

PROJECT SUMMARY

KAMPUNG IMPROVEMENT PROGRAMME

Government-assisted self-help community planning, includes the provision and improvement of basic physical and social infrastructure.

ongoing: (Kota Bambu 1974-1976)

I. AIMS

- A. To improve the living environment (physical conditions) and quality of life (socio-economic conditions) of Jakarta's poorer residents.
- B. To expand the productive capacity of the residents so that they may be more effective in increasing their incomes and participating in their country's development.
- C. To benefit as many of the poorer people as possible in the shortest period of time, given the limited resources.
- D. To minimize disruption of their social and economic lives.
- E. To mobilize the residents' potential for self-help and community cooperation.
- F. The above aims to be achieved to the extent possible, through the provision and upgrading of the residents' basic physical and social infrastructure. (No single statement of aims has been held constant over the decade of the KIP's implementation. The above statement is a synthesis of a number of statements drawn from written material as well as recorded interviews, including statements by Mr. Darundono, the KIP Chief.)

II. DESCRIPTION

- A. In 1969, approximately 60% (or 7200 ha.) of Jakarta's urban area, containing 75% (3 million) of its total population, lived in areas with virtually no physical nor social services. These areas, called kampungs, were scattered across the city as pockets of low-income settlements. Many were adjacent to higher income residential areas, and commercial and harbor areas. As of 1975, the kampungs had an average density of 500 persons/ha., and an average monthly household income of US\$50. Kota Bambu, the case study example, had an

equivalent density of 482 persons/ha. and (as an inner city, post-1950 kampung) probably had a lower monthly household income of US\$27 (see Tables 1 and 2 and Figures 1 to 4 to relate Kota Bambu to citywide kampungs).

- B. The KIP program was initiated in 1969, primarily to alleviate the low physical living conditions of the kampungs. The program is still underway. Kota Bambu, itself, was upgraded during 1974-76.
- C. The KIP's components can be divided into the following:
 - 1. Access roads, bridges and footpaths;
 - 2. Water supply and sanitation, public taps, drainage canals, and solid and human waster disposal facilities;
 - 3. Social buildings, schools and health clinics. These components are the same as those of Kota Bambu (see Table 3 for average KIP components and standards relative to those implemented in Kota Bambu).

III. DESIGN AND FUNDING

- A. The design of the KIP was largely influenced by the need for an inexpensive method of rapidly providing basic infrastructure, using a minimum of technical and administrative resources. Jakarta, with a GDP per capita of US\$160 (1971) was one of the poorest cities of the world. The 1,200 ha. of unserved kampungs were growing at a rate of 100-150 ha./year through both migration and natural population increase. The premise was that KIP was the only way to improve a maximum area of residential environment given the constraints, and that improved public infrastructure would spur residents to improve their own homes. The alternative was to sink the relatively limited resources into a few low-cost housing construction schemes, benefiting very few of those in need. The KIP, thus, had to be easy and cheap to implement. This meant cheap standardized components and a simple implementation procedure (see drawings 1-15 for component designs). The designs were produced by the Planning Section of the KIP unit and are used for all kampungs. A few modifications have been made in designs and in standards over the past ten years. The changes have chiefly stressed footpaths and social facilities in place of roads, and design standards that allow more flexibility in response to individual kampung conditions (see Tables 4,5, & 6).
- B. The building materials used include bamboo, timber, brick, clay tiles, concrete, metal and plastic pipes. The materials are all locally produced and construction is on-site.
- C. The design and implementation of the KIP primarily involves

three parties:

1. The city government (DKI), in particular, the KIP Technical Unit;
 2. The Kampung community through the sub-district head Lurah (responsible for approximately 4000 households), the RWs (responsible for approximately 400 households) and RTs (responsible for approximately 40 households). These people form the Kampung Committee (LKPMKD), the functions of which include establishing priorities for improvement, reflecting residents' views, responding to the KIP Unit's proposals and instructing residents in maintenance and use of facilities;
 3. Local contractors who compete in open tenders to construct the project.
- D. Kampung located in areas considered dangerous or designated for other uses in the Master Plan, e.g., those under high voltage cables, along canal banks, in green areas and those belonging to private developers, are not upgraded. The kampungs to be upgraded in any given year are chosen according to the following criteria:
1. The age of the Kampung;
 2. Highest density;
 3. Lowest income;
 4. Worst environmental conditions.

The selected kampungs are, as far as possible, evenly distributed among the five municipalities that comprise Jakarta. However, kampungs are sometimes selected in response to political pressure.

Upgrading a particular kampung takes approximately two years. The procedure is as follows. The KIP Technical Unit selects a number of kampungs to be improved based on the above criteria. These have to be approved by a Steering Committee consisting of Deputy Governors, Mayors and Directorate Heads. A plan of the selected kampung is prepared which identifies the type and location of the proposed components such as roads and health centers. This is modified in the course of discussions between the KIP Unit and the Lurah who is supposed to represent the KIP community. The agreed-upon plan is then transformed into engineering drawings and tender documents and contracted out to local contractors. All planning and design work up to the tender documents stage, is the responsibility of the KIP Planning Division, See Tables 7 and 8 for Jakarta's administrative structure and the KIP structure.

IV. CONSTRUCTION AND COSTS

All construction is undertaken by local contractors. The Lurah is appointed as the site manager to insure the cooperation of the kampung community and the smooth implementation of the program. A member of the KIP staff serves as his technical assistant.

The first phase of the KIP (1969-1974) was entirely funded by the city government of Jakarta (DKI) and cost US\$15.6 million, or \$13 per capita. In Phase II (1974-76) and Phase III (1976-79), the DKI acquired a World Bank loan to cover approximately 50% of its KIP budget. Funds budgeted for the two phases were \$35.8 million and \$89.5 million, respectively (Table 9).

Between Phases I and II, the rate of construction doubled from 500 ha./ year to almost 1000 ha./year. To date, this pace of upgrading has been kept up. The actual costs in Phase II were equivalent to the amount budgeted but in Phase III, these were less than the budgeted amount (i.e., \$7.2 million or \$60/capita, compare Tables 9 and 10). Although amounts allocated for roads were reduced from 1974 onwards, in favor of footpaths and water supply, roads continued to absorb a disproportionately large portion of the total costs. This was also true for Kota Bambu (see Table 11).

Maintenance and Use

After construction, the responsibility of the operation and maintenance of the KIP components are passed onto the Kampung Committee (LKPMKD) and the relevant ministries. The maintenance of vehicular roads, schools, clinics and garbage disposal are the responsibility of the public works, education, health and sanitation ministries, respectively. The health and education ministries allocate an annual maintenance budget for each clinic and school (equal to \$25, according to the Headmaster of the Kota Bambu School). Cleaning, maintenance and repair of footpaths, drainage ditches, MCKs and garbage collection are the responsibility of the LKPMKD, who are supposed to organize a maintenance squad from among community members. The squad is paid out of voluntary community funds. Individual households are responsible for footpaths and drains directly in front of their houses.

V. PROJECT IMPACT

A. Rate and Extent of Upgrading

The most significant impact of KIP has been its success in upgrading large areas of residential communities in a relatively short period of time and with limited resources. By 1979, its 200-man technical staff could upgrade 1000 ha. or 60,000 plots per year, benefiting 450,000 persons at a cost of \$24,000/ha. or \$60/capita (at predevaluation prices). Furthermore, within the decade, KIP not only upgraded the backlog of unserved kampungs

but will soon keep pace with the current growth in new kampungs (Table 10). Jakarta was the first, and still is, the only LDC city to have achieved this rate and extent of residential upgrading.

B. Access and Drainage

Paved access and drainage is of critical importance in the kampungs since these are subject to heavy rains and flooding. The beneficial impact of these components is apparent when conditions in improved and unimproved kampungs are compared or even those in the improved and unimproved areas within the same kampung (see Figures 5&6).

Nevertheless, flooding continues to occur, albeit reduced, in several improved kampungs (Table 12). The problem is particularly acute where the ground level is below the canal and cannot be drained through gravity. For example, according to the Headmaster, the Kota Bambu School flooded in 1978.

The policy of threading infrastructure along existing rights of way seems to have been generally well executed. Relatively few homes have had to be entirely demolished (1 to 3% 1978 World Bank data), although larger numbers lose part of their houses (in Kota Bambu see Drawing 17). This policy is particularly remarkable given that it was initiated in 1969 when the rule, for many urban renewal projects in other countries (even today), was to lay down wide grid pattern roads with little regard to their destructive effects on existing housing. Furthermore, the narrower, winding paths often aid to achieve a socially and visually attractive environment (Figure 7).

C. Sanitation

Although the fundamental importance of adequate access, paving and drainage may justify the larger proportion of total expenditures these components absorb, the amount spent on roads alone is less justifiable (58% in citywide KIP; 41% in Kota Bambu, see Table 11). Amongst other adverse effects, this has meant that, first, the relatively fewer, higher income households along the major rights of way have benefited particularly from land value increases, to the neglect of the inner kampung poorer households. Second, components such as water supply and sanitary facilities have not been adequately funded. In 1974-76, only one standpipe for every 4 ha. was provided. For an equivalent amount of water, the majority of the residents had to pay water vendors about 5 times more per month compared to those with connections to the city's water mains. Kota Bambu had less than 2 taps for every 4 ha., from which the vendors did a brisk trade. Apart from the vendors, many houses have privately constructed individual wells with hand pumps as a source of water supply (see Figure 8).

Although some areas are kept relatively clean, presumably by residents, uncollected refuse and children defecating in the side drains is not an uncommon site. Densely inhabited areas with narrower access seem to be cleaner. Refuse tends to be dumped in open areas where no individual household is directly affected (Figures 9 & 10). Given that many of the residents' earnings are barely for their immediate needs, it may be unrealistic to expect that garbage collection and maintenance of facilities will be done through voluntary labor and funds. In such a case, the low expenditures and standards for garbage disposal and MCKs (1% and .4%, respectively of the total expenditures in Kota Bambu and reflective of the general KIP expenditure pattern for these components, see Table 11) may be the main reason for unsanitary conditions rather than inadequacies of community organization or physical design.

D. Public Wash and Toilet Facilities (MCKs)

(Refer to KIP drawings sent earlier)

There are two MCK design types. One has no roof, and can thus be overlooked by surrounding two-storey houses. It also has an undifferentiated bath area such that only two persons can bathe in it at a time. Two of this MCK type were visited. In both cases, the facilities were being used, in particular, the bathing and washing areas (see Figures 11, 12 & 13). In one, the local kampung committee had hired a man to collect an entrance fee of RP 25 (\$0.04). According to the World Bank Studies, the MCKs are not fully utilized and therefore, KIP is shifting to individual pit privies. However, their studies also indicate that if there were more MCKs (the 1974-76 standard was for a toilet with 12 seats per 11 ha., i.e., for approximately 400 families) and a vigorous health education program, the roofed design would be more effectively used.

E. Health Clinics and Schools

Twenty-five health clinics were built in 77 kampungs between 1974-76. In the same period, 54 schools were constructed. The schools and clinics have pitched roofs of clay tiles supported by timber trusses which, in the case of the schools, extend to a verandah supported by timber beams. Walls are of brick and windows have timber frames. Two-storey schools have concrete frames and asbestos roofs. They are constructed when the site available is restricted. In Kota Bambu, the 2 schools are single-storey and are grouped, along with the clinic, in one complex but with separate entrances. The location of these buildings as with the MCKs, is dependent on the availability of unoccupied land since funds for compensating expropriation is very limited (Drawings 18,19 & 20).

The schools are designed on a modular system which allows them to be clustered or constructed in a straight line in

response to particular site conditions (Drawing 17). In Kota Bambu, these were clustered with the health clinic acting to close off the school play yard. Both buildings were in need of basic maintenance, such as painting and minor repairs. The clinic design did not allow for through ventilation in the way that the school's did. The school had higher ceilings with top vents for the roof space and the classrooms, which improved cooling effect. However, both the school and the clinic used top hung windows, which (though perhaps cheaper were not as conducive to air circulation as the louvered windows favored by home-owners (Figures 14 to 18)). A preference for the latter was also expressed by the Headmaster. In both schools, the classroom was being used as a staff room, rather than the two rooms designated for the Headmaster and the administration. Apparently, the staff preferred to work in one space, although in one school cupboards had been set up as partitions. As in the case with the MCKs, the main problem was not with the design per se but the lack of facilities (in schools and clinics, this caused overcrowding) and budget for adequate maintenance.

F. Home Upgrading

KIP has no direct housing assistance component. Nevertheless, KIP does seem to stimulate individuals to upgrade their own homes. A visit to Kota Bambu and the unimproved kampungs visited certainly gave the impression, also supported by before and after photographs (please refer to earlier photos sent by Dono). Kota Bambu itself appears to be in a state of constant home construction, repair and improvement, with homes at every stage of construction (Figures 10, 20 & 21). More representative surveys support this impression. Twenty-three percent of owners in improved kampungs had upgraded their homes as opposed to 18% in unimproved kampungs (Surhakti, 1977 cited in Pallman). The survey does not indicate the degree of improvement, which was likely to be greater in the former case. Another survey showed that the majority of the KIP house owners planned to spend between \$72 and \$144 on improvements (PCD, 1973).

The reasons for KIP being a stimulus to housing are basically three:

1. It provided the basic paved access and drainage on which home improvements became more attractive to owners;
2. KIP's implementation in a kampung gave de facto tenureship to the occupants, particularly since the layout respected existing plot lines;
3. The prospect of increased property values further induced home improvements.

All the house occupants interviewed by this writer had made home improvements and the majority had made these improvements in response to KIP (see Annex I). Home improvements were particularly striking along road fronts. The few houses that had not been upgraded or reconstructed served to highlight the change (see Figure 22). The use of louvered windows, concrete grills and high vents reflected a sensitivity to local climatic needs sometimes not expressed in government buildings. Local bamboo continued to be used to good effect in garden walls (Figure 23). Local creativity extended to facade walls decorated with large murals of hunting scenes, etc., done in plaster (Figure 24).

KIP also stimulated improvements on local mosques commonly found in the kampungs. Kota Bambu had several examples (Figures 25 & 26). Since extensions to the mosque required displacement of some houses, these were relocated in a way that the mosque and the houses would form one complex (Drawing 21 & Annex 1).

It would be difficult to imagine such a degree of improvement occurring in an area in which the KIP had not been implemented, i.e., where muddy streets, no drainage, regular flooding, and the constant threat of eviction by the government persisted.

G. Employment

The employment effects of KIP, particularly in construction, issue from:

1. Direct KIP implementation; and
2. Home improvements.

Several hundred small-to-medium-scale local contractors have been involved in local KIP construction. KIP construction has also improved their relative performance as manifested in the upgrading of 20 such contractors in two years and bidding becoming more competitive, leading to costs below original estimates.

On the other hand, since 1973, single contractors are awarded over large areas to improve coordination and efficiency. This practice tends to cut out the smaller contractor. DKI officials informed this writer that to be on the list of the 300 approved contractors (who bid regularly for KIP), the contractors have to have an amount of capital which effectively precludes those who actually live in the kampungs.

However, small contractors and daily wage builders are used extensively by home owners. In one survey, 60% of the owners stated that they used builders. In this writer's interviews, all had hired builders to upgrade their homes.

H. Community Participation

Interviews with Kota Bambu residents indicated that very little community participation occurs, although the intent and channels for it may be present. Other studies (e.g. Perlman, 1978) conclude the same. Among others, speed and economy in implementation is perhaps the most important reason for minimal participation. The KIP is probably unique in that upper-income families have, apparently, not displaced the lower-income residents in the improved areas. The KIP's rapid implementation, insuring that all areas will be upgraded in a relatively short period, leaves little incentive for movement across kampungs (Williams, 1978). In effect, community participation has been sacrificed to the aim of benefiting as many as possible in the shortest period, at a low cost and with the minimum of disruption.

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