

**INTEGRATING ENVIRONMENTAL GOALS INTO URBAN  
REDEVELOPMENT SCHEMES:  
LESSONS FROM KAMPUNG IMPROVEMENT PROJECT ALONG  
THE CODE RIVER, YOGYAKARTA**  
*(Mengintegrasikan Kepentingan Lingkungan dalam Program Peremajaan Kota:  
Pelajaran dari Proyek Perbaikan Kampung di Sepanjang Sungai Code, Yogyakarta)*

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**Abstract**

The Habitat II Conference held in Istanbul in 1996 had declared that "shelter for all" and "sustainable cities" are two main agendas will be faced by international community in the next 21<sup>st</sup> century. While at the conceptual level these agenda are quite explicit and clear, at the practical level they need further explanation and exploration. This study concerns with this issue. Chosing a *kampung* improvement project along the Code River, Yogyakarta, Indonesia, as a case study, this study aims to explore how environmental goals can be integrated into urban redevelopment schemes. Based on the intensive field observations, interviews with actors and agencies involved in the project, and the available secondary data, this study stresses the importance of involving the community directly in the project. Such direct involvement is crucial not only because it ensures that they will get benefits from the process, but also that it makes the community feel that they have some kinds of authority over the process. In this context, it is important to be realized that the role of planners and architects should not be too dominant. Their roles are more or less as "facilitators" or "catalysts" rather than as main actors.

**Abstrak**

*Sebagaimana direkomendasikan oleh Konperensi Habitat II di Istanbul, Turki, pada tahun 1996, "perumahan untuk semua" dan "pembangunan kota yang berkelanjutan" merupakan dua agenda utama yang kita hadapi pada abad XXI mendatang. Meskipun pada tataran konsep rekomendasi tersebut dapat dengan jelas dipahami, pada tataran praktis, rekomendasi tersebut masih memerlukan penjabaran yang rinci. Penelitian yang mengambil studi kasus kampung di sepanjang sungai Code, Yogyakarta, ini bertujuan untuk menjelaskan bagaimana kepentingan lingkungan dapat diintegrasikan ke dalam program peremajaan kota. Melalui pengamatan langsung di lapangan, wawancara dengan aktor-aktor yang terlibat dalam proses, dan data sekunder yang tersedia, penelitian ini menegaskan bahwa kepentingan lingkungan akan lebih dapat diwujudkan dalam program-program peremajaan kota atau perbaikan perumahan jika masyarakat mendapatkan manfaatnya secara langsung. Lebih lanjut, kepentingan lingkungan dalam perbaikan perumahan juga akan lebih dapat diwujudkan, apabila masyarakat terlibat langsung dalam proses perencanaan dan implementasinya. Dalam konteks ini, perlu disadari bahwa peran perencana dan arsitek tidaklah dominan. Peran mereka diharapkan lebih sebagai fasilitator, dan bukan sebagai aktor utama.*

## I. INTRODUCTION

The "Habitat II Conference" held in Istanbul in 1996 declared that, "shelter for all" and "sustainable cities" are two main agendas faced by international community in the 21<sup>st</sup> century. It is stated in the declaration resulted from the conference that "we endorse the universal goals of ensuring adequate shelter for all and making human settlement safer, healthier, more livable, equitable, sustainable and more productive." (Wheeler, 1997) While the theoretical explanations of integrating these two goals are relatively easy to develop, many problems and contradictions, however, are found on how we can synchronize these two goals.

As has documented by United Nations Centre for Human Settlements (Anonymous, 1986; N'Dow, 1996), the evidence is compelling: at least 600 million people, mostly in developing countries, live in health- and life-threatening situations; one third or more of urban peoples, in general live in sub-standard housing; at least 250 million urban residents have no easy access to safe piped water; 400 million lack of sanitation. Further more, the number of urban poor in developing countries is also ever a increasing. Of the roughly 4.2 billion people in the developing world, about 25% live in conditions of intolerable poverty: lacking adequate food, basic education, and even rudimentary health care (Sitarz, 1994).

In brief, as the world approaches the 21<sup>st</sup> century, the very basic needs of this enormous portion of humanity are not being adequately meet. It is clear from the above figure that architects and planners are facing a very difficult and challenging task. They are responsible not only for how to beautify our cities, but more importantly is how to house millions of poor people in developing countries and how to make cities become more livable and environments healthier.

Drawing the empirical evidence of a community development project along the Code River in Yogyakarta, Indonesia, this paper will show how, with careful design and approach, it is possible to integrating environmental goals into urban redevelopment schemes. The discussions presented will provide some lessons on how community and other actors in urban development (including architects) could work together in an 'ideal' partnership, in order to both shelter the poor and create sustainable city.

## II. THE CASE STUDY: KAMPUNG IMPROVEMENT PROJECT ALONG THE CODE RIVER

The subject of this study is the informal or popular settlement (commonly called as *kampung* in Indonesia) along the bank of Code River in Yogyakarta, Indonesia. The settlements or *kampungs* along the Code River stretch along 7 kilometers, from the north to the south of the city of Yogyakarta, and provide housing for a large mass of the city's poor (Figure 1.) The area comprises only about 6.5 per cent of the total city's area, but it shelter about 41,000 people or almost 10 per cent of the city's population. The city itself, founded in 1756, can be considered as a center of Javanese culture, so it has very rich socioal, cultural, and historical backgrounds. It is now the second most popular tourists destination after Bali. The city is undergoing rapid development and transformation.

As many *kampungs* become overcrowded, the incoming migrants settle on 'marginal' land, such as river banks, abandoned Chinese cemeteries, railways embankments, and vacant land throughout the city. The process of *kampung* formation in Yogyakarta is still occurring and is creating massive headaches for the urban government,

which wishes to develop a modern and orderly city.

The settlements along the Code River present a complex of persistent problems with informal settlements in Indonesia; such problems are related to the issues of how to provide more affordable and adequate housing for the poor, while at the same time, to improve the environmental quality of the city.

Originally, the riverbank area on both sides of the river (this is an area about 100 to 200 meters wide on both sides of the river, subject to regular flooding in the rainy

season) was vacant and was considered environmentally important area, due to its function as open spaces for the city. Yet, its strategic location and the fact that most urban poor do not have access to land, attracts people to 'illegally' settle along the bank of the river. With the increasing population of the city, substantial housing accretion on this area took place in the early 1970s. By the mid 1980s, almost all riverbank areas were already occupied (Guinnes, 1986; Setiawan, 1993).

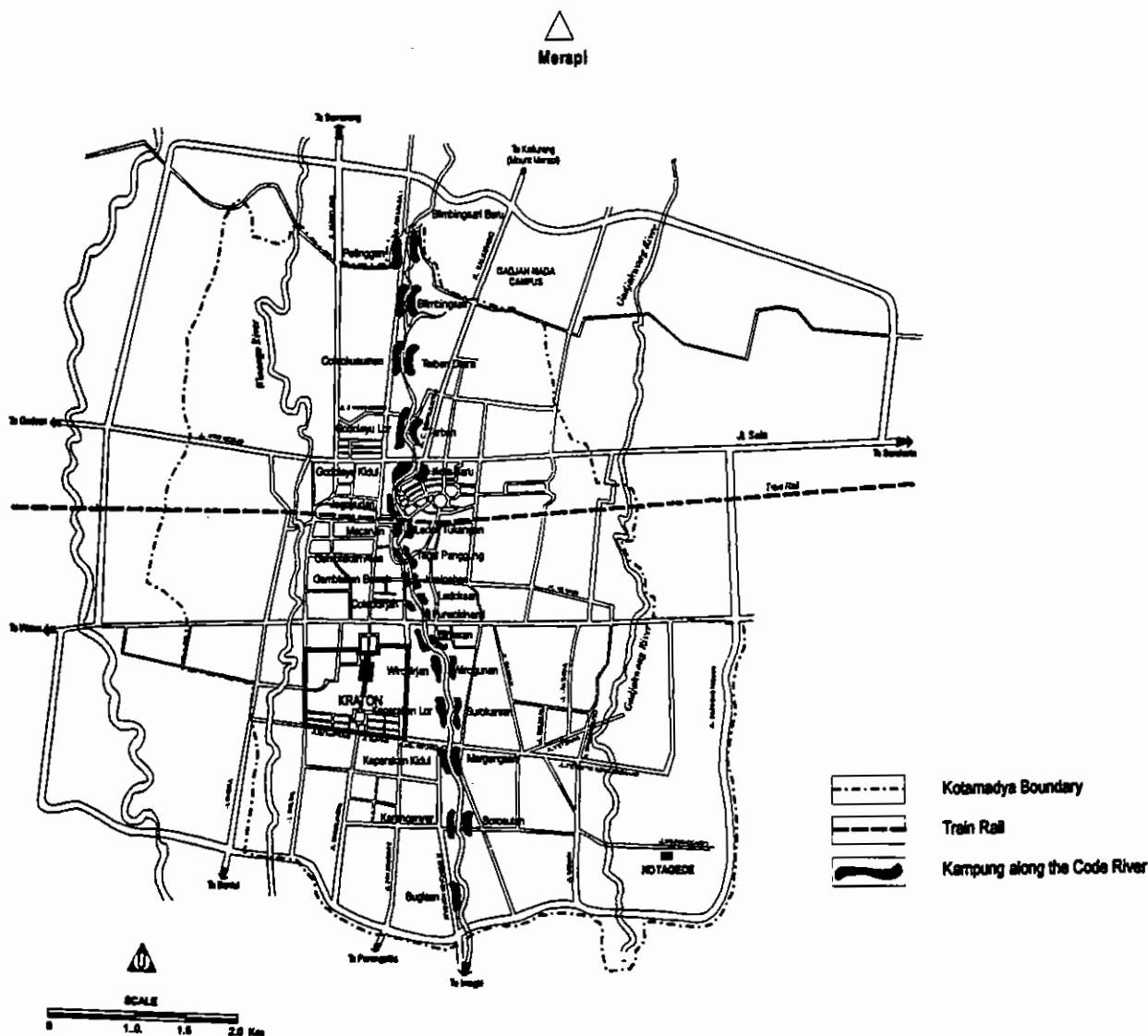


Figure 1. Kampung Along the Code River

In 1984, a flood destroyed 30 houses and partially damaged 156. Although flooding is considered an annual event, which *kampung* people are used to, the later flood really shocked them, as at least 339 households in the *kampung* were affected directly by the flooding. Since then there have been heated public debates about whether or not the *kampung* along this river should be removed, due to its 'risky' location. The city authority called for the relocation of the *kampung* residents to barracks out of town, or to resettlement areas outside of Java. The government made a proposal to totally redevelop the *kampung*; its plan was that all housing in the *kampung* would be torn down and replaced by modern, four-storey apartment blocks. The proposal offered no clear explanation of whether the *kampung* residents would get subsidies or priority on moving into the new housing.

Yet, in a survey conducted to find out people's attitude toward flooding, just six months after the flood, most people (75%) preferred not to move from the area; most people believe that, if a dike were constructed along the river, the threat of flooding would be resolved. The entire affair shows the government's intention to have a modern housing complex, to replace the traditional *kampung* which it considers as backward slums, in an effort to implement the city 'beautification.'

While the public controversies regarding the existence of the *kampung* along the Code River were still not resolved, in the mid 1980s, Fr. Romo Mangunwijaya (popularly known as Romo Mangun), a Catholic priest but more famous as a novelist and architect, came and lived with people in this area. His idea was to utilize and maintain land on the steep riverbank, in order to provide housing for these 'homeless people,' while empowering these 'marginalized' urban dwellers. Arguing that the steep banks would

otherwise deteriorate, he designed a system of embankments and a complex of buildings made of inexpensive materials. In 1988, another local architect, conducted an intensive six-month participant observation in one of the *kampungs* along the Code River (Haryadi, 1989). As his focus was on the residents' strategies for coping with environmental pressures, flooding was one of the issues he discussed with the community. Although at that time the idea of constructing a dike was not a new idea, it was through its discussions with him that the community felt more confident about proposing a dike as a solution for the flooding problem.

Thus starting in 1989, the community, supported by local architects began to propose a riverside dike project. Together, they were able to convince the government that constructing a riverside dike was much more reasonable solution than tearing down the whole *kampung*. Thus, in 1991, seven years after the last big flood in 1984, the riverside dike project was agreed on by the government agencies as a viable solution that met both the community interests in defending the *kampung* from flooding and the city government interests in beautifying the city environment.

In this project, many government and non-government agencies involved in supporting the community. The Public Works Agency provided the budget, as well as the engineering design and supervision during the construction. The military personnel organized and managed the day-to-day work, including the regular supply of materials. The government Electric Power Plant provides *kampung* with electricity, the government utility services also provides *kampung* with piped water, the city planning department also provides *kampung* with public well and street lamp. In addition, other non-government agencies also supported the *kampung* people.

On top of these, however, it was the community that managed the whole project. The community was responsible in mobilizing free labors, providing meals for all people involved in the day-to-day works. Thus, each day during the dry season (around May to August), from 1991 to 1995, thousands of *kampung* residents practiced 'gotong royong' (sharing burden or conducting mutual cooperation) cooperating to construct about 3,000 meters of riverside dike along the Code River. As the budget provided by the government was limited -- only enough for buying materials such as cement, stones, and sand-- the *kampung* people were asked to contribute money, for the completion of the project. This is, of course, a remarkable achievement, one which for two decades people could only dream about. It should be noted, however, that many *kampung* people also had to make sacrifices; these are depicted in Table 1, about 89 housing units, or almost a third of the total housing located along the river, had to be partly demolished due to the dike construction.

### III. THE IMPLICATION: HOUSING IMPROVEMENT AND HEALTHIER ENVIRONMENT

There are several important implications of the riverside dike project for the *kampung*; each will be described below. The first, and perhaps the most important implication of the project, is that it gives a greater feeling of security to *kampung* people. This feeling is not only because their settlements will be safer from flooding; more importantly is the fact that, from the people's point of view, the government has now recognized their existence. As will be discussed below, this feeling of security gives rise to the second important implication for the *kampung*, i.e. the remarkable improvements that have been made to their communities by *kampung* people. As can be seen in Table 2, after the dike was established *kampung* people along the Code River have been able to carry out many community projects. All of these improvements are of great significance,

**Table1. The Riverside Dike (*Talud*) Project**

Year	Vol. (m')	Gov.' Budget (rupiah)	Estimated free labor mobilized (person-days)	No. of housing units sacrificed
1991	250	75,000,000	3,150	11
1992	250	155,408,000	7,000	24
1993	440	152,900,000	6,750	14
1994	980	409,277,000	8,600	23
1995	712	347,500,000	8,000	17
<b>Total</b>	<b>2,832</b>	<b>1,140,085,000</b>	<b>33,500</b>	<b>89</b>

Sources: Field Observation, 1996; Interviews with community leaders, 1995,1996.

Notes: In 1995 1 US \$ was equal to 2,000 rupiah. However, after the economic crisis that hit Indonesia in 1998 the value of rupiah drop very low. In December 1998, 1 US\$ was equal to 10,000 rupiah.

considering that, for several decades, *kampung* along the Code River can be said to have been in a stagnant condition

While before the dike establishment the physical appearance of the *kampung* was not considered to be attractive, now it has been transformed and has a totally new appearance. Along the river, a concrete dike structure became new features of the *kampung*. This dike served, not only as a flood defense for the *kampung*, but also an important element in beautifying the riverside environment. Most of the houses along the river are now permanent concrete structures; some even have two storeys. Pathways are now paved; new and cleaner public toilet have also been constructed. Further more, *kampung* people also decorated the riverside environment by constructing pots for flowers and adding street lighting, as well as other elements such as *kampung* gates, small parks, shelter for the night patrols, announcement board, and other street furnitures.

All these new elements make the riverbank *kampung* more attractive and healthier. Further more, as all housing units located along the river now face the river, the river itself is considered a 'front-yard.' This

seems to be another positive implication, since people's attitudes toward the river may then also change. As mentioned by *kampung* leaders, *kampung* people are now quite hesitant to throw waste into the river something that was common before the dike exists. They now really want to have a cleaner river, and this is a really good implications in relation to the government's 'Clean River Campaign' that is now being implemented in many parts of Indonesia.

Since then, the *kampung* along the Code River have received more attention from outsiders. In 1992, considered as an example of excellent efforts in community development, the Agha Khan Architecture Award was given to one *kampung* along the Code. In 1994, the central government gave the Adipura Award to the city. This prestigious award is given to the city government that is considered most successful in improving the environmental condition of the city. Further more, in 1996, an annual meeting of the Indonesian Institute of Architects (IAI), gave another award for the success of *kampung* improvement along the Code River.

**Table 2. Community Projects Conducted after the Dike was Constructed**

Year	Public toilet (unit)	Well (unit)	Guard Post (unit)	Path way (m')	Street lighting (unit)	Public hall (unit)	Flower pot (unit)	Housing improvement (unit)
1992	8	8	5	450	30	-	30	61
1993	12	11	4	440	30	1	35	36
1994	7	10	1	400	20	1	20	84
1995	11	7	8	800	45	2	40	84
Total	38	36	18	2,090	125	4	125	265

Sources: Field observations and interviews with community leaders, 1995, 1996.

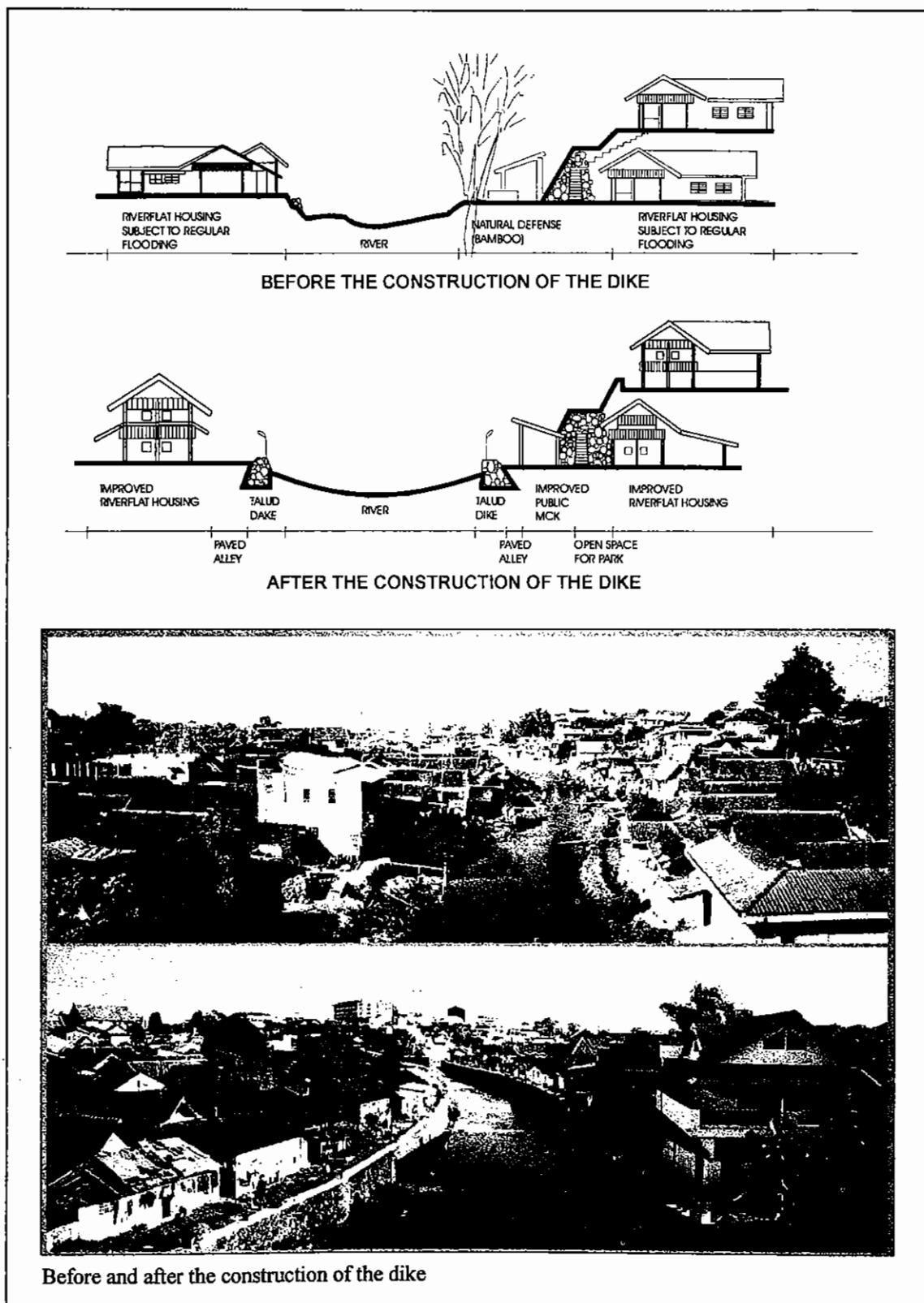


Figure 2. The Riverside Dike Project along the Code River

#### IV. THE LESSONS: COMMUNITY INVOLVEMENT AND THE ROLE OF ARCHITECT

At least five important lessons can be learned from the project described above. First, it is possible to integrate environmental goals into urban redevelopment schemes. As clear in the case of the riverside dike project along the Code River, the community, supported by other agencies (both government and non-government) has been able not only to improve their individual housing, but also to make the environment healthier. The construction of the riverside dike along the river, particularly has become an important "stimulant" that generate not only settlement improvement, but also a better treatment toward river water as an important element in sustainable cities.

The second lesson learned from the project is that it was marked by the very close and strong relation among actors and agencies involved in the project. Both the government and non-government agencies were actively involved and worked together with the community. Such close and good relationships were able to disclose community potentials and resources.

The third lesson related to the fact that such project needs a full commitment and support by the local government. Although community was the main actor in the process, without particular support and involvement of the local government, the project could not be materialized. This is mainly because the status of the settlement is considered "informal" or "illegal" and therefore without government's guarantee for the security of the settlement, people would not be willing to invest money, time, and labor for their settlement.

The fourth lesson can be learned from the project is that the communities were directly involved in the process. Not only that

they involved in the implementation of the project, but also involved in the decision making process related to the project. Such involvement is crucial because it makes the community feel as if they have some kinds of authority over the process. Utilizing the *gotong royong* spirit, *kampung* people have been able to organize collective efforts effectively for the benefit of their settlement.

The last lesson we can learn from the project is that the role of planners architects was quite different. They served more as "catalysts" rather than as the main actor in the process. The planners architects were able to play as mediator, helping to mediate the community and other agencies, particularly the government. Such lesson is very important in the wake of a growing concern that the idea of planners architect as the "master builder" is, to some extents, eroding. Particularly in relation to the problems of "shelter for all" and "sustainable cities" it is now realized that the architects themselves would not able to solve the problems. They have to work together with other parties in urban environment and put the community in the center of the process.

#### ACKNOWLEDGMENT

This research was possible because of the research grant provided by the Toyota Foundation (grant No. 94-Y-27). The author would like to express my appreciation to the Toyota Foundation.

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