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Housing Improvement in a Marginal Settlement: The Case of the UNEP/NHA Barrio Escopa Project

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Site and dwelling improvements were undertaken in 1978-1979 as part of a multi-component, "integrated," and innovative effort at slum rehabilitation in Quezon City, the Philippines. The housing and environmental systems (HES) activities included the reblocking and upgrading of sections of the existing community and the construction of shell houses for relocatees at a New Site nearby. The subproject was able to improve housing conditions for the residents involved, afforded active local participation, and generated some employment and income in the process. But like the larger project, HES did so only after much difficulty and delay due to the innovations attempted and to intervening external events.

Introduction

This case study describes and evaluates the housing, reblocking, and relocation activities undertaken in 1978 and 1979 in Barrio (Bo.) Escopa, Quezon City, as part of the Marginal Settlements Improvement Project (MASIP) of the United Nations Environment Programme (UNEP) and the National Housing Authority (NHA). MASIP was itself part of a two-country effort — the other site was Indonesia — to demonstrate the feasibility of an "integrated approach" to the improvement of urban slums. The project was carried out with the technical cooperation of the United Nations Centre for Human Settlements (HABITAT) and with counterpart funds from the UNEP and from the governments of Indonesia and the Philippines.

This article is divided into three main parts. Here we briefly describe

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the background and setting of the housing subproject, and identify some of the relevant issues involved. The next part is devoted to a narration of the planning, implementation, and accomplishments of the subproject. The third part attempts to evaluate the known costs and benefits of the housing, reblocking, and relocation activities.

The Larger Project: MASIP

In the Philippines, MASIP was organized as a special project of the National Housing Authority (NHA).

In the planning and implementation of the project, MASIP sought the advice and assistance of consultants from a local university and government agencies, as well as the cooperation of the planning and development office of Quezon City which had its own improvement plans for the project site.

MASIP was a multi-component effort consisting of several "techno-physical" and socioeconomic components. Each component was headed by a consultant contracted by MASIP on an institutional or individual basis. The principal components were as follows:

(1) Housing and Environmental Systems (HES), the component with which this case study is primarily concerned

(2) Alternative Energy Resources (AER)

(3) Waste Management System (WMS)

(4) Enterprise Development and Employment Generation (EDEG)

(5) Nutrition, Food Production and Food-Processing (NFPP)

(6) Credit and Finance (CF)

In addition, MASIP included two short-term components, namely: (1) a survey of site conditions and services relating to health, environmental sanitation, nutrition, and family planning; and (2) a "community improvement organization" effort focused on recreation activities and facilities. The College of Public Administration, University of the Philippines, was directly contracted by the UN to serve as overall monitor and evaluator of the project and was considered another component. From the city government, the main link was with the Quezon City Planning and Development Office (QCPDO).

The Project Site: Barrio Escopa

Originally intended for the Tondo slums in Manila, MASIP was moved to the much smaller and comparatively newer Bo. Escopa in Quezon City just before the actual start of the project in January 1978. As a community, "Old Escopa" (an adjacent site was subsequently added for purposes of the project) occupied 6 hectares of a 9-hectare parcel of land belonging to the Ministry of Social Services and Development (MSSD), which had developed and built vocational rehabilitation facilities for the blind on a smaller section between the old and new project sites. Bo. Escopa had been formed near an old government housing area (Project 4) by landless migrants from the core city of Manila

and from other places. In 1975, it had a total population of 1,246 families, a quarter of whom had moved in shortly after World War II, according to a "census-survey" conducted by a task force and QCPDO.

Like most Philippine slums, Bo. Escopa was physically overcrowded, had poor housing, and lacked such basic facilities as surface drainage, piped water, and regular electrical connections. None of the inhabitants owned the land they were living on; 40 percent of the families were house-renters or non-owners, and their houses were built in such a manner that made alleys almost impassable for the unaccustomed outsider. According to the QCPDO survey, half of the dwellings were one-room structures and 70 percent had floor areas of less than 30 square meters — these, for families with 6 to 8 members on the average. Nearly a third of the dwellings (30 percent) had severely deteriorated. The monthly income of the average family was ₱402 — as against ₱563 for Quezon City as a whole. About 40 percent of the working-age population were unemployed, and 70 percent of the pre-school children were suffering from second- or first-degree malnutrition.

Because of its problems, Bo. Escopa had been identified as a project area under the metropolitan "Zonal Improvement Program" (ZIP) and the Quezon City government had proposed an "Urban Development Project" of basic improvements (including the acquisition of an adjacent 4.45-hectares property) to be funded by a loan of ₱9.65 million from the NHA. MASIP was designed to build on and augment the basic improvements planned by the existing authority. However, MASIP also had distinct objectives of its own.

Case Study Objectives and Issues

The primary goal of this report is to recount the experience of the HES component and shed light on the issues, problems, and "lessons" encountered in or learned from the efforts to improve housing and site conditions, "reblock" selected segments of the existing community, and relocate displaced families to the New Site. A related goal is to evaluate the costs and benefits, as well as the progress and effects of the project, and thereby illustrate appropriate methods of cost-benefit analysis in a context such as MASIP's. This section will be followed by a narrative account of the conception, planning, implementation, and reception of the HES and related activities. Another section will then assess the progress, accomplishments, costs and benefits, and useful "lessons" of the HES experience.

This report is not an exhaustive presentation in any of the above respects. It is made modest by the fact that some MASIP activities are still to be completed[1] and by the limitation imposed on the "state of the art" of research and analysis by a complex and dynamic context. Nonetheless, it would be useful to provide a preview of some of the more relevant issues in this case.

A basic isssue is the "integrated approach" that MASIP sought to demonstrate and test. This approach is based on the premise that the problems and conditions of a marginal ur-

[1] Or were yet to be completed at the time this report was written (January 1980).

ban settlement are manifold and intertwined, and should be attacked in a comprehensive and coordinated manner if substantial and sustained improvement — more than what can be gained from incremental or uncoordinated measures — is to be achieved. "Integration" of the substantive elements of the project, close linkages among the consultants, and cooperation with the local community and authority thus formed a key principle of MASIP.

A dilemma suggested by its experience, however, is that while external and internal factors could impede integration, a multi-component effort telescoped in time (two years) and space (Bo. Escopa's small physical and population size) could sometimes amount to "too much integration." Although HES was only one of MASIP's components, it captures a great deal of the difficulties (and promise) of the approach, as HES had to relate closely to other consultants, to the QCPDO, and to the Bo. Escopa residents in order to carry out its tasks or to help others in accomplishing theirs.

A related element in MASIP's approach which HES dramatized is community participation. Popular participation is generally assumed to be valuable for eliciting local information, objectives, and support for a public project, but making participation at once meaningful, "maximum," and "feasible" for expediting a project is, if possible at all, a painstaking process. In the Tondo project, planners present three (nowadays only two) design options for neighborhood residents to choose from. In Bo. Escopa, HES and QCPDO planners adopted a more open-ended participatory strategy that made the alteration or modification of site designs for reblocking a protracted process. This experience thus raises the question whether and how participation could be better structured to facilitate planning and implementation while securing genuine popular support.

A more substantive policy issue is land tenure, a question which pervades slum improvement efforts in the Philippines and other countries. Should "squatters" be given tenure, considering, on one hand, the attractions this offers to further urban inmigration, and, on the other, the crucial incentive offered by tenure for self-improvement (a thesis that seems to be borne out in this case)? But in what form and how soon should tenure be granted? What criteria of eligibility, standards of lot size and site design, and rules of cost and compensation are to be applied? The case suggests that these old questions have not been entirely neglected, but that the relevant policies and plans that could deal with them in specific situations have been poorly articulated and require clearer resolution.

Moreover, the ambiguities and uncertainties that might surround existing policies and plans are compounded by the peculiar and abnormal conditions that often obtain in marginal settlements like Bo. Escopa. For example, the irregular shapes and sizes of existing dwellings and lots, the absence of property lines apart from those that may be marked out by actual occupation, and sheer density in such settlements would defy the basic rules of physical order applicable to more affluent subdivisions. A difficult challenge under such condi-

tions, therefore, is the need to re-examine and adapt (some say abandon!) the "silver bullets" of urban designers and administrators — that is, regulatory standards — while imposing and maintaining a modicum of order, safety, health, and efficiency in marginal settlements.

Another challenge has to do with the values and methods of evaluation that should be observed in an integrated effort in a small but nonetheless complex community. Like MASIP as a whole, HES seems to have been a useful and encouraging enterprise in certain respects, and a survey conducted in November 1979 shows that residents generally approve of the project results thus far. But much remains to be done, and the effects of the project have not crystallized. This makes impact evaluation and cost-benefit analysis difficult. Evaluators are forced to engage in an indefinite "waiting game" for project results. At any rate, integrated projects present a number of technical as well as practical difficulties. Aside from the tasks of documenting and measuring the size and incidence of costs and benefits over time and space, there are the complications of determining the value added by integration, i.e., the value of the joint or "synergistic" effects of various interacting actors, activities, and outputs.

This case study therefore will not attempt to improve on the "state of the art" in a technical manner. Rather, it will try to illustrate the prior conceptual task in formulating an analytical framework suitable to a context such as Bo. Escopa. These tasks include the definition of appropriate indicators and categories of the more salient costs and benefits of housing improvement, reblocking, and relocation and also of the coordination entailed. Where possible, it will quantify and estimate the values involved; otherwise, qualitative analysis will be made of the important outputs and effects. As earlier mentioned, the framework will leave room for interpretation of results and, for that matter, identification of issues not mentioned in the preceding paragraphs.

Description and Narrative

Along with the rest of MASIP, the HES component was originally conceived in 1975. Component proposals were subsequently worked out with Tondo as the intended site. Following a UN workshop in September 1977, however, a decision was reached to transfer MASIP to Bo. Escopa. After the *Project Document* was revised and links with Quezon City established, MASIP was formally introduced to Bo. Escopa in April 1978. However, other changes or refinements were made in the project design in the middle of 1978. Certain events intervened and delayed the progress of work, and results began to materialize only late that year and in 1979.

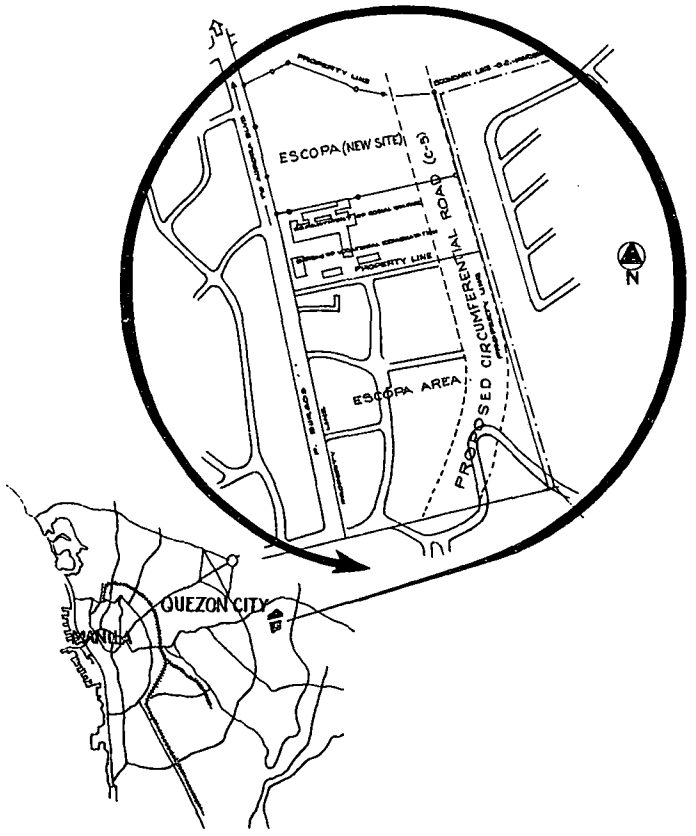
Problems and Plans: Housing and Environmental Systems (HES)

MASIP faced a number of formidable challenges in Bo. Escopa. It was apparently a pocket of poverty, one of 26 identified by ZIP in sprawling Quezon City, a planned postwar capital city devoted to government housing projects, office buildings, commerce, and the main campus of the state universtiy. Along with insecurity of land tenure, Bo. Escopa

counted among its problems poor housing and environment, lack of utilities and community facilities, low family income, and malnutrition among children. A major official concern was overcrowding in Old Escopa and the displacement threatened by a plan to build a segment of a national road (Circumferential Road 5 or "C-5") along the edge of the community. (See Figure 1.)

Quezon City had earlier proposed an "Urban Development Project" to be funded by an NHA loan of ₱9.65 million. This was a broad program of physical and socioeconomic improvements, including improvements on roads, drainage, water supply, and housing. Aside from freezing inmigration on the basis of its census-survey in 1975, Quezon City provided in its project and loan proposal for the acquisition and development of an adjacent vacant property and for the construction of core houses for relocation purposes. Here MASIP also proposed to build a limited number of new dwellings for demonstration purposes, and in 1979, a section of the New Site was also reserved for apartments to be built under the new Bagong Lipunan Sites and Services program (BLISS) of the Ministry of Human Settlements.

Figure 1. Map of Barrio Escopa



1981

MASIP in effect sought to build on Quezon City's development plans, but it also dealt directly with some of Bo. Escopa's outstanding problems. For its part, HES had several objectives and subcomponents. It was intended primarily to demonstrate cost-reducing and innovative methods of housing and site design and development, and in the process improve the living and environmental conditions of Bo. Escopa's residents, increase their income and provide job opportunities. HES was to review and experiment with low-cost building materials and methods in dwelling construction and site development, following a "high-density cluster" design principle.

One major HES target was to build 30 to 50 dwellings on the New Site for demonstration and relocation purposes. Although HES had responsibility for housing and site improvements in Old Escopa as well, it was specified only in mid-1978 that the repair or reconstruction of existing dwellings and the "reblocking" of designated segments of Old Escopa be included. Three adjoining Blocks — tagged 1-A, 1-B, and 1-G — in one of the four barangays[2] of Bo. Escopa were identified for these purposes. Block 1-A was to be the initial target, then the other two blocks were to follow. It was expected that the remaining blocks would also follow in successive cycles of upgrading during the project period, but HES was given resources only for the first three blocks. (See Figure 2.)

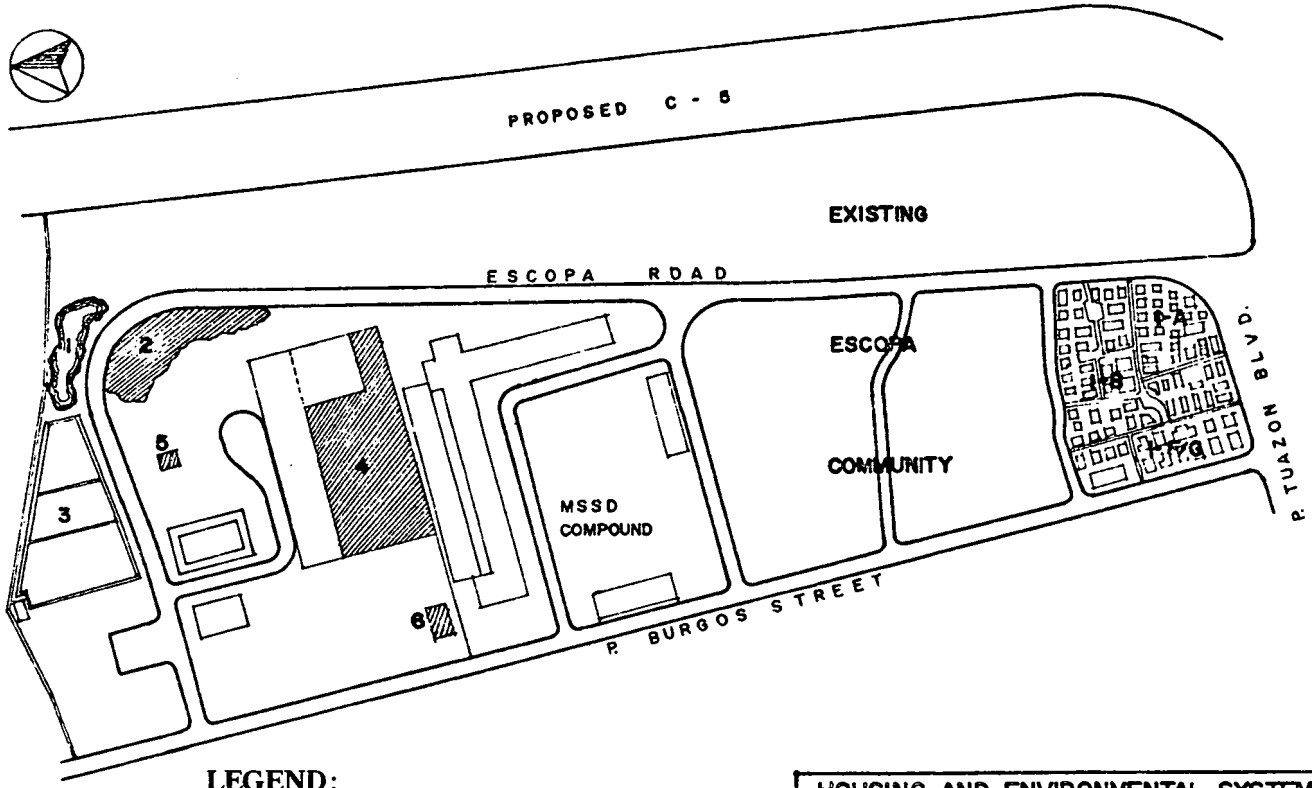
[2]The barangay is the smallest unit of local government below the city or municipal level. It is a geographic subdivision that performs political and certain minor administrative functions.

Along with its housing and site improvement tasks, HES was to devise rainwater collectors (to illustrate "water conservation" techniques), construct footpaths and drains, design and landscape open spaces, etc. It had other tasks and concerns. One was coordination with the other components. HES was to incorporate technological innovations from AER (e.g., solar devices) and WMS (e.g., decomposting toilets), particularly in an experimental house and garden that it was to build. In landscaping, it was to consider food production (i.e., planting) activities to be promoted by NFPP. HES was also expected to assist other consultants in locating, designing, and building their facilities (e.g., a food-processing plant). Another link, to provide housing loans, was with the credit union to be organized in Bo. Escopa.

Another major concern of HES was to engage the Escopa residents in planning and implementation activities. It consciously aimed to elicit design options and choices from the residents, to train some of them in construction activities, and to monitor and evaluate their reactions to its outputs. HES hired an anthropologist to assist in its monitoring activities.

A more immediate task of HES was developing a working relationship with QCPDO. The basis for this was laid by having QCPDO represented, at MASIP's invitation, in the regular meetings of the project consultants with the Director. Aside from the chief of this Office, other QCPDO staff members often attended MASIP meetings. But HES had to interact directly with QCPDO at the planning and field action levels.

Figure 2. Layout of MASIP Sub-Projects at New and Old Escopa



LEGEND:

1 ECO-POND
2 PLANTING STRIP 'A'
3 PLANTING STRIP 'B'
4 UNEP NHA DEMONSTRATION AREA
5 NURSERY
6 FOOD PROCESSING PLANT

HOUSING AND ENVIRONMENTAL SYSTEMS

BARRIO ESCOPA
NEW AND OLD SITE

Main Events: 1978

HES had organized the nucleus of its staff by the time of the September 1977 U.N. workshop in Bandung, Indonesia, which all prospective Filipino, as well as Indonesian, consultants attended. Its peak size reached 33 (29, part-time; 4 full-time) members in 1979. Aside from the faculty and staff members of the College of Architecture,, U.P., HES hired individual consultants (a botanist, an engineer, and an anthropologist) for certain specific tasks, let contracts for construction work, and consulted other "cooperating" institutions on such technical questions as the possibilities of "deformed bamboo" as an innovative building material.

During the first quarter of 1978, after the decision to relocate MASIP from Tondo, HES, as did other MASIP consultants, revised its conceptual proposals and developed design criteria for Bo. Escopa. These were based on surveys of existing physical conditions, which HES conducted at this time, and on QCPDO's data and project plans. HES also prepared a topographical scale model showing existing building and site conditions and preliminary plans for the prospective New Site. The table model was part of MASIP preparations for the formal launching in Bo. Escopa.

However, the launching of the project was delayed till mid-April in view of the national assembly elections held during the previous week and on the advice of local leaders that MASIP would be better received by residents after the elections. During the three-day (April 14-16) launching and information activities, the table model of HES was among the exhibits that attracted the attention of residents.

In July, following a visit by a UN Mission to review MASIP plans, HES targets were specified to include the upgrading of houses and reblocking in Old Escopa, as well as the construction of 40 to 50 New Site houses. Toward the second quarter of 1979, quantitative output targets were set by MASIP for major components and sub-components. The number of existing houses to be upgraded was then set at 100, and the number of New Site dwellings was *fixed* at 50. During the previous quarters, HES had prepared, or attempted to prepare, more specific plans for housing, site improvements, landscaping, and other components.

However, the acquisition of the 4.45-hectare New Site, which Quezon City had started in 1977, was bogged down in expropriation proceedings due to the refusal of the landowners (a private school) to part with their property except for a higher price. Quezon City had earmarked ₱5.3 million out of its NHA loan for the New Site, but based on information about its declared market value, the city offered only ₱2.9 million as compensation. The owners then held out and negotiated for a higher price. The matter was finally settled only in January 1979 at the cost of ₱7.1 million.

Meanwhile, HES and other consultants could not legally enter the New Site and could proceed with work only at the Old Site. Another consequence of the delay was the transfer of the experimental house and garden that HES intended to build at the New Site and could not find space for

in Old Escopa. This was built instead in a low-cost housing area of the main campus of the University of the Philippines in Diliman, Quezon City, about an hour ride by bus from Bo. Escopa.

Upgrading Old Escopa

C. summary. Reblocking and housing improvement in Old Escopa thus occupied the attention of HES during much of 1978 and 1979. Although it conducted area wide surveys, HES made more detailed studies of Block 1-A in May 1978 and of 1-B and 1-F/G in March 1979. From June 1978 onwards, a series of meetings with 37 of the 42 families on 1-A were held by the planners to evolve and secure agreement on site plans, tenure policies, and housing requirements. Two schemes were initially prepared for 1.A (three including a 1977 subdivision plan prepared by QCPDO). These underwent seven revisions, the "final" plan was adopted in mid-January 1979, but was not strictly followed during its implementation. (See Figure 3.)

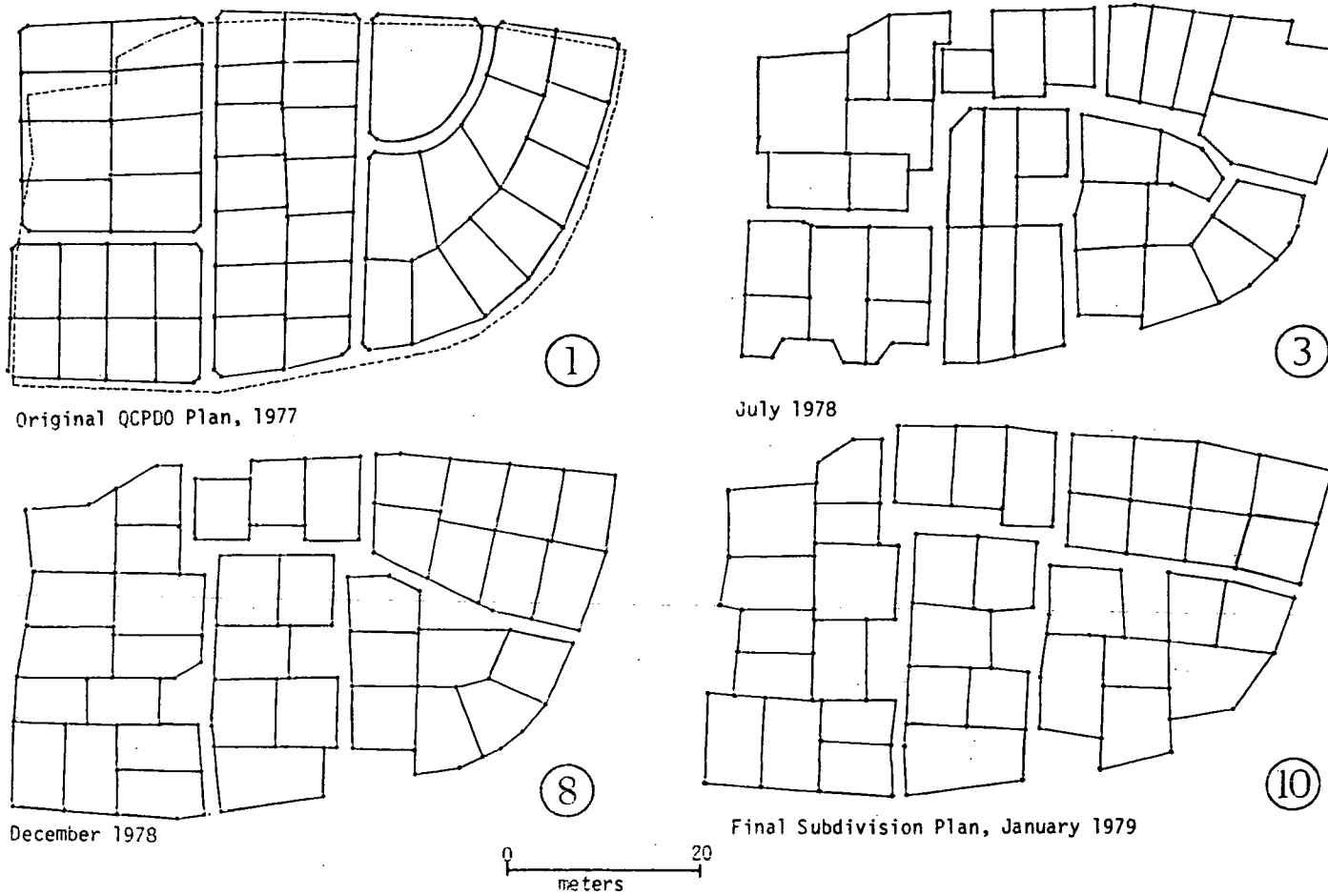
In September 1978, the planners felt ready to stake out the lots in 1-A, but "staking" was put off till October and January due to successive typhoons and adverse reactions from some dissatisfied residents. Starting in March 1979, site works were undertaken by local contractors. These included the removal of obstructions, construction of footpaths and drains, and development and landscaping of open spaces.

In order to determine repair requirements, HES inspected individual houses in September. It supplied eligible residents with "prototype" working drawings and bills of materials, though eventually the residents themselves determined how much improvement or rebuilding should be made. They could not start, however, until the housing loans to be supplied by MASIP became available. After some delay, the Bo. Escopa Credit Union (BECU) was organized in December by the Credit and Finance (CF) consultants and the residents. In early April 1979, HES transferred ₱50,000 of its ₱2.05 million budget for upgrading to BECU, which began releasing them in May 1979. Housing improvement activities began on May 8, 1979, and by September 1979, 20 dwelling units had been rebuilt or improved in Block 1-A.

By March 1979, HES had started a similar cycle of upgrading activities in 1-B and 1-G (1-F, a small segment occupied by three families, was included in 1-G in May). Five meetings were held with families in the two blocks and as many versions of the site plan were prepared between May and October 1979. Staking began in September, but some residents seemed disatisfied. Although site works proceeded in these blocks, housing improvement was delayed until the first week of January 1980 pending the approval of building permits.

Block 1-A conditions. Before taking up certain threads of the narrative, we should briefly describe the site and housing conditions found by HES. The three blocks are adjacent to P. Tuazon Blvd., a busy thoroughfare bordering Old Escopa. Block 1-A is in front of this street and of Escopa Road, which runs through the middle of the Old Site. Block 1-A. was a 2,270 square meter segment occupied

Figure 3. Selected Site Plans for Block 1-A



Source : Housing and Environmental Systems, Marginal Settlements Improvement Project.

by 42 families and 22 houses, while 1-B had 2,814 square meters, 33 families, and 22 houses, and 1-G had 3,780 square meters, 39 families and 20 houses. Some of these houses contained spaces for sari-sari stores, shops, and other small businesses.

The existing houses and lots had irregular sizes and shapes. In 1-A, for example, occupied parcels ranged in size from 5 to 118 square meters. The houses (8 single-story, 14 two-story) were so close to each other that interiors of the block were dim. Pathways, where present, meandered between the buildings. Flooding was common during the rains, low places holding 3 to 10 cm. of water for one to three hours at a time. Of the 22 houses, 4 were in "good" physical condition, 6 were "fair," and 12 were "poor," the latter including two that were "structurally unsound" by HES's standards. Comparable conditions were found in the two other blocks (See Table 1), although some important differences may be noted.

Of the 101 households living in the three blocks, 67 were houseowners and 29 were non-owners. In Block 1-A 7 of the non-owners were paying rent, while 8 were relatives of the owners they were living with. Household sizes on this block ranged from 6 to 8 members and averaged 6 members. Of the total number of families on the three blocks 96 households were registered in the 1975 census and therefore could stay and get HES benefits. The "uncensused" families were excluded from HES benefits and the meetings, although they were told that they could stay if their residence at the time of the census could be verified. Yet the questions of eligibility for and allocation of benefits, as well as tenure, were not easily and soon settled, even among the "censused" families.

Planning with the residents. Following its "cluster" criterion, HES had divided 1-A into six sub-areas based on the existing pathways that it had identified. These were used as a basis for sub-group meetings and decision making. Later, the residents of 1-B and 1-G/F were similarly divided into two groups per block, but HES and QCPDO would conduct separate meetings with them on a block rather than sub-group basis.

During the meetings and "planning sessions" with the residents, HES would indicate through sketch plans how lot sizes, locations, and buildings would be affected for each of the households concerned. In response, residents would raise questions, comments, and suggestions. Then HES would re-draw the plan and re-present it at a subsequent meeting. But partly on QCPDO's advice, it did not show the residents precisely how big their lots would be for fear that they would make invidious comparisons with their neighbors and that the measurements sketched in might be inaccurate and raise questions later. HES did inform the residents about the approximate shapes and locations of their lots, although it left to them the task of measuring out their lots on the base maps (which were drawn to scale).

According to HES, the majority of the 1-A residents readily agreed to the initial versions of the site plan, but a few discontented families managed to prolong the process by their questionings and demands for changes. Lot size, location, and tenure were among the bones of contention. For 1-A,

Table 1. Housing Conditions in Blocks 1-A, 1-B, and 1-G/F, Old Escopa

	BLOCKS			
	1-A	1-B	1-G/F	Total
Area size (sq. m.)	2,200.45	1,811.30	1,898.29	5,910.04
Range of lot sizes (sq. m.)	36.0 - 78.0	36.25 - 72.0	36.0 - 69.71	
Number of families	42	30	33	105
Eligible (censused) families	37	29	30	96
Families to be relocated	1	1	3	5
Houseowner families	22	22	23	67
Renter families	16	8	10	34
Number of buildings	22	22	23	67
Status of buildings				
Good	4	1	1	6
Fair	6	14	10	30
Poor	12	7	12	31
Cost price range of houses (₱)	5,000 - 20,000	4,000 - 10,000	15,000 - 20,000	

Source: Housing and Environmental Systems, Marginal Settlements Improvement Project

HES first drew up two schemes using different lot size averages: 36 square meters which would have accomodated all 42 families, and 48 square meters which would have included only 32 families. These schemes were altered or modified seven times (or more, if one counts the changes within the sub-areas of 1-A) as a result of the meetings. The average figures were thus made the minimum and maximum lot sizes, but later lots smaller than 36 square meters or larger than 48 square meters were allowed. In November 1978, the QCPDO director (who otherwise preferred smaller lots so that 1-A could accommodate any spillover from other blocks) announced that there was no (or no longer any) ceiling on lot size. But in December, at the instance of the houseowners, the renters were pegged to about 36 square meters. (See Table 2 for a summary of design and cost standards).

Some houseowners objected to schemes giving away parts of their present lots to renters or to other owners occupying smaller parcels. As house owners they were given greater priority in terms of lot size, but they were also told that they had an obligation to share bigger lots with other bonafide residents and thus tolerate some reduction in lot size. Other residents objected to proposed reallocations or realignments that would move them away from their relatives, from direct access to a footpath, or from a street frontage. One resident objected to the shape, as well as size and location, proposed for his lot.

Those who had objections typically asked for concessions in the form of bigger lots, exchanges of locations, etc., and HES and QCPDO tried to accommodate them as much as possible. But individual adjustments tended to affect other lots — an effect somewhat contained only by the division of the blocks into sub-areas. New objections would arise after each adjustment. Since QCPDO representatives were seldom present during the Block 1-A meetings, HES recounted that it could not immediately meet new objections. Some residents would be absent from a meeting and would raise their questions at a subsequent meeting; sometimes, they would simply change their minds after agreeing to a previous plan. Certain questions were left to the residents concerned to settle among themselves, but they could not always come to an agreement.

Delayed reactions followed the staking. Reblocking implied the trimming, division, and/or demolition of certain houses, as well as of fences, septic tanks, and other obstructions to the footpaths and new lot lines. But these changes dawned on some residents only when the staking was begun. Thus, stakes "temporarily" put in place were pulled up by disgruntled residents. They were also said to have taken the staking seriously only when surveyors came with transits, which they took as a sign that now the authorities meant business. The stakes were finally emplaced in January 1979.

Roles of HES and QCPDO. From the outset, HES assumed the role of technical proponent and adviser to QCPDO, which is regarded as the decision-making authority in Bo. Escopa. Although it had prepared its own plans for Bo. Escopa (including subdivision plans), QCPDO seemed disposed to accept HES proposals, while HES made it a point to clear impor-

Table 2. HES Design and Cost Standards for Old and New Escopa

	Old Escopa			New Escopa
	Block 1-A	Block 1-B	Block 1-F/G	Pilot Area
Total Area (Sq. m.)	2,200.45	1,811.30	1,898.29	4,136.00*
Total of Lot Areas (Sq. m.)	1,728.68	1,456.54	1,546.49	2,681.92
Number of Available Lots	36	29	30	60
Average Lot Size (Sq. m.)	48.01	50.22	51.44	44.69
Lot Size Range (Sq. m.)	36.00 - 78.00	36.25 - 72.00	36.00 - 69.71	40.25 - 50.00
Total Area-Open Spaces (Sq. m.)	192.77	157.26	125.30	544.00
Percentage-Open Spaces	8.76 %	8.68 %	6.60 %	13.15 %
Total Area-Foot Paths (Sq. m.)	279.00	197.50	226.50	692.00
Percentage-Foot Paths	12.60 %	10.90 %	11.94 %	16.73 %
Density Per Hectare (Households)	163	160	158	145
Unit Cost-Site Dev't (Per Sq. m.)	₱ 31.81	₱ 25.60	₱ 25.60	₱ **

*Out of 4.45 hectares, total area of the New Site.

**Contract amount for initial site development by Quezon City not available

Concrete foot path — cost per lineal meter	₱ 186.00	(Pre-May 1979 prices)
Concrete foot path — cost per lineal meter	₱ 251.00	(Adjusted to current prices)
Asphalt foot path — cost per lineal meter	₱ 203.00	(Adjusted to current prices)
Drain trench cover — cost per piece	₱ 30.00	(Pre-May 1979 prices)
	₱ 31.00	(Sept. 1979 prices)
	₱ 40.00	(Nov. 1979 prices)
Total area of new site (formerly PSBA property	₱ 4.40	Hectares
Acquisitions price	₱ 7.10	Million (1978 negotiations)
Price per square meter (acquisition price)	₱ 161.36	(1978 negotiations)

Source: Housing and Environmental Systems, Marginal Settlements Improvements Project

tant proposals and questions with QCPDO before discussing them with the residents. But HES did take an active role in the planning and the meetings, so much so that it took (or was given) a major part of both the credit and blame for the upgrading and other activities in Bo. Escopa.

QCPDO handled the questions of tenure and other policies and handed down decisions to settle specific disputes with or among the residents. In Block 1-A, QCPDO did not regularly send representatives to the meetings with the residents, but sometimes its liason officer with Bo. Escopa was present and, at critical points, its director came, at HE's request, to answer the residents' questions. In Blocks 1-B and 1-G, QCPDO representatives were more frequently or regularly present, together with those of HES.

During the 1-A interactions, policy questions were dealt with as they arose, apparently without formal guidelines until late in 1978. What had existed were the provisions embodied in general guides such as ZIP and the Quezon City "concept" plans for Bo. Escopa (which proposed, for example, alternative tenure schemes but did not prescribe any particular one). A written draft of policies was prepared by QCPDO only in November. Even then policy decisions continued to be announced verbally by QCPDO, and HES and MASIP felt it necessary to recommend additional guidelines. Formal approval of the draft policies by the Quezon City government and higher levels of government has not been obtained.

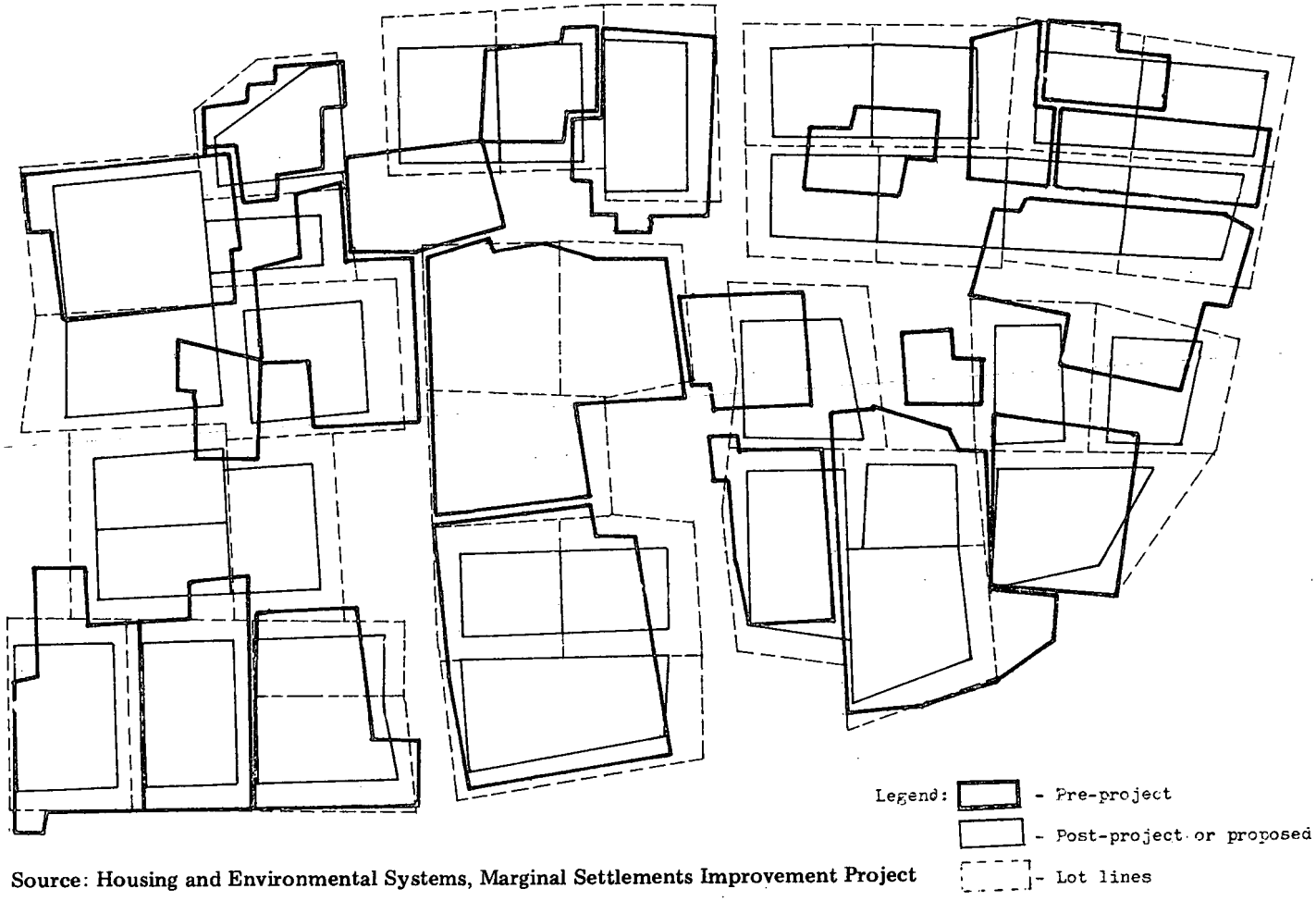
Nonetheless, formally or informally, QCPDO made decisions on key policy issues as best it could within the existing framework. For example, it decided that, as a rule, both houseowners and renters could stay in Old Escopa as long as they had been censused in 1975, and could be awarded lots on a 25-year lease with options to buy within 10 years (according to NHA, this period may be reduced to five years). Lot rental rates and prices and other terms of payment, however, have not been determined[3] (we will return to related aspects at a later point).

Site improvements. Although one or two complaints remained, the site plan for 1-A firmed up in January. This provided for 36 lots ranging in size from 36 to 78 square meters and averaging 49 square meters. Open spaces would take up a total of 800 square meters. Apparently, however, the "final" site plan was not followed to the letter, since certain lots and open spaces were not actually placed according to the plan. (See Figure 4.)

Contracts for site works were let by HES to contractors and workers living in Bo. Escopa, although for other more technical HES jobs, outside contractors were hired. HES taught the local contractors how to prepare contracts and payrolls, open credit lines and checking accounts, and other business aspects of their work. But it no longer found it necessary to train them and their workers in construction skills. They were hired by HES for site improvements,

[3]In the August 25, 1978 meeting, QCPDO pointed out that lots that would cost ₱ 37 per square meter, payable in 25 years, and that a lease-purchase-option was provided to enable those unwilling or unable to buy a lot to stay but without "concept ownership." No specific policy on sale, however, was approved formally afterwards.

Figure 4. Building Lines in Block 1-A before and after Reblocking



Source: Housing and Environmental Systems, Marginal Settlements Improvement Project

landscaping, and construction of the New Site dwellings, while residents in the reblocking areas supplied or hired their own labor for house repairs or construction (often also from among local workers engaged by HES).

The site works included the demolition or trimming of fences, septic tanks, and other structures (including parts of some houses) abutting the footpaths and open spaces. Trenches were then dug and concrete slabs fabricated in Bo. Escopa were laid out to pave the footpaths and cover the drain trenches along the middle of the footpaths. The drain covers had narrow openings to let in run-off water. Approximately 227 meters of 1.5 to 2 meter wide footpaths were built in Block 1-A and 200 meters in 1-B and 1-G. A total of 95 pieces 6" concrete drain pipes with 1 1/2" PVC water pipes were also installed in readiness for house connections should "NAWASA"-supplied piped water actually become available.[4]

The lot realignments and footpaths imposed a more regular grid pattern on the blocks. Alleys now divided 1-A into five smaller segments, while lots filled in the irregular open spaces that had existed before. New open spaces were developed, landscaped, and provided with "micro-park" furniture. Wood "recycled" from electric poles was used for some of the park benches. Later concrete materials were used instead due to the high cost of transporting the poles from their source (outside Bo. Escopa). In one open space, a cistern that could be connected to water spouts on surrounding houses was built as a communal rainwater collector.

Dwelling improvements. In preparation for the housing improvements in 1-A, HES inspected the buildings in December to determine their specific requirements. Aside from supplying them with prototype working drawings and bills of materials, HES advised the residents on building standards too stringent to follow in Bo. Escopa, and therefore suggested modifications. Instead of the usual two-meter setback requirement, for example, it suggested one meter as the minimum. It also relaxed the minimum standards for firewalls. Subsequently, HES became aware that the national agency in charge of the National Building Code had also encouraged the relaxation of standards for slum areas, but local government engineering departments were sticking to the Code standards. Bo. Escopa "got away" only because the people involved in upgrading failed to secure building permits from the Quezon City engineer's office before proceeding. QCPDO had to work to get such permits for the residents of 1-A, but in the two other blocks, houseowners were required to apply individually. No building permits for the three blocks have been issued.

The absence of building permits did not stop dwelling construction in Block 1-A. After BECU was organized in December 1978, the prices of building materials were canvassed (first by a BECU officer, but later by the residents themselves), and housing loans applicants were processed. These required the approval of HES as

[4]NAWASA stands for National Waterworks and Sewerage Authority, now the MWSS (Metropolitan Waterworks and Sewerage System.)

well as BECU, and loan checks were released to the applicants in favor of the chosen suppliers of building materials. Each loan had a maximum amount of ₱4,000, payable at 6 percent interest p.a. over a period of 10 years. It was applicable only to the purchase of building materials.

No applicant in Block 1-A applied for less than ₱4,000 and most residents there have spent much more than this amount. Most (17) of the original 22 structures were entirely demolished and rebuilt; some were partially demolished and rebuilt, and few houses underwent minor repairs only. Moreover, new houses were constructed or were to be constructed by former renters. Thus, when all of these houses shall have been completed, there would be a total of 36 residential units (two of the 37 families agreed to occupy the same lot and building).

Some of the completed houses are more permanent, substantial, and impressive-looking structures. The old houses on 1-A had been valued at from ₱5,000 to ₱20,000, according to estimated building or purchase costs given to HES by the owners. Now, their values have apparently appreciated, as suggested by the amounts spent by residents. Some spent ₱1,000 to ₱39,000 of their own savings or loans from other sources, such as their relatives. Thus, the bigger houses were estimated to cost as much as ₱70,000.

A few houses, however, have not been started or completed in terms of new construction or repair. Delays were experienced because some neighbors agreed to build duplexes, rowhouses, or units close to each other, and one could not start without a neighbor first demolishing or trimming his house or septic tank. In other cases, repairs or constructions were delayed or suspended due to the exhaustion of the loan and absence of other funds. In many instances, complete reconstruction was planned by the residents because they discovered that *anay* and the weather had eaten away substantial portions of their old houses.

At any rate, while the personal expenditures made by the residents themselves seemed to be a salutary response to HES assistance and the increased security of tenure promised by the project, the bigger and more ornate houses struck certain residents of Bo. Escopa as a glaring contrast to the more modest dwelling improvements, especially those suspended for lack of funds.

Following through in Blocks 1-B and 1-G. Evidently, the upgrading in 1-A was impeded by various difficulties, so that completion of its outputs was delayed. Thus, although the footpaths were already 85 percent done by June 1979, they were completed only in November due to the refusal of some owners to remove obstructions, to "cash-flow" problems (i.e., delays in the release of MASIP funds for HES), and to other factors.

Upgrading in Blocks 1-B and 1-G was started in what HES hoped would be a shorter version of the cycle in 1-A. Among other things, HES expected the meeting with the residents there to be fewer. The residents of the two other blocks had been free to attend the meetings in 1-A and were aware of the problems and policies that had emerged. In other words,

HES thought they already knew what to expect. Indeed, fewer meetings and versions of the site plan were entailed by the process in 1-B and 1-G. Nonetheless, similar problems cropped up.

In February 1979, MASIP halted its activities due to an announcement that Bo. Escopa would be the site of a Bagong Lipunan Site and Services program (BLISS) project. Since the new BLISS program stressed the construction of medium- and low-rise tenements — a drastic change in policy for MASIP — MASIP and NHA sought modification of the Ministry of Human Settlements proposal so that, as it turned out, BLISS apartments would be built only on a section of the New Site and the rest of MASIP could proceed as originally planned. Only after such "guidelines" for Bo. Escopa were issued by the Ministry did MASIP resume its activities.

In March, HES conducted a survey of site, housing, and related socioeconomic conditions in 1-B and 1-G. These blocks were smaller than 1-A, but there were also fewer families: 30 and 33, respectively, 29 and 30 of which were "censused." Thus, the gross lot size averages per family were larger. In addition, the size ranges of the actually occupied lots were narrower (about 36 to 70 square meters vs. 5 to 118 square meters in 1-A). There were also comparatively fewer non-houseowners in 1-B and 1-G than 1-A (7 in each block, vs. 15 in 1-A).

However, HES could not tell at the outset exactly how many families were occupying these blocks and which of them have been censused in 1975. It seemed to HES that the populations here were more "mobile." As before, HES left it to QCPDO to resolve such questions and to furnish the lists of qualified and ineligible families. Fortunately, this time QCPDO representatives including personnel from its socioeconomic section, were more regularly on the scene to respond to questions and suggestions from the residents.

HES and QCPDO met the residents of each block as a group, one after the other on the same days. During these meetings, similar questions and objections as in 1-A arose: the exclusion of uncensused families, reduced lot sizes, and undesired locations. The planners tried to be firmer this time. They would listen to appeals (say, for bigger lots), but would reaffirm previously agreed decisions and then go on to the other questions.

By early August 1979, final plans for reblocking were already being prepared, along with bid contract documents for site works. The lots were staked out in September, and in October, dwelling improvements were scheduled for families agreeable to the reblocking scheme. Complaints from ten to fifteen families persisted, and a final "clarification meeting" was held for their benefit in November.

Site works were started in November. Instead of concrete, asphalt was used to pave the footpaths in 1-B and 1-G, because, HES reasoned, asphalt was cheaper, although the drain trenches were also covered by concrete slabs. At least 30 percent of the footpaths and drains had been completed by December. The development and landscaping of two of the five open spaces also started in December and by mid-January 1980, 3 were completed.

The final reblocking plan provided for 29 lots in 1-B and 30 lots in 1-G. These lots ranged in size from 36 to 72 square meters, and averaged 51 square meters. Demolition of obstructions and deteriorated structures began in November 1979. Housing loans have been processed, but actual dwelling improvements were delayed due the city's requirement for individual building permits. As of January 1980, the latest word from QCPDO was that improvements might begin without the permits.

Relocation and the New Site

The foregoing account of upgrading has barely touched two major points: the exclusion of uncensused families from HES benefits and coordination between HES and other component consultants. The first will be dealt with briefly in the following account, and the second in a later section. An overview of the plans and activities relating to the New Site and the relocation of families is now in order.

Plans for the New Site. The New Site or "New Escopa" was acquired primarily in view of the anticipated displacement of 118 to 370 families from Old Escopa. This was expected due to the plan to construct the national road C-5, a segment of which would slice off a substantial part of Old Escopa's eastern edge. QCPDO had considered alternative schemes in anticipation of this action, including alternate locations for C-5, expropriation of a site nearby and a "land swap" with MSSD to connect Old Escopa with the prospective New Site. Without the exchange, the MSSD compound would keep the New Site physically separated from Old Escopa, with only a proposed road supplying the link.

Apparently, QCPDO opted for the scheme involving expropriation of the New Site to accommodate relocatees, but the "land swap" was not pushed through and the C-5 plan remained unimplemented and uncertain. Other city government actions within Old Escopa, however, have required relocation. These include the widening of Escopa Road and the proposed construction of barangay halls, a *talipapa* (public market), and a water tank. The upgrading of Blocks 1-A, 1-B, and 1-G has also resulted in the relocation of a few families.

Although it shared the relocation objective, HES also sought to demonstrate at the New Site certain innovations in site design and development and low-cost housing. These were focused on a cluster of 50 core-and-frame or "shell" houses organized into rowhouse, quadruplex, duplex, and single-detached two-story structures. These buildings would occupy a 4,284 square meter demonstration area adjoining Quezon City's core housing areas, on which it has built a few quadruplex structures.

HES also intended to build an experimental house and garden at the New Site, but this was moved to another location. Its responsibilities extended beyond the housing demonstration area to the design of the landscaping, planting strips, and building facilities of other components. These had to be designed in coordination with QCPDO, which had plans to build a multipurpose community hall and a playground, as well as the quadruplex houses.

Chronological summary. While the acquisition of the New Site was still being settled, QCPDO hired contrac-

tors to begin land improvements there in November or December 1978. According to HES, it was informed of these activities only in January 1979. HES them resumed its planning activities for the New Site, only to be interrupted by the BLISS proposal. Plans for the location of the BLISS apartments — which were also intended for relocation purposes — were prepared by QCPDO. These were to be built in the northwestern and western sections of the New Site. The BLISS project, which involves a total of about 340 dwelling units, has not materialized and it is not known when it might be implemented. This was expected to be a matter for the Ministry of Human Settlements to decide.

Meanwhile, site improvements, including the grading and filling of sections of the Quezon City and the HES areas, and the provision of storm and sewer drains, curbs, gutters, and paved streets, proceeded under QCPDO's direction. The construction of its core houses was started in May 1979 and by October, 24 dwelling units in quadruplex buildings had been finished. These occupied a 1,176 square meter strip alongside the HES area. The relocation of 24 families to these houses was started in October and completed in December. These families came from a corner of Barangay III that was cleared to make way for a barangay hall to be built by the city government.

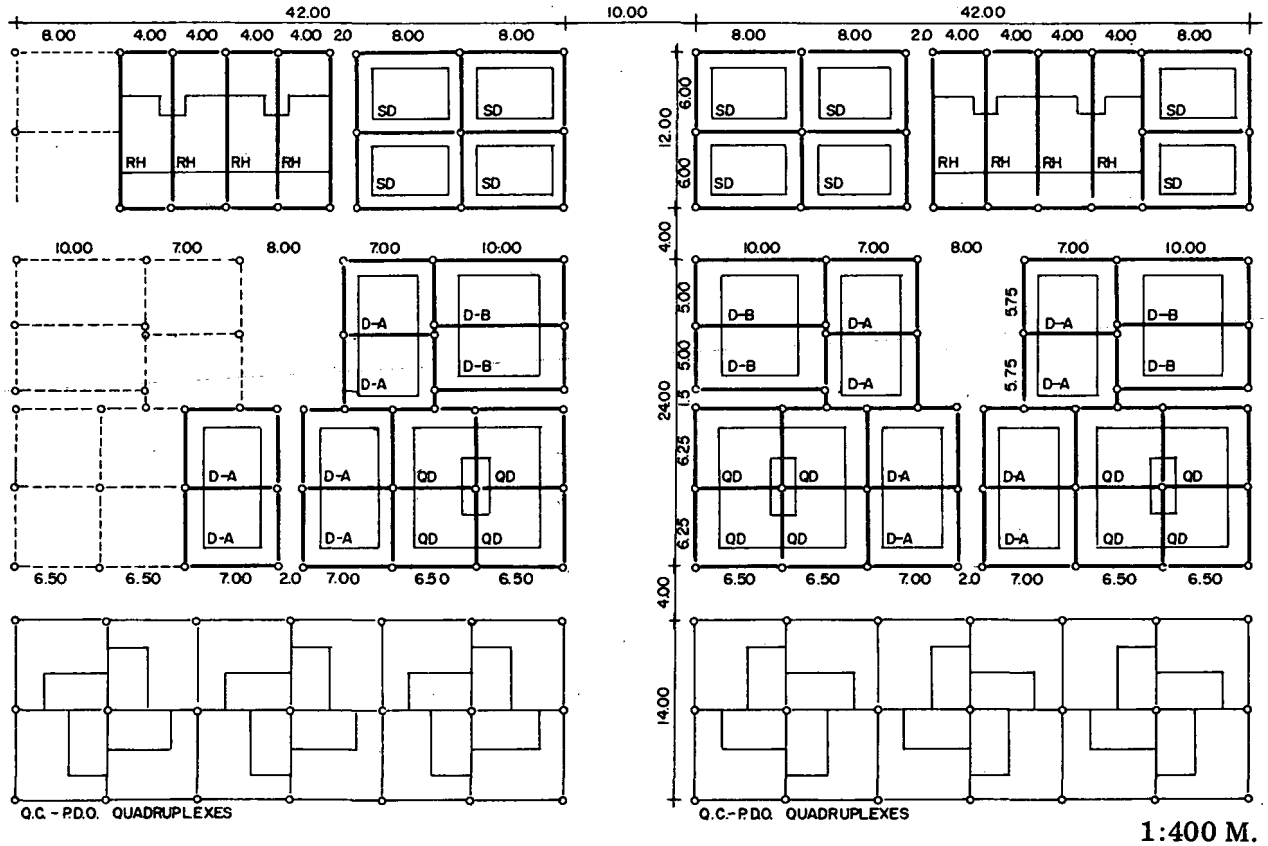
After securing QCPDO's concurrence with its plans for the New Site during the first quarter of 1979, HES started developing its demonstration site on May 7, 1979 and the construction of its shell houses on May 16. These consisted of 2 row-house, 3 quadruplex, 9 duplex, and 12 single detached buildings. (See Fig. 5.) Each unit was supplied with a concrete sanitary core (toilet and bath), hollow-block and wood frames, GI-sheet roofs, and water pipes. Occupants were expected to build the "envelope" or walls and other fixtures themselves. The core-and-frame buildings were completed in October and were turned over to the city government in early November. Some of the site improvements, however, remained to be done or completed as of the end of January 1980.

The relocation of families to the MASIP demonstration houses was started in October 1979, but by early February, only 25 families (or half the target) had been relocated or "awarded" the privilege of moving into the MASIP units. Most of these families came from the sections of Barangay III that were cleared for a barangay hall and the road widening purposes. One early relocatee came from inside the MSSD's Office of Vocational Rehabilitation (OVR) compound. Five of the 25, however, were relocatees from the upgrading blocks in Barangay I.

Retention and relocation.. Aside from the anticipated impacts of the C-5 and other actions on Old Escopa, the city government had felt a need to "de-congest" the existing community. At the same time , QCPDO tried to observe the polity of "maximum retention" associated with site-and-services programs, and to accommodate most of the residents in the three upgrading blocks, whether they were homeowners or renters. Only the "uncensused" families were excluded.

In a meeting with Block 1-A residents in August 1978, QCPDO indicated that residents with the following

Figure 5. Ground Plan of the MASIP "Shell Houses" and QCPDO Quadruplexes, New Site



qualifications could stay and be eligible for lot allocation and HES housing loan: (a) continuous occupancy of their present lots for a period of five years, (b) inclusion in the 1975 census-survey, and (c) absence of disqualifying conditions, such as ownership of real property elsewhere in Metro Manila. QCPDO also said that eligible residents could avail themselves of the lease-purchase-option scheme, which would permit residents unwilling or unable to buy to stay, but without any "concept of ownership" of the land.

The uncensused residents appealed for inclusion, and QCPDO said that they could be retained in 1-A if they could get their neighbors to certify that they had been living in Bo. Escopa prior to the 1975 census or if they had relatives who were residing there and were willing to accomodate them as renters. But in November 1978 QCPDO announced that it was no longer possible to accomodate uncensused families in Block 1-A since they had been previously given two years to petition for inclusion in the 1975 census list and none of them had done so.

The uncensused families, therefore, were supposed eventually to move out of the upgrading blocks. However, their status was not made entirely clear. They could be relocated to the New Site, but might not be eligible for HES housing loans, although their occupancy of the houses there already implied financial assistance from MASIP or the city government. In any case, only five of the uncensused families in the upgrading blocks had been actually relocated by the end of January 1980. One of these families came from Block 1-A, another from 1-B, and three others from 1-G.

The relocation process. When interviewed, some families voiced objections to being relocated because they preferred to stay where they are, did not like the relocation or shell houses, or were reluctant for a combination of these reasons. Those who had built substantial houses in Old Escopa and thought that the New Site units were "too small" seemed particularly unwilling to move. Another major objection was the absence of electricity and water supply at the New Site.

However, there was no overt sign of opposition to relocation. The prospective relocatees were apparently prevailed upon by the necessity to make way for the barangay hall and road widening. The renters and uncensused residents seemed especially appreciative of the option offered by the New Site, especially when the MASIP units appeared bigger than they thought or in comparison with the Quezon City core houses.

The clearance of the Barangay III sections intended for its hall and for road widening was started in October 1979. The residents themselves, together with hired or free help from relatives and friends, tore down their structures and transported their belongings and salvaged building materials to the New Site, which is just a carting distance or about two blocks away.

While tearing down their old houses, the relocatees simultaneously began to complete their new core-and-frame units so that members of their households could start occupying them and protect their belongings. In some instances, temporary walls or sheds were built while the rest of the unit was being completed.

The city's quadruplex units were soon filled, but the relocation to the MASIP houses took some time getting even half completed. Although one family from Block 1-A had been relocated in early October, other relocatees (mostly from Barangay III) were chosen by lottery held by QCPDO in November. During the first lottery (November 19), six families out of the nine prospective relocatees were selected and allowed to pick the houses of their choice from among the duplex and rowhouse units. During the second lottery (November 29), 15 were selected out of 17 families and were assigned by raffle to the different types of housing units still unoccupied. Only four families had actually been relocated at this point, and the rest of the 25 moved in December and January.

On the New Site. Much of the New Site had been developed by January 1980 although a great deal of work remained to be completed. The main segment of an 8 meter-wide asphalt road, concrete sidewalks, and multipurpose community hall (with a floor area of 234 square meters) had been built, and a basketball court was being constructed. The concrete footpaths and communal cisterns at the HES demonstration area, however, remained to be finished and no electricity and water supply connection had been installed.

As far as QCPDO and HES were concerned, the relocation houses had been completed. Four rows of buildings (including the Quezon City quadruplex units) were built on a portion of the New Site overlooking the Marikina Valley, so that some of the houses had a commanding view of the valley. Each of the Quezon City quadruplex units was essentially a 3 by 5 meter single-story house, with a "mezzanine" to supplement the ground floor and provide extra sleeping and storage space. It had a sanitary core and pre-built walls. The occupant could expand his unit, though only on his side of the quadruplex. (See Fig. 5.)

The HES demonstration houses also had sanitary cores. Their ground floors measure 23 to 24 square meters and each unit had a pre-built second-floor frame. The occupant had a wider range of choice of housing types, from single-detached to rowhouse units. But he had to add the floorings and walls, and could not legally expand his unit beyond the lines indicated by the frames (although one occupant has slightly exceeded these bounds).

Relocatees in the HES units, therefore, had to put in work on their units if they were to occupy them. Some relocatees immediately set about to build permanent "envelopes" with new or relatively new materials. One family spent a total of ₱30,000 to complete its unit; although some of the wood used came from its old house, they were placed in such a way as to make the relocation house (a single-detached unit) appear entirely new. In fact, the family even built the walls of the second floor somewhat beyond the indicated building lines — and by all indications, the house is entirely new. Just across this house, there is another solid-looking house whose occupant has also built in a sari-sari store — the first business establishment in the neighborhood.

Other relocatees, however, could afford only to wrap their core-and-frame units in evidently "recycled" materials, including corrugated GI sheets or wallboards which had seen

better days. These often appear to be makeshift, but some of these relocatees have apparently tried to make the best use of their old building materials by repainting them or combining them with hollow blocks so that they would last. Still, there are telltale signs that their houses are unfinished, such as the ground floors waiting to be paved or covered.

As of January 1980, workers contracted by HES were yet to complete the communal cisterns, concrete walkways, open spaces, and the 'integration" of the demonstration area's drainage and sewerage with Quezon City's system on the New Site. There was some problem with the footpaths and the drainage because workmen hired by QCPDO had in earlier months inadvertently filled the demonstration area to such a level that the floors of some HES buildings are now lower than the footpaths. Then, too, HES workmen earlier discovered that some drain pipes that QCPDO workmen were supposed to have installed were missing, so that the former had to dig a different drain trench than they had planned.

Other development activities were still going on or were to be implemented at the New Site, including the construction of the food-processing plant (probably about 7 percent finished as of January 31, 1980) and the location of planting strips.

Coordination between HES and other Components

The experimental house and garden, the upgrading blocks, and the New Site were three focal points of coordination between HES and other consultants, especially Alternative Energy Resources (AER); Waste Management Systems (WMS); and Nutrition and Food Production and Processing (NFPP). From the outset, according to HES, it had called on the others to pool their efforts in designing, installing, and monitoring their experiments and activities. Although they initially did, however, the delays in the acquisition of the New Site and in the prosecution of other activities took their toll on the firming up and implementation of interrelated designs. Moreover, the monitoring efforts of some consultants flagged, and as its own activities mounted after the acquisition of the New Site, HES itself could no longer take much initiative in securing the cooperation of other consultants. The results of these coordinative and collaborative efforts have been uneven.

The experimental house and garden. HES's experiment was stalled and then diverted. Instead of Bo. Escopa, a low-cost housing area on the main campus of the University of the Philippines (UP) became the site of the experimental house and garden. HES reasoned that it resorted to this alternative location to avoid further delay (it had to get a building permit from UP, though) and to extend the usefulness of the experiment beyond the life of the project and to anyone interested in marginal housing, presumably including students. But instead of a family from Bo. Escopa, a UP student-employee and his family of three members were asked to live in and help test out the facilities.

HES designed and built the experimental house and garden to develop a minimum cost but "acceptable and replicable" prototype dwelling unit for the New Site. The dwelling is a detached, two-story structure made of

hollow-block and wooden materials. It was built complete with walls, doors, and windows, unlike the core-and-frame units at the New Site. It has a floor area of 40.32 square meter (exclusive of an enclosed storage shed adjoining the house) and together with the garden, occupies a lot of 144 square meter. In addition to HES's own rainwater collector and grey-water-recycling schemes, the experiment incorporated a built-in solar dryer , a solar water heater, a decomposting toilet, a biogas generator, and a food-growing garden that was designed to utilize rain and sewage water collected in a small pond where fish and *kangkong* (an edible water plant) were also grown. Two compost pits were also dug to produce fertilizer.

AER worked with HES on the design of the solar devices. The dryer was built in to the experimental house with an opening in the roof, but the 20 gallon heater, which AER delivered in May 1979, could be installed and operated only on the ground due to the difficulty of bringing the water up to the roof. (At any rate, AER transferred the heater to Bo. Escopa in December 1979 after the trials at the experimental facility.) An AER representative periodically came to monitor the performance of the solar devices with the help of the occupants and HES. The occupants were using the dryer not only for drying fish (for some consumption) but also for bleaching and drying their clothes, while the water heater was used for warm baths.

WMS and HES installed the biogas generator and decomposting toilet in May and September 1979. These devices formed part of a system designed to produce methane gas as fuel for cooking and, in the process also to recycle greywater for re-use in the toilet, pond and the garden. The compost pits were designed to supply fertilizer for the garden, which NFPP was also supposed to use for planting trials. A WMS representative came every so often to check on the recycling devices, but later on no longer visited the place. NFPP on the other hand, provided HES and the occupants of the experimental house the necessary information regarding the types of crops to be planted in the garden. After the first crops were planted, a representative from NFPP came from time to time to check on the progress of the planted vegetables, but as in the case of WMS, these visits also eventually ceased.

At present, the toilet and the biogas generator do not seem to be working properly or at all. The occupants note that the toilet was smelly and was attracting flies, so that they had to cover up the garbage chute into the toilet's storage chamber. The generator has failed to produce methane gas, so that HES once tried to prime it with a starter chemical. This did not work, and the chemical (or so HES and the occupants suspect) contaminated the pond and killed the fish and *kangkong*. (Earlier, fish in the pond had also died due, it seems, to contamination from tar on the roof.) So far, the compost pits have not produced any fertilizer.

Reblocking sites. In the upgrading blocks, WMS and AER fielded some of their devices and NFPP helped residents in growing food plants. Coordination from the viewpoint of HES seemed less of a problem here, except

on certain items. For example, WMS had proposed to build 10 individual decomposting toilets, including 5 in Block 1-A. Only three were actually put in place (two in October, one in November 1979.) One toilet was installed underneath one of the houses being renovated, so that it complicated the reconstruction work, going on. The three toilets are still to be completed and used.

AER brought its solar devices to the reblocking sites only after some delay partly due to the lack of a suitable house or building where they could be installed. It placed a mobile dryer in Block 1-B, a 20-gallon heater in an open space in 1-A, and a 50-gallon heater or a low platform in front of the Bo. Escopa Health Center building. There was some concern about the dryer being placed on ground level where children could reach it, but it was used by residents (for drying fish and fruits) apparently without any untoward incident. The heaters could not be placed on any high elevation because the water supply had to be carried in pails instead of piped in.

New Escopa. At the New Site, conventional toilets were built with the dwellings instead of the five decomposting units proposed earlier by WMS, while the installation of solar devices and other related activities were put off pending the construction of the food-processing plant. In consultation with NFPP, HES had originally designed a single-story building for food-processing alone. The contractor of HES however, found the ₱30,000 budget for the plant to be insufficient in view of rising construction costs; MASIP later decided to incorporate business training facilities in the building. Thus, the building would now be a two-story structure with a budget of ₱ 170,000.00. It remains to be completed, and HES and the consultants concerned have yet to work out certain details (e.g., location of storage areas). Consequently, another activity that has been postponed has been on-the-job, in-plant training of food-handlers that NFPP wanted the Enterprise Development and Employment Generation (EDEG) to provide. According to EDEG, the execution of the training program is contingent on the completion of the building prior to the termination of the project.

Other New Site activities have shared a similar experience. Another belated effort has been the determination of planting strips for food production. HES had done some demonstration planting at the New Site, but expected NFPP to follow through in larger planting areas, only to find that NFPP did not have enough funds to undertake or assist in planting on a larger scale. QCPDO later permitted residents to use some open lots and areas for planting. But now a jurisdictional question has cropped up as to which of the four barangays in Old Escopa is to supervise which planting strip and as to how they could ensure the "security" of their crops. Finally, WMS had a garbage "redemption center" building constructed at the New Site, but its idea of a waste-recycling "eco – pond" (reminiscent of the "aquaculture" component of the pre-Escopa MASIP) has experienced an on-again, off-again status, in part because of the difficulty of pinning down WMS to the specifics of its plans and in part because the consultants concerned are awaiting decisions from "upstairs" on such remaining items.

1981

Evaluation of Costs and Benefits*

This part of the study briefly assesses the progress of HES and other MASIP activities, and attempts to evaluate the costs and benefits of the reblocking, relocation, and housing sub-components of HES, with particular reference to selected cases of dwelling improvements. The financial data are limited and pertain mostly of the relevant project processes, outputs, and their effects will also be assessed.

Project Progress

It is apparent from the preceding account that MASIP activities have been attended by considerable delays. These have been due to a combination of external and internal factors, including the preparations and interruptions in the organization , introduction, and implementation of the project in Quezon City and Bo. Escopa; the extended process involved in the acquisition of the New Site; the complex initial conditions and varied reactions of the community; the uncertainties about local and national plans and policies relating to Bo. Escopa; and the difficulties of getting or sustaining cooperation among the various parties engaged in the project.

From the viewpoint of HES, a number of events and circumstances proved to be a drain on its time and efforts: the changing specifications of its targets and tasks, the socioeconomic and techno-physical peculiarities of the site, the rather indecisive process of participatory planning that was adopted, the "holdout" residents in the upgrading blocks, the lack of a firm policy-making framework for resolving the contentious issues of land tenure, delays in the reporting and replenishment of funds, and uncooperative weather conditions.

Consequently, many of the results of project activities began to materialize only in 1979 and came far short of their scheduled targets. For example, dwelling improvements in the upgrading blocks were actually started only in May 1979, and the idea of upgrading the rest of Old Escopa (which was scheduled in mid-1978 in the expectation that QCPDO would take on that burden) was never carried out. Other HES and related efforts or plans were diverted, reduced, or indefinitely suspended.

However, HES and other consultants did accomplish certain of their outputs, including the reblocking of 1-A, the construction of 50 dwelling units at the New Site, and the relocation of 25 families from the upgrading and other blocks in Old Escopa. In reviewing the progress of MASIP, it may also be pointed out that innovative projects with "R & D" features and implementation trials typically involve long lead times, significant uncertainties, and substantial additional costs over and above their more routine components. These are usually justified in terms of the lessons that may be learned from the experience and applied (at less cost) in other similar situations.

Costs and Benefits

With these points in mind, we will now try to assess the costs and benefits of the upgrading, relocation, and housing sub-components of HES. A more complete analysis would include all or most of its outputs, costs, and direct and indirect consequences over a period of time (at least when their

*July-October

*We are grateful to Bernardita D. Dianzon for the additional data which have been incorporated in this section.

important effects have crystallized), and do so ideally in quantitative and financial terms. However, in view of the limited experience and information available at this time — some of which we have obtained through selective interviews of residents — we will focus on certain key elements and supplement the evaluation with qualitative analysis.

We will first estimate the total and unit capital costs involved; maintenance and operating costs will not be assessed here. Then we will discuss the benefits in terms of direct housing improvements, the immediate effects of such improvements that a selected group of 1-A and New Site residents perceived, and the employment and income benefits afforded by the project activities for other Bo. Escopa residents.

In sum, it will be seen that when other major expenditure items are considered, the unit costs of upgrading and New Site housing were much greater than the "design" costs originally estimated by HES. However, there were also wide variations in unit characteristics and costs, and the benefits may significantly exceed the costs in most instances, although precision and projection are not possible at this point.

Costs. Out of a revised (1979) budget of ₱2.05 million, HES had spent, as of the end of 1979, nearly ₱1.2 million for all its project activities on and off the site. (See Table 3). For its part, Quezon City had spent ₱5.1 million for its Bo. Escopa activities, and the residents involved in upgrading and relocation had also invested considerable though varying amounts of their own funds or non-project funds.

Ignoring other objects of HES expenditures, including those for HES staff planning and overhead activities,[5] and concentrating on the "implementation" expenses (mostly contractual jobs and housing loan transfers to BECU), we note that nearly ₱814,000 was spent directly on upgrading and demonstration housing (See upper right quadrant of Table 3, reproduced in Table 4). Of this amount, ₱244,000 was devoted to site planning, development, and landscaping.

HES site development costs would thus amount to ₱65.98 per square meter in Block 1-A (as against HES's earlier estimate of ₱31.81) and ₱17.58 for the New Site housing area. The cost data are imcomplete for the New Site and Block 1-B/G/F, and do not include Quezon City's expenditures. The latter expenditures include ₱2.9 million as initial payment for the acquisition of the 4.4 hectare New Site, which cost ₱7,117,720 (or ₱161.77 per sq. m.).

The HES dwelling unit construction costs were ₱4,000 for 1-A, ₱5,000 for 1-B/G/F, and ₱6,777.60 for the New Site. (Cf. ₱7,151.50 average for Quezon City's quadruplex units.) HES applied the first two "design" unit cost amounts (which were also equal to the housing loan amounts) uniformly regardless of repair requirements, while the New Site figure is a simple average of the core-and-frame housing construction cost. At the New Site, HES used design unit costs which

[5]These expenditures are ignored because they are difficult to allocate with any precision to the concrete outputs of the project, and they include the costs of activities whose benefits extend beyond the project.

Table 3. HES Expenditures as of December 31, 1979

Activity	Personnel	Operations and Coordination	Sub-Total	Implementation					Total
				I-A	I-B/G/F	New Site	Sub-Total	Experimental House	
Site planning and development	₱ 47,180.00	3,386.24	50,566.24	99,196.92	26,396.00	41,895.47	167,488.39		₱ 218,054.63
Housing design and construction	126,346.00	1,959.72	128,305.72	148,000.00	75,000.00	338,880.00	561,880.00	22,154.95	712,340.67
Landscaping	34,768.00	1,459.70	36,227.70	45, 988.00		30,818.80	76,806.80	1,636.00	114,670.50
Water and energy conservation	47,550.00	2,061.65	49,611.65	5,290.20		2,200.00	7,490.20	1,695.00	58,796.85
Sub-total	255,844.00	8,867.31	264,711.31	298,475.12	101,396.00	413,794.27	813,665.39	25,485.95	1,103,862.65
Construction materials research		5,216.26	5,216.26					552.50	5,768.76
Food processing plant		573.80	573.80			81,332.69	81,332.69		81,906.49
Water tank marker (landscaping)		150.90	150.90						150.90
Talipapa		46.50	46.50						46.50
Overall operations and coordination		5,067.96	5,067.96						5,067.96
Sub-total		11,055.42	11,055.42			81,322.69	81,322.69	552.50	92,940.61
TOTAL	₱ 255,844.00	19,922.73	275,766.73	298,475.12	101,396.00	495,126.96	894,998.08	26,038.45	₱ 1,196,803.26

Table 4. HES Expenditures and Unit Costs in the Upgrading Blocks and New Site Housing Areas

Activity and Selected Features	Implementation Sites			
	Block 1 A	I-B/G/F	New Site Housing Area	Total
Housing design & construction	₱ 148,000.00	₱ 75,000.00	₱ 338,880.00	₱ 561,880.00
Site planning and development	99,196.92	26,396.00	41,895.47	167,488.39
Landscaping	45,988.00		30,818.80	76,806.80
Water and energy conservation	5,290.20		2,200.00	7,490.20
Total (1-4)	₱ 298,475.12	101,396.00	413,794.27	813,665.39
Sub-total (2-3)	145,184.92	26,396.00	72,714.27	244,295.19
Site size (sq.m.)	2,200.45	3,709.59	4,136.00	10,046.04
Site cost per sq.m.	65.98	7.12	17.58	
No. of dwelling units	37	15	50	
House cost per unit	4,000.00	5,000.00	6,777.60	

Table 5. Number of New Site Dwelling Units by Building Type and Lot Size

Building Type	Lot size (sq. m.)					Total Units,
	40.25	40.62	43.75	48.00	50.00	Lot Areas
Single-detached				10		10
Duplex A	6		8			14
Duplex B					6	6
Rowhouse				8		8
Quadruplex		12				12
Total Units	6	12	8	18	6	50
Total Lot Areas (M^2)	241.5	487.44	350	864	300	2,224,94 sq. m.

varied from ₱5,700 to ₱7,200 with the building types. Here lot sizes also varied from 40.25 to 50.00 sq. m. (Table 5). Assuming a per square meter acquisition cost of ₱161.77 we estimate that lot-and-house costs ranged from ₱12,711 to ₱15,288 at the New Site (excluding site development costs). (See Tables 6 & 7).

Moreover, most of the families involved and incurred additional expenditures in both the upgrading and New Site housing. As of October 1979, only six of the families in Block 1-A had not spent more than the ₱4,000 HES loan. Eighteen had spent additional amounts of from ₱1,000 to ₱5,000 (average: ₱2,333), and 10 had shelled out — from their own savings or non-project loans — from ₱5,000 to ₱20,000 (average ₱9,000). (See Tables 8 and 9.)If the costs of land acquisition (say, at ₱100 per square meter) site development (65 per square meter), the ₱4,000 loan, and an additional building expenditure of ₱1,000 were added up, a minimum-lot (36 square meter) unit could cost ₱10,940. One actual case involving a 78 square meter lot and ₱20,000 additional expense would mean a total cost of ₱36,870 on the same assumptions.

As we have observed, the variations in lot sizes had presented difficulties in the reblocking process, which eventually retained some rather big lots. A related problem has been the disparities in income and assets which surfaced with the housing improvements. Snide remarks by some residents about neighbors trying to outdo one another in terms of house size and ornament, suggest a social cost aspect to the improvement process. One resident with apparently limited means complained that the savings that he intended for business investment got diverted into dwelling construction.

Table 6. Number and Cost of New Site Dwelling Units by Unit Building and Lot Acquisition Costs

Unit Building Cost	Lot Acquisition Cost*					Total Units	Total Building Cost
	₱ 6,511.24	6.571.10	7,077.44	7,764.96	8.088.50		
₱ 5,700				4		4	₱ 22,800
6,200	2			2		4	24,800
6,950				4		4	27,800
7,000	4	12	8	8	4	36	252,000
7,200					2	2	14,400
Total Units	6	12	8	18	6	50	₱ 341,800.44
Total Lot Cost	₱ 39,067.44	78,853.20	56,619.52	139,769.28	48,531.00		₱362,840.44
Total Building and Lot Cost							₱ 704,640.44

*sq.m. x ₱ 161.77

Table 7. Number and Cost of New Site Dwellings by Building Type and Unit Cost

Unit Construction and Lot Cost	Building Type						Total Building Cost
	SD	DA	DB	RH	QD	Total Units	
₱ 12,711.24		2				2	₱ 25,422.48
13,464.96	4					4	53,859.84
13,511.24		4				4	54,044.96
13,571.10					12	12	162,853.20
13,964.96	2					2	27,929.92
14,077.44		8				8	112,619.52
14,714.96				4		4	58,859.84
14,764.96	4			4		8	118,119.68
15,088.50			4			4	60,354.00
15,288.50			2			2	30,577.00
Total Unit Cost	10	14	6	8	12	50	₱ 704,640.44

Such disparities also became apparent at the New Site, where additional expenditures of up to ₱30,000 have been made by some occupants. Despite the lack of electricity there, one relatively affluent family has installed appliances and new furniture in their seemingly all-new, single-detached dwelling — in plain view of passers-by.

On the other hand, the additional costs incurred by the residents may be viewed (as QCPDO would say) as their response to the increased security of tenure occasioned by the project, stimulate personal investments in the improvements in the improvement process.

13 individual cases. In order to update and supplement our data, we interviewed (during February 1980) six families in Block 1-A and seven at the New Site (including four relocatees from 1-A). These were selected primarily on the basis of the types of alterations made on their houses, although they also "represent" ranges of unit costs and, in the case of the New Site, building types. Four of the 13 families (including three at the New Site) were formerly renting dwellings in Old Escopa.

Table 8. Additional Costs Incurred by Block I-A Occupants in Dwelling Improvements, by Types of Treatment and Building (as of October 1979)

Treatment	Additional Cost Incurred						Total Units
	₱ 0	₱ 1,000-2,500	2,501-5,000	5,001 10,000	10,001-20,000	over ₱ 20,000	
Renovation	3	2	2	1	—	—	8
Entirely new construction	2	7	4	3	5	1	22
No data on treatment	1	2	1	1	—	—	5
Total	6	11	7	5	5	1	35
Building type							
Single-detached	6	6	5	4	3	1	25
Duplex	—	2	1	1	2	—	6
Rowhouse	—	3	1	—	—	—	4
Total	6	11	7	5	5	1	35*
Average Cost (₱)		₱ 1,500	3,643	6,100	14,100	39,000	5,200

Source: Housing and Environmental Systems (See Table 10).

*Two of the 37 families in I-A joined up with two others.

As Table 9 shows, these families spent from (₱1,000 to ₱30,000 in addition to the HES loans. There were no cases of minor repairs in 1-A; all were partially or totally rebuilt, or newly constructed (See Table 10). Partially rebuilt houses, however, do not necessarily represent the lower costs; the two instances examined involved ₱14,000 and ₱28,000 additional building costs. Neither do the New Site rowhouses represent lower costs; the duplex and detached units, though, tend to be the extremes in cost.

When all (except site development) costs and variations in lot and house characteristics are included, the unit costs would range from ₱12,896 to ₱44,765, with those at the New Site starting at the ₱16,211 level. We assume a lower acquisition cost for 1-A lots (₱100 per square meter) because it would seem to be less attractive in the "open market." For one

Table 9. Unit Costs of Selected Block I-A and New Site Dwellings

Alteration, Bldg. Type (occupants)	Building Cost Borne by Occupant	HES	Sub-total	Assumed Land Acquisition Cost	Total Unit Cost
Old Site (Blk. 1-A) Residents				(at ₱100/m²)	
Partially rebuilt	₱14,000	4,000	₱18,000	4,450	₱22,450
Entirely rebuilt	5,000	4,000	9,000	3,896	12,896
New	11,000	4,000	15,000	3,800	18,800
Partially rebuilt	28,000	4,000	32,000	7,800	39,800
Entirely rebuilt	26,000	4,000	30,000	3,700	33,700
New	16,000	4,000	20,000	3,800	23,800
New Site Relocatees From Blk. 1-A				(at ₱ 162/m²)	
RH	10,000	7,000	17,000	7,765	24,765
DP	1,000	7,000	8,000	8,089	16,089
DP	2,700	7,000	9,700	6,511	16,211
SD	20,000	5,700	25,700	7,765	33,465
From Brgy. 3					
RH	3,000	6,950	9,950	7,765	17,715
DP	5,000	6,200	11,200	6,511	17,711
SD	30,000	7,000	37,000	7,765	44,765

Source: Housing and Environmental Systems (HES) building costs, HES; occupants, costs, interviews; land acquisition costs, assumed from HES and interview data.

Table 10. Additional Building Costs Borne by Occupants and Building Characteristics in Block 1-A (as of October 1979)

Occupant	Add'l Cost* (Partial)	Treat-ment	Type of Materials GF	SF	Building	Total Floor areas (m^2)	Lot Size (m^2)
A	₱ 1,000	ENC	CW	WP	SD	85.31	62.00
B	4,000	ENC	CW	WP	SD	63.48	59.50
C	11,000	ENC	CW	CW	DP	45.36	36.50
D	12,000	ENC	CW	CW	DP	41.58	36.00
E		ENC	CW	—	SD	—	58.00
F	3,000	REN	CW	—	SD	84.00	66.00
G	—	REN	CW	CW	SD	49.06	44.50
H	3,500	ENC	CW	—	SD	37.73	36.00
I	20,000	ENC	CW	WP	SD	60.55	78.00
J	17,000	ENC	CW	CW	SD	40.82	37.00
K	3000**	ENC	CW	—	DP	22.91/22.91	37.50/50.00
L	39,000	ENC	CW	CW	SD	104.03	77.50
M	—	REN	—	—	SD	—	37.00
N	6,500	REN	—	—	SD	28.40	42.00
O	6,000	ENC	CW	—	SD	58.05	57.50
P	10,500	ENC	CW	CW	SD	43.16	46.00
Q	— —	ENC	CW	--	SD	50.15	52.51
R	1,000	ENC	CW	WP	DP	47.02	41.20
S	6,000	ENC	CW	WP	DP	48.92	44.02
T	5,000	ENC	CW	WP	DP	32.10	55.27
U	3,000	REN	CW	WP	RH	50.46	38.96
V	1,500	REN	CW	WP	RH	36.96	36.46
W	1,500	ENC	CW	WP	RH	36.96	36.00
X	1,500	ENC	CW	WP	RH	36.96	37.33
Y	1,000	REN	CW	WP	SD	61.75	47.00
Z	— —	REN	CW	WP	SD	61.10	65.50
Aa	4,000	ENC	CW	WP	SD	46.44	50.50
Bb	1,000	ENC	CW	WP	SD	46.44	52.00
Cc	6,000	ENC	CW	WP	SD	40.80	38.00
Dd	1,000	ENC	CW	—	SD	18.96	—
Ee	3,000	—	CW	CW	SD	—	—
Ff	2,500	—	CW	CW	SD	—	—
Gg	6,000	—	CW	WP	SD	—	--
Hh	— —	—	CW	WP	SD	—	--
Ii	2,500	—	CW	WP	SD	—	--

Legend: ENC means entirely new construction; REN, renovation; GF ground floor; SF, second floor; CW, concrete or concrete hollow-block walls; WP, wood panel; SD, single-detached; DP, duplex, and RH, rowhouse.

*Other residents did not incur any additional cost, or had not done so at the time the data were gathered. Repairs or renovation on some units had not started; other data were not available.

**Occupants K would occupy two units. They borrowed ₱ 4,000 each from HES, so that their combined expenditures would be ₱ 10,000.

Source: Housing and Environmental Systems

thing, simply clearing the land would entail demolition costs, though the strictly financial expenses may be less significant than the social costs of slum clearance.

Only three of the 13 respondents (including two in 1-A) said that they incurred demolition costs (₱200 to ₱300), and only four incurred moving costs (₱40 to ₱60). Eleven spent ₱5 to ₱50 a day for the snacks and other incidental expenses of workmen. We have not counted these costs in Table 10, but they may have been already included in the additional cost estimates.

Dwelling changes and benefits. While we cannot fully and precisely depict the "before and after" situations of the 13 respondents, we may gather from the partial information they gave that the changes in their housing were generally favorable to them. Four were now no longer house-renters. Many of them got lots and dwelling spaces of the same or bigger size, additional floors, and more rooms compared to what they had or occupied before. There were a few families who indicated that they were worse off in these terms. These included some residents who had occupied lots so big that they had to give up portions of them (and, incidentally, portion of their existing houses as well).

Apparently, the 13 respondents now had more durable and valuable houses. In six units (3 in 1-A, 3 at the New Site), new materials were used for building, while in the remaining seven, both old and new materials were used. Nine respondents figured that their units could last from 6 to 30 years, seven of these respondents cited from 20 to 30 years. Most of these same respondents, especially those who had invested large additional sums, placed the current values of their houses at ₱20,000 to ₱60,000 or from 13% to 78% greater than their estimated total unit costs (minus site development). These current values are considerably greater than the values of their former homes, though there are exceptions in terms of these gains.[6] (See Table 11.)

Despite the setbacks cited by some of them, the 13 respondents were nearly unanimous in saying that the changes in their housing situation were for the better. When asked whether their new dwellings were generally better, less crowded,[7] safer, more comfortable, and had better surroundings, they replied affirmatively[8] to each question except "safer," which elicited some reservation. They especially liked the more spacious, cleaner, and neater surroundings, including the improved drainage and footpaths in

[6]One case (New Site) involved a decline from ₱ 25,000 to ₱ 20,000, the owner's Old Site house was only partially demolished and was now being used by a daughter.

[7]We inquired into changes in household size and composition, but found only two cases (one in I-A, the other a relocatee from I-A to the New Site), in which the households were considerably reduced and altered —from 15 to 2 members in one case, and from 16 to 5 in the other. In the I-A case, renters, as well as relatives separated out, so that the owner lost ₱ 85 in monthly rental.

[8]The replies are no longer tabulated in this report since they were, almost without exception, affirmative. For some of the open-ended remarks, however, see Table 11. In another interview, the respondent who had moved from a rather commodious house in the MSSD compound, had nothing positive to say about their New Site home.

Table 11. Estimated Values and Life of Dwellings; Remarks on New Housing

Respondents	Total Unit Cost*		Estimated value of		Estimated life of new house (Years)	Remarks about New Dwelling and Surroundings	
	House and Lot	House Only	New house	Old house		Features Especially liked	Disliked
Block I-A Residents							
A	₱ 22,450	₱ 18,000	₱ 30,000	₱ 8,000	—	No more flood	
B	12,896	9,000	20,600	10,000	—	More durable	
C	18,000	15,000	30,000	(rented)	20	Own house, footpaths spacious	Location of septic tank
D	39,800	32,000	50,000	3,500	30	Clean, spacious surroundings; no more flood	
E	33,700	30,000	60,000	10,000	30	Neat-spacious	Lack of water
F	23,900	20,000	60,000	*	20	Roomy, own house	
New Site Residents from I-A							
G	24,765	17,000	17,500	(rented)	10	Spacious, fresh air	Low roof; toilet too close to kitchen
H	16,089	8,000	40,000	500	—	Neat-spacious	Somewhat dusty
I	16,211	9,700	30,000	(rented)	6	Spacious, nice atmosphere	Low roof
J	33,465	25,700	50,000	(rented)	25		
From Barangay 3							
K	17,715	9,950	20,000	5,000	—	Fresh air, quiet	No water, electricity
L	17,711	11,200	20,000	25,000	25	Nicer, spacious, clean	Dark, no light
M	44,765	37,000	60,000	10,000	20	Nicer	

*January-April 1980. Does not include site development cost.

**Blanks indicate "Don't know" or no reply.

From the evidence available, it would seem that the project has 1-A, the fresh air and good road at the New Site, and in some cases the fact that they now had their own houses. A few respondents were not sure whether they were safer against break-ins and peace-and-order problems. Some expressed concern about the lack of electricity and water at the New Site, and complained of the "low" roofs of the houses there.

If this analysis could be pursued, the foregoing observations would supply some of the indicators of other longer-term benefits beyond the immediate gain in housing quality and property value (net of cost). For instance, benefits may accrue to the residents from the favorable effects of their improved dwellings and surroundings on their health and morale. Some of these benefits could come in the form of savings from reduced morbidity, reduced absenteeism from work, and enhanced productivity. Reduced property damage or loss (say from flooding), lower costs of maintenance of community facilities, and increments to municipal revenue[9] could be counted among the benefits.

Such effects must be experienced for some time, however, before their benefits (and costs) could be accurately estimated. In the meantime, another more immediate effect of the project should be considered.

Employment and income. An objective of HES was the training, employment, and improvement of the incomes of local residents involved in the development activities. Considerable proportions of both project and non-project expenditures were devoted to construction labor, although building materials probably absorbed most of the investments. Some of the salaries and wages paid out went to Bo. Escopa residents. HES hired 10 "Escopa boys" as research assistants in housing design and construction and paid them a total of ₱22,236 (under "Personnel" in Table 3). Moreover, local contractors and crews, whose number reached 56 members for one contractor, got site development, landscaping, and housing construction jobs worth hundreds of thousands of pesos.[10] Crew members received wages averaging ₱25 a day and ranging from ₱10 to ₱30 daily.

Since local workers were found by HES as already having construction skills prior to the project, some of them were probably previously employed or could have been at other jobs if the project activities had not engaged them.[11] In the absence of the necessary job status data, it is impossible to tell just how much employment and income increments HES activities generated in Bo. Escopa. From the 13 cases examined, how-

[9]QCPDO estimates indicate that the assessed value applicable to a ZIP area like Bo. Escopa is ₱ 160 per square meter. The property tax rate is 2.5 % of assessed value, or ₱ 4.00, so that total taxes that may be expected from Block I-A (2,200.45 square meters)/ is ₱ 8,801.80 and from the New Site (2,224.91 square meters), P 8,899.76.

[10]See Table 4 for the general order of magnitudes of contract jobs.

[11]The 56 workers hired by one local contractor were all jobless at the time they were engaged in Bo. Escopa. They were paid an average daily wage of ₱ 18.85; median wage was ₱ 15.50.

ever, we gather that there could be many jobless residents who were engaged in project-related work.

In these cases, a total of 49 workmen were employed. The jobless workers (17) hired for pay by 1-A residents outnumbered those otherwise with jobs (14). The opposite was true at the New Site (3 jobless vs. 15 with jobs). Paid workers worked for daily wages of from ₱10 to ₱50, for short periods at the New Site and for up to four months in Block 1-A. Some "free" labor (of household members, relatives) was also used, but jobless cases were rarer here. And in some instances, relatives or friends from outside Escopa were brought in to help. Labor in 11 of the 13 cases absorbed a total of ₱38,700 in occupant-borne building expenditures, or from 6.7% to 44% of the corresponding additional costs. This means that building materials took the lions's share of construction cost borne by the occupants (about 80%). (See Table 12).

The direct infusion of jobs and incomes into Bo. Escopa may have had some local "linkage" and "multiplier" effects, but these are hard to trace.[12] training and experience in community A related benefit, however, is the construction afforded by the project, including the business side of contracting.

Summary

This section has been a preliminary assessment of the upgrading, relocation, and new housing activities in Bo. Escopa. The limited project experience and data available do not permit us to get a fuller picture of the costs and benefits involved and their balance.

To give an idea of gross costs for Block 1-A and the New Site, table 13 adds to Table 4 assumed land acquisition costs and building expenditures borne by residents.

Without considering other site development expenditures by Quezon City and HES, and HES's staff "personnel" and overhead expenses, the costs of the project in Bo. Escopa would seem to be already high for a cost-minimizing effort. This seems to be true especially of the New Site housing. The rising prices of land and construction during the period covered would help to account for this pattern. This was dramatized by the escalation of the acquisition cost of the New Site and the construction cost of the food-processing plant.

On the other hand, there seem to have been some definite (though less quantifiable) net gains from the project and residents' own investments. Based partly on the information supplied by some of the residents, the quantity and quality of their housing and environment improved along with the market value of their property. These could result in further gains in health, economic performance, and other benefits later on. Meanwhile, the project has generated additional employment and income among local construction workers, and the residents own investments to community improvement.

Conclusion

Bo. Escopa appears to have been a success story where other similar projects often fail, but it is not an unqualified one.

[12] One Block I-A resident engaged in a small-scale business of supplying hollow-blocks from outside, but it seems that her goods were tied up in "loans" to neighbors which delayed her own house-rebuilding work in the process.

Table 12. Costs of Dwelling Construction Labor and Materials in Block 1-A and New Site (Occupant-borne Costs only)

		Labor	Materials	
Block I-A				
A		₱ 4,000	₱ 5,000	
B		1,000	13,000	
C		6,000	12,000	
D		2,000	18,000	
E		9,000	21,000	
F		4,000	28,000	
	Sub-total	₱ 26,000	₱ 97,000	
	Percentage	21.14%	78.86%	
	Total			₱ 123,000
New Site				
		₱ 2,000	₱ 8,000	
H		4,000	16,000	
I		700	2,300	
J		1,000	4,000	
K		5,000	25,000	
	Sub-total	₱ 12,700	₱ 55,300	
	Percentage	18.68%	81.32%	
	Total			₱ 68,000

improved housing conditions for the residents covered by HES, and afforded significant local participation in the planning, financing, and implementation of site and dwelling improvements, not to mention the other component activities of MASIP. HES's housing design for the New Site may well be replicable in other areas, but the reblocking, upgrading, and relocation procedures, as usual, involved more complex processes that need to be suited closely to particular situations. In both Old and New Escopa, project activities provided ample opportunities for residents' inputs

Table 13. Assumed Land Acquisition Costs and Building Expenditures

	Block I- A	New Site	Total
Land acquisition	₱ 200,045*	₱ 669,080*	₱ 869,125
Site improvements	145,184	72,714	217,898
Housing (HES)	148,000	338,880	486,880
Housing (occupants)	183,000	250,000*	433,000
Total	₱ 676,229	₱1,330,674	₱2,006,903
No. of families	37	50*	87
Gross per unit cost	₱ 18,276	₱ 26,613	

*Assumed: Land Acquisition at ₱100 and ₱162 per square meter, respectively; New Site occupants' share of building costs at ₱5,000 each; only 25 families had occupied New Site houses.

of funds, labor, and ideas, and also generated employment and income for local and outside contractors and labor.

The willingness of some residents to more than match project loans for dwelling improvements is perhaps the most encouraging aspect of the project. It tends to confirm the idea that security of land tenure is crucial in stimulating renewal or upgrading in a slum settlement, once the issues surrounding tenure are — or appear to have been — resolved. In fact, however, there remains some doubt about tenure, as the city government would discourage any "concept of (land) ownership" for the residents and its own implicit claim to Old Escopa is dubious since the MSSD holds the title to the land. At any rate, the personal investments made by the residents in housing improvement also confirm what students of slums have long known but may forget before an upgrading project: Some slum-dwellers are more affluent or more resourceful, while others are as poor or poorer than we think.

In the final analysis, HES, like MASIP as a whole, accomplished much less than what it (or at least the UN proponents of MASIP) had hoped for. For one thing, it was able to reblock and upgrade only about 10% instead of all of Old Escopa (the New Site pilot housing area added about 7% of improved residential land, though site and building improvements there covered more of the 4.45 hectare site). Moreover, it was able to accomplish what it did only after much difficulty and delay. These shortcomings were only partly due to financial problems; in fact, while allocations to HES may have been limited, MASIP had some excess funds at the close of the project. Time, rather than funds, ran out on MASIP. The difficulties and delays may be viewed as the price exacted by the innovations in substantive design, project organization, and community interactions that

MASIP and HES attempted — and also as the toll taken by the external events that intervened and hampered the progress of the project.

What other lessons may we glean from this case in terms of the issues posed earlier in this article?

One is that active local participation could propel and sustain, if not facilitate, project planning and implementation. Perhaps local participation never does make projects easier to undertake, but the greater time and effort it entails is likely to pay off in both short- and long-term advantages, as it harnesses local interest, energies, and resources and builds up momentum for community improvement. The key may be the assurance that the "locals" can influence the process of planning as well as implementation. This assurance was probably provided by the open-ended process adopted by HES, which was a departure from the preconceived, "technocratic" approach hated by critics of planners. But the HES process was too time-consuming and indecisive, as it was eventually realized. To prevent infinite regress, a participatory planning process should provide "closure" as well as an "open door," by limiting the number of alternative plans to be generated and prescribing a definite point for decision by the participants.

Our suggestion of a better-structured planning process, however, may understate the peculiar conditions of people and place that a project has to contend with or adapt to, on one hand, and overstate the clarity of the basic policies and plans bearing on a project and its site, on the other. Upgrading an existing community requires "fine-tuning" and adaptation of standardized policies, such as building regulations (Bo. Escopa was relieved of the latter constraint by the failure of the authorities to get building permits!) As the question of land tenure suggests, however, other relevant local and national policies and plans may be far from standardized, and on the contrary may be too ambiguous to guide project decisions. One major task of project planners and implementors, therefore is to seek clarification of such policies by higher authorities or at least "clear" those that they propose for a specific project.

This may be but one of the demanding tasks imposed by the integrated approach adopted by MASIP. This approach may be viewed as an effort to anticipate, comprehend, and control both external circumstances and internal conditions as part of a project's planned and coordinated activities. As an international project that took time to incubate and settle on Bo. Escopa, MASIP had some opportunity to scan its wider environment for signs of change that may affect its content and progress. But this lead time was apparently not enough for its planners and implementors (and monitors like us) to foresee the coming of BLISS or the delay in acquiring the New Site. Such consequential circumstances probably more often occur as unanticipated events and even when foreseeable, they may have to be adjusted to rather than controlled. The scale of a project and its organization is a limiting factor for effective control of project variables. The smaller they are, the more "exogenous" the important factors tend to be, and the less subject they are to project control.

MASIP was small compared to other projects like Tondo, but inter-

nally, it was complex enough in substance and organization to make coordination difficult at times. The specific shortcomings here (e.g., conflicting schedules for the same group of residents) may be minor and may recede in the distance in view of the accomplishments and favorable community opinion of MASIP. But the organization of MASIP as a special NHA project peopled mostly by academics and agency representatives should occasion some doubt as to how "integrated" it could have been. The rationale for this composition, of course, was the experimental or R & D nature of the project. With an eye to replication elsewhere, MASIP consultants produced a series of manuals as well as final reports as another major output. Yet there remains the question of how the efforts in Bo. Escopa could be sustained after this group was disbanded — and how similar projects could be replicated or, more importantly, institutionalized elsewhere, given that MASIP did not supply an example of such a process.

A final and personal note. As monitors of the project who were later considered part of its consulting group, we had a good share of MASIP's shortcomings, although we cannot take any of the credit for its accomplishments. To make a long story short, we found the role of abiding monitors so engrossing in the details of day-to-day or weekly activities that we often failed to see the forest for the trees. A better system for monitoring may be one where the monitors do their tasks only periodically (say, on a quarterly or six-month basis). Another caveat: there is a fine distinction between project "effects" and project "impact" that is difficult—but practical to observe. Effects may be equally important but short-term, while impact is a long-term set of consequences better evaluated some time (say, one year) after a project is completed.

List of Abbreviations

AER	—	Alternative Energy Resource
BECU	—	Barrio Escopa Credit Union
BLISS	—	Bagong Lipunan Sites and Services
Bo.	—	Barrio
CF	—	Credit and Finance
EDEG	—	Enterprise Development and Employment Generation
HES	—	Housing and Environmental Systems
MASIP	—	Marginal Settlements Improvement Project
MSSD	—	Ministry of Social Services and Development
MWSS	—	Metropolitan Waterworks and Sewerage System
NAWASA	—	National Waterworks and Sewerage Administration
NFPP	—	Nutrition, Food Production and Food-Processing
NHA	—	National Housing Authority
OVR	—	Office of Vocational Rehabilitation
QCPDO	—	Quezon City Planning and Development Office
UN	—	United Nations
UNEP	—	United Nations Environment Program
WMS	—	Waste Management Systems
ZIP	—	Zonal Improvement Program

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