INFORMAL STRUCTURES: VERNACULAR SPATIAL RESPONSES TO THE INDUSTRIAL CORRIDOR IN INDONESIA'S MAIN RICE PRODUCER REGENCY, KARAWANG WEST JAVA

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Abstract

Karawang Regency in West Java is one of Indonesian main rice producer regions whose economic activities growth rapidly. However, the concern of many people is that the development failed to anticipate the gap between traditional vernacular communities who conduct agricultural activities and the new industrial corridor that is formed along the southern part of Cikampek Toll-road that creates environmental and social problems in recent years. The southern industrial sites where national and international manufactured brandings are produced. imported, and distributed are more developed than the northern area. This unequal development creates a disparity inside the regency.

Not only industrial estates threaten agricultural land-uses, but also flooding is now a regular disaster in Karawang and endangers the historic settlements and production of paddy-fields. Vast areas lack proper planning and human resources development. These factors race in parallel with social issues like migration and unbalance opportunities between native and newcomers from outside. Also the impact of modern lifestyles and mechanization are additional threats.

The intention of this paper is to raise peoples' concern about the sustainability of the

vernacular settlement in Karawang which is encroached step by step by industrial estate and modern capitalist developments. 'Informal structures' is a title given to the Karawang Native spatial responses which are created from Native informal economic activities like small eateries, simple boarding houses for laborers, and motorcycles used for public transport. To investigate the phenomena of informal structures in Karawang, this paper will look at from aspects of vernacular communities, urban-architectural structures, authoritarian systems and industrial capitalism through the fourfold intersection of people, place, power and money. The absence of local community involvement in the mainstream development has denied the importance of local initiative and knowledge capacity. Vernacularity, in this case, is transformed into an informal social system that is developed through resistance of kampongs culture against urban capitalist development.

Keywords:InformalStructures,Urban-Capitalism, Agriculture

Introduction

Karawang Regency in West Java¹, located about 60 km east of Jakarta (via the toll road), is one of the Indonesian main rice barns. In the 1980s, the central government in Jakarta endorsed a policy to develop Karawang as one of the main concentrations for industrial areas in the country by utilizing the empty lands on the south of Karawang that were mistakenly identified as infertile. In the present local government autonomy era, many new local authorities face challenges in urbanization especially from increased population and migration. Local incomes from industrial investments become more important than the income from traditional agriculture. As the consequence, many industrial development schemes become the main focus in many developed regions such as Karawang.

There is a disparity between the northern area and the southern area. Cikampek toll

KAB. KARAWANG

Figure 1: Map of Karawang districts.

road divides Karawang into two areas: the northern area which is dominated by large paddy-fields and vernacular settlements, and the southern area which is allocated for heavy industries. These heavy industries actually are very influential in changing land maps and cultural attitudes of local people. As a result, rice production in Karawang now is threatened by the decrease of potential lands for paddy-fields, adding to the problem of a lack of the younger generation's willingness to be involved in sustaining rice production². Flooding routinely also strikes Karawang every year, creating huge losses in community incomes.

The growth of informal structures inside crowded settlements indicates an imbalanced system in an environmental structure. There is a concern about these informal structures as this development can disturb the sustainability and quality of environment in this region. The objective of this research is to analyze the influence of the Industrial Corridor and urbanization on vernacular settlements in Karawang, and to identify the local community's spatial responses in the form of informal structures.

Figure 2: Citarum River, that creates aprica. floodings in Karawang. (2008)

Jumlah Kecamatan Th. 2005 30 Kecamatan



Figure 3: Location of Dusun Rawa Rengas in Sukaluyu Village, Tangerang .

As a case study, this research takes one of small villages (dusun) located on the border of Karawang Integrated Industrial Corridor namely Rawa Rengas in Sukaluyu Village which experiences degradation of vernacular qualities caused by urbanization and industrialization. The method of the research is through analysis of the socio-political aspects of vernacular places in relation to the impact of regional planning to Karawang's the emergence of unplanned informal structures. This paper criticizes asymmetrical power between capitalists (industrial relations corridor), authorities (local government) and vernacular people (community's informal sectors). This paper looks at two ambiguous roles of these informal structures. At first, it criticizes how these informal structures have created discomfort to the environment; secondly, how the beneficial aspects of informal structures do not obtain serious attention from government and are still missing from the mainstream development of Karawang's regional planning. As a strategy, this paper analyzes the fourfold intersection of people, place, power and money through various data collection methods (photographs, statistics, drawings etc) from field

investigations and interviews with three parties: government, industry and local communities.

Vernacular settlement as rice barns

Karawang's vernacular The model of settlement adopts an agrarian system based on a group of familial farming clusters which are located close to a water source. Its arrangement follows a linearity of a dusun road and is surrounded by large paddy-fields and plantations. Between these clusters, which are separated by trees, plantation or small ponds for fishery, there are narrow passages connecting public roads to paddy-field and to other nearby neighboring dusuns. Each cluster consists of a communal yard, houses, and rice barns. This communal yard is used collectively to dry paddy or for other community activities. This vernacular dusun's structure consists of a long row of houses, built surrounding paddy-fields, with some regularity as to its longitudinal extent, on a narrow fertile plain.



Figure 4: Paddy-field in Karawang (2009). Source: Private Photograph

Figure 5: Local Rice Barn with Mill inside and its yard for drying (2010). Photo Meygie L.

The houses stand in a row and face the road. The houses of the chief of village and several others belonging to the principal inhabitants are built on the front. From the road the whole range of dwellings, which forms the *dusun* can not be taken from one viewpoint without interruption since large clusters of trees are spread through it, which conceal the houses in various situations.

Dusun Rawa Rengas in Sukaluyu Village was firstly formed in colonial times in the early 1900s by five families namely Saidah, Sadenan, Entam, Pulung and Armena³. This area was initially swamps and forests that were located on the western border of large paddy-fields owned by a Dutch Tuan Tanah (Land-owner). These local people opened new paddy-fields on the western part of the dusun. The name of Rawa Rengas was derived from original characteristics of the area which was rawa-rawa (swamp area) where there were many Rengas trees.

There are some communal working groups such as farming, fishery and goat breeding communities that operate in each *dusun* and consist of native peoples who own land, stables or fishery ponds. These community's groups assist, mediate, and protect the

Figure 6: Village main road. There is a small stream of village canal for paddy-field on the side of the road (2010). Photographed by Ristia K.

Figure 7: A passage lead to housing clusters and paddy-field (2010). Photographed by Meygie L.



interests of the local people and their resources. In this dusun there are also one or more surau or mushalla, warung (small kiosk), dukun beranak (midwife), small cemetery, and a village school.

This dusun is usually led by a Dusun Chief who is responsible to the Head of the Village. The present Dusun Chief is a person namely H. Kasman (born in Bekasi), the son-in-law of a rich native farmer namely H.Akbar who owns a paddy-mill. Akbar owned the largest paddy-field in the area which now has been partially sold to developers. He then bought new paddy-fields in the coastal areas. Another rich farmer, namely H. Syarbini who owns a paddy-mill, operates the most numbers of simple boarding houses for laborers in the area. The total population in a dusun is usually not so large and the social system in the dusun has been agro-based. This dusun has a total population of about 1184 inhabitants (2009) which consists of 297 Kepala Keluarga (family units) and the majority are Moslems (98%). Presently it is bordered on the north by Galuh Mas Real Estate (formerly name as Rawa Keong), on the east by Pasirjaya Village, on the south by Dusun Kalipandan, and on the west by National Housing Compound Bumi Teluk Jambe. There are two sacred graves (keramat) in this Dusun, namely Keramat Saidah and Keramat Sadenan. These two graves represent the spirit of the place and give a sense of place to the people in Rawa Rengas.

Figure 8: Map of Dusun Rawa Rengas (2010). Source: Private Collection

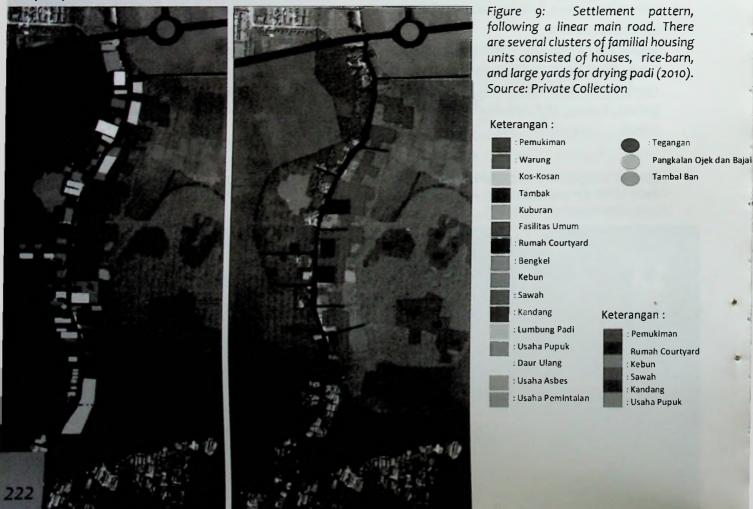




Figure 10: Keramat Saidah burial shelter (2010). Source: Private Collection

There are no impressive structures in the dusun. To enter this dusun, visitors have to enter a T-junction from Kalipandan Dusun on the south and Galuh Mas main road on the north. Presently, Dusun Rawa Rengas is part of the Kelurahan Sukaluyu area, Teluk Jambe East. Situated in an area of 14.24 ha in size, this dusun consists of 1 RW (Rukun Warga) and 3 RT (Rukun Tetangga). The largest is RT 09, where the main Mosque is located. This mosque namely Darut Taqwa serves the community and was rebuilt in a modern style. The size of paddy-fields left in Rawa Rengas is



Figure 11: Dusun cemetery (2010). Source: Private Collection

about 5 ha. For the people who had lived for decades in Dusun Rawa Rengas, the mosque became a spiritual centre that gives religious characteristics to the site. However, in fact, there is no centre, because people chat, gossip, perform events, and play on the street, warungs, yards and everywhere. Here, people are more active in the exterior rather than interior space. Streets, warungs, and yards become the main social spaces. The provision of public facilities, beside the Mosque and Mushalla, is almost nothing, and people sometimes gather in house of Dusun

Figure 12: The new re-design Village Mosque, namely Darut-Taqwa (2010). Photographed by Meygie L.

Figure 13: Village mushalla is located inside H. Oman's land (2010). Photographed by Meygie L.





Figure 14: H. Khosim, one of our informants and native of the area (2010)

Chief. Inside yard of Dusun Chief, there is a *Puskesmas* (small clinic). Two women have a profession as 'dukun beranak' (traditional midwife) to serve locally.

People in Rawa Rengas, originally were people from Sundanese Karawang, and lately they are mixed with other ethnic Sundanese groups such as Bekasi, Subang, Purwakarta, and also Java, forming a 'Karawang' culture. Most people here worked as *buruh tani* (lower income farming laborers) whose monthly wages are under one million rupiahs. They work in scattered paddy-field areas, some work for the fishery industry, some work as goat breeders, some open small businesses at

Figure 16. Goat stable (2010). Private Collection

Figure 15. Fishery pond (2010). Private Collection

home (warungs, pemintalan), and some work as lower employees in companies and businesses outside the area. Some people work as civil servants. The ratio between female and male is 51% : 49%. Most females work as housewives, and some open food stalls or other small businesses at home. The density in this area reaches 0.008 people per sqm. Life cycle rites like birth, circumcision, marriage, and death are conducted as special occasions and people often spend a considerable amount of their resources to celebrate these occasions even though they do not have enough money and have to borrow money from their relatives.

Figure 17. Warung (Small kiosk)- (2010).



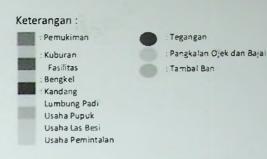


Figure 18. Map of public facilities (2010)

Regarding the environment, in the distant past, when the number of inhabitants was very low, the area was dominated by plantations and traditional 'Sundanese' houses with large yards. The indigenous buildings were made from free materials easily obtained from nature such as 'rumbia' and 'gedek' (bamboo partitions). Later in the 1980s, some stone houses were erected in this area. Contrasted with today, large yards are something very rare to be possessed by many people. Open spaces are only a few, owned by private parties; and there is no open public space inside Dusun, and possible gatherings are conducted inside the mosque and government land outside the Dusun.

Impacts of the industrial corridor

Since the 1980s, the Central Government endorsed a policy to develop Karawang as a concentrated Industrial Estate in Indonesia, which is claimed to be the biggest industrial region in Southeast Asia. Huge lands on the south of Karawang were bought from local people at very low prices by big private



developers and investors. The area is called The Karawang Integrated Industrial Corridor (KIIC) which was built to anticipate other industrial clusters in Cibitung and Cikarang. These southern industrial sites are where national and international manufactured brandings are produced, imported, and distributed. These are more intensively developed than the northern area. This unequal development creates a disparity inside the regency.

There is a concern that the paddy-fields (more than 90,000 ha) step-by-step will be wiped out by heavy industries and new urban housing estates, and that these heavy industries will threaten the sustainability of the native settlements. There is a shift in







peoples' perception, especially for local younger generation, as they do not place their future priorities on agriculture fieldwork. As a result, the growth of informal structures, which are generated by informal economic sectors such as small eateries, simple boarding houses for laborers, motorcycles used for

Figure 20: Transformation of paddy-field into un-used land for new housing estate (at the background) (2010). Private Collection

Figure 19: Some industrial compounds in Karawang Integrated Industrial Corridor showing order and exclusivity (2010). Private Collection.

> public transport and waste collection points, is very high. Some of these structures are freestanding, and there are some others which are attached to peoples' houses which sometimes create discomfort to the environment.

> The power of capitalism is clearly felt in this area. Some big investors have ever so often glanced at this area, and there is a concern that other urban housing estates will soon be built in the area. The formal powers in this urban kampong scene actually consist of several parties. These parties are very influential in running day-to-day social life. The first one is native land-owners, the second one is local government authorities who play at the

Figure 21:The destruction of paddy-field, by new urban and industrial structures (2010). Private Collection



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Figure 22: Name board for goat breeding community (2010). Photo Meygie L

political level, and the third one is rich private businessmen who own the money. Local people who are represented under community social groups have been influenced by the existence of these powers.

In less than 20 years, many of these Dusuns have transformed their agricultural-social maps from feudal landownership towards attempts at capitalist privatization that alter the geography of vernacular settlements. The breathing in and out of individual lives has been set in counterpoint with un-planned spatial programs as a response to wider social problems influenced by the transfer of land-ownership from local people to outsiders that has greater capital investment



Figure 23. Name board for farmer and fishery community (2010). Photo Meygie L

capabilities. Bribing practices to local leaders often accompany the process of these land-right transfers, sometimes illegally and unlawfully done by big investors that have victimized native peoples who did not realize these unfair games. The case study in Dusun Rawa Rengas shows that there are two new modern real estate developments namely Galuh Mas and Karawang Green Village that flank Dusun Rawa Rengas. These two new urban housing settlements are located in former large paddy-field areas and create instant simple business activities conducted spontaneously by the local people.

As a result, several past conflicts involved the local people's resistance when their rights to

Figure 24: Karawang Green Village Estate (left) and Galuh Mas Housing Estate (right) are located next to Dusun Rawa Rengas, and occupy former padi-fields sold by local landowners (2010). Private Collection.



obtain access to settlements or paddy-fields were blocked by fences or by wide roads of the big projects. A sense of social discontinuity is created by the estate gates, wide urban roads and industrial estate strongholds occurring side-by-side with traditional settlements. Other conflicts are created by unequal opportunities to work in factories and companies thus resulting in attitudes that are undermining the important involvement of the local people. In fact, many migrants from other regions worked in new projects and industries, thus creating an imbalanced competition with local people. This condition results in local people's position as subordinates to the outsiders in that they only provide or serve the needs of these outsiders. Moreover, there is also a new practice provided by the local people to collect industrial wastes which are managed by Madurese people. Therefore, villages on the border of KIIC become waste collecting points whose output sold for recycling purposes to waste is management businessmen. These waste businesses have hundred millions of rupiahs turnover; however, again, the local people are not main actors or beneficiaries of this environmental scenario.

Informal Structures

Informal structures mean vernacular spatial responses represented through non-permanent, un-planned architecture created by ordinary people. One of Indonesia's urban problems is landownership, which is still under customary laws. Gareth Hardin (1968:1244) said that 'over utilization of

common property by all member of the community has led to a tragedy where nobody gets any benefits but tragedy.' Hardin's idea can be applied in an Indonesian urban context where local settlement leads towards 'urban tragedy'⁴. This condition is represented, amongst others by the appearance of informal structures, which sometimes fill in empty places or are attached to one particular local community, which then gradually grows uncontrollable, disturbing existing original settlements. Informal structures enlarge and spread because of the increase of informal economic activities as a response to pressures of economic pragmatism while the formal system can not accommodate the spectrum of entire community's needs. These informal have temporary physical structures appearances, locate outside of the formal system and sometimes are illegal, but nonetheless generate part of the big economic matrix.

There are several types of new simple businesses which are located inside vernacular settlements, close to a Dusun and are attached to new industrial urban housing that are conducted by local people, such as: warung makan (Small eateries), simple boarding houses/rooms for laborers, pangkalan ojeg (Basecamp for motorcycles used for public transport), waste recycling and collecting points, tambal ban (wheel repair), car workshops and wash, kusen (Window/Door frames) craftsmen. These kinds of spontaneous activities basically also represent the appearance of new informal social systems involving power that is operating through asymmetrical power relations. There are always parties who possess the economic system and thus dominate local initiatives



Figure 25: Pangkalan Becak (left) and Ojeg (right) are located on each entry to Dusun (2010). Private Collection.

under the power of their authority. A walk through the roads and 'gangs' (pedestrian walkways) of Dusun Rawa Rengas gives the sense of a traditional agricultural place combined with un-planned development. Lippard (1997: 172) says , 'Land use is at the heart of the most controversial aspects of Native culture today.'5 The creation of informal structures seems to be the only way for some local people to survive after they sold their grandparent's heritage lands for cheap prices to private parties. For instance, pangkalan ojeg (base-camp for motorcycle used for public transport) that serve local inhabitants and migrant workers are easily found at every entry points to the new urban settlements, since it is

Figure 26: A waste collection station locates near local settlements. This business, run by people from Madura, creates hundreds of millions of rupiahs turnover (2010). Private Collection.

not easy for local members of younger generation to work in industrial estates for certain reasons such as educational levels and stereotypes of local people's working attitudes which can not compete with outsiders. This perception is held by the authorities of big











Figure 27: A waste collection point locates inside Native settlement own by local people (2010). Private Collection.



private companies and has marginalized local people from the mainstream of economic activities.

The industrial corridor on the south and new urban housing estates has produced huge amounts of waste which are creating environmental problems to the area. However, there is a small number of Madurese businessmen who obtain benefit from this waste. They collect these wastes and sell these wastes for recycling. This business has changed the local landscape where the condition of the waste collection points (owned by local people) are in great contrast to the greenery of the paddy-fields or the clean and neat pattern of exclusive industrial compounds on the south. These Madurese migrants have become a new power base within the informal economic system as they dominate the waste business and local people work under their hands.

Present space is not a multiplicity from old space rather it is a reinvention from economic demands. People here produce their own space, based on their needs, without professionals assistance from such as architects. The old 'Karawang' traditional houses with large yards no longer exist because the connection to the past has been lost and displaced by more dynamic social space where land values have increased sharply. For instance, the descendants of the elder generations sold and divided their lands into smaller blocks which produced disorderly land-use mosaics.

Moreover, the working class migrants attracted to industrial and urban estates become part of a new social fabric in Karawang map, as they bring money to the village and generate new formations of informal structures. The creation of new un-planned /kos-kosan/ (simple boarding houses/rooms for laborers) by native landowners who intensively fill their own green lands with informal structures has destroyed the scenic images of green villages in the past. These new informal structures were built without formal planning permission from the state and displace



Figure 28: Variety of cheap small boarding houses/rooms for laborers inside Dusun (2010). Private Collection

greenery land-use with solid brick structures. De-territorialization of traditional agricultural settlements into new urban territory is occurring step-by-step as pressure on local peoples' economical practices indirectly removes local peoples' initiatives and existence from the memory of their homeland. However, we cannot deny the benefit of these

informal structures to the communities and to the formal economic system in general.

Some money resulting from these businesses has been used to develop some kampong infrastructures and facilities such as rebuilding of the mosque and repairing



Keterangan :

: Kos-Kosan

Keterangan :

Waste collection point

Figure 29: Map of Simple boarding houses/rooms for laborers (2010). Private collection. Fig. 30. Map of Waste Collection Points (2010). Private Collection. village roads. Some people obtain direct benefits from these activities such as those who repaired or changed their houses into more permanent ones or some embark on the pilgrimage to Mecca. Informal structures have become a new powerful system in the cultural evolution of community, which transformed an agriculture based community in the past to modern capitalist society. These informal businesses have provided new fields of work for the local community and should be accommodated and prioritized by the local government in order to avoid worsening urban tragedies.

Conclusion

There is a disadvantage impact on regional planning of Karawang, especially with imbalanced development between industrial corridor and the growth of informal structures which are represented through unplanned or disorderly patterns encroaching on

paddy-fields and Native settlements. Lack of from attention and response the government in managing the appearance (or qualities) of these informal structures are caused by the inability of government to strategies for social-cultural formulate development. Many would argue that social cultural developments do result in physical structures and as such they are more important. Therefore, the government needs to review its development strategies in its entirety and try to integrate and coordinate its development practices by avoiding sectoral approaches that only create partial or short-term solutions. Local people socially need to be empowered through certain educational capabilities in facing the forces of capitalist power which presently have changed Karawang landscape dramatically. Therefore, a new concept to accommodate and develop these informal structures must be based on socio-cultural approaches and community development. It is hoped that community can be self-motivated to make these changes and can creatively find solutions to survive from the pressures of modern industrial capitalism.

End notes

¹ Karawang history can be traced back to a long time ago from Tarumanegara Kingdom (358-669 AC) which was predictably located in Karawang. The area is 1,753.27 sq.km. in size and consists of 30 districts and 309 villages that are edged by Bogor and Cianjur Regencies in the south, Java Sea in the north, Bekasi Regency in the west, Subang Regency in the east and Purwakarta Regency in the southeast. The total population of Karawang is 2,055,469 inhabitants (according to national census 2007), and during 2007 industrial sectors absorbed laborers of almost 5,746 people.

² Geographically, most of Karawang is on flat land and only the southern areas are slightly hilly. Two rivers flow through this area. The biggest one is Citarum River which flows from south to

the Java Sea on the north and separates Karawang from Bekasi, while other river ,namely the Cilamaya River, separates Karawang from Subang. In order to support its entire farm lands that spread across the region, there are three main irrigation canals: North Tarum, Central Tarum and West Tarum which are utilized for padi-fields, fishery, industry, electrical plants and people's daily lives.

³ There is no exact data, where these people came from. The information of these names is obtained from H. Oma and H. Khasim who live in Rawa Rengas and are descendants of these people.

⁴, Initial Report of Environment, Planning, and Development Guidelines for the Karawang Integrated Industrial Corridor (Depok: Department Architecture University of Indonesia, 2009).

⁵ Lippard (1997: 172).

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