

# Spatial Studies and juridical utilization of vacant land and abandoned land control in efforts of regional authority in Semarang city

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**Abstract.** In the constellation of regional autonomy, regional land management problems that substantially contains the local authorities in the land sector is still not getting the understanding and implementation of a satisfactory response. These issues are then more prominent at the time of issue of PP 11/2010 on Control and Utilization of Abandoned Land. In accordance with the description above, this study aims to conduct a study Spatial And Juridical Vacant Land Utilization and Abandoned Land Control in Semarang City. Spatial information about vacant land and abandoned land information is required. In identifying vacant land used high-resolution imagery that QuickBird Satellite Imagery in 2010 and Pleides for 2016. Juridical studies carried out on the abandoned land to find out the status of the land and how many years of neglect by using secondary data from BPN and equipped with field surveys. For data processing was performed using methods of remote sensing and Geographic Information System. The results of this study can be used to determine how widespread availability of vacant land and abandoned land including amendments as an indicator of the direction of regional growth. Statistical testing conducted to determine the correlations between vacant and abandoned land Semarang.

## 1 Background

The authority of the utilization affairs tasks and problem resolution vacant land and abandoned land can not be implemented fully by the majority of the district / city. Land abandonment in urban areas is the result of multi-dimensional drivers of which some are relevant at the local scale [1], while others at regional or national scales [2]. If ever there was the district / city that has tried to implement this authority is still limited to set up a team or committee that is dealing with this issue, so it is still a decree establishes the establishment, not operationalized. Though the authority organizing this affair clearly been mentioned in Annex I of Government Regulation No. 38 of 2007 that include:

- a. Inventory and identification of vacant land for the use of seasonal food crops.
- b. Determination of parcels of land as vacant land that can be used to season food crops together with other parties under the agreement;
- c. The determination of the parties that need the land for crops with emphasis on the local community;
- d. Facilitation of cooperation agreements between holders of land rights to those who will use the land in front of / known by the village chief / headman and local district with an agreement for the two planting seasons;

- e. Handling issues that arise in the utilization of vacant land if one party does not meet the obligations in the agreement.

These issues are then more prominent at the time of issue of PP 11/2010 on Control and Utilization of Abandoned Land. In this legislation no mention of the terminology of vacant land, but the land that indicated neglected and abandoned land. In this case that meant the abandoned land is land that has been granted the right by the state in the form of HM, HGU, HGB, HP and HPL or basic control of land, which is not cultivated, not used, or not used in accordance with the circumstances or the nature and purpose of basic rights or mastery.

In the context of economic, land abandonment has resulted in missed opportunities to bring in the economic potential of the land. As an illustration of the opportunity lost in the lands abandoned due to land disputes and conflicts are as follows:

"The BPN RI data show that the number of agrarian disputes in Indonesia until 2007, there were 4,581 cases; as many as 858 cases of agrarian conflicts; and agrarian cases pending in the courts as much as 2,052 cases. In terms of area, productive land object of the dispute that can not be exploited and used in an optimal area: 607 886 ha. The economic value of the land being disputed by: 6.07886 billion m<sup>2</sup> x Rp. 15.000, - (SVTO lowest land) = Rp. 91,182,900,000,000, - While forecasts opportunity lost from the land that is not utilized due to the status of the dispute reached 146.804 trillion rupiah (exceeds state budget)[3].

The argument above shows that there is a crucial issue of vacant and abandoned land that can not be resolved. Spatial and juridical information on vacant land and abandoned land and land prices as a factor information reinforcement is needed in order to empower and control the implementation of the regional authority efforts in the area of land and food resilience Semarang.

## 2 Problem Formulation

The formulation of the problem in this research there are:

1. What are the contributing factors to the empty and abandoned land as well as enforcement efforts and utilization of abandoned land?
2. What is the estimated opportunity lost of vacant land and abandoned land that is not utilized it in 2016 at Semarang?

## 3 Data / Material research

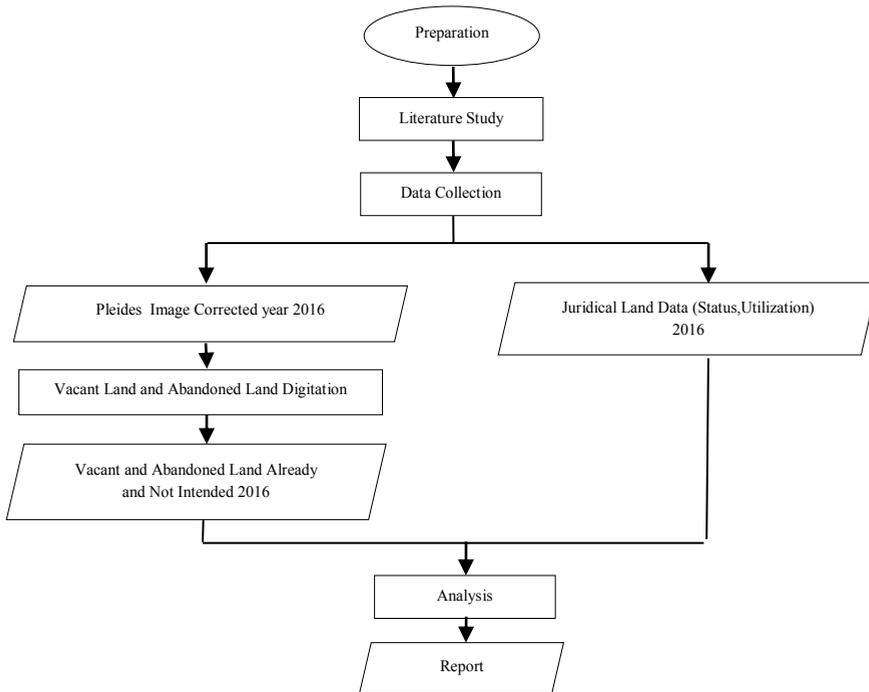
Data that is used in data processing, among others:

1. Spatial Data
  - a). Quickbird image was corrected in 2010
  - b). Pleides image was corrected in 2016
  - b). Administrative map of Semarang
2. Non-Spatial Data  
Judicial land data 2016 were obtained from Badan Pertanahan Nasional.

## 4 Research Areas Description

This research study area is in the city of Semarang, Central Java, Republic of Indonesia. Semarang city is the capital of Central Java Province is the only city in Central Java, which can be classified as a metropolitan city. As the provincial capital, Semarang be the parameters of progress other cities in Central Java Province. Semarang city development progress can not be separated from the support areas in the vicinity, such as the City

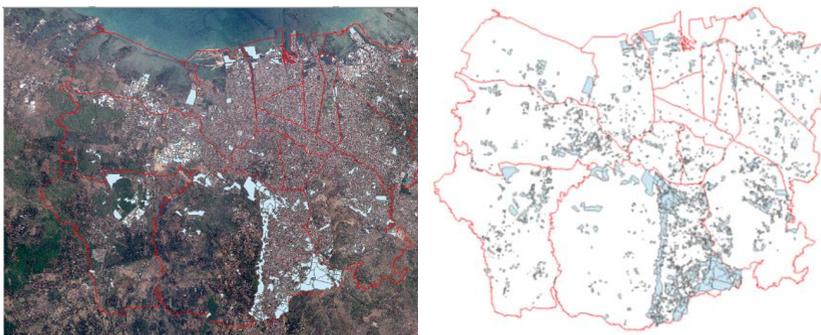




**Fig. 2.** Research Flowchart

### 5.1 Early Stage Data Processing

This research data processing carried out stages of digitization on the satellite image and data processing the availability of vacant land and abandoned land of Semarang. The method used to identify vacant land and abandoned land is the visual interpretation and digitization process Imagery in Pleides image which has been corrected geometric with Quickbird Image later in the interpretation of visually by its characteristic appearance of the surface of the land use and digitization to get the spread of vacant land and abandoned land. The use of scenes encompassing the beginning of the vegetation growing season enhance the accuracy of abandoned land classification [4]. Visual interpretation aims to distinguish one theme to another theme based on the appearance depicted in the image. The parameters used in the visual interpretation is the hue or color, the roof shape, size, texture, associations. The digitization of vacant land shown in figure 3.



**Fig. 3.** Vacant land digitation result

The size of vacant land shown in Table 1 below.

**Table 1.** Vacant land in each district

No	District	Size (Ha)	No	District	Size (Ha)
1	Tugu	3100,272	9	Ngaliyan	4493,430
2	Tembalang	4145,276	10	Mijen	5381,080
3	Semarang Utara	1427,463	11	Gunungpati	6148,800
4	Semarang Timur	561,732	12	Genuk	2733,250
5	Semarang Tengah	535,296	13	Gayamsari	643,487
6	Semarang Selatan	614,525	14	Gajah Mungkur	941,386
7	Semarang Barat	2416,450	15	Candisari	661,336
8	Pedurungan	2198,652	16	Banyumanik	3149,286

The graphic of vacant land in Semarang shown in figure 4 below.



**Fig. 4.** Graphic of vacant land in Semarang

## 6 Basic Consideration of Issuance of Government Regulation No. 11 Year 2010

Government Regulation No. 11 of 2010 issued by the main considerations, first, that the condition of land abandonment is getting a greater gap between the social, economic, and welfare and the quality of the environment; Second, the regulatory instrument in the form of legislation that already exist, namely Regulation No. 36 of 1998 on Control and Utilization of Abandoned Land along with its implementing regulation can no longer be used as a reference completion of demolition and utilization of abandoned land. But politically there is actually a greater purpose and spacious and located with the issuance of Regulation No. 11 Year 2010 is to support the successful implementation of the National Agrarian Reform Program. Where the abandoned land has been set as one of the objects of Agrarian Reform in the State land beside former West Rights and / or Swapradja and other state land, State land, the former HGU and HGB that have expired period of validity of the right and was not renewed; as well as former State Land Forest Area.

### 6.1 Abandoned Land Definition

In the government regulated is not clearly regulated formulation of what is the definition of abandoned land. Both in the General Provisions Article 1, which usually describes the terms used in the subsequent chapters. As a comparative understanding of abandoned land can be found in Article 1 point 5 of Government Regulation No. 36 of 1998 which has been revised, the land abandoned by the holders of land rights, the holder of management rights,

or those who have obtained a basic land tenure [permission / decision / certificate from the competent authority is the basis of tenure] but has not yet obtained the right to land in accordance with the legislation in force. Deeper explanation of the meaning of the abandoned land, the explanation can be found in Article 1 of Regulation No. 11 of 2010, that is, if the land is: a. not sought; b; not used or c. not used according to the circumstances or the nature and purpose of their rights. d. basic mastery of the existing soil when the soil: a. not sought; b; not used or c. not used according to the circumstances or the nature and purpose of their rights. d. basic mastery of the existing soil when the soil: a. not requested right; not sought; or c is not used; d. or not used in accordance with the requirements or conditions stipulated in the location permit, the decree granting the right, the decree release of forest area, and / or in the permit / decision / other letters from the authorities.

## 6.2 Criteria Object of Abandoned Land

PP No. 11 of 2010 that is the new object abandoned land determined as specified in Article 2. Then the criteria defined in Article 3 of land that does not include the control object abandoned land are land HM or HGB on behalf of individuals who inadvertently not used according to the circumstances or the nature and purpose of their rights; and land held by the government, either directly or indirectly and had the status of whether or not the status of State/Regional inadvertently not used according to the circumstances or the nature and purpose of their rights. Land rights of individuals who form HM or HGB is inadvertently not used according to the circumstances or the nature and purpose of his rights because the rights holder does not have the ability to undertake economic terms, use, or utilize. While specific land controlled by the government (*land assets of the Government*) are not intentionally used in accordance with the circumstances or the nature and purpose of their rights, due to the limited budget of the State / region to promote, use, or utilize.

Thus, it can be deduced, if land is HM or HGB individual or land controlled by the government (*Land Asset government*), the holder of rights has the ability to economically and/or Agency (Center/Regions) have a sufficient budget to promote, use, or use the land according to the situation or the nature and purpose of its rights, it will increase the status of previously abandoned land is not an object, it will be the object of curbing the abandoned land.

## References

1. Pointereau, P., Coulon, F., Girard, P., Lambotte, M., Stuczynski, T., Sanchez Ortega, V., Del Rio, A. *Analysis of Farmland Abandonment and the Extent and Location of Agricultural Areas That Are Actually Abandoned or Are in Risk to Be Abandoned*. In: Anguiano, E., Bamps, C., Terres, J. (Eds.), Institute for Environment and Sustainability, Joint Research Centre, European Commission (2008)
2. Terres, J.-M., Scacchiafichi, L.N., Wania, A., Ambar, M., Anguiano, E., Buckwell, A., Coppola, A., Gocht, A., Källström, H.N., Pointereau, P. *Farmland abandonment in Europe: identification of drivers and indicators, and development of a composite indicator of risk*. *Land Use Policy* **49**, 20–34 (2015)
3. Badan Pertanahan Nasional, *Penelitian Penetapan Harga Dasar Tanah di Perkotaan*, Diktat Puslitbang BPN, Jakarta (2009)
4. Prishchepov, A.V., Radeloff, V.C., Dubinin, M., Alcantara, C., *The effect of Landsat ETM/ETM+ image acquisition dates on the detection of agricultural land abandonment in Eastern Europe*. *Remote Sens. Environ* **126**, 195–209 (2012b)