

**HARVARD UNIVERSITY GRADUATE SCHOOL OF DESIGN**

**Unit for Housing and Urbanization**

*Sustainable Improvement Strategies  
for  
Lower Income Urban Communities*

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***SUSTAINABLE IMPROVEMENT STRATEGIES  
FOR LOWER INCOME URBAN COMMUNITIES***

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**Appendix: Summary of Overall Study Components**

## ***SUSTAINABLE IMPROVEMENT STRATEGIES FOR LOWER INCOME URBAN COMMUNITIES***

### **INTRODUCTION**

The Unit for Housing and Urbanization at the Harvard Graduate School of Design was established in 1987. Its primary purpose is to undertake applied research and teaching activities that increase the efficacy of professionals in the fields of urban development and housing in developing countries.

Rapid and partially uncontrolled urban expansion, dominated by the growth of peripheral low-income communities, has been the salient characteristic of Third World cities in the last two decades. The Unit has first focused its activities on enhancing the ability of municipalities to cope with the consequences of this uncontrolled growth. It is now concentrating on developing strategies and management tools to address the urban problems of the 1990's. These include choosing responsive urban policies in a time of severe budgetary constraints.

The Unit has initiated a major study to identify sustainable approaches to improving and maintaining the environmental quality of low-income neighborhoods. The study will be undertaken in cooperation with international organizations, and selected central and local government agencies, non-governmental organizations and academic research units in developing countries. Individual components are planned in five geographic regions: the Middle East and North Africa, Sub-Saharan Africa, South Asia, South-East Asia and Latin America and the Caribbean (Appendix I). This proposal focuses on the Middle East and North Africa regional projects.

### **PROBLEM DEFINITION**

The World Health Organization estimates that 5 million deaths and 2 to 3 million cases of permanent disability are caused yearly by contaminated water, poor sanitation, air pollution and overcrowding. The cumulative impact of these conditions is the most severe for children in low-income urban neighborhoods. It is estimated that a child born in a squatter settlement is 40-to-50 times more likely to die before the age of five than a child in an industrialized country. According to the UN, efforts to alleviate these conditions through conventional upgrading and sites-and-services projects, has reached only ten percent of the urban poor. This investment has been concentrated in 150 projects which sought to achieve replicability through lower standards and higher levels of cost recovery.

These projects, which necessitate central government subsidies in one form or another, are increasingly becoming unaffordable to nations burdened by heavy foreign debts at a time when decentralization policies are shifting the responsibility of providing services to local governments. Municipalities in developing countries are attempting to cope with their new obligations by redefining their land development strategies, reorganizing their institutional structures and finding new methods of generating the financial resources necessary to provide and maintain urban services.

Sustaining the positive impacts of government expenditures on urban infrastructure is of crucial importance if effectiveness in public investment is to be ensured. For government authorities this is a demanding task. Intense development pressures in many urban communities, especially in the larger cities, can cause densities to double in less than five years and triple within eight to ten years. Lower development standards and the lack of maintenance combine to erode the effects of service improvements and undermine the livability of project sites. Settlements, which were upgraded less than a decade ago have reverted back to slum conditions. Higher densities, overburdened services, and the general lack of indoor and outdoor space undermine the health and development of young children.

The ability of local government to respond to needs, and the effectiveness of the responses are linked to the capability to formulate and implement affordable improvement strategies which are also sustainable without a continuous infusion of public resources.

### **PROJECT GOAL**

The research project seeks to identify, define and test strategies and methods to enable government authorities with private sector participation, to develop sustainable approaches to upgrading and maintaining urban environments in limited income communities. Special emphasis will be placed on defining strategies which have beneficial impacts on the quality of life for children and youths.

### **PROJECT OBJECTIVES**

1. Identify and select pragmatic approaches to sustaining environmental quality in low-income urban neighborhoods with particular emphasis on the needs of children and youths. .

2. Identify, select and define appropriate monitoring and evaluation criteria to appraise prevailing levels of urban environmental quality including health and sanitary conditions.

3. Develop guidelines for sustainable improvement programs to be implemented by public authorities and non-government organizations.

4. Train public officials and members of community organizations in assessment techniques and implementation of action programs for improving and maintaining environmental quality.

### **METHODOLOGY**

The study design consists of an overall methodological framework that integrates the findings of research projects conducted in different geographical regions. The sites chosen for the projects are similar enough to produce general guidelines, but different enough to highlight crucial cultural, social and economic variations. Each regional project within the study is designed as a separate component with research efforts yielding specific outputs. The overall framework for the study will further integrate and merge the findings from each project into a coherent set of strategic recommendations and guidelines. Research and documentation undertaken by the Unit over the past two years

(Appendix II) will provide support, analytical tools and comparative materials for this study.

The regional project in the Middle East and North Africa will involve the following elements:

1. The reassessment of projects in Jordan and Egypt that successfully demonstrated both public and private sector approaches to improving environmental quality in urban neighborhoods. The reassessments will identify factors which enhanced or safeguarded the sustainability of the improvements and factors which impaired or destroyed their functional quality.

\* In Jordan, the reassessment will concentrate on two sites in Amman upgraded by the Urban Development Department in the early 1980's. The reassessment will draw on a 1982 baseline study which focused on the relationships between health and environmental conditions in the sites and a 1986 follow-up study which highlighted the impact of the upgrading project. The analysis will also document the health impacts of improvements introduced five to six years earlier on children under five years of age today.

\* In Egypt, the reassessment will be conducted on two sites in Cairo. The first is a citizen self-reliance improvement project implemented in 1981 by residents of a deteriorated public housing estate. The second is a similar site included in a Cairo Governorate training program for municipal engineers in 1986. Both projects involved getting residents to improve their common spaces and preventing the misuse of vacant land. The reassessment will draw on a 1982 evaluation of the first site and documentation of the upgrading at the second site.

2. The development of operational guidelines to stimulate upgrading and maintain environmental quality in the face of processes of physical transformation and social change.

3. The organization of a regional workshop on sustainable management strategies. Public officials, representatives of donor agencies and the experts participating in the various components of the study will be brought together to discuss and evaluate proposed guidelines and make recommendations to promote their adoption.

4. The formulation of detailed operational strategies and the selection of indicators to monitor environmental quality.

5. The design of training programs for public officials and community leaders.

6. The conducting of field tests to determine the effectiveness of operational guidelines and training programs. Discussions with implementing agencies have identified potential sites in Jordan, and Cairo.

## **PROJECT OUTPUTS**

The findings of the project will be compared to results obtained from other regions and discussed in the Workshop. Guidelines and training materials developed through the larger study will merge the experience gained from regional components and highlight the impact of cultural and socio-economic variables on the factors contributing to the sustainability of improvements.

Agencies responsible for the implementation of urban upgrading programs which participate in the project will be left with:

- \* An evaluation of past accomplishments highlighting areas of strength to build upon;
- \* A set of tested guidelines for the development of sustainable improvement programs integrating physical and socio-economic factors; and
- \* A core group of personnel adequately trained in:
  - the appraisal and monitoring of environmental quality;
  - the mobilization of private resources within lower income urban communities to upgrade and maintain the quality of their environment; and
  - the structuring of public and private interface to ensure the sustainability of improvement programs.

## **EVALUATION**

The Unit will closely monitor the pilot projects selected for field testing of operational guidelines to identify the critical elements contributing to the success or failure of the tests. Evaluation criteria will focus on assessing each action program based on impact, sustainability, the performance of the institutions involved, capital cost and maintenance cost.

Anticipating the inevitable transformations which intensify the use of land in upgraded areas, the evaluation would also cover: the use of interior and exterior spaces; the interaction between public and private spaces; the extent to which the needs of youths and children are successfully met; and the health and social impacts of increasing densities, as well as their environmental consequences.

## **SCHEDULE**

The project is to be carried out in two phases over a three year period. Phase I, which will require approximately 18 months, includes the following activities: the reassessment of the Amman and Cairo projects; the development of operational guidelines; the workshop; the formulation of detailed operational strategies, the selection of monitoring indicators and the initial preparation of training materials. Phase II, which will also require approximately 18 months, will involve the finalization of training programs and the field tests. Field tests will be monitored with a final evaluation conducted after the tests are completed.

## **BUDGET**

The study is jointly funded by Harvard GSD Unit for Housing and Urbanization, Ford Foundation, Regional Office and UNICEF, Regional Office. Budgetary efficiency is achieved by the distribution of tasks among Cambridge, Amman and Cairo and the allocation of assignments between Unit staff and locally recruited professionals.

To the largest extent possible, the study will rely on Jordanian and Egyptian professionals and seek the active participation of executive agencies responsible for implementing upgrading programs. Linking into existing programs will allow field work to proceed at a modest cost and have an immediate impact. Results can be quickly integrated into new and ongoing activities for which funding is already available. This will assure continuity after the study is completed.

## **STUDY TEAM**

François Vigier, Charles Dyer Norton Professor of Regional Planning and Director of the Unit, will oversee the overall study. The Middle East and North Africa regional component will be coordinated by Dr. Mona Serageldin, the Associate Director of the Unit.

The Study Team will consist of unit staff and subcontractors. The team brings together the diverse disciplines needed to study complex urban issues and the expertise and level of field experience required to develop feasible operational strategies.

- Dr. Wafaa Abdalla, Landscape Planning, Advisor, Social and Cultural Center, Institute of National Planning, Egypt;
- Mr. David Cook, Urban Infrastructure Management, Planning Advisor;
- Mr. John Driscoll, Housing and Community Upgrading, Research Associate at the Unit;
- Dr. Sawsan El Messiri, Urban Social Anthropology, Community Development and Upgrading Advisor;
- Dr. Mona Serageldin, Urban Institutional and Financial Planning; Associate Director of the Unit;
- Dr. Seteney Shami, Socio-cultural Anthropology, Head, Anthropology Section, Yarmouk University, Jordan;
- Dr. François Vigier, Urban Planning and Design, Director of the Unit and Professor of Regional Planning, Harvard University Graduate School of Design.

# SCHEDULE

| PRELIMINARY SCHEDULE  | PHASE I               |    |        |      |      |  |        |        |    |    |        |        | PHASE II |        |        |        |        |        |        |        |        |        |        |        |
|---|-----------------------|----|--------|------|------|--|--------|--------|----|----|--------|--------|----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|   | 1990                  |    |        |      |      | 1991   |        |        |    |    | 1992   |        |          |        |        |        |        |        |        |        |        |        |        |        |
|   | J                     | F  | M      | A    | M    | J  | J      | A      | S  | O  | N      | D      | J        | F      | M      | A      | M      | J      | J      | A      | S      | O      | N      | D      |
| 1. Reassessment of Projects<br>-Cairo<br>-Jordan                                | ****                  | CC | CCCCCC | CCCC | JJ   | JJJJJJ   | JJJJJJ |        |    |    |        |        |          |        |        |        |        |        |        |        |        |        |        |        |
| 2. Develop Operational Guidelines<br>-Cairo<br>-Jordan                          |                       |    |        | CC   | CC   | JJJJ   |        |        |    |    |        |        |          |        |        |        | XX     |        |        |        |        |        |        |        |
| 3. Workshop on Sustainability   |                       |    |        |      |      |  | XXXXXX | *      |    |    |        |        |          |        |        |        |        |        |        |        |        |        |        |        |
| 4. Formulate Operational<br>Strategies & Select Indicators<br>-Cairo<br>-Jordan |                       |    |        |      | CCCC | CC   | JJ     | JJJJ   | CC | JJ | XXXX   | XX     |          |        |        |        | XX     | XX     |        |        |        |        |        |        |
| 5. Develop Training Manuals   |                       |    |        |      |      |  | XX     | XXXXXX | XX |    |        |        |          |        |        |        |        |        | XX     | XX     |        |        |        |        |
| 6. Field Tests<br>-Cairo<br>-Jordan   |                       |    |        |      |      |  |        |        |    |    | JJJJJJ | CCCCCC | CCCCCC   | CCCCCC | CCCCCC | CCCCCC | CCCCCC | CCCCCC | CCCCCC | CCCCCC | CCCCCC | CCCCCC | CCCCCC | CCCCCC |
| 7. Monitoring of Field Tests  |                       |    |        |      |      |  |        |        |    |    |        | XXXXXX | XXXXXX   | XXXXXX | XXXXXX | XXXXXX | XXXXXX | XXXXXX | XXXXXX | XXXXXX | XXXXXX | XXXXXX | XXXXXX | XXXXXX |
| 8. Evaluation   |                       |    |        |      |      |  |        |        |    |    |        |        |          |        |        |        |        |        |        |        |        |        | XXX*-> |        |
| LEGEND:   | X: General Activities |    |        |      |      | * Preliminary Design, Workshop & Post Project Assessment |        |        |    |    |        |        |          |        |        |        |        |        |        |        |        |        |        |        |
|   | C: Cairo Activities   |    |        |      |      | J: Jordan Activities                                     |        |        |    |    |        |        |          |        |        |        |        |        |        |        |        |        |        |        |

LEGEND: X: General Activities  
C: Cairo Activities

\* Preliminary Design, Workshop & Post Project Assessment  
J: Jordan Activities



## **APPENDIX**

### **Summary of Regional Projects**

The following is a summary of activities underway or planned for each of the regional projects.

#### ***Middle East and North Africa***

The regional project in the Middle East and North Africa, funded by the Ford Foundation, UNICEF and the Unit, will be conducted in cooperation with the Urban Development Department in Jordan, the Cairo Governorate and community groups. It will be carried out in two phases over a three year period.

In Jordan, the survey will concentrate on two sites in Amman that were upgraded by the Urban Development Department in the early 1980's with funding from the World Bank. The survey will also document the health impacts of improvements on children under five years of age.

In Egypt, the survey will be conducted on two sites in Cairo. The first is a citizen self-reliance improvement project implemented in 1981 by residents of a deteriorated public housing estate. The second is a similar site included in a Cairo Governorate training program for municipal engineers in 1986. In both projects residents improved their common spaces and prevented the misuse of vacant land.

Discussions with implementing agencies have identified sites for field tests in Aqaba and Cairo.

#### ***Sub-Saharan Africa***

In the Sub-Saharan Africa regional component, the surveys will focus on three sites in Abidjan: Abobo-Gare, Port-Bouët II and Port-Bouët.

Abobo-Gare is an informal settlement for low and middle income groups developed in the 1960's on land subdivided by customary occupants. It was upgraded in 1982 with funding from the World Bank.

Port-Bouët II is a rapidly densifying settlement which grew out of a temporary resettlement zone developed by SOGEFIHA to accommodate residents displaced by the construction of a public housing project in the Port-Bouët area. The upgrading project completed in 1983, was used to test the performances of small-scale contractors for the civil works component and the project completion report stressed the need to find adequate institutional and financial channels to maintain the newly created assets.

The Port-Bouët "AMCAV" community upgrading project, initiated in 1984 to introduce sanitary works and community facilities, combined decentralized urban management with community participation.

Field reconnaissance and documentation of the site was funded by the Unit and completed in 1988.

### ***South Asia***

In the South-Asia regional component the following sites in Pakistan and India were selected for reassessment.

In Bombay, two sites have been identified: the Charkop land infrastructure servicing project; and a slum upgrading project implemented as part of the Bombay Urban Development project initiated in 1985 with World Bank Financing. Field testing would occur at project sites to be selected in consultation with the Karachi Development Authority and the Bombay Municipal Corporation.

### ***South-East Asia***

A reassessment of two projects in Indonesia is planned. Specific sites in Jakarta and Surabaya will be selected for the reassessment in consultation with the Indonesian Directorate General of Human Settlements. A site upgraded in the late 1970's under the Kampung Improvement Program and a second site upgraded in the mid-1980's under the Integrated Urban Infrastructure Development Program. Field testing would occur at sites, selected by the Directorate General of Human Settlements and emphasize issues of decentralization and a larger private sector role in the provision and maintenance of infrastructure.

This regional project is still under development. Funding will be sought upon finalization of site selection.

### ***Latin American and the Caribbean***

In Latin America and the Caribbean the Unit has initiated preliminary investigations to select sites for future surveys. The Unit has funded a case study on the Barrio De Carapita in Antimano, Caracas, Venezuela to document impact of safety and sanitation problems on the functional utility of private and public spaces in the settlement. This will provide insights into issues relating to the provision and maintenance of municipal services.