

BUILDING RESEARCH DEPARTMENT

THAILAND INSTITUTE OF SCIENTIFIC AND TECHNOLOGICAL RESEARCH

December 1980

REPORT

ON :

KAMPUNG IMPROVEMENT PROGRAMME

IN INDONESIA

By :

Poonperm Wattanawongkiri

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Report on
KAMPUNG IMPROVEMENT PROGRAMME
IN INDONESIA

(The programme on improvement of the urban
housing stock for the low-income people)

3.3.2 Kampung Improvement

Introduction

Housing projects is an integral part of human settlements like transmigration, resettlements of "traditional" communities, rural housing improvement, "Kampung" (Low-income urban settlements) improvement, low-income housing, site and services rehousing disaster areas.

Housing in Indonesia has gradually obtained higher priority in Government Development Policies. The main programme for the low income groups is Kampung Improvement in the Urban and Rural Housing Improvement in the rural area.

For a short period of 3 month training course at the Directorate of Building Research in Bandung, it was only possible for me to select for study only the main housing programmes. These are Rural Housing and Kampung Improvement. Other Housing projects such as SITES & SERVICE, low-cost Housing, Transmigration project, have also been studied but did not go into details.

In view of the economic structure and condition in the rural areas as well as in the low-income urban settlements Indonesia and Thailand are almost similar. Hence the knowledge gained from this training course can be applied to and implemented in Thailand.

Kampung Improvement Programme (KIP) in Indonesia
(The programme on improvement of the urban housing stock
for the low-income people).

1. Problems of low-income settlement in urban areas.

- Population growth. The first problem is the rapid growth of population. It is presently growing by more than 2.4 million people per year. By the year 2,000 it is estimated that the population will reach at least 200 million with young people in the majority.

- Population Imbalance, Besides a high rate of population growth. Indonesia is also facing the problem of unbalanced and uneven distribution of population. The people have continuously migrated to the cities especially in the islands of Java where 64 percent of the total population of Indonesia lives on 7 percent of the country's land area. In the cities many of them can earn only small amount of money and some are unemployed.

- Thus, the condition of human settlements tend to deteriorate as the insufficient income to acquire the standard houses and environments and as population increases faster than the capacity of providing public services.

- A further result, is the uncontrolled used of land and the scarcity of suitable land for housing and infrastructure development. Land speculation and the ensuring sky rocketing prices of land are still major obstacles for the development of housing and other essential facilities.

2. Background and present situation

- In an efforts to develop a healthier environment for the low-income people who lives in the Kampung. KIP was initiated by the Special Municipal Government of Jakatar in 1969 (Moh. Musni Thamrin Project) and by the municipal Government of Surabaya (Supratman Programme) in 1973. The programme have become a national programme and has gradually been expanded in REPELITA 2 by the Central Government through CIPTA KARYA'S Directorate of Housing.

- The Kampung improvement program has also attracted the interest of international institutions such as the United Nations and the World bank. These institutions generally conclude that the project is an effective measure to improve the quality of environment for the citizen. Substantial support for this programme was obtained from The World Bank loans, providing 50 percent of the costs. Under The world bank's "first urban project" Kampung Improvement has been implemented in Jakarta while feasibility studies have been conducted in Surabaya and LOTABEK. Under the second loan KIP is being implemented now in Jakarta and Surabaya, and feasibility studies are being prepared for another cities.

- Experience with Kampung Improvement so far has also made clear that improvement of some infrastructural elements like water supply or garbage collection can hardly be tackled in a Kampung separate from the city system of such infrastructure. Therefore the need is felt of integrating KIP projects in the local programme for infrastructural systems.

3. Objective of Kampung Improvement Programme.

Since the majority of the low income urban population lives in Kampung. The main objective of the Kampung Improvement Programme is to develop a healthier environment for the Kampung dwellers, there by creating a healthier quality of life in its broader sense. It also means a healthier human satisfaction, and creativity and induce hope and initiative.

Furthermore, it will create a harmonious social life and generate labour force which is not only productive but also ready to work with dedication.

Basically, The realization of the Kampung Environment improvement programme is directed towards the improvement of physical infrastructure. It covers facilities for social welfare and Sanitation accompanied by effective information with a limited measure of capital investment or fund by the administration in the hope that such endeavours can be advanced by the community through its own initiative.

The Kampung which will benefit from this programme are those highly dense populated neighbourhoods and mostly inhabited by the poor, Its success however relies heavily on peoples' own contributions in so far KIP is limited to the improvement of the living conditions of the Kampung with the expectation that the residents will be stimulated to improve their dwellings themselves.

4. Criteria for selection as to which Kampung should receive priority for improvement.

Bearing in mind the limited funds available, the consideration as to which Kampung should receive priority for improvement is necessary, the criteria for selection depends on :

- a. Physical condition; Area, which are considered to be in the worst physical conditions, such as having no drainage, temporary and narrow walkways etc. will be given first priority in ranking.
- b. The density of the population; priority will be given to the high density Kampung.
- c. Maturity and dynamism of the local community for further self improvement.
- d. The age the history of such Kampung.

- e. Eventual effects on the immediate surroundings in particular and on the city in general (Socio-economic, Socio-psychological & planological)

5. Programme of KIP

The Programme of KIP is to upgrade impoverished Kampung by providing basic amenities. This programme includes upgrading and construction of community facilities and services. Roads and footpaths are part of the programme. Drainage canals are an essential element of the programme, since these alleviate the discomforts suffered from flooding during the rainy season. Improvements in water service and toilet-washing facilities is a high priority among Kampung residents. The construction of Public toilet facilities and washing areas is highly valued by Kampung residents since only a few houses have private facilities and the remainder make use of rivers, canals of neighbours' facilities. The toilet-washing facilities consists of a covered toilet space, a space for washing clothes and separate washing spaces for men and women and a septic tank. Social welfare as well as housing also are part of the total programme. The example of the total programme of KIP in Jakarta and Surabaya can be classified.

- KIP Programme in Jakarta :

- Infrastructure :

- a. roads, bridges and footpaths
- b. sewerage and drainage
- c. electricity
- d. other endeavours according to the local needs.

- Facilities towards social welfare :

- a. health centres/clinics
- b. educational and cultural centres
- c. other endeavours according to the local needs

- Sanitation :

- a. public bathroom, lavatory and washing areas.
- b. windmills/water pumps/artesian wells.
- c. refuse dumps
- d. other endeavours according to the local needs.

- Housing .

- a. Information on health conditions
- b. other endeavours according to the local needs.

- The Aim of the KIP programme in Surabaya.

The programme aims towards improving the environment of settlements, which are mostly inhabited by low-income families, by way of improving physical surroundings, specifically by supplying or increasing basic urban infrastructure at suitable and low cost including :

- constructing/ improving access roads and pedestrian walkways
- improving the drainage system
- installing/increasing the network for the supply of drinking water and installing drinking water faucets.
- creating sanitation facilities in the front of RCK buildings (bathing, washing, toilet).
- increasing waste disposal facilities and fastening local waste management organizations.

Through these physical improvements, it is hoped that the following benefits will be achieved :

- improving public health
- decreasing the death rate
- increasing the work capacity, productivity and income of the people.
- improving the social and economic conditions of the settlements to increase per-capita income
- stimulating settlement dwellers into improving the quality of their environment.
- opening up new fields of employment for school dropants.

6. Kampung improvement standard.

According to the Standards for Human Settlements in Indonesia, the levels of service and standards of construction developed for the sites and services and core housing (SSCH) component of the project would also apply to Kampung Improvement Project. If costs were to be recovered directly from the Kampung residents, this would mean that they would repay a similar amount to that paid by SSCH project resident.

KIP projects with a comparable standard of infrastructure to SSCH projects are therefore theoretically affordable by a much lower income group.

In practice, the application of SSCH infrastructure and service standards to the KIP sites is strongly influenced by the existing physical pattern and the standards have modified accordingly.

a. Roads, Paths and Bridges

The improvements to the circulation system have been designed to :

1. Ensure convenient access (generally a maximum of 300 metres) to the road network from any dwelling within the Kampung.
2. Provide for an improved access into the kampung emergency vehicles.
3. Facilitate the development of utilities by allowing drains and main water pipes to be brought within fifty metres of the majority of houses.
4. Facilitate the better collection of solid waste by handcrat.

Table below gives the dimensions and unit/costs of circulation elements to be incorporated into the project. The A, B and C categories are identical to those used in the SSCH project. Categories B1, B2, B3 and C2 are modifications' used only in the KIP project.

ROAD AND FOOTPATH STANDARDS AND COSTS

Type	Description	Right of way (m)	Pavement width (m)	Cost (Rp/lin m)
A	Minor footpath	2.0	1.6	4,100
B	Major footpath	3.0	2.0	5,200
B1	Major footpath	2.0	2.0	5,200
B2	Emergency vehicle path	4.0	2.4	6,300
B3	Pedestrian pavement	existing	3.0 ^a	7,700
C	Minor road	7.0	3.5	9,000
C2	Road resurfacing	existing	5.0	10,000

a Represents 1.5 m width on either side of existing road.

b. Water Supply and Firefighting

In view of the high priority placed on a good water supply by the Kampung residents, the installation of full reticulation which will provide for eventual connection to all dwellings as well as to existing and proposed (public toilet facilities and washing area) MCK's was recommended.

Fire hydrants will be connected to the main water supply network at 200 metre intervals which will place all dwellings within 175 metres of a hydrant. Unit costs are given in the following.

Item	Diameter (mm)	Material	Unit cost ^a (Rp. per lin m.)
Pipe	250	AC	15,000
Pipe	200	AC	10,700
Pipe	150	AC	7,200
Pipe	125	AC	6,200
Pipe	100	PVC	4,600
Pipe	80	PVC	3,100
Pipe	50	PVC	1,900
Hydrant	75	Cast iron	100,000 each

Pipe costs include valves and all other fittings.

From which have mentioned above that the standards of construction develop for the SSCN Project would also apply to KIP projects, hence, to make clear. Site & Service project development standards will be copied from "STANDARDS FOR HUMAN SETTLEMENTS IN INDONESIA" to shown here.

Bandung Urban Development and Sanitation Project (BUDS)

A Site & Service project development standards

In principle an interactive approach to the definition of standards has been adopted, by comparing costs with the capacity of the beneficiaries to make repayments and adjusting the standard until a reasonable fit is achieved. In doing this, however, the view has been that if costs appear to be too high, and the house itself accounts for a substantial proportion of cost, it is better to cut down on this element which can later be developed privately rather than on the standards of the infrastructure which can only properly be developed by the public sector. Therefore, attempt has been made to define infrastructure standards which will not be subject to major changes even if further alterations are necessary at the time of detailed design.

a. Roads and Footpaths

The proposed widths of pavements are the minimum necessary for the defined function, but the right of way (ROW) is sufficient to enable expansion to take place if necessary. The only possible exception to this is the width of minor footpaths, which we recommend to have 1.6 metre pavement, and 20 metres satisfy the functional demand placed on it by pedestrian and cycles only traffic, and could present even fourwheeled vehicular access in case of emergency. In choosing such narrow rights of way, the intention was to ensure that plots designed for the lowest income group able to afford SSCs will not be attractive to income groups with prospect to car ownership. Widening these paths would either reduce the number of plots in the whole area by about 70-100, or would imply a reduction in the size of 60 sq.m. plots by 1.25 sq.m. each, to 58.75 sq.m.

The consultants do not recommend the first of these two possibilities. The reduction of plot size is a distinct possibility, without adversely affecting the feasibility of the project. The trade off between reducing private or public space was in favour of the latter.

Sewerage

A complete piped sewerage system, with connections to all plots has been adopted for the following reasons :

1. The BUDS First Stage Project includes the provision of a piped sewer system for the urban areas. Connections to the system can be provided to SSCH sites. The benefits from the sewer investment can be more fully realised at an early date if the SSCH project is connected to the system.
2. Pit privies, though cheaper in construction, require greater maintenance than the piped service and more land in the development as a whole (minimum plot sizes of 75 m²).
3. The additional cost per plot of the piped service over pit privies is relatively small : between 5 and 12 percent.
4. Unlike other SSCH development costs, such as core housing, a piped sewer service can not be provided on a plot by plot basis by the individual owner, nor is it practical or economic to provide a piped sewer service incremental by staged development.

5. The degree of environmental health improvement achieved by piped sewer service to each lot is a qualitative benefit out of all proportion to the cost involved compared it an equal cost for other improvements.

In view of the importance of this service, and the high cost of maintenance, make it necessary to specify to a high standard the outset.

c. Water Supply

Pipe water was mentioned in the BUDS household survey as one of the highest priority service needs. This serves to reinforce the obvious public health advantages of full reticulation and it was therefore recommend that this be adopted rather than an arragement of shared stanapipes.

Cost for the constant flow system were 76 per cent higher than the demand system, if a steel storage tank were used and 4.5 per cent higher with a brick storage tank. It was therefore concluded that the demand system should be used in the project.

d. Electricity and Street Lighting

The present stage of project development has not included electricity and street lighting, primarily because the costs appear to be out of all proportion to the benefits. For the majority of low income households electricity is a convenience rather than a necessity. It does not contrivute to the standard of public health and it doen not rate among the high priority concerns of those interviewed in the BUDS kampung household survey. The cheapest type oof installation, using overhead cables, can be introduced

later if required without making any advance provision at the initial stage of development.

e. Schools

Four levels of schooling would be included in the SSCH project, namely kindergarten, elementary, junior secondary and senior secondary.

STANDARD OF PROVISION FOR SCHOOLS

School type	Age group	School population	Target attendance rate %	Age group as % of 2001 pop.	Catchment population	Site area m ²
Kindergarten	4-6	(provide one per elementary school)				1,000
Elementary	7-12	480	100	16.3	3,000	1,500
Jun Secondary	13-15	480	80	6.3	9,500	10,000
Sen Secondary	16-18	480	60	5.9	13,600	10,000

a Based on 40 per class, 6 classrooms and 2-shift operation.

f. Health Facilities

Community health facilities at a level lower than that of a hospital comprise a policlinic which offers a full out patient service, a PUSKESMAS or health centre offering medical care, preventive medical facilities and health education, and a sub-puskesmas offering a limited range of the same services, (including family planning and nutrition programmes).

At the lowest level in the hierarchy, first aid centres are normally established privately and coordinated with the Red Cross.

STANDARDS OF PROVISION FOR HEALTH FACILITIES

Facility	Support population	Site area m ²
Puskesmas	30,000	2,000
Sub-puskesmas	10 - 15,000	1,500
First aid centre	2,500	- a

a Assumed to be developed privately on residential plot.

g. Open Space

Open space will be provided in the SSCH project in two broad categories : space for active recreation which will normally be at least 0.5 hectares to accommodate a football field ; and smaller informal space which will have a variety of users ranging from children's play to provision for hawkers and stalls which is not included in the formal calculations of commercial space. For both categories together the standard has been proposed of 2,500 m² per 1,000 population.

In addition to this, the Antapani site includes small areas of open space which are unusable on account of the likelihood of flooding. These areas will be designated as undeveloped open space and will provide for the proper routing of flood control channels.

7. Target of KIP in REPELITA III (1979-1984)

During REPELITA III, KIP became the most important programme on housing in urban area. Its success however relies heavily on peoples own contribution in so far KIP is limited to the improvement of the living conditions of the Kampung with the expectation that the residents will be stimulated to improve their dwellings themselves.

Indonesia Kampung, are transition areas from rural to urban life lodging the bigger part of the urban population. They combine the high density, specific for urbanization, with many rural characteristics. Kampung improvement is aimed at keeping this Indonesian way of life intact, but transforming the Kampung into: low rise high dense, permanent, residential areas with brick houses, a good physical infrastructure and adequate social/economic/service, as much as possible self sufficient, while public green, small scale roads (mainly-footpaths) and open gardens will support the traditional socialibility of its community.

Although the KIP-programme is mainly aimed at monitoring the existing Kampung, the need is felt however of the removal of some Kampung from the middle of the big cities where a more drastic urban renewal is needed in order to provide space for the many functions in those areas, such as shopping centres, offices, traffic, recreation and also housing in an orderly way.

In REPELITA III, the total target an KIP of 150,000 units, will be divided as follows :

10 big cities	: 200 Ha each, total : 1,000 Ha
40 medium cities	: 100 Ha each, total : 4,000 Ha
150 Towns	: 60 Ha each, total : 9,000 Ha

(1 Ha = 10,000 sq. metre)

The mentioned targets in Ha must be seen as an average; it is possible that more or less per target city and town are implemented.

Beside this in some big cities still to be selected, pilot projects on Urban Renewal will be started.

8. Role of the Government.

Housing has gradually obtained higher priority within Governments development policies. In accordance with the Guidelines of State Policy the Governments intervention in housing is bigger according as the income of the group concerned is lower.

Kampung improvement program was initiated by two local initiatives : by the Governor of the city government of Jakarta and by the Municipal Government of Surabaya in 1973. The program has gradually been expanded in REPELITA II by the central Government through CIPTA KARYA'S Directorate of Housing.

As in other countries, also in Indonesia many agencies and institutions are involved in housing. This is inevitable because of the complex nature of housing policy as well as of the diversity of housing efforts by various initiators.

The National KIP programme became in the course of REPELITA II an assistance to the local government in their efforts to improve the living conditions of the low income groups, who lives in the Kampung. From the beginning of the National KIP program, the Government was aware that improvement of the physical infrastructure alone would not be sufficient to raise the total living conditions in the Kampung. The Government therefore welcomed the cooperation in the programme by UNEP and Unicef who started experimental project aimed a more comprehensive approach of Kampung Improvement, including social and economic components and making use of peoples participation in the preparation and implementation of the programme. KIP as it in fact started, is still considered as the ultimate responsibility of the municipal government.

The contribution of CIPTA KARYA and its directorates to the programme consists of the preparation of national policies of KIP inclusion of feasibility studies of KIP in urban development studies "Counterparting" foreign technical

assistance, channelling foreign project aid to the projects, providing subsidies for the project preparation and implementation costs and organizing training courses for KIP management. Steering Committees guide and monitor the local programs.

CIPTA KARYA'S Directorate of Housing will keep the responsibility for the implementation of the program for improvement of the existing housing stock namely Kampung Improvement. Within CIPTA KARYA and its directorates several activities supporting the housing policy of REPSELITA III will be carried out. It is the intention that supporting activities in the field of research, training, training and information will be directed more at the practical needs of the housing programs to be completed. This asks for an adequate coordination between the supporting and the implementing agencies.

The KIP is considered as the ultimate responsibility of the local government in cooperation with the people. After a start has been made, substantially to be supported by the central government, KIP should gradually become a current local programme. The National programme as well as international cooperation can only be complementary to the own efforts of the local community. Therefore it is up to the local government to decide the priority it wants to give to the Kampung improvement programme within the total complex of local policies, as well as the priority to be given per Kampung project within The program. After such decisions have been made a local KIP-unit has to be established, charged with the implementation of the projects and consisting of working participants of all the municipal agencies concerned. It is expected that the local administration in cooperation with the people after a start has been made with kampung improvement, supported by the Central Government, will develop such a project into a current program of the local policy, CIPTA KARYA'S provincial branches will become more and more a sharing partner in the implementation of it.

The Directorate of Building research is the main center of CIPTA KARYA'S research program. The building research of BPIB is meant for all kind of building but especially for housing. The research activities of CIPTA KARYA, although intended to support the other programs, constitute a program of their own. The concrete targets on research in REPLITA III will be derived from the needs of the implementation programs.

A common problem that is inherent in all research is the way to put results of the research into practice. In as far as the Directorate of building Research is concerned this problem is two fold. One is to find a smooth way from laboratory-research via field-research to practical application. The other aspect of the problem is turning research efforts into the needs of the implementation programs of CIPTA KARYA. This demands good and constant coordination. In order to give support to these programs, technical standards, norms, and systems will be developed on behalf of Kampung Improvement. The research on traditional building materials will be oriented to the needs in the kampung Improvement.

9. Local participation

Since the housing policy of REPELITA III aimed at guidance to the people in order to stimulate public responsibility and public participation in the establishment and improvement of their own settlements. The intention of local participation is that as many people as possible are involved in the execution of development programmes by working together with the government services.

Public response will be stimulated for further improvement of urban settlement policies, strategies and programs. Residents of each kampung participate in the planning process through local representative committees and help determine priority improvements to be made within a framework of established

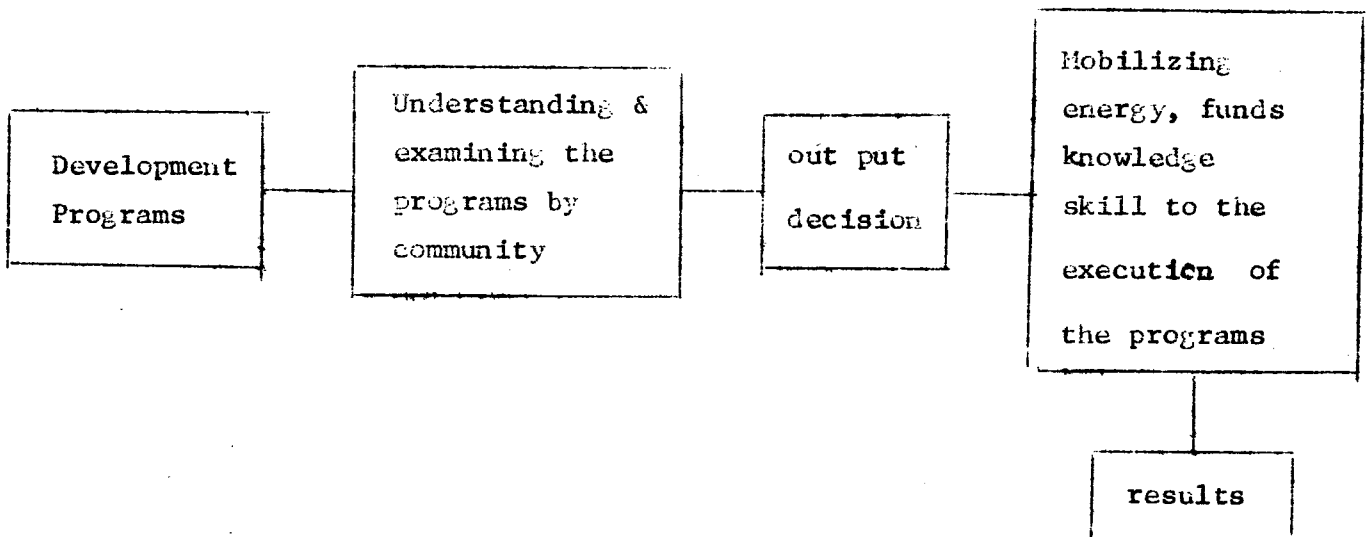
design standards. Hence, the design standards vary from one kampung to another. This reflects the needs of a given residential area and the different levels of infrastructure services in the cities kampungs.

Making the community participating actively is not simple and easy. The willingness to participate requires an understanding of the programs. The community should know what are the objectives, the benefits and the effects of the programmes on their lives. If these are known already, then questions arise are in what parts of the programmes they can participate and how, what do they have to contribute, ideas, energy, skill, or money and other belongings.

In the participation of community members in the implementation of development programs, there are two steps which should be carried out.

Step 1. Communicating the development programs to the community, so that they can express their needs and wishes on housing, and also in order to ask for a reasonable personal contribution of labour, expenditures in the execution of the programs.

Step 2. Mobilizing, organizing and leading the community participation in the implementation of the programs.



10. Financing programs.

The urban Slum improvement program or Kampung improvement program has been executed for several years in various slum areas in the heart of the city of Jakarta. The project in Jakarta has initially financed by local budget allocation. In 1975 financial assistance was obtained from the World Bank under a project entitled "Mohammad Husni Thamrin Kampung Improvement programme". After that in 1975-1976 six other larger cities of Indonesia namely Surabaya, Yogyakarta, Bandung, Semarang, Medan and Ujung Pandang were selected in the national policy of "Kampung improvement programme several international institution such as UNICEF, UNEP and IERD have provided assistance for the planning and financing of the implementation.

During the third five year Development Plan period (1979-1984), Kampung improvement projects will be expanded to cover a total of 15,000 Ha with 3.5 million people in 200 towns. For "KIP" Rp 3,100,000 Per Ha will be made available by CIPTAKARYA as a grant; Rp 2,800,000 as a subsidy in the implementation costs, Rp 300,000 on behalf of the project preparation and supervision, training, monitoring etc. Additional funds have to be found from local and provincial budgets as well as from foreign aid.

The maximum allocation for "KIP are.

for the 10 big cities	Rp 560 m/n per city (200 Ha)
for the 40 medium sized cities	Rp 280 m/n per city (100 Ha)
for the 150 towns	Rp 168 m/a pertown (60 Ha)

REFERENCES

1. "REPELITA 3" (THE THIRD FIVE YEAR : NATIONAL DEVELOPMENT PLAN :
1979-1984)
By : CIPTA KARYA (MINISTRY OF PUBLIC WORK ; INDONESIA)
2. DIARY INDONESIA
By : DIRECTORATE OF BUILDING RESEARCH INDONESIA
3. LAND TENURE AND TITLE REGISTRATION
4. DEVELOPMENT OF LOCALLY PRODUCED BUILDING MATERIALS IN DEVELOPING
COUNTRIES
By : ALBERT KARTAHARDJA
5. LOCAL PARTICIPATION
6. THE MANAGEMENT OF THE KAMPUNG IMPROVEMENT PROGRAMME IN SURABAYA
By : THE CHAIRMAN OF THE STEERING COMMITTEE FOR THE KAMPUNG
IMPROVEMENT PROGRAM IN SURABAYA
7. K.I.P. - U.N.E.P. PROJECT - THE SURABAYA EXPERIENCE
By : SOEKARDJO
8. OVERALL PROJECT IMPACTS AND ASSESSMENT OF THE IMPLEMENTATION OF THE
KIP - UNEP IN INDONESIA
By : W.M.F. HOFSTEEDE
9. HOUSING IMPROVEMENT & COMMUNITY SPACE DEVELOPMENT
By : JOHAN SILAS
10. ROLE OF UNEP PROJECT INDONESIA IN THE NATIONAL POLICIES AND
PROGRAMMES FOR KAMPUNG IMPROVEMENT
By : R.E. SOERIAATMADJA
11. THE UNEP PROJECT IN SURABAYA COMMUNITY PARTICIPATION IN THE PLANNING
AND EXECUTION OF KIP-UNEP SURABAYA
By : SOEHARYONO KADARMANTO

12. UNEP KAMPUNG IMPROVEMENT PROJECT
By : THE STEERING COMMITTEE
13. EXPERIENCE IN KIP UNEP BANDUNG
By : SUTIKNI UTORO
14. HUMAN SETTLEMENTS
By : COMMITTEE ON ENVIRONMENT, REPUBLIC OF INDONESIA
15. JAKARTA RESETTLEMENT PROGRAM
By. : IMAN SUNARIO
16. STANDARDS FOR HUMAN SETTLEMENTS IN INDONESIA
By : AGAN HARIMAN
17. WORKSHOP ON AN INTEGRATED APPROACH FOR IMPROVEMENT OF SLUMS AND
MARGINAL SETTLEMENTS (FINAL REPORT)
By : DIRECTORATE OF BUILDING RESEARCH INDONESIA
18. ANNUAL REPORT 1979
By : DIRECTORATE OF BUILDING RESEARCH INDONESIA

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