Design of Spatial Planning (DTR); 12) Deliberation on the amount of Land Donation for Development (STUP); (13) Release of land rights by participants; (14) Confirmation of land as object of consolidation of Land; (15) BPN implement re-arrangement (reallocation/application of new plots); (16) Construction works; (17) Redistribution/issuance of Decree on granting of rights; (18) Certification.

3. The IP4T and Land Information System (LIS)

The implementation of IP4T activities at BPN is carried out through stages: counseling, working map creation and P4T data collection (primary data of P4T), secondary data collection related to village or potential hamlet, quality control, measurement and mapping of land, tabulation, spatial and textual data and data analysis. Data collection of IP4T primary data consists of collecting data/information on every parcel of land in the hamlet, whether certified or not, concerning tenureship, ownership, use and utilization of land, and other information. Results of IP4T activities in the form of land parcels in one village to ensure the relative position of each parcel contained in one village of IP4T location. Land information, one of which is adopted from FIG (Federation Internationale des Geometres): Land Information System is a tool used for legitimate decision making on administrative and economic issues and as a tool in planning and development consisting of databases containing spatial land reference information and data related to it, on the one hand and procedures and techniques in systematic data retrieval, updating, processing and distribution of data on the other party. The components that are often featured in LIS are data and maps of land use (potency, land allocation, and land use), land ownership and tenure. Therefore, the result of IP4T activities is a database to make the Land Information System (LIS).

4. Analysis

By looking at the sixth stage of land consolidation: Identification of subjects and objects to land rights to know the number of participants, shelter, proof of land ownership, size and location of each parcel, number of fields, boundaries of land ownership. Requirements for urban land consolidation participants are: (a) The participant has a letter or proof of ownership of the land; (b) The participant is willing to relinquish his/her land rights as a basis of the granting of new rights after being consolidated. (c) The participant is willing to donate some of his land for public infrastructure such as for roads and for other public facilities. (d) If the land is in a state of dispute then both parties must declare their consent and participate willingly in the land consolidation. Viewed from the 6th stage of this IP4T data that has been integrated into the LIS has prepared 80% needs of these stages. Viewed from the time side of the job takes months and requires a lot of human resources. While for

stage 7, 8, and 9 that is measuring/mapping, mapping detail can be done faster based on IP4T result which have been integrated into LIS. In other words the third stage can be simplified by field check activities only. With the cut off of the 6, 7, 8 and 9 stages of land consolidation can accelerate the process of land consolidation.

5. Conclusions

From the description above it is concluded that the LIS supported by IP4T activities can shorten the phase of land consolidation implementation that is in the identification step of the subject and the object of land rights. LIS is highly efficient in terms of time and human resource requirements as well as the efficiency of measurement and mapping activities.

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