

## Historical Old “Kampung” Toward Sustainable Green and Clean Habitat

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The rapid development of modern city was not totally achieved by hundreds of old dwellings habitat within modern city. Old settlement dwellings which are settled side-by-side and small size houses called “Kampung” keep trying to make better living environment and socio economy condition, even accomplishing creative remarkable programs toward green and clean sustainable habitats. These programs are coming from the Aga Khan Award for Architecture called “Kampung Improvement Programme [KIP] on 1968-1993, C-KIP (1995-2003) and Surabaya’s Government Green and Clean competition creativity agenda from 2005 to now. The paper try to explore deeply the objective and the spectacular programs on old kampungs. Each kampung participated to achieve the highest award by introducing many aspects such as plating greenery fruits, recycling dry and wet wastes, producing greenery gas and eco-friendly fertilizer, filtering and reusing grey water, and planting medical plants as well as conducting waste bank in order to increase socio-economics in the kampung by stimulating people to collect and to separate daily wastes.

Keywords: historical old kampung; sustainable; green and clean; habitat.

### Introduction

Surabaya has just celebrated the 722<sup>nd</sup> anniversary on May 31, 2015. Many programs were held by the city government in many categories from festivals (fashion, traditional curinary, old city figure & urban culture) to parade of flower culture, as well as late night sales. All these programs were to encourage all citizens to participate to increase daily socio-life including people lived in the old kampungs. According to Handinoto (1992), historical Surabaya’s development started by the year of 1275 by Kingdom of Singosari (Kertanegara), then by Kingdom of Mojopahit (Raden Wijaya) in 1293. In the book written by Empu Prapanca, there were Kingdom of Surabaya existed by the year of 1365, then followed by the Kingdom of Mataram in year of 1577. The Surabaya’s kingdom (Jayalengkara) had been destroyed by the

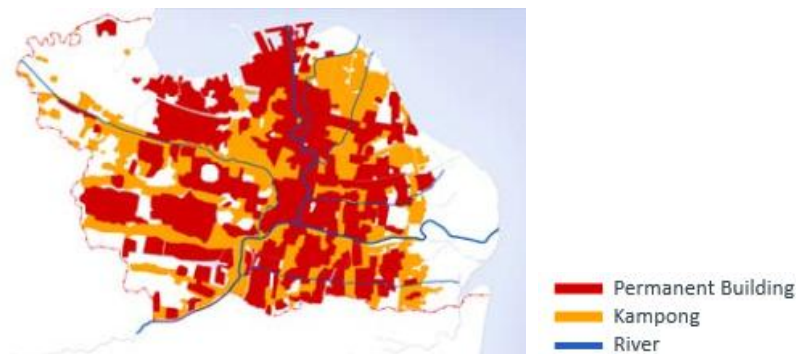
Kingdom of Mataram in year of 1625 at Western Kalimas river. During the period of kingdom Mataram, Raden Wijaya won the warrior from China called Tartar on 31 May 1293; that's why that date was chosen as Surabaya's anniversary (Arifin, 2014).

### **Formation of Historical Kampung in Surabaya**

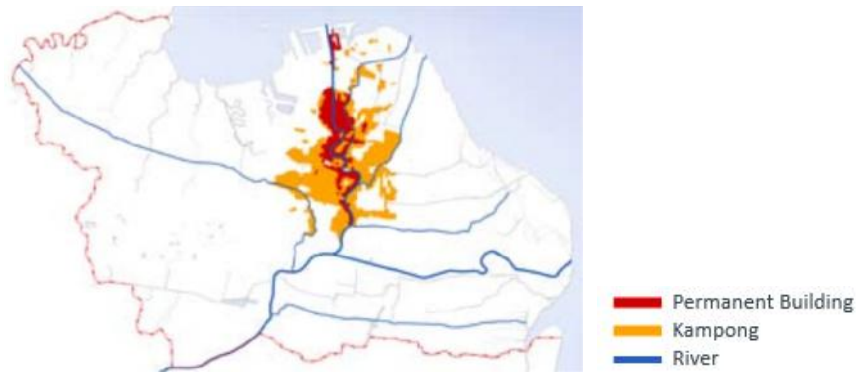
Surabaya, second largest city in Indonesia with population of nearly 3 millions, is situated at 7° 17-21' Southern Latitude and 112° 47' Eastern Longitude (Figure 1). Based on investigating of Hadi (2011), the city now has been expanded to sea sides by mostly buildings built (Figure 2). With compared to old city map 1905, most buildings and kampungs had been built alongside the river Kalimas due to the river was acting as main trading road from aboard to the city (Figure 3). According to Handinoto (2006), Surabaya's Kingdom (Keraton Surabaya) was placed at the site of Indonesia National Bank now, and the Northern square of the kingdom was the Surabaya's monument hero (Figure 4). The Kingdom of regents (Patih is adviser to the king) were settled at the western part of the Kingdom identified as "Kampung Mas Patih", and the regents served to folk or citizen were settled on the Eastern side of the Kingdom named "Kampung Kepatihan". So, the "Kampung Bubutan" situated on the Southern side of the main square was a settlement of Kingdom's clerks (Figure 4).



**Figure 1: Surabaya's Map over View (Image source: Hadi, 2011)**



**Figure 2: Surabaya's Map 2006 (Image source: Hadi, 2011)**



**Figure 3: Surabaya's Map 1905 (Image source: Hadi, 2011)**



**Figure 4: Simulated Position of Surabaya's Kingdom and old Kampungs in the Past to the Present (Image source: Google Earth)**

Back to 1617 where European immigrants (Netherlands) came to Surabaya, and Jan Pieterzon Coen built loge and dwellings around the Kalimas river for Netherlands's immigrants stayed (Purnawan, 2012). Nevertheless, long before the Netherlands immigrants came to Surabaya, there were settlements of immigrants from China, Saudi Arabia, Melay and Surabaya's native residents (Salmon, 1991; Handinoto, 1992; Widigdo, 2015). China's settlement was strictly settled in Surabaya's small areas so the chinese kampung dwellings were settled closely side by side. The Kampung of Saudi Arabia was not develop too much in the Surabaya's city. The Surabaya's native citizens could inhabit freely beyond the Surabaya's city, consequently many new kampungs were founded else where within the Surabaya city (Albrecht & Rusche,

1890). Kampung, native Indonesian people named it, is vernacular and self-organized settlements which form a large segment of urban settlements in the most Indonesian cities. Kampung are physical not clums except having regretful serviced and mostly low-income quarter housings regarding sewerage systems, garbage assortments and other public services (Dhakal, 2002).

### **Concepts of Kampung Improvement Programs**

The Kampung Improvement Program (KIP) initially established by the Government of Dutch in 1924 with the intention of preventing the spread of certain diseases from the kampungs to the Dutch residents (Rita Ernawati, 2013). Then, The KIP kept ongoing to Kampung in Jakarta on 1968-1974 (phase I), 1974-1976 (phase II) and 1976-1979 (phase III) by the Aga Khan Award for Architecture. The aim of the programs had five main issues:

1. To enhance living atmosphere (physical conditions) and characteristic of life (socio-economic conditions) of kampung residents.
2. To expand the productive capacity (increasing incomes) of kampung residents.
3. To reduce disruption of their social and economic lives.

The KIP applied to Surabaya's kampungs in 1968-1993 had two types (Anzorena, 1993; Silas, 1993):

1. The W.R. Supratman KIP was introduced on 1968, and it lasted for 5 years. The Municipal Government of Surabaya improved the footpaths and drains in the kampungs with concrete pavings and gutters. The kampung residents were encouraged to participate on the programs to form development committee and to do all pavings and gutters themselves.
2. The IBRD assisted KIP was then launched and ended on 1990. The Government still concentrated to improve the vehicular roads with minimum 3 meters wide, footpaths, drainages, public baths, toilets and clean water supply, as well as education and public health facilities.

The following KIP program to expand and to help poor people living condition in kampungs of Surabaya was Comprehensive KIP. It has been implemented since 1995 - 2003 by the Municipal Government of Surabaya. The program encompassed housing, infrastructures and economy enhancement, in the endeavor of poverty (Septanti, 2004), and green and clean living environment ([www.surabaya.go.id](http://www.surabaya.go.id)).

The final brilliant concepts for making sustainable living for people in kampungs of Surabaya are offered in competition in the context of making green and clean sustainable kampungs habitats. The program has been initiated in 2005 and till now by the Mayor of Surabaya, Tri Rismaharini. There are several categories in the sustainable green and clean kampungs competition:

1. Garbage management [(sorting waste in 3 types: paper, plastic, wet garbage), composting (organic fertilizer), waste facilities and monitoring).
2. Waste recycling (innovation, artistic and commercial values)
3. Sanitation (kampung streets and environment cleanliness, sewage and drainage condition).
4. Greenery (biodiversity, plantation, fertilizer usage).
5. Toilet/bathroom condition

### **Methodology**

With primary and secondary data, the study begins with three questions that showing the phases of study, as follows:

- (a) Description: identifying the historical old kampungs at Surabaya, that still exist now and show the effort to be green and clean neighborhood.
- (b) Analysis of the cause of KIP / Kampung Improvement Program: what are the impact of KIP, do the historical old have contribution to make Surabaya city as a sustainable green and clean habitat?
- (c) Development theory: what are the potential parameters in Kampung that can be used to empower its people success to achieve the clean and green award.

Revealing several old kampungs that have been developed well the living habitat, then, it will in depth review the kampung Maspatih which has not only as historical old kampung but the Maspatih kampung won also the green and clean competition in 2014.

### **Results and Discussion**

After accomplishing the KIP programs (1968-1993) in Jakarta and Surabaya, several possitive and unencouraging outcomes can be pinched out:

Possitive ways:

1. Physical infrastructure kampung condition became better covered with concrete slab footpaths and drainages making clean environment (figure 5).
2. 1.2 million people's living environment spread over 3,008 ha was improved
3. There were upgrade 220 km of footpaths and roads in kampungs

4. Kampung drainages and culverts were constructed around 93 km
5. 56,000 meters for clean water pipes were new connected in kampungs
6. 86 units of public bathing, washing and toilet facilities have been built.
7. Solid waste collection was significantly improved



**Figure 5: Kampungs in Jakarta [Before KIP (a & c); After KIP (b & d)]**

Several unencouraging matters:

1. Kampung communities are lack of creativity participation ( no competition)
2. Entrepreneur kampungs did not exist with fixed funds from KIP.
3. Creativity kampung leader did not expand due to fixed package of KIP

By having strong commitments to create more independent socio economic condition and sustainable living habitat for thousands of residents in old kampungs, the Surabaya's government enforced the C-KIP with the aims to have more achievements (physical conditions, social economy and quality of life). It has been achieved to 27 kampungs and involved more than 500 community Shelf Help Action Groups. Table 1 showed the C-KIP program components and achievements.

**Table 1: C-KIP Program Activities and Achievements**

No	Program Component	Types	Volume
1.	Physical environment improvement	- Pathways improvement	7,473.8 meters
		- Drainage improvement	6,432.6 meters
		- Solid waste management	1,142 sq meters
		- Public toilet	7 units
		- Other facilities	6 units
		- Management training	98 person
2.	Community development	- Skill training	627 person
		- Soft loan	2,502 person
		- Information and publication	15 person
3.	Housing improvement	- Housing improvement	1,764 units
		- Kitchen improvement	247 units
		- Toilet	212 units
		- Water supply connection	243 units
4	Land management	- Building permit	176 units
		- Land certification	660 units

(Source: Institute for Global Environmental Strategies, 2012)

One of pilot projects of C-KIP is kampung Kebalen. The footpath was covered with concrete slabs and the drainages were built on both sides of the footpath making a clean environment and no flood during the rainy seasons. The kampung residents can provide sales foods, vegetables and snacks in front of their house making better socio economy condition. The living habitat is not too greenery environment by only providing small plant in pots and yards, but most people feel comfortable with their living habitat (figure 6).



**Figure 6: Kampung Kebalen in Surabaya After C-KIP**

(Image source: [movingcities.org](http://movingcities.org))

Afterward, the challenging “Surabaya Competition Green and Clean Programs” hosted by the Government of Surabaya (mayor’s Surabaya) was launched starting from 2005 till now. People living in kampungs are enthusiastic to take part and to win the prizes. Not only obtaining the award but the kampung will also be famous. The Kampung Gundhi won the best kampung Surabaya green and clean habitat in 2013, so many delegations from abroad-Banglades, Philipine, Singapore, and others (Asia Pacific countries) visited the kampung Gundhi to closely watch and understand how the kampung can be became the sustainable greenery habitat sustained by kampung residents. Kampung Gundhi’s residents did attractively their living habitat ranging from planting rows of fruit trees, vegetable to overcome the wastewater treatment (water recycling) and plastic-waste recycling to other goods (figure 7). Kampung Jambangan is another succesfull winner to establish the sustainable green and clean habitat among Surabaya’s kampungs. Kampung inhabitants are planting many trees and flowers as well as nurturing birds to preserve the nature universe in the built environment. Residents have arranged solid garbages-plastic botols, iron or aluminum cans and papers. Setting up greywater treatment is essential to maintain sustainable clean water requirement. Each dwelling sets up the greywater treatment to help clean water unavailable sometime and cost savings (figure 8).



**Figure 7: Kampung Gundhi in Surabaya Green & Clean Competition**

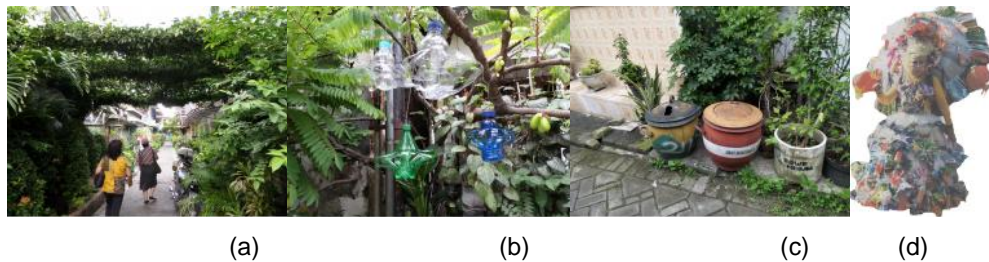
(Image source: movingcities.org)



**Figure 8: Kampung Jambangan in Surabaya Green & Clean Competition**

(Image source: movingcities.org)

In depth reviewed the historical old kampung contained heroic value is Kampung Maspatih. The Kampung Maspatih complex has 6-alley kampung dwellings; each kampung alley has its kampung leader to manage kampung built habitat through community communication. The uniQ of Kampung Maspatih toward sustainable habitat are: 1) selling herbal trees and fruits in many dwellings, 2) recycling useable waste into sellable hand-craft goods, 3) educating residents through small library, 4) generating garbage bank for people who need extra or urgent funds, 5) encouraging people to collect and separate garbage, 6) having extra skill to earn extra money for living beside opening shop in the house (figure 9 & 10).



**Figure 9: Entrance Kampung Maspatih with Natural Planting Shelter (a), Making Lamp Caps with Plastic Botols (b), Solid Waste Separation Cans (c), Recycling waste clothe (d)**

(Image source: movingcities.org)



**Figure 10: Old Dwelling (a), Library and Garbage Bank (b), Selling herbal plant (c)**

(Image source: movingcities.org)



**Table 2: Representative Each Kampung Maspatih Businesses & Human Skill Data**

<b>Kampung Alley</b>	<b>Creativity Home Industry Facilities</b>	<b>Home Business</b>	<b>Extra Skill</b>
1	Wuluh blimbing fruit processing into syrup	Herbal shops	Computer repairmen
4	Furniture	Food stands	Tailor
5	Making handy-craft souvenirs	Grocery stores	Chef tradisional food
6	none	Grocery stores	Tailor, Watch repairmen

(Source: Widigdo et al., 2015)

Many Kampung Maspatih residents have extra skill (men) beside they run home business (women) in the kampung from morning till evening. They also do creativity home industry for long term planning and earning extra income. They can be a medium business groups for the future. (see table 2).

### **Conclusions**

After reviewing preliminary KIP programs (1968-1993), C-KIP (1995-2003), and the Surabaya Green & Clean competition agenda (2005-now, ongoing), several points can be drawn:

1. KIP programs were good to construct the chaos of preliminary unthouch kampungs condition, and installed infrastructure needs; but the KIP was a set-up programs even though the renovation works have been done by kampung communities.
2. KIP programs did not encourage kampung communities to expand the sustainable habitat (wastewater treatment and garbage recycling, energy savings).
3. Comprehensive KIP did the uncovered KIP programs like greenery environment, water treatment, and educated people as well as constructed school facilities. Nonetheless, the C-KIP still could not persuade kampung communities to do with their own creativity, creating kampung brand-marking, and receiving awards (throphies and motor-cycle).
4. Surabaya Green & Clean programs is extraordinary to encourage kampung communities to design their own sustainable kampung habitat better than modern dwelling villages built by housing developers.

### **Acknowledgement**

We wish to appreciate the Institute of Higher Education of Indonesia's

Government to provide funds for researching historical old kampungs as heritage “Jagat Cilik” (low-income level habitat) in Surabaya.

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