

Does Low Income Rental Flat Contribute to the Sustainability of Surabaya?

Purwanita Setijanti, Happy Sumartinah, Johannes Krisdianto, and Susetyo Firmaningtyas

Abstract—This research develops the concept of resilience that seeds from the low income community settlement in dealing with problems and changes occur in urban areas. Vulnerable state is addressed by action in the form of prevention, adaptation and improvement to survive and, at the same time, to change without losing its identity. Vulnerability in the environmental dimension is the focus of this article, with consideration to strong linkages with residential area.

Using qualitative descriptive method, this study examines the aspects of preparedness, mitigation measures and response capabilities of the community in the context of creating/improving the level of city resilience. This study shows that rental flat for low income community has a great value deserved to be improved to be able to contribute in creating resilient city.

Index Terms—Low income community, rental flat, urban resilience.

I. INTRODUCTION

In 2025, approximately 68% of the world population will live in urban areas, either because of urbanization or the development of rural areas. Even though environmental capacity is limited every city's inhabitant remains entitled to a decent living space. Unfortunately, not all of them are able to access decent housings, especially those of lower income level. The poor community might be forced to survive with all the limitations and the rigors of life in the city competition; to live in dense environments, inadequate dwelling and lacks of basic infrastructure.

Kampung, a self-help settlement of lower middle group class, is often considered as a slum which will decrease the quality of the city. In Surabaya, the second largest city of Indonesia, kampungs are retained and developed as a decent place to live with all of its uniqueness. Kampung Improvement Program (KIP) in Surabaya, for example, is purposed to raise awareness of the inhabitants, to empower and to improve their quality of life and their living

environment with only limited support from city government [1]. Unfortunately, the program could not be carried out in all kampungs for several reasons e.g. it is very dense and highly disorder settlement, built up on public land, etc. For this case the city government relocates the people on a rented flat.

The idea to build rental flat for low income community was not only to provide an adequate living environment but also to place various social, economic and cultural activities found in kampung which could not receive improvement program. The flat was expected to fully facilitate the activities of its residents and in turn to improve the quality of life of its inhabitants. The quality here is not only in terms of economic development, but also an increase in terms of social and cultural life [2]. The flat can also be used as a place for new urban residents from villages and towns to adjust the city life. It is inevitable that the way of life in villages and towns are very much different to in cities. Cities for some extent have limited carrying capacity of the territory and natural resources, various regulations, rules and restrictions. In this case, flat is a transitory housing for the migrants. As a capital city of East Java province, the number of migrants in Surabaya is increasing. The flat can be a place for them, particularly informal workers, to adapt and be able to well established in the city, it is not excluded and may be followed by a dynamic development of the city life [3].

The rent rate is very low considering that the residents' economic capacity to be able to run everyday life as well as to support of the feasibility of occupancy along with the infrastructures and basic means. It is hope that they can save their earnings and, after some period of time, have the ability to access a better house independently.

Modest rental flat was designed to meet the needs of housing for low-income communities and to reduce urban slums therefore the flat should have an easy access to the service center or workplace. It is important for them to not just have a place to live but also to easily carry out economic activities to improve their lives.

II. OBJECTIVE

As described above, the problems mostly found in the settlements of low income group include poor environment, sub-standard housing, flooding, and poor sanitation. All of them can decrease the carrying capacity of the city while at the same time global competitiveness increase. These problems can be overcome by growing the community resistance/resilience to be able to survive in Kampung Surabaya [4]. The objective of this research is to formulate the resilient concept of low income community living in rented flats.

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P. Setijanti, H. Sumartinah, and J. Krisdianto are Lecturers at Department of Architecture, Institut Teknologi Sepuluh Nopember, Kampus ITS Sukolilo, Surabaya, Indonesia (e-mail: psetijanti@yahoo.com, happysumartinah@gmail.com, john_kris@arch.its.ac.id, salatoen@arch.its.ac.id).

S. Firmaningtyas is with Laboratory for Housing and Human Settlement, the Department of Architecture, Institut Teknologi Sepuluh Nopember, Kampus ITS Sukolilo, Surabaya, Indonesia (e-mail: yayas.sf@gmail.com).

III. METHOD

This paper is a part of a qualitative descriptive study aimed to examine the role of rental flat community in shaping urban resilient of Surabaya. The variables to be measured are preparedness, mitigation measures, response capabilities and recovery mechanisms [5] of the inhabitants toward changes on built environment, economic, social, and environmental aspects. Data was collected through: 1) literature study on the philosophy, and concept of flat design and development in Surabaya, 2) interviews were conducted to describe the issues to be studied in detail for a deeper understanding of the lives of the occupants. Unstructured group interviews were conducted during distribution of questionnaires which consist of closed and open questions compiled from the variables, 3) observation is conducted not limited on the flat units but also on the flat environment and its surrounding, and 4) documentation of photo shoots to illustrate information of the flat situation and condition.

Until 2016, there are 17 rental flat for low income community built and managed by the city government of Surabaya, and the number continues to grow. This paper is a result of examination 2 rental flats which were chosen based on several criteria as follows: 1) inhabited by low income community and has the lowest rental price, 2) has been long occupied therefore the social system has been formed and transformed physically, and 3) has been built for kampung relocation.

From these criteria have two rental flat has been studied namely flat Dupak Bangunrejo which was built in 1988 and flat Sombo which was built in 1989 (Phase 1) and 1991 (Phase 2).

IV. RENTAL FLAT PROVISION AS TRANSITORY HOUSING

A. Flats Dupak Bangunrejo

Kampung Dupak Bangunrejo is located in Sub-district Dupak, District Bubutan. It is relatively close to the industrial area and the port of Tanjung Perak, the biggest port in eastern Indonesia which has great opportunity of informal economy activities thus attracted a significant number of migrant.

Despite of have conducted kampung improvement program in 1978, most of the housing conditions in the kampung were still far below the minimum standards, the kampung were still developing below the minimum standard. There were many low cost rental rooms priced around Rp.7.500,- per room per month (approximately USD 3 at that time), which inhabited by mostly circular migrants working in low-income informal sectors, as shown in Fig. 1. From the results of the study of the kampung and its community for almost 4 years it was concluded that not all parts of the kampung need to be relocated, but in addition to the plan of building new housing for the residents, it was expected that other parts of the kampung can be improved by the construction of street, gutter, clean water infrastructure, etc as part of the construction of the flat.

The flats themselves consist of six three-storey buildings, each of which consists of 150 residential units. All buildings cover an area of 3000 m². The composition of the blocks is fully follow the existing land plots, consisting of residential

building, meetings building, worship and commerce, as well as support buildings were used to store carts, rickshaws, and so forth.

B. Flats Sombo

As well as Kampung Dupak Bangunrejo, the state of kampung Sombo in sub district Simolawang, District Simokerto, was also substandard, semi-permanent, lack of infrastructure, unhealthy, very dense (over 1000 people per hectare), and vulnerable. The study for the design also took years before the flats were built to replace the kampung. The flat was also built by land adjustment. It was built in 2 phases in 1989 and 1991 consists of 10 four storey buildings in area of 41.044 m². Similar to Dupak, flat Sombo has only one type of unit of 3 x 6 m² with possibility to rent more than one unit. The rental prices per unit depending on the location of the unit are: (1) First Floor: IDR. 40.000,- / month, (2) Second Floor: IDR. 30.000,- / month, (3) Floor III: IDR. 20.000,- / month (USD 1 = + IDR 13,000,-).



Fig. 1. Typical rental space in Kampung Surabaya.

V. ENVIRONMENTAL IMPROVEMENT

Both flat design concepts were formulated through in-depth study on the patterns of existing public housing, the standards used and the interaction of existing society. The design was not only socialized and approved by the relevant government agencies but also discussed with the proposed community. Some basic planning formulated and agreed upon, namely: 1) meeting all city and central government standard, legal permit but keep the rental rate low, 2) accommodating zoning/ pattern found in the previous housings and settlement (private zones and communal zones) and wherever possible enhanced the quality of previous built forms (shady architecture, natural ventilation and sufficient sunlight). This means that the design will provided place to also accommodate established social and economic activities in the closest, 3) employing availability and durability of construction materials (cheap, durable and easy to maintain), and 4) prioritizing all original occupants (including tenants which still have a long leasing period) to rent the units.

The result is a modest rental flat as follow: 1) four storeys building connected with stairs. The ground floor is used for communal space and facilities, and families with elderly have priority to stay at the lower level, 2) wide corridor to replace the alley in the kampung as a communal space, in addition to communal kitchen, bathroom, toilet, prayer room in each floor (Fig. 2 and 3), 3) every unit has windows both facing the

corridor and the exterior, and 4) the basic pattern plan is a shared communal room surrounded by flats.



Fig. 2. Wide corridor as communal space used for gathering.



Fig. 3. Wide corridor also used as space for small shop.



Fig. 4. Communal kitchen in every floor.

As initially expected the physical condition of the flats and its surrounding are improving. It is seen from the condition of paved road, drainage, improving clean water provision, and communal grey water treatment. The improvement of environmental quality can be seen on the reducing of health centre visitation after the development of the flats as shown on Table 1.

VI. URBAN RESILIENT ASPECT

Surabaya as one of the metropolitan cities in Indonesian

faces severe challenges as the rapid globalization and modernisation. Low income community have to deal with the vulnerability of the environmental, economic, and social and culture dimensions with all their difficulties.

TABLE I: HEALTH CENTRE VISITATION

Year	District Bubutan	District Simokerto
1985	153.669	182.614
1987	200.819	293.397
Year of Flat Construction	1988	1989 an 1991
1990	117.494	183.394
1993	107.366	167.136

Source: Surabaya in Number 1987 and 1993 [6]

This study shows that rental flat housing built to replace substandard kampung could support and create the city resilience to keep a decent living environment, livability and competitiveness both regionally and globally. Comprehensive infrastructure development and management contributes to the improvement of residential comfort in general. It is a great contribution to the resilience of the city in anticipation of potential disasters (flooding, outbreaks of disease, slum, etc.).

Social resilience contributes to the public awareness of the settlement condition and situation, and in turn to the city. The design not only keeps the good sense of place of their living space but in general social resilience will keep the identity of the city as a place for various groups. Meanwhile economic resilience not only can be seen as a way of reducing unemployment rate but it is a way of low income community contributing to the city economic development.

The research shows that the resilience appears in the rental flat of Surabaya are supporting the creation of a viable, livable and competitive city. It shows that the flats have capabilities to overcome problems and changes occurred in urban areas without losing its identity and is able to survive in the midst of urban development even improving its condition.

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Purwanita Setijanti was born in Madiun, on April 27, 1959. She obtained the bachelor degree from the Department of Architecture, Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia in 1985, the master degree from the Department of Architecture, UCL, London, UK in 1993 and doctoral degree from Faculty of Urban Planning and Design, University of Melbourne, Melbourne, Australia in

She is researcher and lecturer at the Department of Architecture, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia and the dean of Faculty of Civil Engineering and Planning. She is also member of International Council for Research and Innovation in Building and Construction (CIB) Asia on Informal Settlement and Affordable Housing. She has published several books and a number of articles in various journals as well as presented her research in international and national conferences and chaired numerous international conferences. Her recent books are Surabaya's Kampung toward the 21th Century, published by Surabaya City Planning Board, Surabaya, 2011 and Strategic Urban Development for Equitable and Sustainable Indonesia published by Ministry for Economic Affair and Laboratory for Housing and Human Settlement- ITS, 2015. Her research interest is in inner city housing development.



Happy Sumartinah was born in Malang, on February 2, 1946. She graduated from the Department of Architecture (bachelor), Institut Teknologi Sepuluh Nopember (ITS), Surabaya, Indonesia in 1975, School of Building (MSc), University of New South Wales, New South Wales, Australia in 1980 and the PhD from the Department of Architecture, University of Queensland, Queensland Australia in 1988.

She is a leading international researcher in International Council for Research and Innovation in Building and Construction (CIB) Asia on Informal Settlement and Affordable Housing. She is member of Laboratory for Housing and Human Settlements, Department of Architecture, and Lecturer at Department of Architecture, ITS. She has published a number of journal articles, conference papers and other form of publications and chaired numerous international conferences. Her recent books are Surabaya's Kampung toward the 21th Century, published by Surabaya City Planning Board, Surabaya, 2011 and Strategic Urban Development for Equitable and Sustainable Indonesia published by Ministry for Economic Affair and Laboratory for Housing and Human Settlement- ITS, 2015. Her research interest is in coastal housing.



Johanes Krisdianto was born at Surabaya, on January 9, 1977. He finished bachelor degree in architecture at Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia in 1999 and the master degree on design architecture at Institut Teknologi Bandung, Bandung, Indonesia in 2010.

He is Lecturer and Researcher at Department of Architecture, Faculty of Civil Engineering and Planning, ITS. He has published several conference papers both national and international level. His research interest is in architectural design.



Susetyo Firmaningtyas was born in Padang, on November 24, 1971. She held the bachelor degree (architecture), the master degree (housing and environment) from the Department of Architecture, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia (1995, 2001), and the master degree (heritage) from Faculty of Urban Planning and Design, University of Melbourne, Melbourne, Australia (2009).

She is researcher in laboratory for Housing and Human Settlement, Department of Architecture, Institut Teknologi Sepuluh Nopember, Surabaya, Indonesia. She has published a chapter entitled 'RE-building History' (with Aditomo, Krestian and Istanto) in Heritage as an Asset for Inner-City Development, JP Corten et.al (ed), NAI 010, Rotterdam, 2014, conferences papers, journal articles and recently, together with a team, a book entitled Strategic Urban Development for Equitable and Sustainable Indonesia published by Ministry for Economic Affair and Laboratory for Housing and Human Settlement- ITS, 2015. Her research interest is in urban heritage and conservation.