

## SLUMPING (Slum Mapping) as An Implementation of Innovative Platform to Help Government and Humanitarian Groups Log Various Slum Area

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### Abstract

World Bank (2017) reported around 64% people who live in urban slums are in Asia. Jakarta is one of city in Asia countries that has many slums. This study aims to help government and humanitarian groups to settlements slum area with innovation with mapping area. This study used qualitative approach. In collecting data, this used interview for expert and document analysis. The subject of this study is Advocacy Coordinator of Urban Poor Consortium (UPC), Coordinator and Member of Urban Poor Linkage (*JRMK*), the Chairman of *Ciliwung* River Community (*KAKC*) and Chairman of Neighbourhood (RT) 07, Halmet (RW) 01, Pademangan, Kota Tua, Jakarta. This research will be located in *Ciliwung* river basin area, Jakarta, Indonesia. The result of the study show that area mapping is very needed to find and determine right settlement of slum area in urban city. The finding show that the government's efforts in determining the mapping of slums are still being monitored in terms of physical criteria.

**Keyword:** *Slums Area, Settlements, Government, Humanitarian Groups, and Mapping Area*

### 1. Introduction

Various international forums has done meetings for discussing about the development of the settlement and urban, one of all is World Urban Forum (WUF). The theme of 9th WUF in Kuala Lumpur, Malaysia, on 7-13th February 2018 is Cities 2030, Cities for All : Implementing the New Urban Agenda. The report on the results and conclusions of the 9th WUF dialogues which is one of eight people live in slums worldwide. The Challenge of Slums also presents the first global assessment of slums. The report argues that number of slum dwellers is growing and will continue to increase unless there is serious and concerted action by all relevant stakeholder.

Urbanization can have an impact on the appearance of slums area. Increasing urbanization has resulted in a faster growth of slum population (Agarwal & Taneja, 2005). Identification, mapping, and assessment of all slums are important for locating the missed out slums and focusing on the neediest slums (Awadalla, 2013).

The Borgen Project (2015) reported between 2002 and 2014, the percentages of the urban percentage of the urban population in developing countries who lived in slums decreased from 39 percent to 30 percent. While these statistics are encouraging, the bottom line is that number of people living in slums continues to grow. Yudhohusodo (1991), slums are an area with unstructured, unpatterned forms of housing, physically such as irregular houses and roads, unavailability of public facilities, clean water infrastructure, sanitation.

In this paper, the author focused case in Jakarta, Indonesia, because Indonesia is one of the fastest urbanizing countries in Asia, the capital city and also the largest city in Indonesia with a population of 10,374,235 people in 2017. (Ari: 2019). Also, Jakarta is urban city including slum growths. In Jakarta, there is a significant unregistered population, many of whom are poor. A rough estimate is that around 3 million people live in settlements in the greater Jakarta region that lack basic infrastructure services. (Padawangi & Douglass, 2015, p, 533)

The problems of urban slums, emerges from poverty, still fails to register in the minds of people and government. Leading forces of development could suggest by global political factors (decentralization, devolution, rise of governance-moving beyond government, and rise of municipal civic leadership) (Goswami, Sribas & Samita: 2013).

In 2014, Joko Widodo (Jokowi) as a Jakarta gubernatorial election winner's was elected president and succeeded by his deputy, Basuki Tjahaja Purnama (popularly known as Ahok). And, Ahok up position as a Jakarta governor. Ahok have been especially difficult for poor people in Jakarta. He backed the demolitions in the name of development and flood control, and compounded it with insults.

The Jakarta Post (2018) reported, in 2017 gubernatorial election in the Indonesian capital of Jakarta, Anies Baswedan focusing on an alliance between a movement representing members of the urban poor dislocated by urban redevelopment. Anies Baswedan and his administration has been applauded by the city's urban

poor groups for involving them more in policies that affect them. The members of the urban poor movement tried to ensure that the commitments in the political contract became embodied in policy after the election. Urban Poor Consortium (UPC), Urban Poor Linkage (*JRMK*), and *Ciliwung* River Community (*KAKC*) is the humanitarians group which are collaboration with government log various slum area. They have worked together in terms of area mapping, in which physical monitoring of settlements through the use of drone. However, in monitoring and mapping slum areas, there are many criteria that need to be considered, and not only about criteria in physical form.

Adoubted by United Nation Habitats (2016), slum is household that may suffer one or more of the following conditions: lack of access to water protected from outside contamination, lack of access to sanitation facilities that separate human waste from human contact and lack of adequate living area (more than three people living in one room of four square meters minimum). These conditions also include a lack of housing durability (the structure must be on non-hazardous land and must be able to withstand extremes in climate) and a lack of security of tenure (protection by the state to ensure the unlawful eviction of inhabitants of homes). In the statement, it can be concluded that the classification of slums is not only based on the physical elements of the building, but also the lifestyle and living conditions experienced by the community.

The author give contribution to help government and humanitarian groups to do mapping slums area with prototype design of innovation platform. SLUMPING (Slum Mapping) is an innovative platform that using data filled in based on community participation. This is one way to monitor the actual condition of the population in each family and find new slum areas. In this platform the level of slum area is measured based on all indicator of slum characteristics. The author have project that if implementation SLUMPING will have a large impact in fixing slums more broadly and the findings based on the hierarchy will with the physical slum indicators and people's habits.

## **2. Material and Methods**

### **Research of Study**

Based on this problems, the aims of the research is “How do government and humanitarian groups in Jakarta overcome the slum area problem in the urban city?” and “How is Slum Mapping being implemented to help government and humanitarian group can find new slum area?”

### **Objectives of Study**

The present study focused on the several criteria of slum in urban city, with sampling object in Jakarta, Indonesia. The following objectives have been framed for the present study, these are follows:

1. To find the right way to government and humanitarian groups in Jakarta overcome the slum area problem in the city
2. Slum Mapping being implemented to help government and humanitarian group press urban people and finding \new slum area

### **Key Informant**

Data collected by using interview and observation on community action plan, and the purpose subject is:

1. Advocacy Coordinator of Urban Poor Consortium (UPC)
2. Coordinator and Member of Urban Poor Linkage (*JRMK*)
3. Chairman of *Ciliwung* River Community (*KAKC*)
4. Chairman of Neighbourhood (RT) 07, Halmet (RW) 01, Pademangan, Kota Tua, Jakarta.

### **Aims of Study**

Following aims of the research that is:

1. Present study mainly the formation of slums in urban areas.
2. Identify the problems and constraints of slum development.
3. Introduce the Indonesian case and our framework on politician–citizen linkages.
4. Examine the needs, social characteristics, and problems of slum dwellers.
5. Know the living conditions and infrastructural facilities available in the slum areas.
6. Evaluate the humanitarian groups and development various policy measures and improvement program in slums.
7. See the level of general awareness among the residents of slums.

8. Review urban poor movement tried to ensure that the commitments in the political contract became embodied in policy after the election.
9. To explain importance mapping to slum area to helped the humanitarian group and other stakeholders.

## Methods

### Research Design

In order to achieve the answer for the research questions, this study applied a qualitative method. Creswell (2014) stated that qualitative data is developing method, open-ended questions, using interview data, observation data, and document analysis. Analysis can be in the form of textual or pictures and interpretations in the form of themes of patterns.

### Data and Data Source





The data of this study were the document analysis and interview. Document analysis aims to research were documents of need assessments of humanitarian groups have done experience to resolved slum landmarks. In this study, the author combine research article and review article. The aims of interview activities to researcher is the key instrument in this research are the experts' responses toward the implementation about how important the slum mapping to helped humanitarian groups log various slum landmarks.

## 3. Result and Discussion

### Document Analysis

#### 3.1 Mainly the formation of slums in urban areas.

Indonesia is one of the fastest urbanizing countries in Asia. Worldometers (2019) reported Indonesia is the fourth biggest population in the world. [Table. 1]

1	 <a href="#">China</a>	1,417,930,202
2	 <a href="#">India</a>	1,362,483,155
3	 <a href="#">U.S.A.</a>	328,103,403
4	 <a href="#">Indonesia</a>	268,369,114

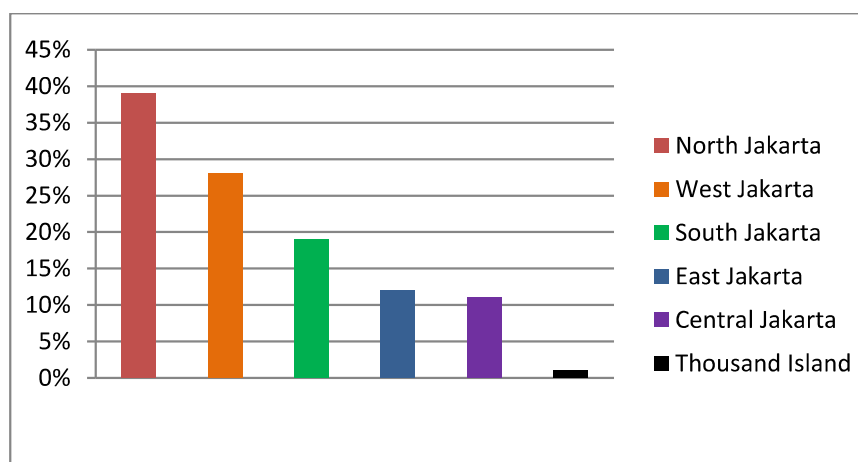
**Table 1. The Country with The Most Population In The World (Source : Wordometers)**

The population of Indonesia in 2019 will be 269.536.482 people. With 1.03 percent increase of population or was added to 2.742.502 citizens, compared to 266.794.980 citizens in 2018. The following is Indonesia's population growth since 1975, which is presented in [Table. 2]:

Year	Population	Yearly % Change	Yearly Change	Migrants (net)	Median Age	Fertility Rate	Density (P/Km <sup>2</sup> )	Urban Pop %	Urban Population	Country's Share of World Pop	World Population	Indonesia Global Rank
2019	269,536,482	1.03 %	2,741,502	-165,000	28.3	2.42	149	56.0 %	150,870,274	3.49 %	7,714,576,923	4
2018	266,794,980	1.06 %	2,803,601	-165,000	28.3	2.42	147	55.3 %	147,548,918	3.50 %	7,632,819,325	4
2017	263,991,379	1.10 %	2,875,923	-165,000	28.3	2.42	146	54.6 %	144,200,189	3.50 %	7,550,262,101	4
2016	261,115,456	1.14 %	2,953,343	-165,000	28.3	2.42	144	53.9 %	140,824,151	3.50 %	7,466,964,280	4
2015	258,162,113	1.26 %	3,127,598	-167,000	28.0	2.45	143	53.2 %	137,422,002	3.50 %	7,383,008,820	4
2010	242,524,123	1.36 %	3,162,279	-148,943	26.7	2.50	134	49.5 %	120,154,271	3.49 %	6,958,169,159	4
2005	226,712,730	1.39 %	3,034,460	-170,262	25.5	2.53	125	45.5 %	103,118,973	3.47 %	6,542,159,383	4
2000	211,540,429	1.44 %	2,916,516	-68,992	24.4	2.55	117	41.5 %	87,758,699	3.44 %	6,145,006,989	4
1995	196,957,849	1.66 %	3,104,206	-76,365	22.8	2.90	109	35.6 %	70,027,122	3.42 %	5,751,474,416	4
1990	181,436,821	1.92 %	3,284,925	-33,348	21.3	3.40	100	30.1 %	54,633,885	3.40 %	5,330,943,460	4
1985	165,012,196	2.27 %	3,504,366	-9,913	19.9	4.11	91	25.7 %	42,383,285	3.39 %	4,873,781,796	4
1980	147,490,365	2.44 %	3,353,250	-40,549	19.1	4.73	81	21.8 %	32,160,623	3.31 %	4,458,411,534	4
1975	130,724,115	2.63 %	3,177,867	-18,072	18.5	5.30	72	19.1 %	24,959,632	3.20 %	4,079,087,198	5

**Table 2. Indonesian Population in year 1975 until 2019 (Sources: *Wordometers*)**

Population of Jakarta (2019) reported the population density of the city is 14,464 people per square kilometer. The number of inhabitants in the city went from 4.5 million in 1970 to 10,7 million in the year 2018. The growth rate of Jakarta surpassed government estimates and the national average with about a growth rate of 3.6%. Again, in Indonesia, the slums are in Jakarta. They are spread in six areas of Jakarta which elaborated in [Table 3], there are:



**Figure 1. Slums Area Graphic in Indonesian Capital of Jakarta**

(Sources: The Ministry of Agrarian Affairs and National Land Agency (ATR/BPN))

Republika (2019) reported in North Jakarta, there are 39%; in West Jakarta, there are 28%; in South Jakarta, there are 19%; in East Jakarta, there are 12%, in Central Jakarta, there are 11%; and in Thousand Islands, there are 1% of slums. The Ministry of Agrarian Affairs and National Land Agency (ATR/BPN), Doni Janarto Widiyanto said that almost 49 % of Jakarta were considered as slums. The Ministry had classified, almost 118 of 264 areas of the capital city had slums [Figure. 1].

The Central Bureau of Statistics Republic of Indonesia (BPS) (2018) reported there are 445 *Rukun Warga/RW* (hamlet) in DKI Jakarta were categorized as slum in 2017. The number consisted of 15 slums in the heavy category, 99 medium slum RW's, 205 light slum RW's, and 126 very light slum RW's. The highest number of residents in slum category is in the Central Jakarta area, reaching 98 RW. The amount consists of 1 RW heavy slum, 23 RW moderate slum, 47 RW slum, and 27 RW light slum. While the least is the Thousand Islands, which is only 7 RW as shown in the graph below [Figure. 2].

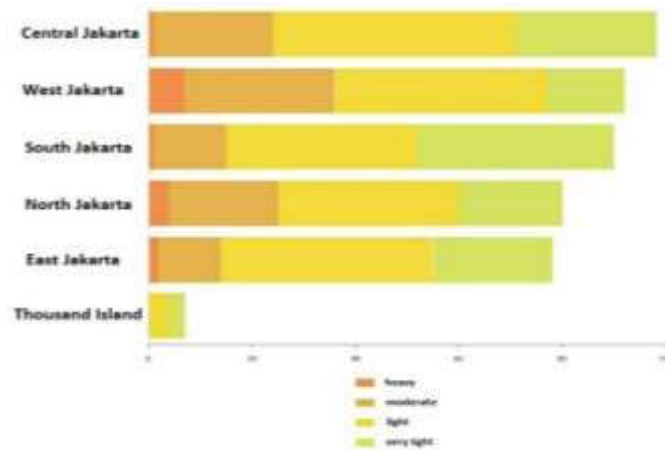


Figure 2. Rukun Warga/RW (Hamlet) in DKI Jakarta were categorized as slum in 2017

Some of the variables that form the basis of slum RW assessments include population density, building density, poor building quality. Then, poor ventilation and lighting, poor latrines, drainage conditions and public street lighting. By cooperating with the Regional Work Unit (SKPD) per region the Provincial Government of DKI Jakarta will arrange the slum RW's until 2022.

The development of cities which are generally more rapid and advanced is one of the pulling factors of urbanization from rural to urban areas with the aim of obtaining a better life and income. The effect are discrepancy in spatial planning, decreasing the sanitation infrastructure facilities (such as sanitation and clean water), decreasing the level of public health, crime, social conflict, flood disasters and other. Dense population usually results in houses being coincided without thinking about groundwater catchment. This condition is one of causes of flooding.

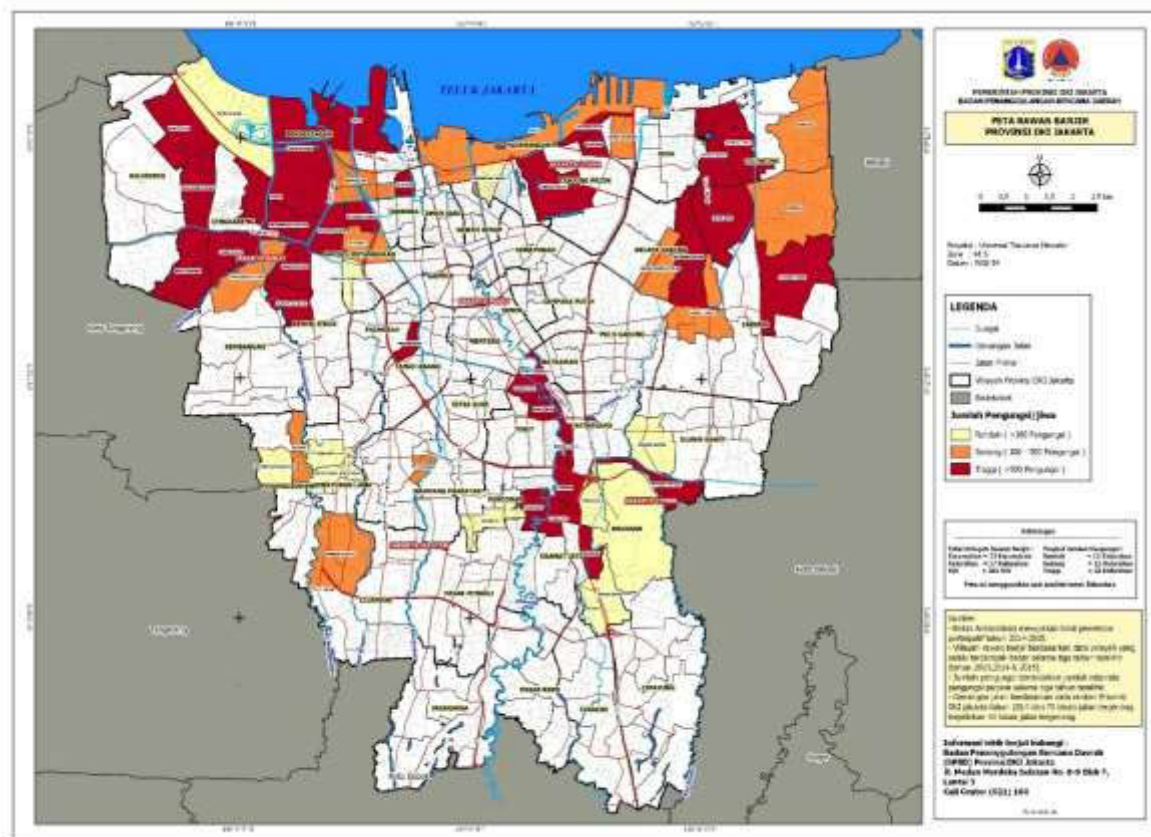


Figure 3. Map of Flood Prone in DKI Jakarta Province Based on 2013, 2014, 2015



(Source : The Regional Disaster Management Agency (BPBD))

Severe floods have been reported to have hit Jakarta in the past, including 1621, 1654, 1918, 1942, 1976, 1996, 2002, and 2007. An important part of the flooding problem is caused by the fact that a substantial part of Jakarta is low-lying. Around 24,000 ha of the main part of Jakarta is estimated to be below sea level. (Jakarta Post, 2013).

Jakarta Globe (2015) reported Jakarta lies in a low, flat basin, averaging 7 metres (23ft) above sea level, 40% of Jakarta, particularly the northern areas, is below sea level, while the southern parts are comparatively hilly.

Rivers flow from the Puncak highlands to the south of the city, across the city northwards towards the Java Sea; the Ciliwung River, divides the city into the western and eastern principalities.

Jakarta Post (2011) reported Jakarta is an urban area with complex socio-economic problems that indirectly contribute to triggering a flood event. Flood is an annual event in Jakarta during the wet season, and the flooding has become more devastating recently. Accordingly to Andjelkovic (2001), flooding is caused by extreme natural events occurring within a drainage basin, also referred to as a river basin, a catchment area or watershed.

The problems of urban slums, emerges from poverty, still fails to register in the minds of people and government. The study by Goswami, Sribas and Samita (2013), it was discovered that leading forces of development could be suggested by global political factors (decentralization, devolution, rise of governance-moving beyond government, and rise of municipal civic leadership).

### 3.2 Government Settlement and Policies in Jakarta Slums

In 2014, Joko Widodo (Jokowi) as a gubernatorial election winner was elected president and succeeded by his deputy, Basuki Tjahaja Purnama (popularly known as Ahok). And, Ahok took position as a Jakarta governor. Ahok has been especially difficult for poor people in Jakarta. He backed the demolitions in the name of development and flood control, and compounded it with insults. In order to understand the political contracts created by urban poor activists and gubernatorial candidates in 2012 and 2014, it is helpful to briefly review the context of the urban poor in Jakarta. As with Indonesia as a whole, poverty is a major problem in the capital city. Ahok has attempted to make much of his plans to transform Jakarta into a modern city like Singapore, he also promoted construction of more flats (known as *Rusunawa*) for Jakarta's poor people.

The Jakarta Post (2018) reported, in 2017 gubernatorial election in the Indonesian capital of Jakarta, Anies Baswedan focusing on an alliance between a movement representing members of the urban poor dislocated by urban redevelopment. Anies Baswedan and his administration has been applauded by the city's urban poor groups for involving them more in policies that affect them. The members of the urban poor movement tried to ensure that the commitments in the political contract became embodied in policy after the election.

### 3.3 Indonesian Status on Politician–Citizen Linkages.

Urban Poor Linkage (JRMK/*Jaringan Rakyat Miskin Kota*) and Urban Poor Consortium (UPC) is a part of community action plan or humanitarian group to help middle class in slum area. Since established in September 1997, UPC has consistently focused on organizing the urban poor and on defending their social, economic, political rights and carried out organizing work in 58 *kampung* in Jakarta and also expanded its organization nationally by establishing Urban Poor Link, which became JRMK in 2002.

JRMK was initially active in 14 regions, but it has maintained a presence in eight cities: Jakarta, Banda Aceh, Bandar Lampung, Yogyakarta, Surabaya, Sidoarjo, Makassar, and Kendari. In 2009, UPC decided that in order to maintain its independence, it would no longer take funds from donors. The real action UPC and JRMK is implementation on regional development in the river area. *Ciliwung* river basin area is the area which is the UPC and JRMK guidance.

Hydratelife (2016) reported *Ciliwung* is a 119 km long river in the northwestern region of Java where it flows through two provinces, West Java and the special region of Jakarta. The section of *Ciliwung* in Jakarta is heavily polluted. Informal settlements or slums flourished on the banks of *Ciliwung*, increasing the amount of waste and reducing the surface area of the river. Some canals were completely blocked by slum by slums and people created informal gardens inside by drying the canal. Flooding is a problem of *Ciliwung*. With many of the original forest converted into settlements around *Puncak* area, the flooding has worsened each year.

Since 2015, UPC and JRMK do cooperation with *Ciliwung* river community to settlement problems in along the river basin. They also nurturing an ethos of self-reliance, among it is urban poor supporters.

Therefore, the government needs get the right and correct mapping data to expanding the scope of slum area management through humanitarian group.

### 3.4 Needs, Characteristics, and Problems of Slum Dwellers

A slum is a general depiction of the attitudes and behaviors that are below the standard of living and usually characteristics the middle and lower income people. An area can be declared a rundown when a group of individuals living under the same roof who lack one or more in: (1) Durable housing of a permanent nature that protects against extreme climate condition, (2) Sufficient living space which means no more than three people sharing the same room, (3) Easy access to safe water in sufficient amounts at an affordable price, (4) Access to adequate sanitation in the form of a private or public toilet shared by a reasonable number of people, (5) Security of tenure that prevents forced evictions (Habitat: 2006).

#### Interview With ex-perts

[1]	What are the key drives of urbanization flows in and out of the city? When do people enter/leave a slum?	
	Mr. Salijan	In 1970, the residents around Pademangan area, specifically Kampung Tongkol, Kampung Lodan, and Kampung Rapu, were still dominated by the native of Jakarta. However, since 1986, the residents started coming from other areas as the act of urbanization. Such as Makassar, West Sumatera, and Central Java.
	Mr. Syafruddin	In 1970, the Jakarta residents who lived in river banks were still few, even Ciliwung river was still full of ships as the trade route and other economics activities. Then in 1980ish the residents from outside of Jakarta started coming in. Until 1990, a lot of the river banks had been shouldered, so the land became wider. The land was also built from the urugan land. This was done to 300 houses in Kampung Tongkol, Kampung Lodan, and Kampung Rapu. At that time, the population from migration kept coming because of the urbanization.
	Mrs. Eny	The slumpings had been built since a long time ago, before the transmigration happened, since Kopro Banjir (Water Service) existed hereditary from the parents. It was only an empty land, then got occupied because there was still no any prohibitions at all. So, many people built toilets and kitchens in river banks. Not so long after that, Jakarta became the center of Urbanization.
[2]	What the usual problems appear on slums area dwellers in Ciliwung river basin? And how the government do slum development?	
	Mr. Salijan	In 1980, there were still a lot of slumpings, such as houses which didn't use PAM water (the people there were still using the water from the river to wash the clothes, dishes, and even to take a bath), and also people who used electricity were still few. The urugan lands changed into residential areas in 1990, houses were still being built in river banks, even the kitchens were built over the river, and the were made of bamboo. This made one kitchen was reallt close to the other kitchens. From 2010 to 2015, the residential in Ciliwung's river banks experienced flood. This was caused by the trashes which got stuck in the river. In 2015, Basuki Tjahaja Purnama as the governor of Jakarta, fixed up the policy of land and river, Various residentials which were built on the side and over the river, needed to be fixed. The effort to relocate changed into emptying at least 5 meters of the land from the side of the river. This became the deal of the governor and the people who lived there with the political contract. In 2017 when Anies Baswedan replaced Basuki as the governor, the enviromental management was done in the riverbank settlements.
	Mr. Syafruddin	The citizens still don't understand the reform agraria problem and they also weren't included in the process of making the decision, even though they had been living there before the policy was endorsed, and

		the RDTR was released in 2012 (which would be applicable from 2014 – 2030) about the settlement. Citizens who lived for more than 20 years could set the legality of their settlements, but they didn't know what to do if there was any policies which was not according to the applicable rules.
	Mrs. Sukariawati	The citizens still don't understand the reform agraria problem and they also weren't included in the process of making the decision, even though they had been living there before the policy was endorsed, and the RDTR was released in 2012 (which would be applicable from 2014 – 2030) about the settlement. Citizens who lived for more than 20 years could set the legality of their settlements, but they didn't know what to do if there was any policies which was not according to the applicable rules.
[3]	Why Jakarta governor involved politician–citizen linkages with slums area dwellers in Ciliwung river basin?	
	Mr. Salijan	UPC and JRMK accompanied some villages which were located in Ciliwung to negotiate with the governor of Jakarta. The deal or political contract was strived to change the relocation to only to cut the land . So that the people who were actually on the side of the river, had at least 5 metres from the river.
	Mrs. Eny	In 2005, Anies Baswedan have done the settlements on the side of the river were planned to be evicted. People then strived to change the government's stigma, that the citizens who lived in slums were not all seedy. Finally, by their own awareness, they cut their own land and made distance to the river 5 meters from their houses. In 2017, the political contract started. On the Governor's Decision no 878 2017 about the task of villages arrangement, it was said that the JRMK had 16 Villages. The current Governor of Jakarta has now been open to accommodation people's aspiration in arranging the settlement areas to be more interesting. One of them is an act to decorate the villages with arts of paintings. The main idea in making the political contract is as an act of government's tolerance so the citizens could be better in developing the settlements and the surroundings.
[4]	What the needs, social characteristics, and problems of slum dwellers slums area dwellers in Ciliwung river basin?	
	Mr. Salijan	Another problem about the sanitation which was still being thrown at the river, but since 2016, the citizens had started building their own toilets inside of their own houses even though there were still some houses using sanitation on the side of the river. But, it had already been planned that in December 2019, the citizens in those three mentioned villages would all have their own bathrooms in their own houses.
	Mr. Syafruddin	The citizens in Tongkol, Lodan, and Rapu villages needed companions. One of the companion acts was Advocate, Knowledge of basic rights of lands owning and environmental hygiene, connecting the coached villages with JRMK, universities, academics, artists, and law institutions from JRMK about various lands on the side of Ciliwung's settlements through Komunitas Anak Kali Ciliwung (Community of Ciliwung river)
	Mrs. Enny	Tha citizens' characteristics were hard to be told about awareness. They were still stuck with the bureaucracy and had doubts with the purpose of working with JRMK in rearranging the villages. JRMK was only looked for when the citizens had problems and they only wanted to be accompanied by some of JRMK.
[5]	What are the living condition and infrastructure facilities (health, education, water, mobility, sanitation) that are available?	
	Mr. Salijan	The living condition in Tongkol, Lodan, Rapu villages' citizens had been better in economics, educations, and social relations among the



		citizens. The citizens showed their empathy with Komunitas Anak Kali Ciliwung (Children of Ciliwung river) by doing the “Clean Ciliwung”, which also involved other communities in cleaning the river. The carnival activity was done to strengthen the relationship among the citizens.
	Mr. Syafruddin	The governor of Jakarta has provided trash cans in some points on the side of the river. This is being done so the citizens could avoid throwing trashes at the river. And so the citizens would have no any illnesses which were affected by the environment. Besides, the government have also provided Healthy Indonesia and Smart Indonesia for the poor, so they could get health insurance and free education for the children between 6 – 21 years old.
[6]	How the humanitarian groups and governor improvement program in slums?	
	Mr. Salijan	The Children of Ciliwung River Community is a community among Tongkol, Lodan, and Rapu villages which has a function to collect people’s aspiration. The Children of Ciliwung River Community is working together with JRMK and UPC in stating the legality and lands connection based on the RDTR.
	Mr. Syafruddin	The citizens in Tongkol have become the inventor of villages of no trashes. This activity is an initiation from UPC which is working together with KAKC in rearranging the settlements in Ciliwung. This effort has been done as a challenge towards the citizens in order to increase their spirit of decreasing the trashes from household with the biggest change, it was.....
	Mrs. Eny	In 2008, UPC formed JRMK as an organization for the citizens, the members mostly were house moms. The first step of JRMK was to get close to the citizens, by helping them to take care of their birth certificates with communal savings. This was done in 2004. This one was so important, so the children from 16 villages could get their administrations done by their children.
[7]	How the awareness humanitarian group and government among the residents of slums?	
	Mr. Salijan	KAKC and UPC have done make self-help architecture and facilitation. KAKC since the middle of 2015 has been unloading houses on the side of the river voluntarily, opening new routes to the river’s inspection. This initiative was the first step to plan and rearrange the village to be peaceful and beautiful. The process of building houses in Tongkol village One of the examples was to implement three programs of 10 houses strategy without trashes. The benefit of his activity is to provide guidance in improving environmental conditions better
	Mr. Gugun	Upc has engaged citizens in improving the village through the community action plan (CAP) program of the DKI Provincial Government. CAP has been carried out by consultants with technical backgrounds, such as planners and architects. This activity involved 15 villages in the UPC network, there are : Muka, Krapu, Tongkol, Lodan, Aquarium, Marlina, Elektro, Gedong Pompa, Tembok Bolong, Blok Empang, Kerang Ijo, Kali Apuran, Rawa Barat, Rawa Timur, and Kunir villages.
	Mrs. Eny	JRMK has netted 21 residential areas as listed in Governor's Decree no 878 in 2018. *JRMK assesses that there are 4 achievements of Governor Anies Baswedan during his one year lead DKI Jakarta, there are build Shelter Victims of Evictions 2015 and 2016. Community Action Plan (CAP) program in 15 Kampung, Becak (Three Wheeled Vehicles) in Jakarta, security for street vendors (PKL) in Ancol, Jakarta.
[8]	How important is the mapping of slums?	

Mr. Salijan	previously in 2015, Kakc and Upc collaborated in mapping slum areas carried out for three areas, which included the riverbanks. This was done by flying drones, as physical monitoring of settlements around the riverbanks. So the mapping of slums from other criteria is very important in this regard.
Mr. Gugun	Benefits of mapping areas including there are : 1. To know the level of urbanization and various change. 2. To facilitatate and indentify levels of population movement between regions 3. To simplify the implementation of population policy determination 4. To know the population culture and its distribution
Mrs. Eny	Mapping the area, especially in the slums is very important, it can also be useful for humanitarian groups in capturing communities in slums will be more extensive and organized.


### 10 Examples of Sample Houses





1. Sharing the land; one building consists of four units of settlements, three floors for families and relatives.
2. Sharing the stairs and corridors, the house could be wider
3. One supply for water and two bathrooms completed with septic tank, filter, and water infiltration. One connector/electric meter
4. Rooftop made of bamboos, friendly building material. Bamboos which were preserved, could avoid any attacks from beetles. Reusage the used materials (stairs, woods, dll) from previous building so the money can be saved
5. Enough ventilation and natural light for all houses, so it could prevent the houses from humidity which could damage our health. Also for avoid the usage of lamps during the day.
6. Adults build, and kids paint. This will strengthen the togetherness in the family.
7. Be sensitive of the historical buildings, by taking care of and loving the surroundings. Tongkol Village was located on a route with 15 meters width, formed between The Children of Ciliwung River Community with the wall of colonial castle (which was built in 17th century)
8. Be sensitive of the environmental nature on the side of the river, by taking care of a big tree which produces fruits.
9. Serving the path for inspecting the river, at least 5 meters. So the river could be a public place.

### Three Strategies for Houses without Trashes

1. Front Door Strategy: Buying the products with bigger packages, decreasing and avoiding consuming packaged products.
2. Middle Door: Cooking and consuming only as much as we need, so there will be no leftovers. Using existed ingredients, instead of buying the new ones. Fixing or repairing broken things, don't just throw them away without trying to repair them first.
3. Back Door Strategy:
  - a. Don't just throw away the organic leftovers. Turn them into compost.
  - b. Other leftovers which could still be given to others who need them.
  - c. Start saving the water during washing or cleaning.

### ***Yuk Belajar Bareng (Let's Study Together): The Inventor of Villages without Trashes (Tongkol Village)***

<p><b>Mrs. Asnan's Family (Tongkol Village - Decreased 42,6%)</b>          "Our trashes at home from organic leftovers used to be a lot. But now, my children and I separate the organic trashes to be turned into compost."</p>	
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 <p style="text-align: center;"><b>↓ 52,1%</b></p> <p style="text-align: center;">Keluarga Mbak Ina (Kp. Tongkol)</p>	<p><b>Miss Ina's Family (Tongkol Village - Decreased 52,1%)</b></p> <p>“At home, I always cook. So, it's enough to only buy fresh food from coster. At first, I forgot to bring my own bag, but now I understand the benefits of decreasing the trashes at home.”</p>
<p><b>Mrs. Wasti's Family (Tongkol Village - Decreased 72,7 %)</b></p> <p>“Using cloth bags when shopping, because it's more practical. The stuffs we bought would just be put into the bag. Before shopping, we need to know first about what's going to be made/cooked, by asking the children what they want to eat that day. So there won't be any food leftovers.”</p>	 <p style="text-align: center;"><b>↓ 72,7%</b></p> <p style="text-align: center;">Keluarga Ibu Wasti (Kp. Tongkol)</p>
 <p style="text-align: center;"><b>↓ 81,0%</b></p> <p style="text-align: center;">Keluarga Ibu Ayi (Kp. Tongkol)</p>	<p><b>Mrs. Ayi's Family (Tongkol Village - Decreased 81,0%)</b></p> <p>“For our daily foods, we usually buy them, by bringing our own plates. Drinking water from galoons. The trashes in our house are now fewer and decreasing.”</p>
<p><b>Mrs. Sudarsih's Family (Tongkol Village - Decreased 88,2%)</b></p> <p>“The water for us to drink, is usually be boiled by ourselves. So we don't have to buy packaged water. Rice leftovers also won't be thrown away, but to be saved. Later I'll turn it into fried rice. Or the rice could be made as snacks, too. So we don't have to buy more snacks.”</p>	 <p style="text-align: center;"><b>↓ 88,2%</b></p> <p style="text-align: center;">Keluarga Ibu Sudarsih (Kp. Tongkol)</p>

### SLUMPING as An Innovative Platform

SLUMPING is an idea of innovation platform as a contribution by author to help government and humanitarian groups mapping slums area. This platform is still in the form of a prototype design and has not been realized that can be used by many parties. In the article and research paper that the author has found, the determination of slums is still based on criteria in terms of physical building or infrastructure. Even though there are many other criteria in determining how an area is included in the category of slums. On this chance the author will describe how this platform innovation works. The following is a view of the SLUMPING main page:



## SLUMPING (SLUM MAPPING)

Share Your Life and Make It More Better

**INFORMATION**  
ENTER

**SHARE YOUR LIFE**  
LOG IN  
[DON'T HAVE ACCOUNT? SIGN UP HERE](#)

*SLUMPING is an innovative platform that using data filled in based on community participation.*

*This is one way to monitor the actual condition of the population in each family and find new slum areas. In this platform the level of slum area is measured based on certain indicators.*



On this page, users can find out the benefits and the process of running this platform through an explanation on the screen display as an introduction. In addition, there are two services, namely 'Information' and 'Share Your Life'. The 'Information' service presents various information about the needs of users about the state of slums in an area and as a reference in understanding clean lifestyles.



## SLUMPING (SLUM MAPPING)

Share Your Life and Make It More Better

**SHARE YOUR LIFE**

USERNAME

PASSWORD

LOGIN

[DON'T HAVE ACCOUNT? SIGN UP HERE](#)



Furthermore, the 'Share Your Life' page is a page provide for users who participate in answering various questions concerning the daily life and environment of the users. If the user of this service has never filled out personal data completeness, then the user can click on 'sign here' to create an account first. The following are instructions for using the SLUMPING application, if you have never created an account before:

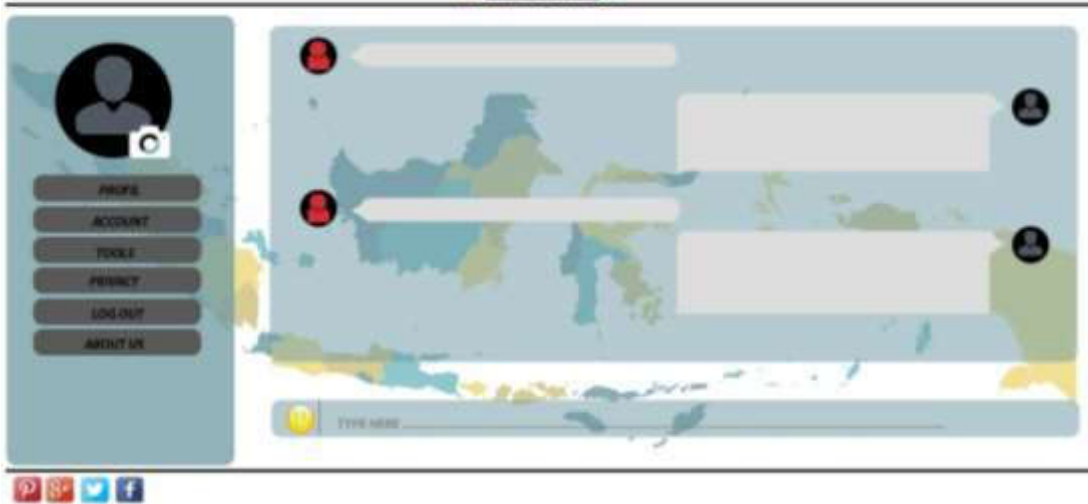


# SLUMPING (SLUM MAPPING)

Share Your Life and Make It More Better



Users need to complete their personal data by filling in various information from personal data that is equipped by filling in the Resident Identity Card number. After doing this, the user will get an ID and password which can then be used on the 'Share Your Life' service.



SLUMPING will provide questions about the conditions and patterns of life of service users that must be answered in the form of essays. This process is important is to get the complexity and detail of the answers from service users.

## 4. Conclusion and Recommendation

### Conclusion of Study

This research found that mapping to slum areas is importance, and availability with GIS, from the study we know that:

The number of the slum dwellers is growing and will continue to increase unless there is serious and concerted action by all relevant stakeholders. The government and humanitarian group (Humanitarian groups and other community) can identify social characteristics, and problems of slum dwellers. Jakarta governor has done commitments in the political contract with JRMK and UPC.



## Recommendation

Therefore, slum area problem needs various steps to handle slums in the cities. Solution of the finding study, there are:

1. To Government:

*First*, taking a big role, and also be responsible to handling the slums in Southeast Asia, should be more focused, integrated, and well-planned. *Second*, the government increase collaboration with Humanitarian groups and other community action plan to solve various problems of slums, from various sectors between the needs in certain plans. *Third*, giving guarantee for the new houses' securities after relocation. Having a place to stay is a basic need of humans. And the citizen who stay legally or illegally house's in some area, getting the regulation and securities from arbitrary eviction. Soon, other than the houses can also turn into bigger public spaces and social spaces. Systematic efforts of systems are needed through different kind of approaches. *Fourth*, change the face of the edges of the rivers to be cleaner.

2. To Humanitarian groups

The problems of urbanization, slums, and slums dwellers are a challenge to humanitarian group. Humanitarian groups can develop informal settlements. The development of informal settlements could very different outcomes. They can mapping and using systematic spatial knowledge, also develop strategies to reduce the number of slum dwellers.

3. Innovation of Platform Solution by Author

SLUMPING (Slums Mapping) is the innovation of platform which was written by the author to make the mapping of slums in Indonesia easier. Slumping is useful to map the areas which fulfill all requirements of slum characteristic, so this platform really useful and make it easier to socialize and relocate the slums or the houses prepared by government.

This platform is also useful for various groups of humanity, who want to do social program. Besides, it also makes it easier for the citizens' data team in observing the slums. That is important to remind us that the majority of citizens came from the urbanization, so it needs to be checked furthermore whether the citizens have been registered to have the identity card or not, of the area the live in. The collected data of the mentioned above can be really useful for instances or related institutions in stating the data more transparent. The government can also decide the exact rule of various slums in some areas.

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