

**Progress Report for The Ford Foundation on
Sustainable Improvement Strategies for Lower Income Communities
Amman and Cairo Components**

May 1991

A. Background

The Unit for Housing and Urban Development at the Harvard University Graduate School of Design has initiated a major research effort to identify sustainable improvement strategies for lower income communities in different geographic regions. The project is an outgrowth of the Unit's research on how development pressures in urban communities can cause densities to double and triple within five to ten years, often eroding the positive environmental impacts of improvement projects.

Co-funded by the Ford Foundation, UNICEF, and the Unit, research efforts in Amman and Cairo are reassessing projects that successfully demonstrated both public and private sector approaches to improving environmental quality in urban neighborhoods. In Karachi, the Unit is funding a survey of a low-income community in cooperation with the Department of Community Health at the Aga Khan University.

In Amman, the reassessment is focusing on two sites upgraded by the Urban Development Department (UDD) in the early 1980's. Through their joint study, the UDD and the Unit are assessing the transformations that have taken place in two settlements during the last decade in order to develop more sustainable improvement standards for future UDD projects. In Cairo, Dr. Wafaa Abdalla is conducting an independent reassessment of the two public housing estates where residents helped to reverse deteriorating conditions by improving their common spaces and prevented the misuse of vacant land. In both the Amman and Cairo reassessments a special emphasis is being placed on the impacts of these improvements on children and youth and the role of public spaces in maintaining environmental quality.

When the projects are complete after the subsequent development of operational strategies and field tests, participating agencies will be left with: an evaluation highlighting areas to build future programs upon; a set of tested guidelines for the development of sustainable improvement programs that integrate physical and socioeconomic factors; and a core group of trained personnel.

B. Activities to Date

In June 1990, just prior to the outbreak of the Gulf Crisis, a working session was held in Amman to initiate the study. Organized by the Unit and hosted by the UDD, key study participants and funders finalized the research design and visited the study sites.

Amman

Socioeconomic Survey. The surveys of East Wahdat and Jofeh, developed by the UDD, were administered in September 1990. In December 1990, the UDD published a draft report of frequency tables that summarized the initial survey results and published a synthesis report in

January 1991. Portions of the UDD survey were used by the UNICEF Regional Office for the Middle East and North Africa in UNICEF's February 1991 report on the impact of the Gulf war on Jordanian children.

Physical Assessment. A physical survey instrument was designed by the Unit and the UDD to record the physical conditions of the streets and public spaces, amenities and activities, environmental and sanitary conditions and landscaping. The UDD will also select certain public spaces for observation to document prevailing patterns of activities during different times of the day and days of the week. These observations, as well as the geographic recording of physical conditions and activities will serve as a counterpart to the socioeconomic survey to identify key relationships between the social, economic, cultural and physical characteristics of the two communities.

A working paper, "Sustainability of Public Spaces" was developed to highlight the importance of public open spaces in improving and sustaining environmental conditions over time. The paper is based upon an initial analysis of activity patterns, infrastructure standards and open space criteria used in the two communities. The paper suggests alternative standards for open space configuration and offers general principals for creating a landscape with a hierarchy of spaces that respond to the social, economic and cultural activities in the community.

The study is applying an additional research tool through its use of PALMS, a geographic information system under development in the Unit. PALMS, an acronym for the Parcel-based Land Management System, can link maps with a relational database to provide a graphic window on stored information. For example, it can identify the total number of school age children within a 1km radius of a community center and generate a map showing where they live.

The 1981 baseline data, 1985 UDD survey and the more recent 1990 survey were entered into DBase III in Amman and are being transferred to PALMS at Harvard. To date, plot information from the 1990 data has been entered into PALMS, while that on households and individuals is undergoing preliminary analysis in statistical programs at the UDD and the Unit. For both the Amman sites, plot outlines, locations of infrastructure, public facilities, and open spaces have been digitized and linked with the database tables. Selected portions of the ongoing physical survey by the UDD of streets and public spaces will also be entered into PALMS.

As more information from the socioeconomic and physical surveys becomes available, the relationships between the socioeconomic data and the physical features of the site will be further explored. In general, topics which have been identified for further study are overall densification patterns and the relationships between the quality and use of open space and the contiguous socioeconomic characteristics. Through the use of PALMS, the Amman project is demonstrating the merits of using a geographic information system to identify important spatial patterns which would not be evident in either statistical tables or maps alone.

Cairo Project.

Dr. Wafaa Abdalla, the principal investigator, completed her socioeconomic survey and visual documentation of the two sites in the Fall and has finished a version of the report in Arabic. The draft final report, in both English and Arabic, will be completed by late Summer 1991.

B. Future Activities

The overall timetable the Cairo and Amman studies was delayed approximately six months by the Gulf Crisis and the accompanying restrictions on international travel and field work. The UDD team is credited with accomplishing many of the tasks identified in the UDD *Framework for the Physical Reassessment of the Amman Projects, Phase I*, despite the difficult conditions in Amman. The collaborative nature of the institutional arrangements between the UDD, the Unit and the donors proved useful in finding creative solutions to completing tasks. A revised timetable with a description of activities is attached.

Attachments:

1. Revised Schedule of Activities and Summary Budget
2. Financial Report
3. Revised Budget
4. Sample of Physical Survey Instrument
5. PALMS generated map of sites surveyed in September 1990
6. PALMS generated map of children in East Wahdat under 16 years and within 100 meters of the Community Center

AMENDED SCHEDULE	PHASE I								PHASE II															
	1991				1992				1993															
	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																								
-Cairo																								
-Jordan																								
2. Develop Operational Guidelines																								
-Cairo																								
-Jordan																								
3. Formulate Operational Strategies & Select Indicators																								
-Cairo																								
-Jordan																								
4. Develop Training Prog/Material																								
-Cairo																								
-Jordan																								
5. Field Tests																								
-Cairo																								
-Jordan																								
6. Monitoring & Evaluation																								
7. Workshop on Sustainability																								
Summary Budget																								
-Unit																								
-Ford																								
-UNICEF																								
TOTAL																								
LEGEND:	X: General Activities C: Cairo Activities J: Jordan Activities R: Review																							

REASSESSMENT In Amman, the reassessment will be completed as soon as the UDD team can complete the physical survey and compile their findings from the two communities. The Unit is in the process of completing the transfer of data from the 1990 survey into PALMS. A synthesis report will be developed after reviewing this data, the finding from Cairo and the UDD report.

DEVELOPMENT OF OPERATIONAL GUIDELINES Based upon the findings of the reassessments, operational guidelines will be outlined that stimulate the upgrading lower-income communities and maintain environmental quality in the face of processes of physical transformation and social change.

FORMULATION OF OPERATIONAL STRATEGIES Detailed operational strategies will be developed in cooperation with the relevant governmental and non-governmental organizations. These strategies will allow agencies to select appropriate monitoring and evaluation criteria to appraise prevailing levels of urban environmental quality including health and sanitary conditions.

THE DESIGN OF TRAINING PROGRAMS AND MATERIALS The training program will target a core group of personnel for training in: 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.

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

MONITORING AND EVALUATION The pilot projects selected for field testing of operational guidelines will be monitored and evaluated to identify the critical elements contributing to the success or failure of the tests.


WORKSHOP OF SUSTAINABILITY The organization of a regional workshop on sustainable management strategies is planned depending upon availability of funding. 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.

Sustainable Improvement Strategies for Lower-Income Urban Communities

**FINANCIAL REPORT
through May 11, 1991**

Ford Foundation Funds disbursed during the period from Grant award in May 1990 to May 1991 include \$12,672 of the initial \$25,000 allocated to the study. These funds were used as follows:

\$ 8,362	for the working session in Amman and initial site assessments in Cairo and Amman;
\$ 1,677	for Amman Field work; and
<u>\$ 2,289</u>	for Analysis and Evaluation.


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REVISED BUDGET---SUSTAINABLE IMPROVEMENT STRATEGIES

	June 91	Dec. 91	June 92	Dec 92	June 93	TOTAL
Reassessment of Projects						
Unit	47,300	0	0	0	0	47,300
Ford	12,700	0	0	0	0	12,700
UNICEF	12,000	0	0	0	0	12,000
Total	72,000	0	0	0	0	72,000
Operational Guidelines/Strategies						
Unit	0	9,225	0	0	0	9,225
Ford	0	3,500	0	0	0	3,500
UNICEF	0	5,000	0	0	0	5,000
Total	0	17,725	0	0	0	17,725
Training Program & Materials						
Unit	0	20,000	7,855	0	0	27,855
Ford	0	0	0	0	0	0
UNICEF	0	0	0	0	0	0
Total	0	20,000	7,855	0	0	27,855
Field Test						
Unit	0	3,000	5,000	6,170	0	14,170
Ford	0	9,000	15,000	8,800	0	32,800
UNICEF	0	0	5,000	0	0	5,000
Total	0	12,000	25,000	14,970	0	51,970
Monitor & Eval.						
Unit	0	0	3,000	0	4,085	7,085
Ford	0	0	0	1,000	0	1,000
UNICEF	0	0	0	1,000	0	1,000
Total	0	0	3,000	2,000	4,085	9,085
TOTAL						
Unit	47,300	32,225	15,855	6,170	4,085	105,635
Ford	12,700	12,500	15,000	9,800	0	50,000
UNICEF	12,000	5,000	5,000	1,000	0	23,000
Total	72,000	49,725	35,855	16,970	4,085	178,635

Percent
59%
28%
13%

Budget based on Revised Schedule of Activities (May 1991)

CHECKLIST FOR PHYSICAL INVESTIGATION

The checklist for the physical survey consists of two sheets, one to record the physical condition of the street and the second to record amenities and activities. Each site is divided into segments represented by the "strip maps" on the survey form, in East Wahdat there are approximately 152 segments and in Jofeh 143.

The survey will include all public spaces in each site. It will be normally conducted by two qualified observers working in tandem, one carrying out the built conditions survey and the other noting amenities and activities. Each applicable item is checked off in the appropriate box and in addition, observations can be made on the strip map, using a coded number for the observation, for example, "L2" for a broken sewage manhole.

In addition, the observers are encouraged to record any unusual circumstance in mapped, written and sketch format. Comments by the observers are welcomed in this type of survey since it is not possible to anticipate all likely events in the field. In addition, the UDD team is choosing selected public spaces for more in-depth observation by documenting activities during different times of the day and days of the week.

The geographic recording of information gathered in this survey will complement other information such as maps, as-built drawings and the socioeconomic survey. Of particular interest is relating the resident's perception of their physical surroundings as noted in the recent socioeconomic survey and observations made by the surveyors concerning conditions within twenty meters of the house.

CHECKLIST FOR PHYSICAL INVESTIGATION - BUILT CONDITION

Site:
Street Segment No.:

Surveyor's Name:
Weather Conditions:

Date:
Time:

STREET

Type: A. Pedestrian ☐
B. Vehicular ☐

if vehicular:

B1. bus stop ☐
B2. car parking ☐
B3. car access ☐
B4. truck access ☐

Obstruction:

E1. Illegal structure ☐
E2. Illegal parking ☐
E3. Dumped bldg. materials ☐
E4. Dumping of refuse ☐

Street Lighting:

J1. Wall mounted ☐
J2. Pole mounted ☐
J3. None ☐

if lighting:

J4. working order ☐
J5. bulb missing ☐
J6. fixture broken ☐

Surface condition:

C1. Good ☐
C2. In need of minor repairs ☐
C3. In need of major repairs ☐
C4. Resurfacing ☐

Sidewalk:

D1. One side ☐
D2. Both sides ☐
D3. None ☐

Curb:

F1. One side ☐
F2. Both sides ☐
F3. None ☐

Retaining Walls:

K1. Yes ☐ No ☐
if yes, locate on plan
K2. Cast/block construction ☐
K3. Structural cracks ☐
K4. Weepholes blocked ☐
K5. Accidental damage ☐

Drainage:

G1. Trench
Yes ☐ No ☐
if yes:
G2. Concrete cover block ☐
G3. Cover with grate ☐
G4. Sound ☐
G5. Damaged ☐
G6. Blocked ☐
G7. Missing ☐

H1. Inlet

Yes ☐ No ☐
if yes: Locate on Plan
H2. Both sides ☐
H3. One side ☐
H4. Sound ☐
H5. Damaged ☐
H6. Blocked ☐
H7. Grate missing ☐
(Locate H5, H6 & H7 on Plan)

Sewage:

Manhole 1

(Locate Manholes on Map)

Manhole 2

Manhole 3

Cover:

L1. Sound ☐
L2. Broken ☐
L3. Missing ☐

L4. ☐
L5. ☐
L6. ☐

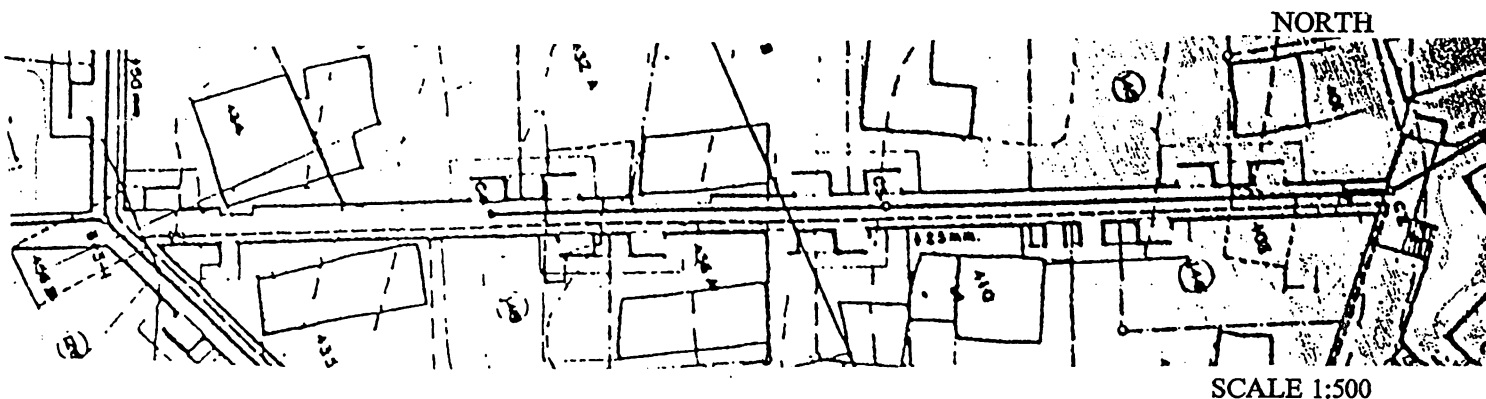
L7. ☐
L8. ☐
L9. ☐

Sewage Backup: M1. Yes ☐
M2. No ☐
if yes, locate on plan.

Unauthorized connections:

N1. Water ☐
N2. Electricity ☐
N3. Sewage ☐

(Locate on Plan)



COMMENTS AND ADDITIONAL OBSERVATIONS (use other side of paper if necessary)

CHECKLIST FOR PHYSICAL INVESTIGATION - AMENITIES

STREET ACTIVITIES

Type of Street/ZoneP1. Residential ☐P2. Commercial/Workshop ☐P3. Play area for small children ☐P5. Area used by women for joint activities ☐P8. Small shop ☐P4. Overspill of domestic activity ☐P6. Area used by youths ☐P9. Area used by street vendors ☐P11. Other Activities ☐P7. Meeting area for men ☐P10. Shop ext. into street ☐

ENVIRONMENT

Refuse CollectionQ1. Free standing bin Yes ☐ No ☐
if yes, locate on mapR1. Dumpster Yes ☐ No ☐
if yes, locate on mapQ2. bin cracked ☐R2. Dumpster damaged ☐Q3. bin sound ☐R3. Overflowing ☐Q4. bin overflowing ☐R4. Refuse around unfilled dumpster ☐Q5. refuse around unfilled bin ☐Q6. refuse in street ☐PlantingS1. Planter Yes ☐ No ☐
if yes, locate "P" on map.T1. Trees Yes ☐ No ☐
if yes, locate "T" on map.

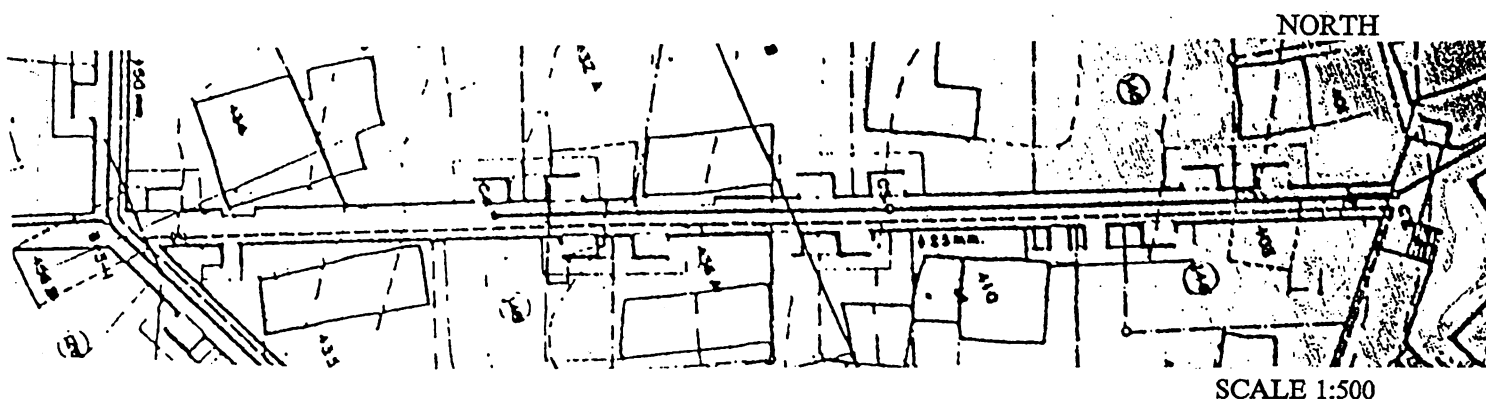
U. Maintenance

S2. Top soil present ☐T2. In good condition ☐U1. Planter irrigated ☐S3. Plants growing ☐T3. Damaged limbs ☐U2. Soil cultivated ☐S4. Plants dead ☐T4. Dead tree ☐U3. Trees pruned ☐S5. Removed ☐T5. Missing ☐U4. Illegal dumping on planted areas ☐S6. Damaged ☐STAIRS DesignConditionW1. Adequate ☐W4. Good ☐W2. Too steep ☐W5. Broken step ☐

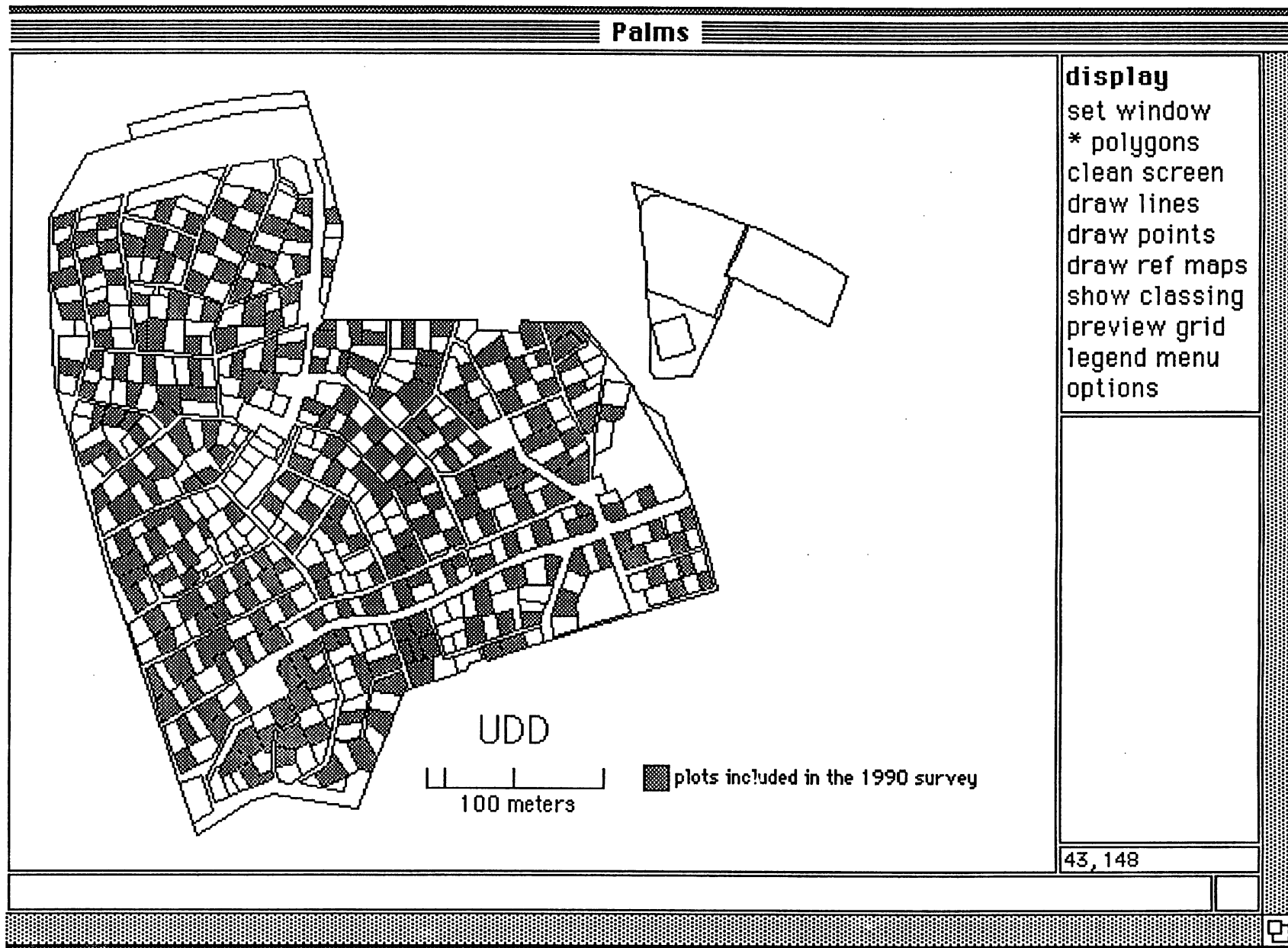
Height _____ cm

W6. Worn out step ☐W3. Too narrow ☐W7. Water/sewage runoff ☐

Width _____ cm

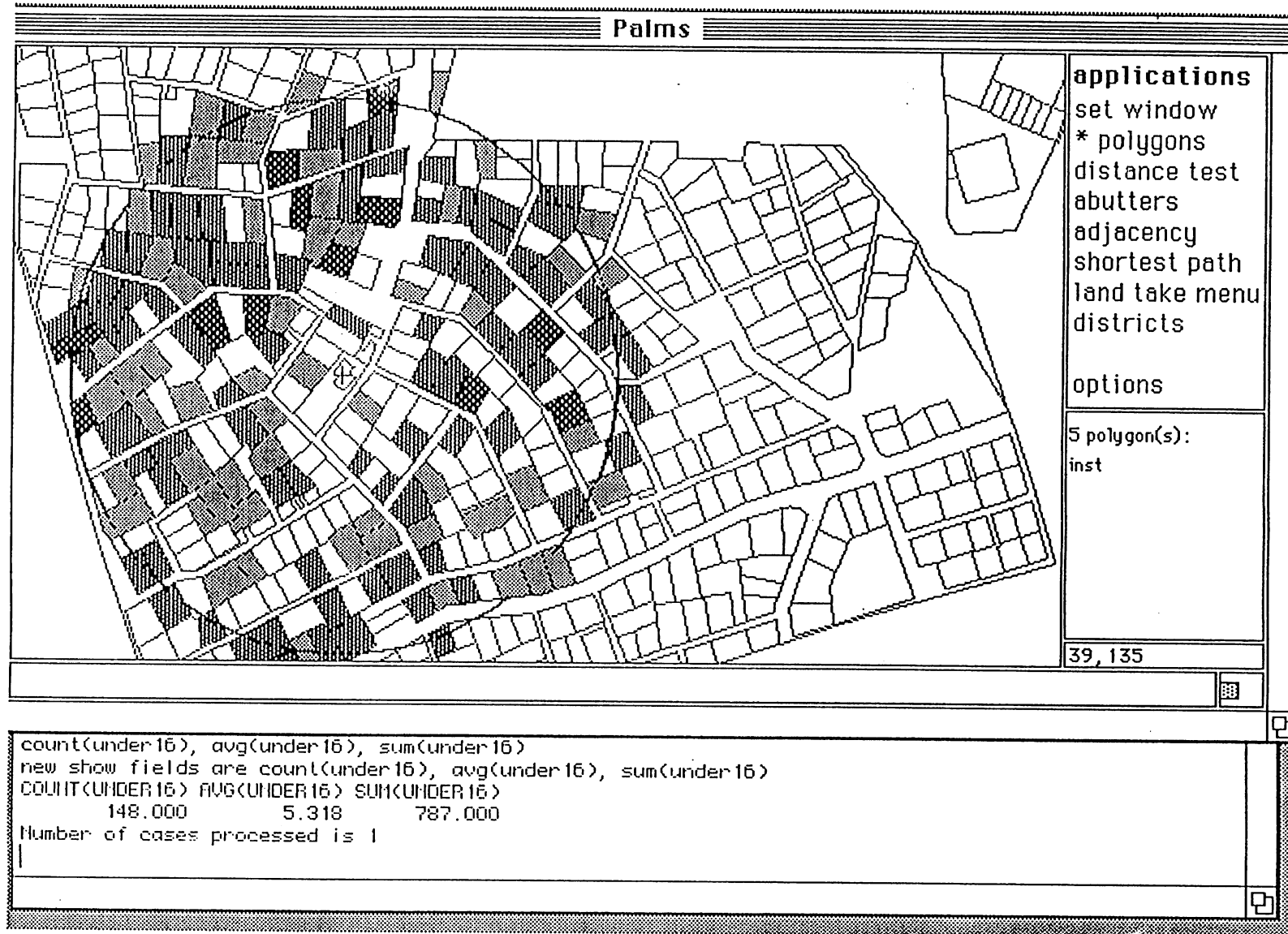
W8. Presence of refuse ☐

COMMENTS AND ADDITIONAL OBSERVATIONS (use other side of paper if necessary)



PALMS generated map of East Wahdat plots included in September 1990
UDD survey.

Map Showing Plots with Children Under 16 Within 100 Meters of the Community Center.



A screen dump from PALMS, showing plots with children under 16 within 100 meters of the community center. Plots are selected by a query to the Oracle database and by location; values of selected plots are then summarized in the Oracle window at the bottom of the screen.