

# Adequate Human Settlement and Housing for Low-income Disabled People in Surabaya's Kampung



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## **Abstract**

*Highest urbanization and globalization is the major forces influenced the development of the country. Poverty becomes more widespread in rural area as well as in urban area. Most of people with disability live in poverty and slum area while they have less access for full participation and equality at any sectors. Discrimination on the society makes its worst and minimal capability for supporting their daily life and social interaction.*

*In Surabaya, good access in shelter regarding to disabled needs are still limited and exclusive. Few of people with disability have their own private home while the others only can get rent house particularly in informal settlement within below from the shelter and environment standardization requirement. Field studies in 2 different areas have been explored and investigate the housing design and settlement from disabled people's perspective. The aim of this study is to propose the suitable proposal for change and improvement of shelter and housing design for low-income disabled people.*

# 1. Shelter Situation and Analysis

## 1.1. Surabaya's Data in General

Indonesia is located south and east of mainland Asia and north and west of Australia. The country's total area is 1,904,570 sq km with consist of 5 main islands of Indonesia are Java (134,045 sq km), Sumatra (473,605 sq km), Kalimantan (751,100 sq km), Sulawesi (189,040 sq km) and Papua (421, 981 sq km).

With 3.47 percent of total world's population, Indonesia became the world's fourth most populous country. Total Indonesia's estimated population in August 2007 is 225,195,394<sup>1</sup>, giving it an average population was growing 1.2 percent a year.

Become the second largest city after Jakarta and the capital of East Java, Surabaya is located at 07 21 South altitudes and between 112 36 and 112 54 East longitudes. Most of the regions are lowland and bounded by Madura Bay, Sidoarjo Regency, and Gresik Regency<sup>2</sup>. The City total area is 326.36 sq km and divided into 31 Districts and 163 Villages.

By statistic calculation of Surabaya's estimated population (2007) from 1990 and 2000's population census is 2,358,111; which is 27.5 percent lower than Jakarta's estimated population<sup>3</sup>. Surabaya city has growth impressively where commerce sector dominated in contributing its economy. It becomes the centre of economy in east java and the place of manufacturing companies and industry. This situation has shaped the social life where most of Surabaya's population work in these areas. It also attracts labour market from rural areas. Therefore, the city is highly urbanized and as a result, there is also a large slum area.

Related to estimation of disability population, it finds difficulties the valid data of the disabled population in recognised sources of national and international data. National level statistics is only collected on regular basic on the disable or calculated from the disable organisations or rehabilitation school's participant while in the other hand some disabled people participate in one or more disabled organizations.

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1 <http://www.datastatistik-indonesia.com/proyeksi/index>.

2 Surabaya in Figure 2005/2006

3 [www.world-gazetter.com](http://www.world-gazetter.com)

In developing countries, 300 million or 10 percent of the population are disabled and 3.5 percent are physically handicapped (WHO)<sup>4</sup>. It's also stated that 82 percent of disabled people live in the poverty by UN. In Indonesia, the estimation data showed lower where the disabled population has only reached 1 percent of the total population (*2000 National Survey, SUSENAS*). Estimation number of disabled people in Surabaya from 1993 to 2005 showed that it has increased significantly which is Surabaya has taken place the second physically disabled person populous city with totally 816 people and the third disabled children populous city in East Java Province with totally 227 children. On year 2005, more than 2,415 people with kinds of physics and mental defects have been increased 4.76 percent from year 2004.

On 2004, more than 330,000 people live in poverty in poor and real poor categories. According to World Bank criteria, the income level of Surabaya is low where it's only 8,27 percent from total income per capita more than 650 thousand rupiahs per month<sup>5</sup>. Disability affects of poverty especially in development country where more than 80% of disabled people in Surabaya live in poverty, less educated, and unemployed, where discrimination has became the main issues in all sectors. The income level of disabled people is being worst where most of them could only work in an professional working field, small industrial factory and home industry level with under standard level salary.

## **1.2. Shelter Related Fact and Figures**

### **A. Access to Shelter**

Surabaya has growth rapidly and changed physically due to the urbanization and globalisation. The fast city development has interacted immigrant labours and the consequently the populous of Surabaya is increased significantly in every year. The land use and building use's policy has also been changed where green area, open area, and farming area have become settlement and business area; in the other hand conservation's buildings and office buildings has change into commercial's buildings. The ratio of inbuilt area and non built area in Surabaya is 62.96 percent to 37.04 percent from total area of Surabaya city.

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4 [www.fao.org](http://www.fao.org)

5 Surabaya in Figure 2005/2006

More than 298,883 dwellings have no completeness of dwelling elements with 45.44 percent of dwelling's distribution. It means that the quality of dwellings in Surabaya is still poor. It also showed that most of non permanent dwellings have not fulfilled good facilities particularly toilet's and clean water's facilities. The occupied dwelling's distribution percentage indicated that most of permanent dwellings are own property (62.06%) and non permanent's dwellings only reached 30.93% own property's dwellings while the others are rent or lease status dwellings.

With high cost of living and property's dwelling in Surabaya, most of low income disabled migrants did not have other choice for living and afford suitable houses for their family. They prefer to live in the rent houses or rooms which have low prices and near the work place without any good access for infrastructures and service (Figure 1).



Figure 1: Rent house and private house of disabled people in informal settlement. Sources: The Author and Link-Research – Postgraduate students of University of Newcastle UK and ITS Surabaya)

## B. Access to and cost to Basic Services/Infrastructure

Good basic services and infrastructure has been developed successfully especially for large scale slum upgrading. KIP Comprehensive was one of good example of slum upgrading program since 1969 and it has currently improved 70 percent of the *Kampungs* in the city<sup>9</sup>. The government became an enabler to support and give stimulation for the society and local organization able to sustained improvement of the quality of basic service/ infrastructure and life in *Kampungs*. However, this program is overlooked by most “non disabled” people rather than accessible for all

<sup>6</sup> Master plan of Surabaya 2003 – 2013

<sup>7</sup> World Habitat Award 1990 – 1994, *Kampungs* are informal, low-income housing areas found throughout South-east Asia. They are self-built through the traditional and informal process of ‘housing by people’.

<sup>8</sup> Housing Statistics East Java Province (Result of the 2000 population census)

<sup>9</sup> World Habitat Awards 1990 – 1994

especially for infrastructure and public facilities such as path ways, road, public toilet, and etc (Majale 2007)<sup>10</sup>.

In the recent year, the government has developed good policy for several public buildings, main roads, education facilities and government building arising out of good accessible and free barrier facilities. This can be improved nevertheless from the hard negotiation and good participation of disabled people and NGO providing adequate environment for all.

Previous study by Link Research between University of New Castle, UK and ITS Surabaya has found that the main problems of basic services/infrastructure for people with disability is un well recognition design of public facilities, drains and sewers, pedestrian and public sanitation<sup>11</sup>.

### **C. Access to and cost of Education**

As one of the main education centre, Surabaya has been the home for many students from around Indonesia even neighbour country such as Malaysia, Philippine, Thailand, etc. Airlangga University and Institute of Technology Sepuluh Nopember (ITS) are the country's most selective higher education institutions with variety of field studies in the eastern region of Indonesia.

According to disability's education need, the education sectors haven't given maximum access for special need. Most of education institution's building did not provide good accessibility both education programs either free barrier environment. As a result, People with disability have less educated and marginalized from the social community.

Have been committed to the MDGs goals, Indonesia Government has agreed and implemented the inclusive and integrated method in some public school which accept disabled student to have an equality. However, many of public schools reject the disabled student because of lack facilities and teachers for a special need. Consequently, disabled children do not have any choice for study and are sent to special school which are mostly of poor quality. On the other hand the government does not provide affordable and accessible school for disabled people. Futhermore,

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10 Draft Project Proposal, GURU-Newcastle University

living in poverty, stigma and discrimination are other factors making disabled people less self confidence and they failed to complete their primary level of education..

#### **D. Housing Policy**

As disabled has become a global issued, the government has an obligation to provide policies and it is important regarding for the implementation as part of National Development Plan (PROPENAS). The National Development Plan aims to improve the lives and prosperity of all Indonesians where disabled people are included as well. The first implementation was in 1969, when the poverty levels were approximately 65% of the total population. On 2000, the public Act No. 25 for National Development Plan Policies and strategies and programs for 2000 – 2004 has been approved to uplift the socio – economic condition for poverty, neglected children, disability, vulnerable groups in need of social protection and the social impact of natural and man – made disaster<sup>12</sup>.

Since 2003, the government has committed to provide one million housing for low-income people in all provinces of Indonesia according to implement mutually reinforcing framework of the Millennium Development Goals (MDGs) to promote human development by reducing poverty and improving lives. Unfortunately, housing and settlement policy for disabled people have not been proposed while the disabled people have difficulty to provide good life and adequate dwelling.

Some of the other legislative and policy regarding to disabled issues are only focused on social welfare and education problems while the other are focused on technical standardization regulation of accessibility for Public Buildings and Environment which have not implemented in all sectors.

#### **E. Shelter Design**

Good accessible areas for all in Surabaya are very hard to find. This problem has become a major factor that influences the life and shelter quality of disabled people.

The Kampung Improvement Programme (KIP) has been significantly improved the quality of shelter basic services and infrastructures; however this program still has not covered the main problems of disabled lens. Basic services and infrastructure

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<sup>11</sup> Link Research Project “the Evaluation of The Kampung Improvement Programme through the lens of disability “– The University of New Castle, UK and ITS Surabaya

regarding to accessible and safety for disabled are still hard to find easily without any further development and improvement. This condition forces the disabled people able to access all parts of the built environment and use of all facilities without being made to feel inadequate (Majale, 2007; Ikaputra and Sholihah, 2001).

In Surabaya, most of disable person lives with their family or relative and can not provide their private dwelling. The exclusion of full participation on environment, social life and education sectors are basic cause of problem for disabled people to be independent and participated on their daily social life. Migrant disabled people who has lower income could not have good access for adequate houses and prefer to live in the rent houses in the informal or marginal settlements without have legal right or recognition by local government. This situation is become worst when the low income disabled people could not be the targets for housing subsidized by the government where they could not reach the standard of minimum income.

## **2. Actors in Shelter Delivery and Organization**

Adequate shelter for all regarding for disabled people can be provided by stakeholders link-worked. This is included the participant of local government, developers, disabled organizations, whole communities, and research institution.

In Surabaya, this link-worked has not been promoted while almost all city area is still not accessible for disabled people. However, there are some good indications for adequate inclusive/non-barrier environment by developers, institutions, and NGOs participations.

Figure

2:



*Disabled Organization in Surabaya. Sources: Link-Research – Postgraduate students of University of Newcastle UK and ITS Surabaya)*

Some public areas, public buildings, recreation area and market buildings have considered and implemented good accessibility for disabled people, such as Taman Bungkul Garden, Al- Akbar Masque, Foot path along Basuki Rahmat district and etc.

Recent pilot study has been raised by link-researched between Department of Architecture ITS, The Global Urban Research Unit (GURU) Newcastle University and local NGO for disabled people in Surabaya which concentrates on the Evaluation of The Kampung Improvement Programme through the lens of disability.

Laboratory for Housing and Human Settlement is one of Department Architecture, ITS's laboratory research institution. This research institution has worked some researches and studies on shelter design and development as well as development and design consultant and training programs, and partnership consultant.

NGO for disabled people which are HWPCI (organization for disabled women in East java) and PPCI (organization for disabled people in Indonesia) have been full participated and pro active advocating the disabled issues especially for human development and improving their lives (Figure 2).

### **3. Shelter Problem**

Regarding to the shelter design and environment, the government has uplifted its quality by some shelter's stimulation programs such as Kampung's Improvement programmes. However, this programs haven not integrated the disability need and issues. Otherwise, most of policies and regulation for disable haven't been maximal participated by disable people itself.

The main problem is lack of recognition of disabled needs in the shelter area, lack of information and policy providing the inclusive environment for disabled people. Living in poverty, less of opportunities (economy, education, social, etc) and participation in the society are the other problems arisen.

The people affected by the problems are the disabled, as the victims and those who have to survive and struggle on this situation; their families who are concerned about both daily life and the future; society because the inclusive environment is not only for particular persons (disabled, children, elderly) but also for all the people and



their society; the government, because poverty is big issue for all developing countries, and most disabled people live under the poverty.

NGOs are the main actors that can stimulate the society and the local government having good recognizing for disabled people need and perception. Most of policy has been established but still have to find future identification, recognizing and exploration on better environment and feasible that possible to access for disabled people. Even small things can make the different for the next opportunities and hope especially good recognizing of disabled needs.

The Local government has an important part of the whole problem because they can make some good step regarding disabled needs.

Disabled people have also big parts of these actors who can be the victim or innovators for surviving and adequate for friendly environment. Spirit, self confident, hard work, positive and etc are the other ways to get involve, take a part and being recognizing in their society.

The problem appears all the time, even if there are no disabled people. Elderly people, pregnant women, and children need a friendly environment and society.

Why does this problem exist? The disabled are a minority and the rest of society if not aware of the problem. Building better can cost more and there are few policies implemented.

The research activities is carried out with some shelter problem statements which are to investigate how to design low-cost housing from disabled user's perspective taking into consideration living in the limitation and poverty condition . Furthermore, it explores the environment and settlement problems issue which can affect the quality of life for disabled people.

## **4. Settlement and Housing Needs for Disabled People in Surabaya.**

The development of Surabaya city cannot be promoted without the inclusion of Kampung (Silas, 1990). It has been well known that Kampung is self-build through the traditional and informal process of 'housing by people' which has more changes to structure and organize their dwelling within different culture and socio-economic

life. Kampung in Surabaya contain a mix of socio-economic with low and middle income households living alongside of each other<sup>13</sup>

At the end of 1960's, Kampung Improvement Program (KIP) had been implemented to provide more positive development physical environment and has improved more than 70 percent the quality of life and settlement condition. First implemented was focused on the reliability of sanitation and physical environment and now it has been developed in new methods with Social Rehabilitation of Slum Area (RSDK) towards the UN's Millennium Development Goals, notably Millennium Development Goal 7, Target 11, which aims *“to significantly improve the lives of at least 100 million slum dwellers by the year 2020.”*

During 1989 until 2005, Kampung Improvement Programs has been implemented in 54 sub district area in Surabaya. There are five key element to the highly integrated programme:

- a. Physical and environmental improvement of Kampung
- b. Community participation and involvement.
- c. Sustainability
- d. Role of Women
- e. Planning and monitoring.

However, Kampung Implemented Programme has not been full integrated the disabled inhabitant where accessibility and inclusive environment are still neglected.

Two district areas (Wonorejo and Tenggilis Mejoyo) are analyzed to make an comparison between Kampung's area with and without KIP's upgrading program for identified the constrains and change providing the accessibility. They are located a part of east Surabaya where some of low income disabled people lived. Wonorejo is informal settlement selected to next generation of the KIP Comprehensive to improve housing and settlement quality on 2002, while in the other hand Tenggilis Mejoyo have not been reached out of the KIP upgrading programs. Field study survey, deep interview with disabled interviewees, and documentations has been approached to get more information for shelter design and low-income housing design from disabled people's perspective.

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<sup>13</sup> World habitat award 1990 - 1994

### a. Wonorejo Kampung

Wonorejo Kampung is a part of Rungkut's district area located in east Surabaya with total area 21.08 kilo metres squares and 5.279 of total population. This

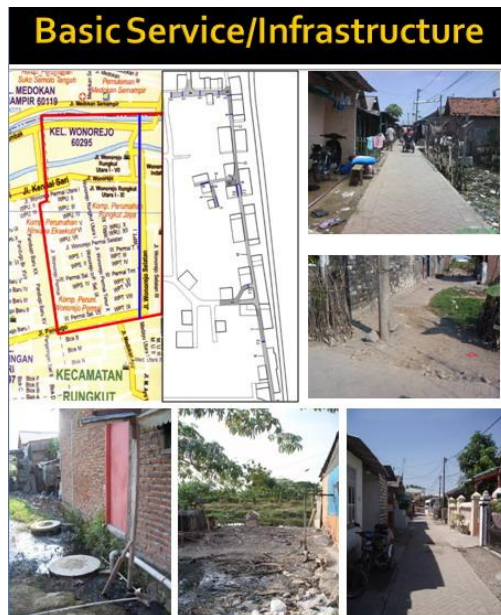


Figure 3: The Basic Map of Wonorejo's Kampung and its basic services/infrastructures condition.

Sources: Author and Link-Research – Postgraduate students of University of Newcastle UK and ITS Surabaya)

kampung is a rural settlement which has informal and formal settlement with some of recent development on its basic structures/infrastructures.

A second generation of C-KIP had been implemented in 1998 and 2005 which was to improve socio-economic standards of the people as well as physical improvements to houses, circulation, and sanitation. There are two different kind of area which set up Wonorejo's Kampung into two kind of infrastructure condition (Figure 3). The west section has been developed very well since it has good roads condition

with adequate drainage as well as good variety public services such as schools, mosque, stores, and free market. Houses are typically 1-3 storeys with a gated private area in front (formal settlement). In recent years more land on east section was cleared for new housing development, providing an opportunity for expansion particularly on the Apur river banks<sup>14</sup>. The majority of the house's conditions on the new development are less in comparison to those houses to the west, with inadequate basic services/infrastructures. Most of the roads are too narrowing, only adequate for pedestrians and motorcycles, etc. This area lacks a planned sewage system and part is without piped water, consequently residents rely on water sellers.

Housing condition in this new area is from semi permanent to permanent building with varying size plots and security of tenure. The marginal settlement development particularly on the Apur river banks has growth very fast without have any legal

<sup>14</sup> Link-Research Project Report of The University of Newcastle & ITS Surabaya

security of tenure. Most of the inhabitants are working as informal workers such in small factories labour, construction labour, or fisherman. In Wonorejo Kampung, there are one concentration settlement area of disabled population living in vary condition (middle-income until low-income family). Most of

middle-income disabled people has their own houses with legal land tenure and the other hand, some of low-income disabled people is living in marginal settlement (Apur River bank) within poverty and lack of legal land tenure. Disabled people who have private house and formalized land tenure, have wider opportunity making house extension or housing quality development rather than who live in the marginal settlement (Figure 6). The marginal settlement inhabitants did not make any housing development because the government would not compensate if there is re settlement area.

**b. Mejojo Kampung.**

Mejojo Kampung is a part of Tenggilis Mejojo District located in east Surabaya with total area 5.52 kilo metres squares and 13.796 of total population. This Kampung is divided into two different kind of area which is for industry area and informal settlement. Become one of important industry area in east

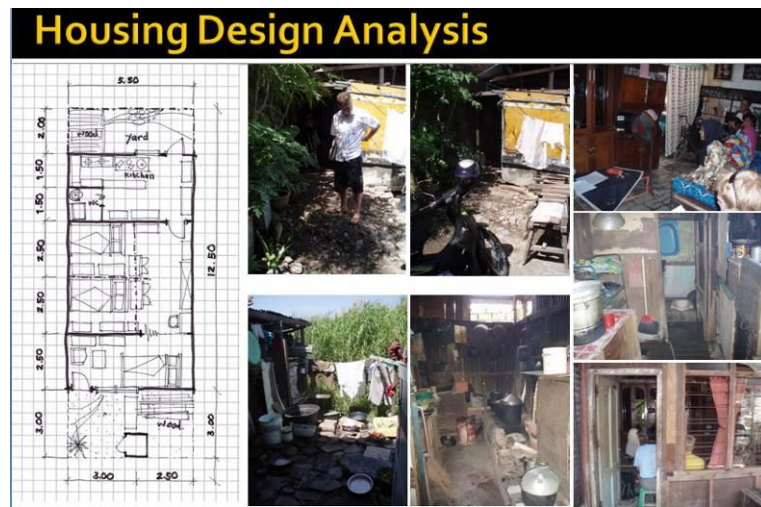


Figure 4: The Basic House Map of Low-Income Disabled People in Wonorejo's Kampung).  
Sources: The Author and Link-Research of Postgraduate students of University of Newcastle UK and ITS Surabaya)

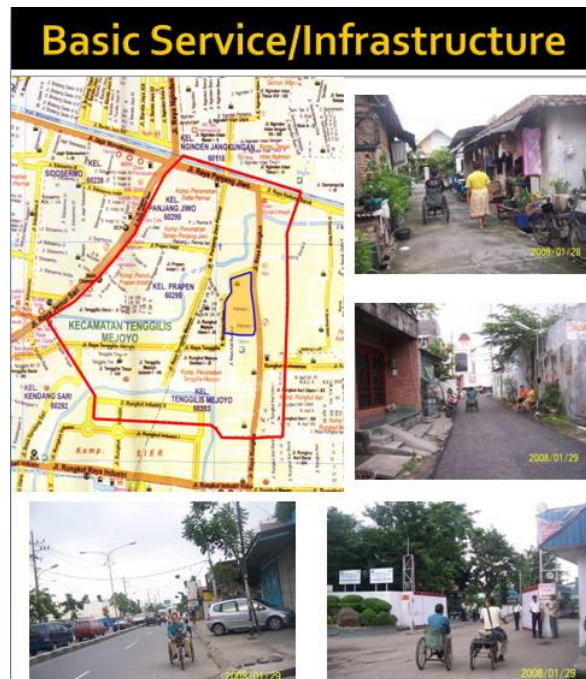
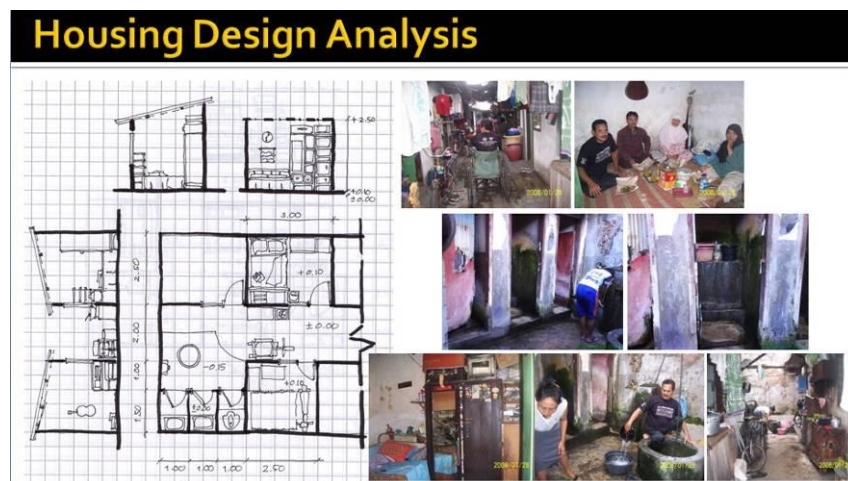


Figure 5 : The Basic Map of Mejojo's Kampung and its basic services/infrastructures condition.  
Sources: Author

Surabaya, Tenggilis Mejoyo Sub District has well settlement arrangement with good basic services and infrastructures although this area is never being undergo by KIP upgrading program . Streets in Mejoyo Kampung has been paved or asphalt, providing good street lighting and semi-enclosing some of the sewers with adequate good sanitation and clean water (Figure 5).

However, becomes one of the populous district area in Surabaya because of the workers immigrant, housing is become a major need where many illegal or immigrant live in rent house or slum settlement (Figure 6). Live closer to the



*Figure 6: Mejoyo Kampung's Map and Basic House Map of Low-income disabled people in informal settlement). Sources: Author*

workplace is the main factor why the immigrants insist to live in this area. Lacks of land tenure security, living in unhealthy housing and settlement, and become an illegal community (non-permanent resident) are the living conditions especially for disabled people who work in some informal and formal industry. Disabled people who live in rent house could not able developing their house condition because they could not access the housing stimulation program from the local government as well as for small credits from the bank.

Within accessible and wider streets, disabled people who use wheelchair do not have any difficulties for making mobility and movement in their environment. However, the semi-enclosing of sewers and the lack of street separation between pedestrian and other street users such as motorcycles and car become a very dangerous and unsafely condition for disabled people.

## 5. Proposal for Change and Improvement

Kampung Improvement Program (KIP) Comprehensive is one of large scale slum upgrading programs that have been implemented in mostly kampung in Surabaya. However, this program is still overlooked by most “normal” people rather than accessible for all especially in infrastructure and public facilities. Previous study had been established for evaluation the KIP upgrading program from disabled lens to find the weakness and opportunity for accessibility. The outcomes of this project found that mostly basic services/infrastructure in the upgrading kampungs have designed and planned without overlooked the technical standardization regulation of accessibility for Public Buildings and Environment. C-KIP also did not specially address the needs of disabled people as well as have not yet accounted of disabled people for participating on the implementation upgrading programs.

Recommendations are needed on proposal of change and improvement especially for new guidelines on the next upgrading implementation program (C-KIP) that addressed and include for the needs not only for disabled people but also for elderly, pregnant women, and children for safety and accessibility for basic services/infrastructures and for housing. Technical assistance also will be provided to help the process of C-KIP upgrading program implementation which consider for accessibility especially for disabled people.

Small changes could make a significant difference to the standard of living for the disabled in the Kampung. Some proposal of change and improvement will be addressed on:

1. New data for the population of disabled people in Kampung of Surabaya. This data will be very important to predict which one the kampongs that have an concentration density of disabled people according to give change and opportunity for disabled people participating on kampung upgrading programs.
2. Lessons and good practice identified, documented and disseminated according for analysing .
3. Increased awareness, knowledge and understanding of problems faced by slum dwellers with disabilities.
4. Census reports and mapping data resources.
5. Capacity building in people with disabilities, their carers and disability NGOs

6. Guidelines on the formulation and implementation of disability sensitive slum upgrading policies and programmes.
7. Disability-sensitive accessible/adaptable resources for local governments and development agencies.

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## **References**

1. Majale, Michael  
(2007) *An Evaluation of the Kampung Improvement Programme (KIP) through a Disability Lens – Draft Project Proposal* – Global Urban Research Unit (GURU) School of Architectural Planning and Landscape Newcastle University. UK
2. Link-Research The University of Newcastle & ITS Surabaya  
(2006) *Pilot Project: An Evaluation of the Kampung Improvement Programme (KIP) through a Disability Lens*. Global Urban Research Unit (GURU) School of Architectural Planning and Landscape Newcastle University. UK
3. [www.handicap-international.org](http://www.handicap-international.org)(Download on Desember 2007)  
*Good Practices for the Economic Inclusion of People with Disabilities in Developing Countries: Funding Mechanism for Self-Employment*.
4. Ikaputra and A. B. Sholihah,  
(2001) “*Mobility for All: Towards Barrier-free Environment in Yogyakarta-Indonesia*”, *IATSS RESEARCH Journal*, Vol. 25, No. 1.
5. World Habitat Award Reports 1990 – 1994. (-)
6. HWPCI  
(2001), *Himpunan Peraturan Perundang-undangan Penyandang Cacat Nasional dan Internasional*. Himpunan Wanita Penyandang Cacat Indonesia (HWPCI) Jakarta.
7. Departemen Sosial RI  
(2004) *Rencana Aksi Nasional Penyandang Cacat 2004-2013 Indonesia*.
8. [www.apcdproject.org](http://www.apcdproject.org). Download on September 2007.
9. Master plan of Surabaya 2003 – 2013
10. Housing Statistics East Java Province (Result of the 2000 population census)
11. [www.wikipedia.com](http://www.wikipedia.com). Download on September 2007.
12. Surabaya in Figure 2005/2006
13. <http://www.datastatistik-indonesia.com/proyeksi/index>. Download on September 2007)
14. [www.world-gazetter.com](http://www.world-gazetter.com). Download on August 2007
15. [www.fao.org](http://www.fao.org). Download on August 2007.