

## ICT-BASED SIMPLE STAGES FOR UPDATING THE MAP OF VILLAGE'S FACILITIES

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### Abstract

This article explains about the utilization of information technology for updating the map of village's facilities. The activity objectives are convey information about the stages of process and obtains a physical form of updated for the map of village's facilities. A number of stages for the process is covers the preparation of the work team, submission of renewal permits for the map of village's facilities, and comparison of secondary and primary data. The physical form of an updated the map of village's facilities is a process of renewing and making a hard copy of the map of village facilities of A1 paper size along with a frame and scheduling and submission of a symbolic the map of village's facilities to the Head for the Village of Pemagarsari.

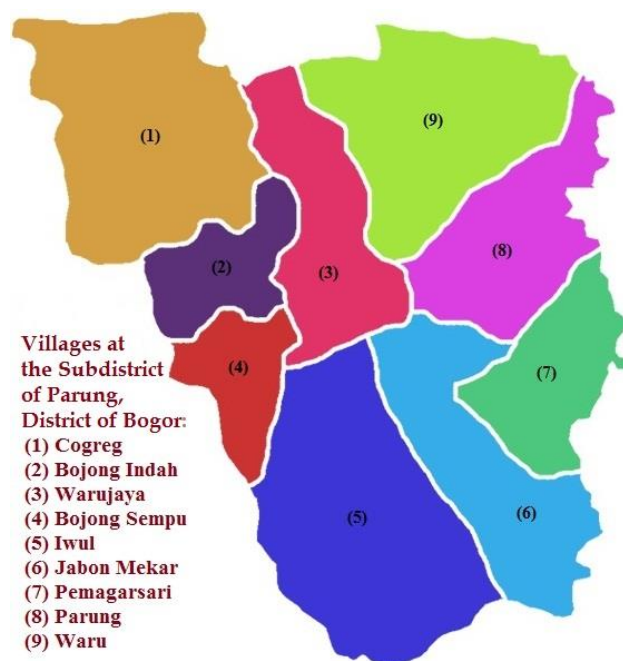
**Keywords:** Applied Research, Previous and Latest Map, the Village of Pemagarsari, Villages in Indonesia.

### INTRODUCTION

The term Information Technology (IT) is known as Information Technology with a modern understanding, first appeared in an article in 1958 in the Harvard Business Review with writers Harold J. Leavitt and Thomas L. Whisler with comments (**Leavitt and Whisler, 1958**), that information technology is a new technology not with a single name embedded, but is called information technology (**Leavitt and Whisler, 1958; Applegate et al., 1988**). Information Technology is a general term for the existence of any technology for assistance to humans in the making, changing, storing, communicating, and/or disseminating information (**Williams and Sawyer, 2014**). Information technology as a fused computing and high-speed communication for data, voice, and video (**Williams and Sawyer, 2014**). In the business context explained by the Information Technology Association of America (ITAA), that information technology is the processing, storage and distribution of vocal, pictorial, text and numeric information by microelectronics based on a combination of computing and telecommunications (**Longley and Shain, 1985**). Examples of the use of information technology not only in the form of personal computers, but also telephones, televisions, household electronic appliances, and modern handheld devices, in this case cellular phones or cellphones (**Williams and Sawyer, 2014**). Some modern fields arose from information technology as the next generation, namely web technology, bioinformatics, cloud computing, global information systems, large-scale knowledge bases, and others (**Simpson and Weiner, 1989; Williams and Sawyer, 2014**).

The map is also known as a floor plan, is a noun with the meaning of representation through pictures of an area with a statement of nature, such as boundaries, surface properties, or others based-on explanation from the dictionary in Indonesian Language or a description of natural elements and or man-made, which is above and below the surface of the earth depicted on a flat plane with a certain scale based-on explanation on the Government Regulation Number 8, the Republic of Indonesia, year of 2013 is called PP Number 8 2013 (**PP Number 8, 2013**). Basic Map is a map with the presentation of natural and/or man-made elements that are on the surface of the earth, depicted on a flat plane with a certain scale, diagram, projection, and geo-reference. Map Accuracy is the accuracy, detail and completeness of data, and/or geo-referenced and thematic information, so that it is an amalgamation of geometric reference systems, scale, accuracy, or database detail, digital storage formats including element codes, cartographic representations with symbolic, color coverage, shading and notation, and completeness of map contents (**PP Number 8, 2013**). Map of Village's Facilities is a map of the area when applied based on regulations in the village government in accordance with the needs and scope of the publication of documents in the form of maps.

The one village that has become this research, that is the Village of Pemagarsari is one of the villages in the Subdistrict of Parung, District of Bogor, Province of Jawa Barat in Indoensia (**the Government of Subdistrict of Parung, no year**). This village is a village resulting from the division of Village of Parung, The Subdistrict of Parung District in 1982 and officially became one of the villages in the Subdistrict of Parung. The names of villages at the Subdistrict of Parung, District of Bogor, where the Village of Pemagarsari among other villages is located as shown in Figure 1.

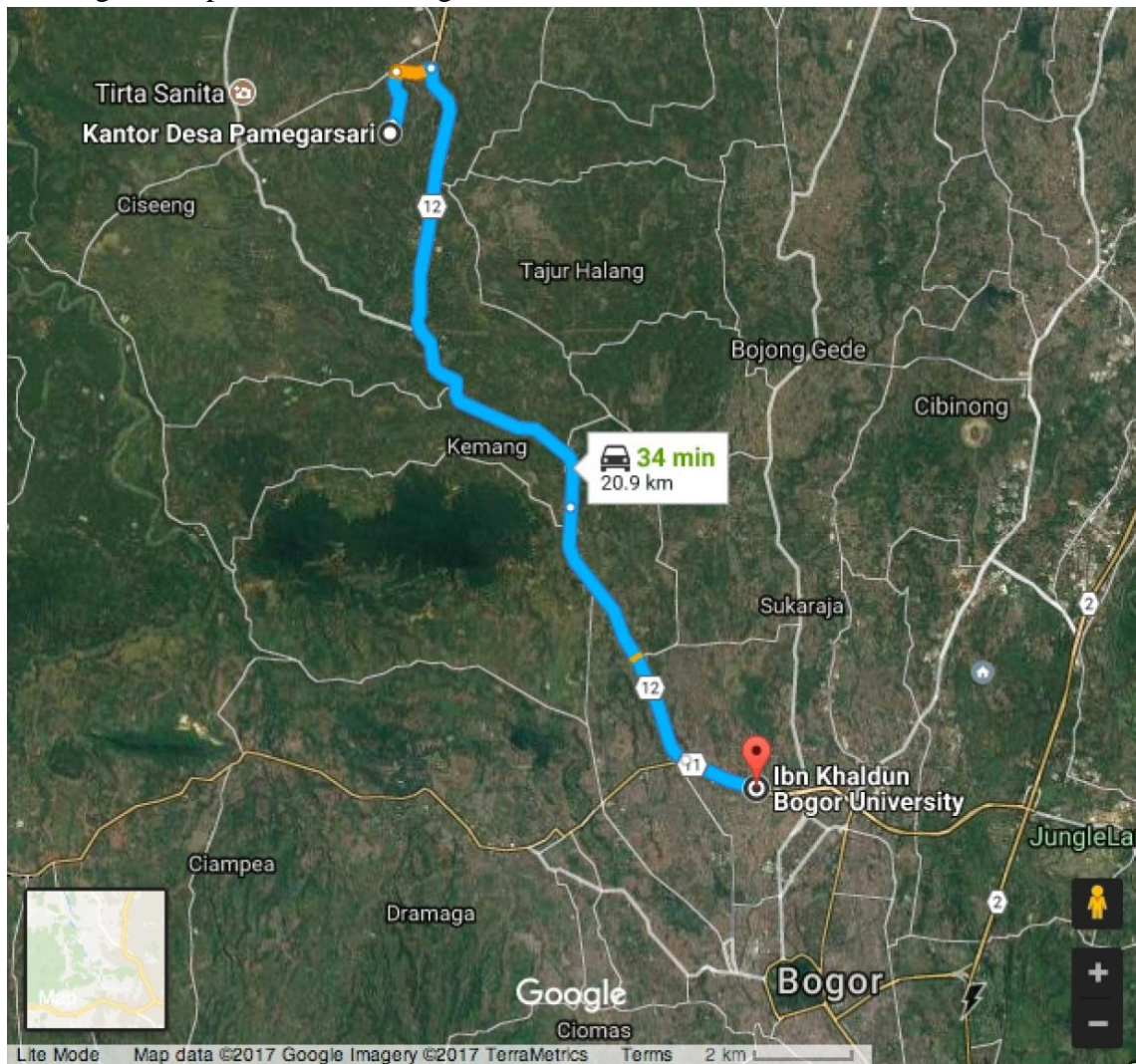


Source of information:

<http://kecamatanparung.bogorkab.go.id/index.php/multisite/site/kecamatanparung>

**Figure 1. The names of villages at the Subdistrict of Parung, District of Bogor, where the Village of Pemagarsari among other villages is located**

Based-on Figure 1 can be explained, that the distance of the achievement of Village of Pemagarsari from the Universitas Ibn Khaldun Bogor (is called UIKA Bogor) Campus is 20.9 km. The display of distance to the location of the Office of Village of Pemagarsari from the UIKA Bogor Campus is shown in Figure 2.



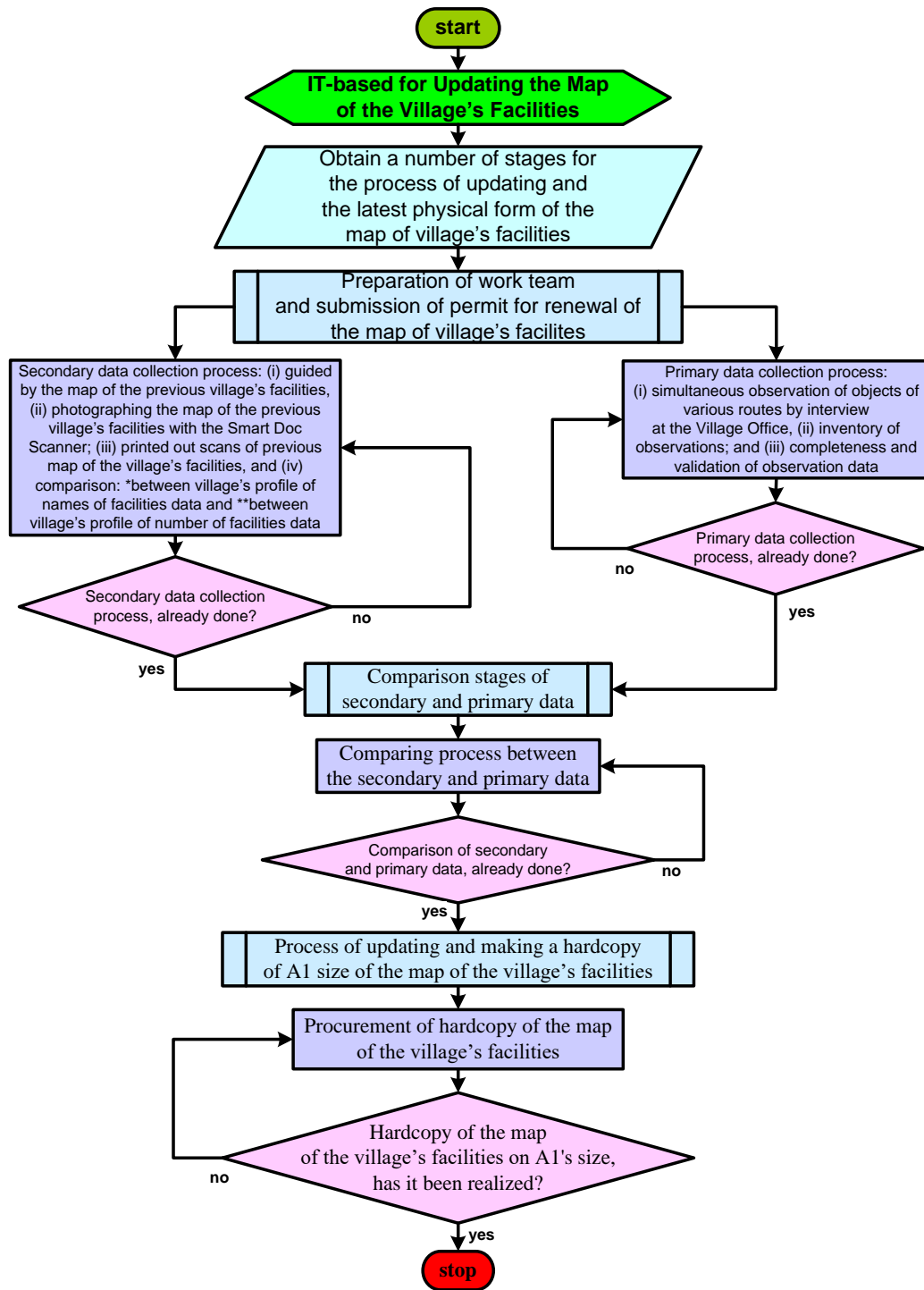
**Figure 2. The display of distance to the location of the Office of Village of Pemagarsari from the UIKA Bogor Campus**

Guided by these descriptions, this paper aims to deliver information about the activities which includes obtaining, then set the research objective is a number of stages for the process of updating the map of village facilities and a physical form of a map of renewable village facilities.

## **IMPLEMENTATION METHOD**

A work program to support the updating of the map of village facilities by a number of students belonging to the Group 13 of KKN-TT from Bogor Ibn Khaldun University at the Village of Pemagarsari, Subdistrict of Parung, District of Bogor. The process of updating the map of village facilities is in the form of social interaction between students belonging to the “Group 13 of KKN-TT, Bogor Ibn Khaldun University with the target community represented

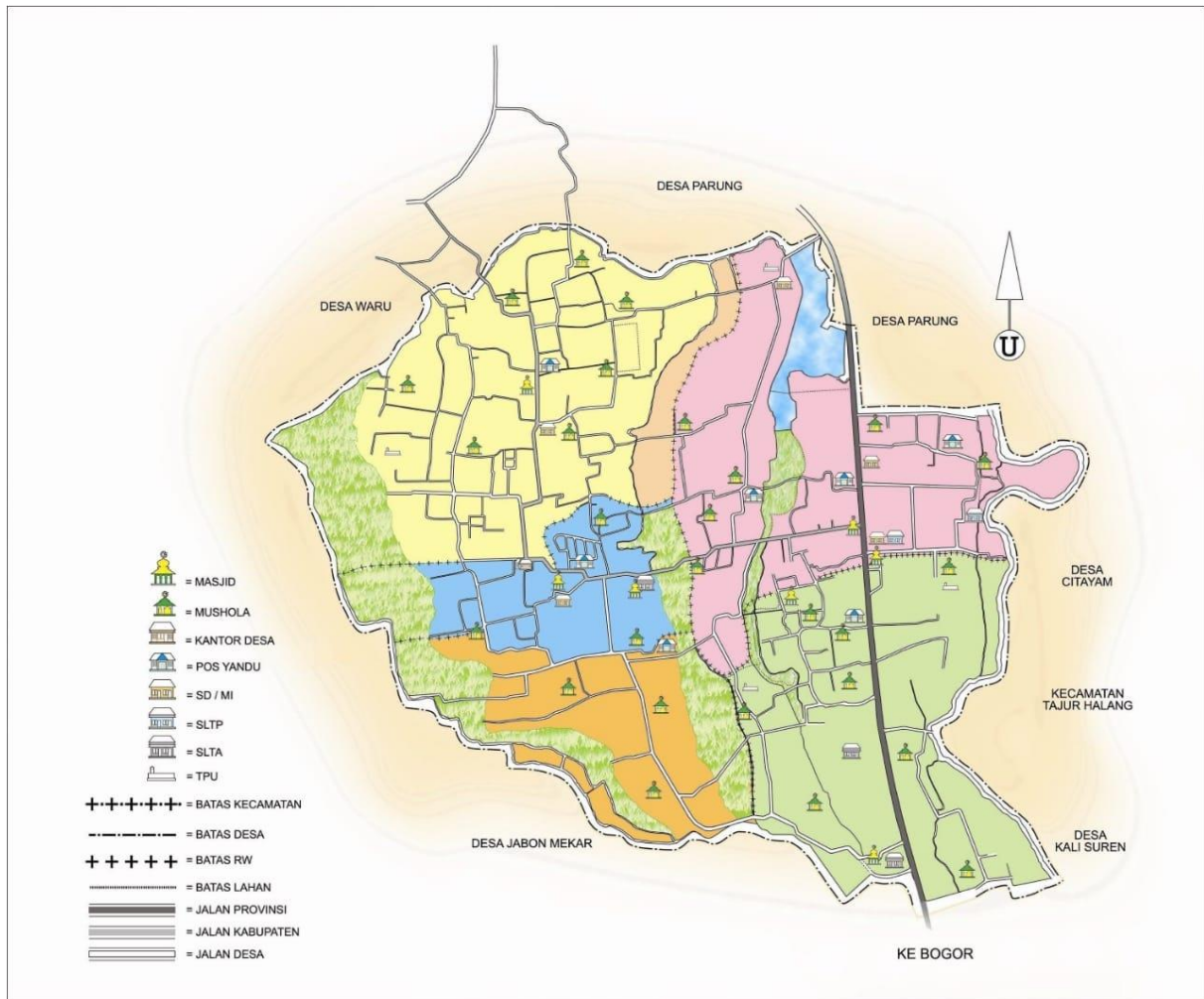
by the staffs of the Village of Pemagarsari. The stages of activities are made in the form of a flow chart as the implementation methods is shown in Figure 3.



**Figure 3. The stages of activities are made in the form of a flow chart as the implementation methods**

## RESULTS AND DISCUSSION

The permit application process begins with a discussion of the idea of renewing the existing village facility map. A map display of the previous map of the village's facilities is shown in Figure 4.



**Figure 4. A map display of the previous map of the village's facilities**

Based on Figure 4 can be explained, that the village head of Pemagarsari was enthusiastic in welcoming the idea, so that the results obtained later could be linked to the collection and verification of State Property, based on Address Ecological, related to climate change adaptation issues. The results of the renewal can be utilized when the Village of Pemagarsari Government together with the Assembly of Development Institute (is called Muslembang, Musyawarah Lembaga Pengembangan) in planning and controlling physical development based on the Human Development Index (HDI).

Secondary and primary data acquisition followed by comparison of the two data. Comparison of overall data, as shown in Table 1.

**Table 1.** Comparison of overall data

No.	Names of Facilities			Number of Facilities		
	Latest Information of Village's Profile	Previous Map	Latest Map	Latest Information of Village's Profile (units or location)	Previous Map (units)	Latest Map (units)
1	The Mosque	The Mosque	The Mosque	11 units	7 unit	11 unit
2	The Prayer Room	The Prayer Room	The Prayer Room	30 units	25 unit	30 unit
3	The Church	-	-	-	-	-
	Early Childhood		Early Childhood		-	6 unit
4	Education Programs <sup>(1)</sup>	-	Education Programs <sup>(1)</sup>	10 units		
	Elementary	Elementary	Elementary		3 unit	6 unit
5	School/Madrasah Ibtidaiyah <sup>(2)</sup>	School/Madrasah Ibtidaiyah <sup>(2)</sup>	School/Madrasah Ibtidaiyah <sup>(2)</sup>	5 units		
6	Junior High School <sup>(3)</sup>	Junior High School <sup>(3)</sup>	Junior High School <sup>(3)</sup>	2 units	2 unit	6 unit
7	Senior High School <sup>(4)</sup>	Senior High School <sup>(4)</sup>	Senior High School <sup>(4)</sup>	2 units	4 unit	2 unit
8	Community Health Centers <sup>(5)</sup>	-	-	5 locations	-	-
9	Integrated Service Center <sup>(6)</sup>	Integrated Service Center <sup>(6)</sup>		9 locations	6 locations	
10	Internet Cafes <sup>(7)</sup>	-		5 units	-	
11	Post Office	-		1 location	-	
12	Public Cemetery	Public Cemetery	Public Cemetery	5 locations	5 locations	5 locations
13	-	The Village Office	The Village Office	-	1 unit	1 unit
14	-	-	Islamic boarding school	-	-	3 units
15	-	-	Mini Market	-	-	3 units
16	-	-	Animal Husbandry	-	-	3 units
17	-	-	Maternity Hospital	-	-	1 unit

## Explanations:

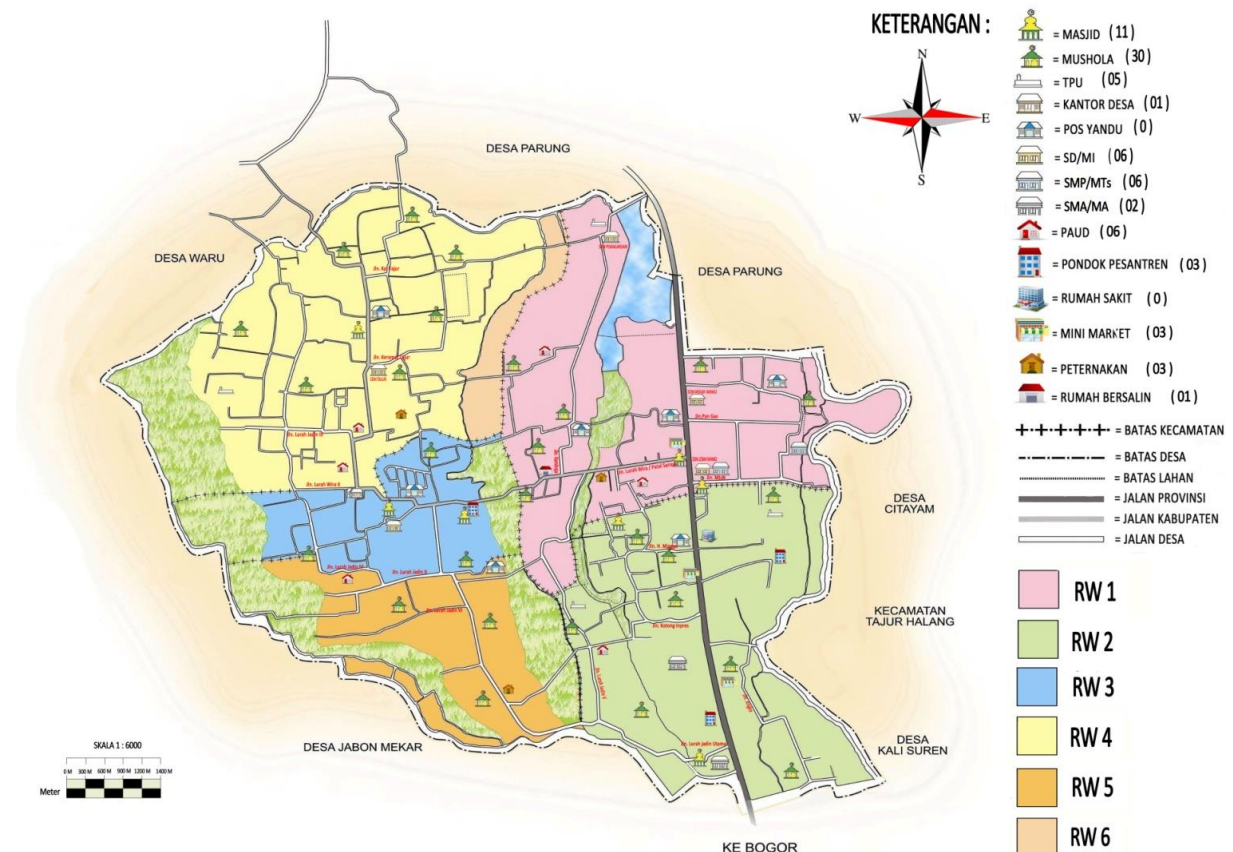
<sup>(1)</sup> is called PAUD (Pendidikan Anak Usia Dini)<sup>(2)</sup> is called SD/MI (Sekolah Dasar/Madrasah Ibtidaiyah)<sup>(3)</sup> is called SMP (Sekolah Menengah Pertama)<sup>(4)</sup> is called SMA (Sekolah Menengah Atas)<sup>(5)</sup> is called Puskesmas (Pusat Kesehatan Masyarakat)<sup>(6)</sup> is called Posyandu (Pusat Pelayanan Terpadu)<sup>(7)</sup> is called Warnet (Warung Internet)<sup>(8)</sup> is called Tempat Pemakaman Umum

Based-on Table 1 can be explained, that the name and number of facilities in the Previous Map column with those in the Latest Map column, found the same or different data. Name and number of facilities, including:

#1) The name of the facility on the Previous Map there with the Latest Map, namely there are four names that include the Mosque, Prayer Room, Public Cemetery, and the Village Office;

- #2) The names of the facilities on the Previous Map are different in naming on the Latest Map by two names, namely Junior High School “in SLTP with SMP/MTs”, and Senior High School “in SLTA with SMA/MA”;
- #3) Naming facilities on the Previous Map, but not on the Latest Map by one naming, namely Integrated Service Center;
- #4) Naming facilities that are on Previous Map, but not on the Latest Map, with the Previous Maps are five names, namely Early Childhood Education Programs, Islamic Boarding School, Mini Market, Animal Husbandry and Maternity Hospital; and
- #5) The difference in the number of facilities there are five types of facilities, namely Mosque, Prayer Room, Elementary School, Junior High School, and Senior High School.

The activities results on Renewal for the Map of the Village’s Facilities, is closing at the Village of Pemagasari with the result of update. A map display of the latest map of the village’s facilities is shown in Figure 5.



**Figure 5.** A map display of the latest map of the village’s facilities

Based on the results of secondary and primary data processing, an update of the map of the village’s facilities for the Village of Pemagasari was carried out with the photoshop application through consultation of all team members. The updating and making of a hardcopy of village facility maps is carried out through a number of stages of the process, namely:

- a) Prepare a laptop with the photoshop application and two persons who coordinate in the work of updating the village facilities map. Secondary and primary data processing results

are prepared, so that it can be obtained easily when processing with Photoshop applications;

- b) Prepared the unit scale by practicing one object to another object based on the dashboard distance (in kilometers) on the motorcycle. The magnitude of the error allowed is about two meters;
- c) Activated the photoshop application with an A1 format worksheet, then made an attribute with the contents of the attribute layer;
- d) Inserted photo results of village facility maps contained on the walls of the Village Office of Pemagarsari on the old map layer;
- e) Pay attention to the image of the village's facilities on the map of old village's facilities which include mosques, prayer rooms, public cemetery, Village Office, Integrated Service Center, Elementary School, Junior High School, Senior High School; Early Childhood Education Programs, Islamic Boarding Schools, Mini Markets, and Maternity Hospital;
- f) Pay attention to the notation of the image of road administration boundaries, namely land boundaries, village boundaries, sub-district boundaries, provincial boundaries, also village roads, district roads, and provincial roads;
- g) Pay attention to the color notation that distinguishes the working areas of the community units (is called RW), namely RW-1, RW-2, RW-3, RW-4, RW-5, and RW-6;
- h) All three notations are cropped and pasted in the information section;
- i) Based on the results of field observations, the material is added or removed;
- j) Equipped with the contents of explanation of attributes;
- k) Files are created in .pdf format; and
- l) Hardcopy is made and framed.

## **CONCLUSION**

Based on the results and discussion, the conclusions are drawn according to the objectives of the research. A number of stages of the process for updating the map of the village's facilities for the Village of Pemagarsari were carried out through the preparation of the work team, submitting a license for renewal of the village facility map, and comparison of secondary and primary data. The work team consists of a number of students from various study programs. The permit application process begins with a discussion of the idea of renewing the existing of map of the village's facilities. The comparison between secondary and primary data is emphasized on the name and number of facilities in the map column in the previous map and the latest map. Obtaining the physical form of the updated map of the village's facilities is done through the process of updating and making a hardcopy of the map of the village's facilities of A1 size paper along with frame and scheduling and submitting symbolically updated the map of the village's facilities to the Head of the Village of Pemagarsari. The updating and making of a hardcopy of the map of the village's facilities was carried out through a number of stages of the process, while the results of the activities for renewal of the map of the village's facilities were handed over at the closing ceremony of the activity at the Village Office of the Village of Pemagarsari and received directly by the Head of the Village of Pemagarsari.



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